Kenyatta University
School of Business

Conference Proceedings

2nd International Business Research and Industrial Conference (IBRIC)

3rd - 4th December 2020

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Theme: Academia-industry Partnerships For Competitive Innovations and Global Sustainable Development.

MESSAGE FROM THE DEAN, BUSINESS SCHOOL, KENYATTA UNIVERSITY

First, allow me to welcome you to our School, the premier Business School in the region, where scholars and researchers, leveraging on collaborations with like-minded partners in public and private sectors, local and global, develop cutting-edge knowledge and innovations for our present and future generations. The School of Business is focused on tailor-made courses that seek to provide quality education and training, promote scholarship, service, innovation and creativity and inculcate moral values for sustainable individual and societal development.

It is with great pleasure that I welcome you in this 2nd Annual School of Business, International Business Research and Industrial Conference (IBRIC), 2020 whose theme is '*Academia-industry partnerships for competitive innovations and global sustainable development'.*

In the year 2019, the School of Business held its First International Business Research and Industrial Conference (IBRIC) in June 20th – 21st 2019 at the North Coast Beach Hotel, Mombasa. We had very robust discussions as well as paper presentations from academia and industry. The conference proceedings and the Book of Abstracts has already been done and shared out. Arrangements are in top gear to have a resident journal for the School by latest early next year.

In order to realign the School's mission with the University's, the School of Business has focused on tailor-made courses that seek to provide quality education and training, promote scholarship, service, innovation and creativity and inculcate moral values for sustainable individual and societal development.

The 2020 conference is unique as it is being held virtually. This of course has been necessitated by the Covid-19 pandemic. Traditionally, universities have been problem solvers. They have always sought solutions that eliminate inconvenience and discontent. The COVID-19 pandemic has brought plenty of both to the world, but it may also be leading us to better times.

This conference seeks to bring academia and industry together as well as government with a view to provide an interdisciplinary platform for policy makers, top managers, researchers, practitioners and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the fields of Business Management and Innovation.

We are also seeking to provide opportunities for academics from a range of disciplines and countries to share their research both through the conference podium and refereed publications, opportunities for academics to receive informal in-depth feedback through discussions, and to enable them to establish contact with professionals in other countries and institutions and as well, get a creation of action plans to follow up outcomes of the conference and reinforce (as well as create new) partnerships that are aimed at helping governments to develop system-wide business growth strategies in the context of shaping the SDGs, Kenya Vision 2030 and the Big Four Agenda.

Universities and industry are two partners of the entrepreneurial network that must seek a reconnection to merge the discovery-driven culture of universities with the innovation-driven environment. That is why this, we have incorporated a very diverse participation from the industry as well government. Academia industry partnership has the ability to advance industrial application of scientific knowledge towards

innovation and global sustainable development. Universities must go beyond education and research and embrace direct interaction and contribution to industry. As the School of Business, Kenyatta University, we appreciate this fact and it is against this backdrop that the conference was conceived and is now being implemented.

The expected outcomes of this conference include:

1. An increased dissemination of knowledge on Business Management and Innovation.
2. Publishing of the Conference Proceedings and Printing of the Book of Abstracts.
3. Improved university ranking on webometrics.
4. A high-level policy brief to government on industry-academia efforts on sustainable business development for the SDG and Kenya's Vision 2030.
5. Publication of the conference proceedings.
6. Following-up action plans on the various sub-thematic areas.
7. Strengthened Strategic Partnerships for follow-up initiatives.
8. Increased university visibility

Key information and follow-up products that will be produced and disseminated during and after the Conference will comprise the following:

- ✓ Conference report
- ✓ Press releases
- ✓ Daily bulletins
- ✓ Web publications
- ✓ Compendium of the conference proceedings

This conference provides a platform to share and disseminate knowledge that will spur innovation for global sustainable development. In this season of social distancing arising from the COVID-19 pandemic, we have an opportunity for a seamless global interaction in the most effective and efficient way via online platforms and therefore as the Dean, Business School, I take this opportunity to officially welcome you to this virtual conference.

Let me also applaud the University Management for the tremendous support, both financially and with logistics, I'm glad for the unwavering support we received from the industry as well as key state agencies. Lastly, I would wish to thank the Organizing Committee for a job well done as well the faculty and administrative/technical staff in the School of Business.

It is my strong belief that the conference will accomplish all of its goals and objectives. Once again, I am honored to welcome you to this 2nd IBRIC Conference.

God bless you all.

DR PAUL SANG
AG. DEAN SCHOOL OF BUSINESS
KENYATTA UNIVERSITY

MESSAGE FROM THE CONFERENCE CHAIRMAN

It gives me great pleasure, on behalf of the conference organizing committee to welcome all the guests, sponsors and delegates to the 2nd International Business Research and Industrial Conference (IBRIC-2020). The conference theme of "*Academia-Industry Partnerships for Competitive Innovations and Global Sustainable Development*" provides us with yet another unique opportunity for increasing the possibilities of converting the knowledge and innovative ideas generated through quality research activities into viable practical solutions for societal and industry consumption. The conference comes in the midst of the COVID-19 global pandemic that has engendered unprecedented high degree of uncertainty, significantly disrupting and impending operations of businesses. The success of this conference is a clear demonstration of the importance you associate with the need for change and the society - gain - expectations from the new modes of conducting business (the virtual model).

This conference provides an interdisciplinary platform for industry, academia and government to present and discuss developmental, transitional and transformational changes necessary for the new normal. Indeed, the conference has been organized by a team of experts from the School Business, Kenyatta University and will be graced by representatives from our partners such as the Institute of Certified Public Accountants of Kenya (ICPAK), KCB Foundation, Federation of Kenya Employers, Nairobi Securities Exchange, Kenya Tourism Board and international discussants.

I implore all our distinguished delegates to participate actively and to cause interesting and insightful discussions over the next two days. I wish everyone a successful and fruitful conference experience.

Thank You

DR. AMBROSE O. JAGONGO
CHAIRMAN,
2ND IBRIC, 2020

MESSAGE FROM THE CO CHAIR IBRIC 2020 CONFERENCE

CONFERENCE PROCEEDING OUTPUT

The 2nd Annual School of Business, International Business Research and Innovation Conference(IBRIC) was held virtually on 3rd – 4th December, 2020. The theme of the conference was '*Academia-industry partnerships for competitive innovations and global sustainable development'.* The rationale of this conference was to provide a platform where academia, industry players and policy makers would interact for transformational changes in both academia and industry as well as link knowledge to practical solutions. The conference was attended by representatives from government agencies, industry as well as academia.

During the conference, the speakers highlighted the need for innovations to drive productivity and postulated innovation as the game changer for economic landscape in all the spheres of operation, including academia. It was also noted that creation of new innovations should not only be a strategy to beat competition, but a driver for accelerating two-fold process of disintegration and integration as well as the spring board for building academia-industry partnership system.

Further during the conference, demand for more efficiency in all aspect within organizations and increase in automation were identified as the key changes that are facing organizations currently and would continue into the future. It was also highlighted that jobs get replaced but people get redundant by choice because of failure to update skills, lack of forecasting and complacency. This provided direction on key areas of partnerships between academia and industry including development of market responsive curricula, training of agile labour force that is efficient and s ready for changes. In addition, partnership and collaborations in research and innovation in technology should be explored to facilitate seamless provision of goods and services, as well as accelerate experiential learning among all the players.

The conference participants were satisfied (with 42.1% and 52.6% indicating they were very satisfied and satisfied respectively). They highlighted that Industry-Academia engagement was very informative provided them an opportunity to learn and pick lessons that would facilitate them to change how they run their businesses and how they work in their respective organizations. They indicated that such a platform where academia, industry players and the government meet provides opportunities to identify the key societal challenges and devise ways of resolving them from the three frontiers of policy, knowledge(academia) and practice (industry).

We want to appreciate all our guests and delegates, both local and intenational from academi, industry and government agencies for the insights, sharing and for the upcoming collaborations emanating from this conference. Thank you very much.

DR. JANE W. NJUGUNA

CO-CHAIR, 2ND IBRIC, 2020

MESSAGE FROM THE CONFERENCE EDITOR IN CHIEF

On behalf of the 2nd IBRIC Editorial board, the Editor in chief takes great pleasure to invite guests and delegates to our very first virtual conference that has been orchestrated by the unprecedented wave of Covid-19 Pandemic. From the flip side of the pandemic, more opportunities for research and sharing of findings were unveiled through our virtual platform. Indeed the world has become a global village.

IBRIC 2020 conference theme was **"*Academia-Industry Partnerships for Competitive Innovations and Global Sustainable Development*".** The conference accords an opportunity for professionals and industry players to keep in tandem with current research findings in business and management in the midst of covid-19 pandemic. It is our hope that the conference ignited our thinking and ingenuity on innovations that can help organizations navigate operations post covid-19 Pandemic.

It is our hope that as we engaged in various discourses, the conference expanded our horizons to enable us leverage on technology, innovations and strengthen our partnerships with industry and government ministries. We expect that the outcomes can be worthy of our time and engagements. We are treading on a very delicate era with turbulence and dynamism that are not easy to predict, but with the partnerships and consultations through platforms such as these, we can pick our brains in the valuable debates and show case our innovations with a view of circumventing the tumultuous environments of business and management.

The various research and innovations are expected to transform organizations and also act as a source of competitive advantage for global business sustainability.We do believe that the 2nd IBRIC conference offerd an opportunity to interact with our partners in industry, our sponsors and other stakeholders represented by government agencies as well as partners in academia represented by different universities.

The editorial board takes this opportunity to appreciate all the paper contributors and the editorial board members who have reviewed the papers. The total numbers of research abstract papers received were sixty(60) by academia in Kenya and outside our borders. The accepted papers have been published in the IBRIC 2020 Conference Proceedings that is available in our website..

We appreciate all our invited guests and speakers, sponsors and partners in the industry, representatives of government agencies, our delegates and those who came to learn from others.

Thank you ! 'Asante Sana '!

DR. HANNAH BULA (PHD)
THE CHIEF EDITOR
2ND IBRIC, 2020

KEYNOTE SPEAKER

Mr. Geoffrey Odundo

Mr. Odundo is the Chief Executive of the Nairobi Securities Exchange Plc. He is an accomplished Investment Banker and has been in the financial services sector for the last 28 years holding various senior roles in asset management, corporate finance and securities trading.

He holds directorships in the, Association of the African Stock Exchanges (ASEA), East African Securities Exchanges Association (EASEA), The NSE Clear Limited, Trustees of the NSE Fidelity Funds and Wanafunzi Investments Limited.

He is also a Council member of the Institute of Certified Financial Analysts (ICIFA) and a Member of the Thomson Reuters Africa Customer Advisory Network, member of Working Committee of the World Federation of Exchanges and member of the Central Bank of Kenya CFDDM Committee.

Mr. Odundo is a Director on the CDSC Board representing Nairobi Securities Exchange PLC where he is a Director of the NSE Clear Limited; and a trustee of the NSE Fidelity Funds.

MR ODUNDO
CHIEF EXECUTIVE
NAIROBI SECURITIES EXCHANGE PLC

VICE CHANCELLOR'S FORWARD

It is with great pleasure that I welcome you to the 2nd IBRIC Conference of the School of Business, Kenyatta University. We are very grateful to our industry partners for the tremendous support they have provided us, particularly Federation of Kenya Employers (FKE), Nairobi Securities Exchange (NSE), Institute of Certified Public Accountants of Kenya (ICPAK), Lixil Africa, Kenya National Commission for UNESCO, Kenya Tourism Board, Kenya Revenue Authority, Bamburi Cement and the KCB Foundation.

The Covid-19 pandemic and gentlemen has given us a new resolve as scholars, industry players and researchers to embrace new ways of living. In this regards I wish to request all of us in this conference to re-engineer the efforts by the government through the World Health Organisation Ministry of Health so that we overcome the challenges posed by COVID-19 pandemic. Kenyatta University has been in the forefront of innovating new ways and means of embracing the new normal. This new normal is with us to stay. I can only say and affirm that; every difficulty has an opportunity and every opportunity has a difficulty. The COVID-19 pandemic has equally presented difficulties.

We cannot underscore the historic nature moment for us at Kenyatta University as we join the School of Business fraternity in hosting the second International Business Research and Industrial Conference (IBRIC) which is the first academic-industry conference by the University to be held virtually. In line with our commitment to our Mission regarding Community Service, this conference has been organized to bring together like minded researchers, scholars, business executives, private and public partners, members of the industry and students drawn from diverse disciplines.

The Conference theme and sub-themes capture contemporary issues in the economy and the larger society by investigating relevant issues and suggesting some answers, or even raising more questions. It is my conviction that our engagement with the industry players and the output of the researches presented in the two days will bridge the gap between the industry and academia. The entire spectrum of the conference ranging from technological innovation, strategic capabilities, corporate governance, Human resource, data analytics, Entrepreneurship to project management actually captures the changing economy landscape in the current Covid-19 Era.

As a University, we expect that after this conference, we will have increased dissemination of knowledge on Business Management and Innovation, publishing of the Conference Proceedings and Printing of the Book of Abstracts, improved university ranking on webometrics, a high-level policy brief to government on industry-academia efforts on sustainable business development for the big four agenda, publication of the conference proceedings, following-up action plans on the various sub-thematic areas, strengthened strategic partnerships for follow-up initiatives as well as increased university visibility. The timing and the hosting of this conference which has attracted over 300 participants as well as a legion of followers on social media demonstrates our commitment as a university to fulfil our mission of providing quality

education and training, promoting scholarship, service, innovation and creativity and inculcating moral values for sustainable individual and societal development.

It is with great satisfaction that I note the IBRIC Theme has been designed with a focus on components of our university mission and the core values of: excellence, creativity, self-reliance, innovation, quality and relevance, equal opportunity, moral integrity, democracy, corporate governance, institutional culture of hard work, competitiveness, academic freedom, respect for diversity and professionalism. In this regard, we see the IBRIC Conference contributing to the university commitment to the expected role in the global, regional and local debate on development particularly through the role we as a university are expected to play in contributing to the global sustainable development goals and the country's Vision 2030 besides the Governments Big Four agenda on manufacturing, food security, affordable housing and universal healthcare.

Ladies and gentlemen, it is my hope that the diverse papers and discussions to be shared in respect of the main theme and subthemes will pinpoint pertinent academic and societal concerns that go a long way to enlighten all of us on how best to leverage on the opportunities created by the Government Agenda in raising the economy to play a more dominant role globally and regionally. In that respect I call upon the organizers to document the conference proceedings with a view to availing key lessons that will be derived from this conference so as to inform policy on the areas cited in the sustainable development goals and the Governments Big Four agenda besides Vision 2030.

I am pleased to note the strides the School of Business has made towards collecting, collating and disseminating knowledge in that the planning for the conference has been undertaken with involvement of stakeholders drawn from the academia, the industry and sections of the national government.I conclude by thanking the international guests, industry players and all conference participants. May I also thank the conference organizing committee of the School of Business for the hard work they have put in to ensure the success of the conference despite the many challenges posed by the Covid-19 pandemic. I all wish you a fruitful conference experience as you present, converse and dialogue on the diverse topical issues as addressed by the main theme and sub themes of the IBRIC 2020.

It is now my pleasure to declare the IBRIC 2020 officially open. Thank you and God bless you all.

PROF. PAUL K.WAINAINA
VICE-CHANCELLOR, KENYATTA UNIVERSITY

ACKNOWLEDGEMENTS

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LIST OF PAPERS AND ABSTRACTS

1. Bearing Kenya Vision 2030: Localizing the Shenzhen Model of Development for a Sustainable Tourism

Eric Balan[1], Mohd Saeed Siddiq[2]
[1]University Tun Abdul Razak, [2]Minot State University

Abstract

This paper assesses the importance of the tourism sector in Kenya from the point of international arrivals judging by its expenditures and receipts. To qualify the efficiency of the sector, a DEA assessment was carried out and it confirmed issues faced by the nation. As part of the vision 2030, initiatives to revitalize the sectors has been in place. 17 of such initiatives were identified but it is resting on the shoulders of the government and its tourism agencies. The paper proposed that Kenya looks at adopting the Shenzhen model where innovation and entrepreneurship to be spearheaded by the institutions of higher learning. With the sector being an import growth engine to the nation, it must also look out for interlinkages and become a catalyst to other sectors. With the pandemic of COVID19 hitting hard on the country, the issue of sustainability was raised. Part of the tourism businesses are not recession-proof, and Kenya will need to reassess its position in the sector if it wants to be a economic pillar for the East Africa region. The pressing matter at hand that this paper has illustrated is that tourism in Kenya must go beyond national parks and beach fronts. It is a struggle between development and ecology heading towards 2030 sustainability agenda.

Keywords: Kenya, Sustainable Development Goal 9, China, Belt and Road Initiative, Sustainable Tourism, Kenya 2030

Introduction

Tourism is a vital GDP contributor. It is an economic sector that serves as the gateway to other sectors to prosper. In general, tourism contributes about 15% to a nation's productivity output. Kenya is a tourism magnet. The God given natural resources of animal sanctuaries has attracted millions into growing the sector. Africa's gateway of development, especially the east, is through Kenya (ATTA, 2019), and the potential growth is exponential. Kenya is the 3rd largest tourism economy after Nigeria and South Africa. In 2018, Kenya tourism had seen about 6% growth creating about 1 million jobs. The country beat the average Sub Saharan tourism growth rate of 3.3%. Kenya's Vision 2030 sees opportunities and challenges to improve the sector. As a driving force of the economy, it needs Kenya to be the top 10 tourist destination and the leader in Sub Saharan tourism.

However, tourism is highly competitive (Vodeb, 2012), and the sector is sensitive to price changes caused by domestic shifts, regional instability, and to external forces. Tourism has the multiplier effect and the capacity to promote regional development in creating new commercial enterprises while boosting existing industrial businesses. Tourism also has the dynamism and synergism to stimulate domestic demands turning the local and national economy towards people centric. The vision and delivery board under Jane Karuku after considerable consultation with stakeholders has identified key tourism pillars and macros.

The 17 initiatives are strategically inline with the targets of the SDG 9 where it seeks to build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation at the same time to improvement industrialisation drivers of economic growth, creates job opportunities and thereby reduces income poverty.

For 2020, Najib Balala has said that the tourism sector was expected to grow by 1% of its foreign exchange after contributing $1.54 billion in 2019. However, with COVID19, it saw many tourism-based businesses closed. The tourism minister has also said that the foreign exchange contribution in the second half of 2020 stood at zero. Mohammed Hersi who is the chairman of Kenya Tourism Federation confirmed the situation with high cancellation of booking were seen in the July-October timeframe of 2020. With closures and job losses due to the pandemic, it has caused severe bruising to the tourism revenue. Over a twenty-year period from 2001-2019, tourism revenue has seen an upward trend.

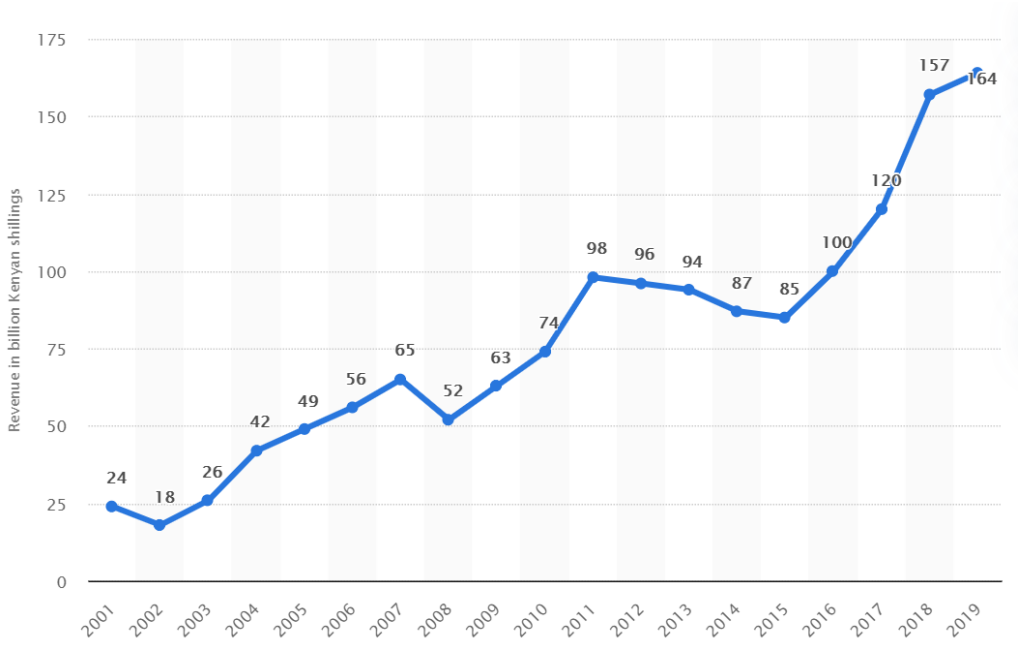

Figure 1: Kenya Tourism Revenue – 2001-2019

Source: Statistica

Figure 1 shows that 2019 recorded the highest revenue collection of 164 billion Kenyan shillings with international arrivals in 2019. No doubt that that tourism industry has been showing an impressive recovery since 2015 but sustaining it would be a major concern especially post the pandemic of

COVID19. Recouping the pandemic losses of $750 million in revenue would be the next task towards achieving its vision 2030. Certain ancillaries of tourism are not recession proof and certain are. It would be proper to then analyse which are and which are not (Srivastava, 2011). Tourism businesses can maintain their success regardless of an uncertain economic environment (Pappas, 2016). This can only be assumed if people (especially domestic) continue to travel throughout the recessions, and tourism businesses are to be recession-proof for the sector to sustain its importance in national productivity contribution. Everything would depend on the flow of inbound and outbound together with its receipts and expenditures.

Kenya Tourism Analysis

Data published by the World Bank is in congruent with the Kenya's national indicative forecast and predictions of the tourism sector. Table 1 shows the tourist arrivals at Jomo Kenyatta International Airport and Mombasa International Airport, respectively. Data was publicly made available by the immigration services. The data excludes Kenyan travellers. The overall number provides an indication of the inbound tourist receipts that contributes towards the total national exports (Statistics, 2020).

Table 1: Tourist arrivals through JKIA and MIA

Month	Airports			
	JKIA		MIA	
	2019	2020	2019	2020
Jan	113362	114873	15727	12214
Feb	107058	108578	12864	11092
Mar	106001	43346	9732	3950
Apr	104418	12	5096	0
May	98788	1229	3689	0
Jun	126822	534	2454	2
Jul	150286	617	8663	1
Aug	150723	13371	11000	548
Sep	124001	na	9208	na
Oct	115828	na	10940	na
Nov	111548	na	12339	na
Dec	121912	na	12391	na
Total	1430747	282560	114103	27807

Source: Department of Immigration Services

The drop in 2020 was caused by the pandemic outbreak, March onwards. Keeping to this trend and with slow recovery would dampen the tourism sector to levels far beyond recovery, incurring the government to then invest (loses) to revive the sector over a very long period. The overall 10-year trend of 2010-2019 in Figure 2 shows significant tourism health towards GDP contribution.

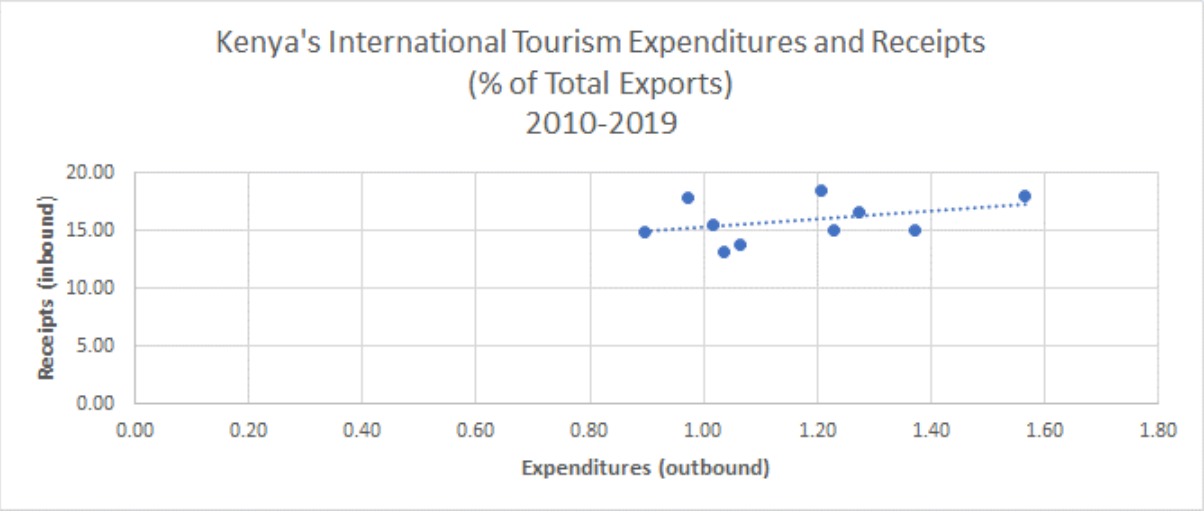

Figure 2: International Tourism Data (% contribution)

Source: The World Bank Dataset

Basing solely on the data provided, in terms of overall GDP contribution of Kenya's total exports, it can be assumed that the tourism sector is indeed efficient. Tourism is contributing significantly to Kenya's GDP. However, when a closer examination was carried out and the contribution was measured in terms of dollar value, the data presented a rising concern. Figure 3 shows that the tourism expenditures and receipts were seeing a downward trend over the same period of 2010-2019.

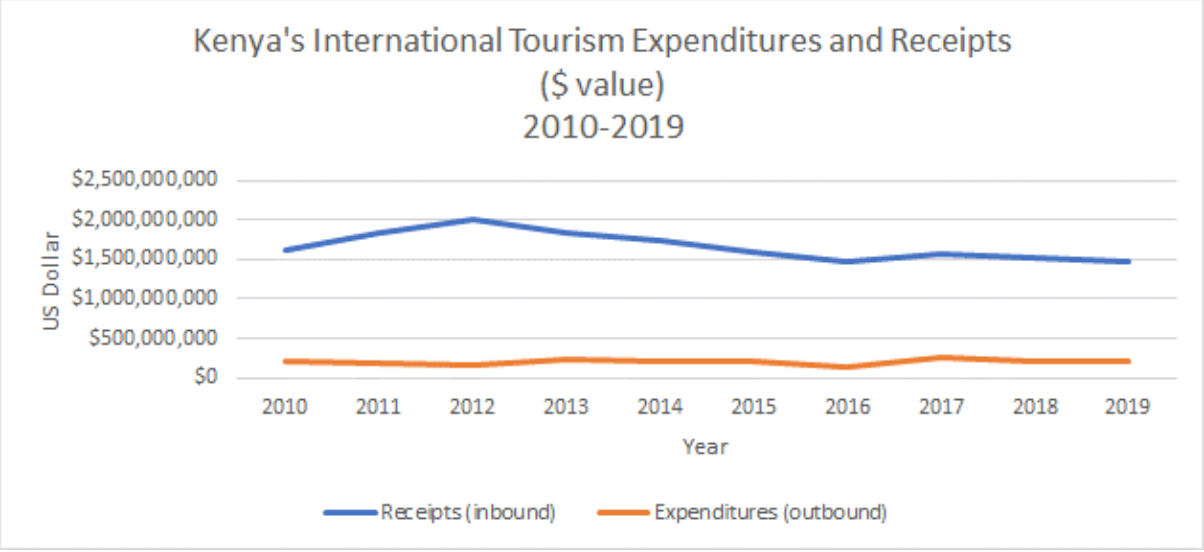

Figure 3: International Tourism Data ($ value contribution)

Source: The World Bank Dataset

From the point of 2015, as the UN announced the plans and targets in achieving the Sustainable Development Goals, the Kenya's tourism seemed to have flatten out into a straight line. To confirmed this, a Data Envelopment Analysis, DEA, assessment was employed to understand the efficiency factor of Kenya's tourism sector. Figure 4 illustrates.

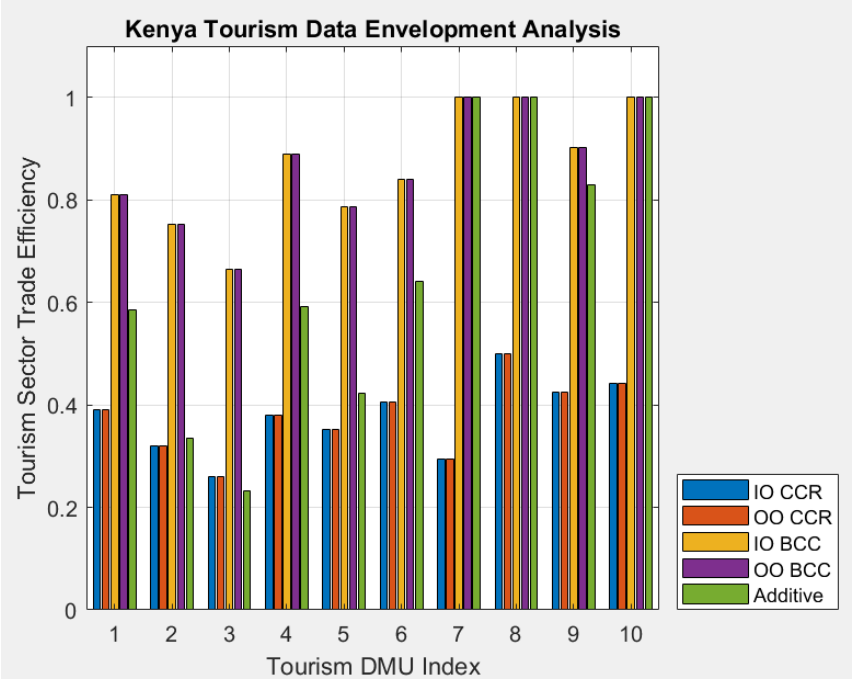

Figure 4: Kenya's Tourisms DEA Output

Source: The World Bank Dataset

The DEA measured the tourism sector using two efficiency scale: Overall Technical Efficiency (OTE) and Pure Technical Efficiency (PTE). The CCR model defines the relative efficiency of the DMU as a weighted sum of outputs divided by a weighted sum of inputs where all efficiency scores were restricted to lay between zero and one. An efficiency score that is less than one for the sector would mean that it is operating below the frontier. The BCC model measured the PTE, i.e., conversion of inputs into outputs. The CCR model measured the OTE. It is to note that inefficiencies can be caused by the size of the sector to its corresponding outputs, lack of the needed operational support, and disadvantageous conditions under which it operates that effects the OTE and PTE (Ali Emrouznejad, 2016). The assessment

concluded that the tourism sector was indeed inefficient for the overall period except for 2016, 2017, and 2019 were efficient years for Kenya's tourism, hence confirming the data from the World Bank.

To be fair, the period of 2010-2019, and particularly zeroing into the period of 2015-2019, Africa as a whole continent undergone massive struggles. The Ebola and Zika outbreaks were two of the problems that nearly ceased many parts of the continent. Issues over the border with Somalia and Ethiopia was a major matter that impacted the tourism sector in Kenya (Ngwu, 2019). The devaluation of the shilling had also stirred up commotions and with an overvalued currency it makes Kenyan exports undesirable and uncompetitive. This also had caused a severe imbalance to the current account (Hayat, 2015). This too choked the banks from lending to the private sectors causing a low tax revenue collection and higher debt. The shilling that fell had also caused a panic demand for more dollars that triggered a spiral in the capital markets and sparked a higher inflation on the supply side. It was impossible for Kenya to invest in itself during the aforementioned period.

Leveraging of China

Understanding, rationalizing, and implementing the SDG targets works in a process of expansion and consolidation. Kenya needs to be firm in its realities pertaining to development, and it needs to expand based on its own capabilities and capacities. As the country's economy expands, it opens up new ventures of foreign investments. However, Kenya needs to be sure that as it expands, it needs to realize of the speed and impact that the expansion brings. The consolidation process allows Kenya to then rationalize and internalize the process of expansion and therefore allow the government of Kenya to take a "big picture" approach to see if the expansions are truly what it needs. The consolidation process aids in giving implemented development policies and projects a retrospective paradigm before embarking onto the next phase of expansion. China is actively expanding in Kenya.

For tourism to work, as echoed in SDG 9, resilient infrastructure is vital. Proper infrastructure caters, accommodates, and invites globalized interest. This will then sustain and uplift local industries which will then in turn foster innovation to spur a rich dynamic continuum of the economy. By 2030, Kenya will develop into a new industrialized country with global competitiveness (Jakkie Cilliers, 2018). This ensures high quality of life for the people and a beautiful innovation environment that brings about social stability. Since 2010, the Kenyan government has adopted a series of policies to promote economic growth, and the economy has indeed progress in a steady momentum of development. However, the poverty rate and unemployment rate still prevail, and it requires a modernized policy to combat it. Through national industrialization development and special economic zones, Kenya can vigorously strengthen infrastructure constructions by attaching importance of tourisms as part of its nation building exercise.

This would then actively promote the industrialization process and economic transformation. As seen success in China in poverty elevation, Kenya too could see the same result. With COVID19, the Kenyan government will incur a high public debt (Okungu, 2020). With the loss of jobs and the closure of certain other sectors beside tourism, the country will incur high domestic debt to stay afloat. External debts will also rise causing the country to be strained in its fiscal balance. The national budget which is already in deficit will only be lengthen and swelled (Kemboi, 2020). With the economic conditions not being in

favour to Kenya, it surely does not have the financial means to render infrastructure development on its own, therefore economic expansion and development consolidation will not materialize on Kenya's own accord. Leveraging off China's Belt and Road development constructions will only catapult Kenya into realizing its economic outcomes quicker.

However, there are issues and challenges too with the Chinese development projects that needs to be addressed internally within the government board. Despite the challenges on the Belt and Road projects, it does not jeopardize the partnership between Kenya and China. Both are aware of the weakness in the projects when it comes to competition and environmental considerations. As solutions are underway, the bigger goal remains,- Vision 2030 and the Big Four Agenda. This is the common interest between both the countries. In resolving existing matters, restructuring current and future project deals, and leveraging off China would only ensure that Kenya' goals are met. As the Chinese influence gains prominence in the country, it gives an opportunity to Kenya to localize some of China's development successes seen in China to be emulated in Kenya.

Localizing the Shenzhen Model

If Nairobi is compared to Beijing as the capital and administrative city, then Mombasa is of Shenzhen, the port city of development. The development and success of Shenzhen was the genius of Shenzhen University founded in 1983 that stirred innovation and entrepreneurship. Shenzhen University was established as a full-time comprehensive university, in line with the aim of China's Ministry of Education to further develop the critical infrastructure in the Special Economic Zone of Shenzhen. It was once a tiny fishing village but now a vast metropolis. The transformation of Shenzhen is beyond remarkable. Forty years in the making, the city was a market town inhabited by 30000 people, now inhabits more than 12 million people. Shenzhen was designated as China's first Special Economic Zone (SEZ) and became China's first manufacturing hub and China's richest and influential city.

Shenzhen was the living experiment and the window of the opening policies than changed China forever. The key to Shenzhen's success was to open the city to foreigners and to stimulate innovation. The Chinese government had very little role in the overall development of the city. A lot of it had to do with marketization (Tang, 2004). It was and still is a city that thrives on demand and supply. Shenzhen is a long and narrow city and geographically the city was and is well endowed. It is a coastal city with a 70km coastline. Due to its location to open waters, the city became a major port for foreign trade and international exchanges. Every form of development that took place in the city had a purpose and played a role in the vision of transforming the city into what it is today. From the tech central, to its education, from trading natural minerals to a mega financial hub, the vision never strayed.

Everything that came out and up from Shenzhen had a functional duty towards the city's progress. The speed of its development and around its region became known as the "Shenzhen Speed" and the success from this opening up experiment prompted the Chinese government to then transform other coastal cities into special economic zones (Kaiming, 2007). This is the Shenzhen Model. The major cities (and connecting areas) around Kenya are also endowed. The advantage of setting up and establishing a Special Economic Zone, is that the SEZ stimulates GDP growth, it attracts foreign investments and increases foreign exchanges, it helps with the development of exports, increases employment opportunity, brings in

migrants, and allows the transfer of knowledge and technology. With a SEZ identified and established, stringent regulations are needed.

The major problem that Shenzhen faced was in its early days of development was that about 90% of its investments were from Hong Kong who had bigger risk appetites and was investing heavily in a rather bias and un-diverse market, – real estates. Like Kenya, reliance on China's funding and development would only clog the entire country's development outcome. Over influx of capital inflows disrupts. For Kenya, the SEZs ultimate test is to maximize its Total Factor Productivity and this is in the dissemination and usage of capital, labour, and resources, and this is the key in unlocking the potential growth for Kenya. The efficient reallocation of resources from low-end sectors must be administered properly to thrive the various economic sectors. Unfortunately, not the entire region of Kenya can participate and become key SEZs. It depends too on the willingness of the local council government to work and for the national government to invest in selected areas.

SEZs are not just an economic measure, it is also a socioeconomic one. With the rapid movement of urbanization in Nairobi and Mombasa, the social structure of the SEZ must be able to cope and adapt to the changes it will experience. The mindset and dynamism of the people within the SEZ must be geared towards sustainability. Like Shenzhen, everything has a specific role. Certain designated cities in Kenya can adopt and adapt the Shenzhen Model with a caveat that the government do not intervene and allow innovation and entrepreneurship to take shape.

The Double U: UN SDG and Uhuru's Big 4

Since 2008, the vision for a prosperous 2030 was set. The nation is well aware that it needs to change for the betterment of its people. Vision2030 is a holistic change. It is a change that leaves no stones untouched and unturned. It is a change is the mindset of the people. When a country like Kenya begins to see affirmative results due to the change it has taken, the subregion of East Africa will follow suit. When Kenya changes, it is inevitable for the east African community to not change. In 4 years of the period from 2002-2006, Kenya's economy rose from 0.6% to 6.1%. Growth, progress, and development are elements that Kenya has seen, felt, lived, and experienced. It was this economic admiration that catapulted Mwai Kibaki's Economic Recovery Strategy for Wealth and Employment Creation, ERS.

The objective was simple, - to transform Kenya into a newly industrializing middle income country providing a high quality of life to all its citizens by 2030 in a clean and secure environment through an all-inclusive and participatory stakeholder consultative process, involving Kenyans from all parts of the country (Development, 2003). Unfortunately, a noble objective of such fail to meet any of the Millennium Development Goals, MDG. Achieving the goals and vision of 2030 is generally a huge public contract and a weighty responsibility for the government. Accountability, integrity, and performance will be key indicators It is also to note that this mega endeavour is not entirely left to the government to shoulder. The targets of the SDG are meant for a collaborative effort between the individuals, communities, and the institutions of Kenya to bend its energies towards the success of the country.

The success of Shenzhen was the empowerment given by the government to the university to drive growth. Calling for development and empowerment is not a revolution; it is a revelation of resolutions. It needs purpose and it needs life. As the Big 4 agenda of President Uhuru Kenyatta's blueprint coincides with almost all of the UN SDG targets and goals, he is running short of time. It would be his legacy before he steps down from office in 2022 to implement and see fruition of the agenda. The Big 4 Agenda also coincides directly with the economic and social rights as stipulated in Article 43 of the nation's constitution (Kenya, 2010). The decade of 2020-2030 would be the defining period for Kenya in becoming the beacon that East Africa needs. It is uniquely positioned geographically and has dynamism of being the economic catalyst for region.

For decade to come and for this to materialize, the country must be true to the aspirations of all Kenyans for a government based on the essential values of human rights, equality, freedom, democracy, social justice and the rule of law. It is time for Kenya to be part of a globalized movement to nurture and protect the well-being of the individual, the family, communities, and the nation. A part of achieving the Double U, it also adopts and enacts the constitution for the current and future generations of Kenyans.

Moving the Tourism Economy Up the Value Chain

As a key pillar of the economic and a driver for other sectors, the tourism sector does not require reinventions. Since tourism is a global industry, the mindset of Kenya must be geared toward global competitiveness. The battle at hand is COVID19, but taking the pandemic out of the economic equation, Kenya's tourism has only a single theme, - national parks and the Indian ocean. Reinstating COVID19 back into the economic equation, the entire sector plummets. Pre pandemic lockdowns, international arrivals had increased by a mere 0.4% in 2019 as compared to a 14% rise from 2018. This is a very minute increase, which had also grown tourism earnings by 3.9% year-on-year. International conferences increased by 6.9%. National parks visitors expanded by 3.7%. Total international visitors surpassed the 2 million mark.

From the Economic Survey 2020, it mentioned that 63% of international visitors stated "holiday" as purpose to travel to Kenya, 14% for business, and a large chuck of 23% are on transit (KNBS, 2020). All tourist ancillaries Is that all that Kenya can offer? Of the 17 tourism initiatives by the Kenya Vision 2030, 8 initiatives are related to national parks, 3 initiatives are resorts related and 2 are business and conferences related. The key to moving tourism up the value chain is through innovation. Innovation must identify the need in order to address tourism wellbeing, and it does not need to be momentous (Pikkemaat, 2006). An innovative way to sustain the tourism sector is to follow the "tourist's footsteps". This will detail out the steps taken, the places visited, and the businesses they interact with as soon as they land in JKIA or MIA.

The touchpoints and the cumulative activities of a tourist's trip are vital information toward the entire tourism experience as a whole. Some tourism activities can be visually represented like the physical shops, but there are many that cannot be visually seen, and these are the inner needs and the voids or a tourist that requires a supply to the demand. Such a manner helps in the distribution and redistribution of

businesses that relies on tourism (Mitchell, 2012). Although the 17 tourism initiatives are based on existing tour offers that Kenya is known for, but there are still room for improvements in capitalizing tour satisfactions. It would be ideal to believe at this juncture that the tourism supply chain in Kenya has a lot to improv on. The tourism sector cannot be an economic victim in times of crisis, and it needs to find ways to remain recession-proof through-and-through.

All main and supporting protagonists of the tourism industry must ensure that the supply chain and the value chain does not break under pressure but instead evolve with the environmental pressures. The COVID19 pandemic will serve as a reminder for a very long time of the impact it had caused not only in Kenya but globally. To rebuild the tourism sector upwards of the value chain requires resilience, and it is the role of government to ensure that resilience is built upon the notion of a perfect substitution, where when one chain breaks, the rest are ready to step in to hold the economy.

Conclusion

Tourism is Kenya's 3rd largest economic source and contributor. It also a significant source of income to many who contributes directly back to the nation. The prospects of tourism have been overshadowed by numerous misfortunes, making it unsustainable and difficult to develop further. The plans and the initiatives for the decade to come is indeed noble but it will be faced by challenges beyond the comprehensions of those looking at Kenya outside of its borders. Kenya is still the favourite place for international traveller and the statistics do not lie. Tourism is a major organ, and it is connected to the main economic artery. In a world free from the pandemic, this is a sector that comes with intense competition, but it is also a volatile sector. These challenges be it internal or external can be addressed and resolved through policies that are focused on the attention of sustaining the sector under any condition.

This is not a simple role for the government and its tourism agencies to weather. The assistance to be rendered through innovation and entrepreneurship stemming from the institutions of higher learning can ease the struggles. National parks are not to be relied on as the main revenue stream. This is a stream that is perpetually narrowing with climate change, and with wildlife habitats degrading, the damage will simply be irreversible. China's Belt and Road projects are also locking horns with environmentalist, and with the government. It is not about the infrastructure projects, but it is more about how and where these projects are cutting across the Kenyan landscape. Coupled with the poor state of the economy, some of these projects may not be worth pursuing. But Kenya really needs development infrastructures. Connecting the coast to the heartland would sacrifice nature and everything along the path.

It is a fragile state to be in when the country is trying to balance human development and ecological conservation. Drafting policies with these in mind is itself a sustainable battle. In an attempt to assess and reassess the economic role of tourism, Kenyans would need to consider and reconsider on the purpose of each tourism endeavour that it is about to embark on towards 2030. To develop is easy but to sustain is hard. Localizing the Shenzhen model would not be easy as well as it needs robust and suitable

institutional drivers that are free from bureaucracy and be willing to put their trust into the market. An ecosystem of innovation must be inculcated, adhered to, and consistently evolve with globalized changes. The ecosystem must be able to identify linkages between sectors that provide inputs into tourism. Making strides towards 2030, upon reassessments, it is already certain that Kenya's GDP relies a lot on tourism and it is in the thick of things in the economy. The vision board of 2030 do not see tourism as an isolated revenue driver, but it sees it as a catalyst. The challenge to come is when the tourism sector demands for new investments to be injected and it causes other sectors and resources to fallback.

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2. Capital Adequacy and Revenue Efficiency of Selected Insurance Companies in Kenya

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Abstract: *Revenue efficiency is a major component in sustainable growth in the insurance industry. The constant change in the insurance industry operating environment has increased the significance of the effect of revenue efficiency in resource utilization in the sector. Revenue efficiency in the Kenyan insurance industry has been on a downward trajectory thus hindering profitability and sustainability. The study determined the effect of capital adequacy on revenue efficiency of selected insurance companies in Kenya. The study was underpinned on the positivism research philosophy and used a causal research design. The target population was 27 insurance companies that have consistently been in operation during the study period, 2008-2017 and registered by the Insurance Regulatory Authority. The study took a census of all the 27 insurance companies. Secondary data was collected from audited financial statements as submitted to the Insurance Regulatory Authority. Data analysis was done using descriptive statistics and inferential statistics. Descriptive statistics included mean, mode, median and standard deviations. Inferential statistics included correlation analysis and multivariate analysis using the two*

stage Data Envelopment Analysis by obtaining efficiency scores in the first stage and applying the dynamic panel regression model in stage two. The findings showed that capital adequacy had a positive statistically significant effect on revenue efficiency of insurance companies in Kenya. The study recommends that the IRA through a holistic analysis of an insurer's risk position and capital held at all times should be able to link the company's capital adequacy to the amount of risk the company underwrites, therefore adopting risk-based approach and emphasize on implementation of solvency II framework.

Keywords: *Capital Adequacy, Data Envelopment Analysis, Dynamic Panel Data, Dynamic Panel Regression Model, Insurance Company, Revenue Efficiency.*

Introduction

Background of the study

All companies strive to minimize inputs and to maximize their outputs and that companies that fail to achieve these objectives do not survive, (Cummins & Weiss, 2013). To ensure survival, companies must strive to be effective, (Eling & Luhen, 2007). The main objective of every profit orientated organization is profit maximization through maintenance of great standards of efficiency in cost and revenue, this has made the study of cost and revenue efficiency imperative in finance, (Philips *et al.*, 2010).

Insurance industry is part of the financial service providers including but not limited to commercial Banks, Savings and Credit Societies, Building Societies among others contributing about 11% of GDP, with the insurance industry contributing 3% of the GDP, (Cytonn Report, 2017). The Kenyan insurance sector has lately been experiencing a continuous decline in revenue efficiency affecting the profitability and sustainability of insurance companies. A declining rate of growth in revenue as compared to the global revenue trends is also evident in the Kenyan insurance sector; the General insurance business in Kenya grew by 11.4% which is an equivalent of 3.4% while the global growth stood at 3.6%, and the Life business in Kenya grew by 9.7% representing 1.7% while the global growth was at 4%, during the year 2017, (IRA, Annual Report, 2017).

The Kenyan insurance industry penetration was 2.68% with 52 insurance companies serving 46 million people as at December, 2017, while the average global penetration was at 6.1%; South Africa with 175 insurance companies for 55 million people, insurance penetration was at 14.50%; Namibia with 30 insurance companies for 2.5 million people and an insurance penetration of 7.4% ; and Mauritius with 20 insurance companies for 1.3 million people and an insurance penetration of 6.40% , (Cytonn report, 2017, IRA Annual Report, 2017, Sigma, 2018)

Revenue Efficiency

Revenue efficiency is the use of available resources by a company to realize an increase in profits and it is measured by an output distance function, (Kocisova, 2017; Jarraya & Bouri, 2012). An insurance firm has several outputs or sources of revenue that is investment income, commissions from reinsurance, other direct incomes and premium income. Premium income is the major output from an

insurance company's daily operations, accounting for 74% of the total output, (IRA, Annual Report, 2015). Most studies on the insurance industry have used premium income as a measure of output where Premiums collected is a clear reflection of the insurance firm's ability to market its products, choose its customers and acknowledge risks, (Bikker & Leuvensteijn, 2008).

Trends in the Kenyan insurance sector revenue throughout the study period are as shown in figure 1.1 below:

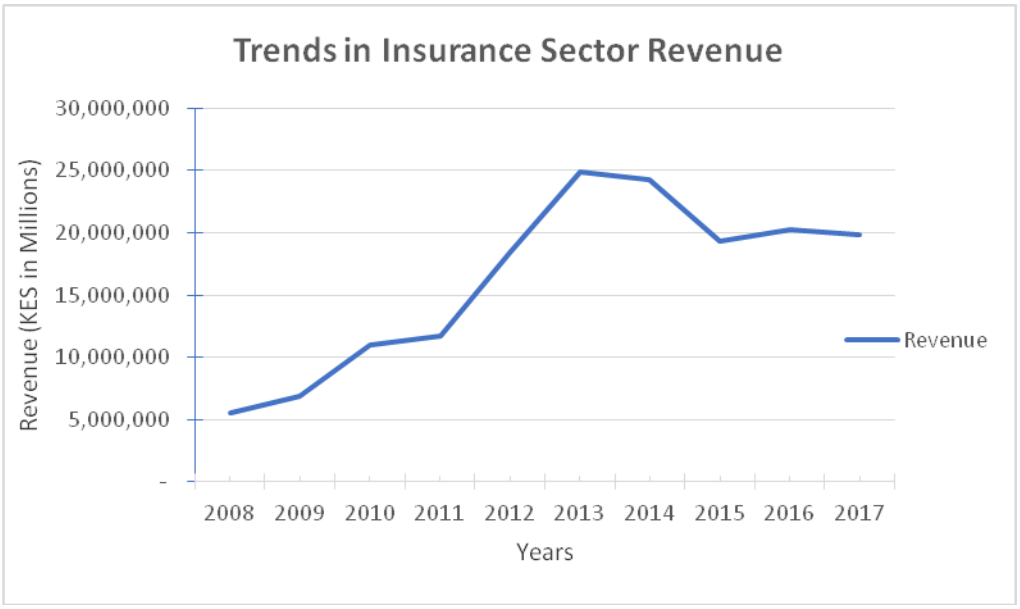

Figure: 1.1: Trends in Insurance Sector Revenue

Source: IRA Annual Reports, (2008-2017)

From Figure 1.1, although there is an increase in the industry revenue, it is marginal and starts declining from the year 2013 through to 2017. The industry's Revenue is seen to decline by 2.7% from 2013 to 2014 and further with even a bigger margin of 20.25% from 2014 to 2015. Although there is a slight increase in 2016, the industry's revenue declines by a further 2.32% in the year 2017.

Capital Adequacy in the Kenyan Insurance Companies

Capital adequacy is a measure of the available capital in relation to the minimum required capital by the regulatory authority in this case the IRA. Capital adequacy is seen to promote the efficiency and stability of a financial system and it is perceived to be an important indicator of an insurer's capability to withstand losses from the customers' claims, (Smajla, 2012). An efficient firm increases capitalization by retaining more earnings as capital, (Carvallo & Kasman, 2005). The insurance industry in Kenya has in the recent past experienced a dramatic change in the capital structure such as the introduction of the Risk Based Capital (RBC) regime by the IRA. The changes include an increase in the minimum capital requirement each insurer is expected to hold; composite insurers KES 1.0 billion, general insurers KES 600 million, long-term insurers KES 400 million, reinsurers KES 1.5 billion, (IRA Annual Report, 2015). The introduction of the RBC regime is meant to support the implementation of the risk-based supervision framework that was introduced in the year 2008. A majority of the past studies

looked at the banking industry where they suggested that capital adequacy enhanced bank profitability and revenue efficiency but very little has been done concerning the insurance industry, (Wasseja & Mwenda, 2015; Almazari, 2013; Pessarossi & Weill 2013; Ajlouni *et al.*, 2011). Capital adequacy was measured by the Capital Adequacy Ratio (CAR).

The Study Objective

To establish the effect of capital adequacy on revenue efficiency of selected insurance companies in Kenya.

The Research Hypotheses

Ho: Capital Adequacy had no significant effect on revenue efficiency of selected insurance companies in Kenya.

Significance of the study

The study aimed at providing stakeholders in the insurance industry with knowledge on the effect of capital adequacy on revenue efficiency of the industry. The IRA being the regulators and policymakers has the responsibility of monitoring and evaluating the efficiency of insurance companies. This study provides the IRA and the management of insurance companies with objectively researched information regarding the responsiveness of a company's revenue efficiency to changes in the company's capital adequacy. As a result, policies put in place are objectively informed.

Information that is important to investors is the information that is material in enabling them to make accurate decisions regarding where, when and how to invest their funds. This research informed investors on how to use capital adequacy to gauge the revenue efficiency of insurance companies in Kenya and make appropriate investment decisions.

The study acts as an addition of information to the finance field and a basis for future reference by academicians and scholars. It provides researchers with the opportunity of knowing how capital adequacy relate with the revenue efficiency of the insurance companies in Kenya since much of the available research in this regard has concentrated on the developed economies but not Kenya.

Scope of the study

The study focused on capital adequacy and revenue efficiency of insurance companies in Kenya with the aim of establishing the model of explaining the relationship between them. The study considered 27 insurance companies that have been consistently in operation between 2008 and 2017 covering a study period of ten years. The period under study was chosen basing on the fact that the IRA was established in the year 2006 and Risk Based Supervision Framework whose main aim is to enhance industry capacity and stability was implemented in the year 2008.

Limitation of the study

The use of historical secondary data which the researcher had little or no control over what data had been collected, and how. However, the limitation was mitigated by the use of audited financial

statements submitted to IRA by the insurance companies in conformance to the provisions of the Insurance Act. By concentrating only on the insurance industry, the study was not sufficiently heterogeneous.

Literature Review

2.1. Theoretical Review

This section discusses relevant theory that supports the research problem at hand. The study reviewed the Agency Theory.

Agency Theory

The classical owner-manager agency problem was propounded by Jensen and Meckling, (1976) they described how the owner and the manager relates through the metaphor of a contract. The agency relationship results when one party known as the principal delegate's work or decision-making authority to another party known as the agent. In the insurance industry, insurers receive premiums from the insured and invest the money in financial assets (Cummins & Weiss, 2009), insurance companies in this case are the agents while the insured are the principals. The agency problem arises when the interests of the insured and the insurer diverge, (Hill and Jones, 2001).

The agency theory is based on risk, outcome uncertainty, incentives and it has been used by scholars in accounting, economics, finance, marketing, organizational behavior, and sociology (Arwa, 2010). The main concern for this relationship is to solve two main problems; firstly, the agency problem resulting from a divergence in the goals of the principal and the goals of the agent and secondly a divergence in risk preferences between the two (Eisenhart, 1989). Insurance is the transfer of risk between two parties (the insurer and the insured), where the insured pays premiums to the insurer who in return agrees to compensate the insured when the insured risk occurs, (Ingram, 2006). The insurer in this case is the agent whom the principal (insured) entrusts with their premiums to invest wisely and for the money to be available to and when the need arises.

2.2. Empirical Review

In this section, the various empirical studies of importance to this study are reviewed basing on the objectives of the study.

2.3.1. Capital Adequacy and Revenue Efficiency

Bochaberi, (2018), determined the effect of Bancassurance on financial performance of commercial banks in Kenya; the key variables under study were bancassurance, firm size, capital adequacy and liquidity. Using a multiple linear regression model, the study concluded that capital adequacy had a positive significant effect on financial performance of commercial banks in Kenya. However, the study concentrated on the financial performance of commercial banks in Kenya while this study looked at revenue efficiency of insurance companies in Kenya.

Pessarossi and Weill (2013), used the Stochastic Frontier Analysis to determine cost efficiency in the Chinese banking sector. The study looked at how capital adequacy requirement relates to efficiency for Chinese banks and concluded that capital adequacy requirements and cost efficiency had a positive relationship. The study showed that capital requirements improved bank efficiency although the degree of this effect was depended on ownership type. The study opined that low capital ratios are perceived to increase the shareholders' urge to take on excessive risk as a result of reduced moral hazard between shareholders and fund providers while a higher capital ratio tends to reduce shareholders' risk shifting tendencies as it acts as a risk control incentive. However, Pessarossi & Weill (2013), used SFA while this study used the two stage DEA.

A study by (Almazari, 2013), determined the relationship between Capital adequacy and profitability. The study obtained secondary data from nine Saudi banks. Using traditional financial ratios and linear regression technique, the study argued that capital adequacy improved bank profitability and minimized the expected financial distress and bankruptcy costs. Almazari, (2013) suggested that capital adequacy enables bankers and regulators to absorb shocks thus minimizing the chances of bank failures and losses to depositors, on the other hand, banks take excessive risk purely to maximize the shareholders' wealth at the expense of debt holders. However, these studies (Pessarossi and Weill 2013; Almazari, 2013), concentrated on competition in the banking sector using SFA and convectional financial ratios respectively while this study looked at the insurance companies using two stage DEA.

Sentero, (2012), sought to determine the effect of capital adequacy requirements on the efficiency of 43 Kenyan commercial banks for a period of five years. Using DEA, the study suggested that there was a significant relationship between capital adequacy and efficiency. The study further recommended that in order to improve solvency and liquidity, regulators should ensure strict adherence to laid down financial regulations on capital adequacy requirements and that higher regulations may be good for stability, but not necessarily for improved efficiency in the industry. However, the study did not consider time lags.

Malik, (2011), used Return on Assets as a measure of profitability to investigate firm-specific factors that determine the profitability of 34 insurance companies in Pakistan. The study concluded that the volume of capital was positively and significantly related with profitability. Malik, (2011), suggested that capital adequacy promoted the efficiency and stability of a financial system and an important indicator of an insurer's capability to withstand losses from the customers' claims. However, the study used the traditional financial ratios while this study used two stage DEA which is a frontier approach of measuring performance in terms of efficiency.

Research Methodology

The study was underpinned on the positivisim philosophy and adopted the causal research design. The target population was the 27 insurance companies that have consistently been in operation during the study period, 2008-2017 and registered by the Insurance Regulatory Authority. A census of all the 27 insurance companies was taken. Using a data collection sheet, secondary data was collected from audited financial statements as submitted to the Insurance Regulatory Authority. The dynamic panel secondary data was quantitative in nature and was analyzed using descriptive statistics and inferential statistics.

Descriptive statistics included mean, mode, median and standard deviations. Inferential statistics included correlation analysis and multivariate analysis using the two stage Data Envelopment Analysis by obtaining efficiency scores in the first stage followed by Dynamic panel regression model in stage two.

3.1. Stage one: Determination of Revenue Efficiency Scores

Two models have been developed in the DEA methodology; Constant Returns to Scale, (Charnes, *et.al,* 1978) and Variable Returns to Scale, (Banker, *et.al*, 1984). The Constant Returns to Scale (CRS) model assumes that there is no significant relationship between the scale of operations and efficiency therefore it gives the overall technical efficiency (OTE). That assumption is viable when all the DMUs operate at an optimal scale otherwise the computed measures of technical efficiency will be contaminated with scale efficiencies, (Sufian, 2007). The Variable Returns to Scale Model measures pure technical efficiency (PTE), which is the measurement of technical efficiency, free from the scale efficiency effects, (Seiford, 1996).

The study adopted the DEA models presented by (Cook & Seiford, 2009, Sufian, 2007). Assuming n insurance companies (i=1,…., n), based on a vector of *y* outputs with *s* elements (y_1, $y_2 \ldots\ldots y_s$) and a vector of *x* inputs with *m* elements (x_1, $x_2 \ldots\ldots x_m$), the problem is specified as a mathematical problem below to necessitate the choice of an optimal weight;

$$Max_{u,\,v}\theta = \frac{\sum_{r=1}^{s} u_r y_{rn}}{\sum_{i=1}^{m} v_i x_{in}} \quad \ldots\ldots\ldots\ldots\ldots\ldots (1) \qquad \text{Subject to; } \frac{\sum_{r=1}^{s} u_r y_r}{\sum_{i=1}^{m} v_i x_{ij}} \leq 1 \forall \text{ j} = 1\ldots, \text{n}$$

$$u_1 \ldots u_s \geq 0$$

$$v_1 \ldots v_m \geq 0$$

Where; *u* – Vector of weights on the outputs (Total Revenue)

v – Vector of weights on the inputs (Total Assets)

The objective of the DEA program is to determine the *u* and *v* that maximizes θ subject to program constraints, (Sufian, 2007). The weight vectors *u* and *v* that maximize the ratio of the weighted average outputs to the weighted average inputs for the first insurance company are determined first, (Athanassopoulos & Shale, 1997). The first condition constrains the maximum efficiency (θ), so the program initially selects weights *u* and *v* which produce an efficiency of one, (Avkiran, 1999). This first potential vector of weights for the first insurance company is applied to all other insurance companies in the study. As with the first insurance company, the efficiency for the remaining 26 insurance companies is also constrained to be one or less. If these weights yield a calculated efficiency greater than one for any insurance firm, *u* and *v* weights are rejected and the program selects another set of weights and starts the process again, (Cook & Seiford, 2009). The program repeatedly tests different weighting schemes against the other insurance companies until a set of weights that maximizes θ for the first insurance company is selected while not yielding a calculated efficiency greater than one for any other insurance company. This insurance-specific set of weights *u* and *v* are used to calculate the efficiency score for the first insurance company y. The DEA program then repeats the same procedure with the second, third and all the

remaining twenty-three firms until all the DMU-specific weights and corresponding efficiency scores for each of the *n* insurance companies have been calculated (Sufian, 2007). The efficiency scores range from zero to one where observations with a value of one are on the efficient frontier.

3.2. Stage two: Dynamic Panel Regression Model

Stage Two involved the determination of the potential effect of capital adequacy on the revenue efficiency scores obtained in stage one using the dynamic panel regression model as follows:

A panel regression model is based on panel data; these are observations on the same individual unit over several time periods. The relationship between the dependent variable Y and the independent variables Xs is given by:

$$Y_t = Y_{t-1} + \beta_1 X_{1t} + \beta_2 X_{2t} + ...\beta_n X_{nt} + \varepsilon \ldots\ldots\ldots\

Table 1: Summary of Descriptive Statistics

	Min	*Max*	*Mean*	*SD*	*Skewness*	*Kurtosis*	*Jarque Bera*	*Prob*	*Obs*
Revenue Efficiency	*0.096*	*1.000*	*0.944*	*0.076*	*0.000*	*0.000*	*101.25*	*0.000*	*270*
Capital Adequacy	*0.000*	*0.900*	*0.084*	*0.811*	*0.000*	*0.000*	*101.25*	*0.000*	*270*

Source, Research Data, 2019

From table 1, the results showed that capital adequacy had a minimum of 0.0, this is an indicator that some insurance companies were not adequately capitalized and were unable to meet the minimum capital ratios as required by the IRA, (Cytonn Report, 2019). Capital Adequacy had a mean of 0.084

Jarque-Bera test determines if the series is symmetric around its mean, it measures the difference of the skewness and kurtosis of the series. The null hypothesis for this test is that the variables are normally distributed and would lead to a bell curved distribution. Jarque-Bera test for normality shows that Capital Adequacy *(P = 0.000)*, is not normally distributed since their p-value were smaller than 0.05 at 95% confidence level, the residuals are not normally distributed which would lead to model bias (Jarque and Bera, 1980). Brooks, (2008) recommends that in case of sufficiently large samples violation of normality is inconsequential.

Correlation Analysis

The descriptive analysis above pointed out the feasible problems likely to be faced in the inferential analysis but there was need to carry out statistics with a more intuitive quantitative analysis. The correlation matrix helped in determining how best capital adequacy explained the movement in the revenue efficiency and the strength and nature of association. The study used the Pearson correlation at 5% significant level to determine the relationship between variables as shown in table 2.

Table 2: Pearson Correlation Matrix

	revenu~y	capita~y
revenueeff~y	1.0000	
capitalade~y	0.1663*	1.0000
	0.0062	

Source: Research data, 2019

Table 2, reveals the existence of a positive significant relationship between revenue efficiency and Capital Adequacy *(rho = 0.1663 P = 0.0062).* Although the Pearson Correlation reveals the strength of a linear relationship between two variables, it fails to completely characterize the relationship, thus, the need for a unit root test, (Babak, 2012). Diagnostics tests carried out for the regression were; test of normality, stationarity test, autocorrelation test and heteroscedasticity test.

4.3. Time Series Graphs and Trends of the Variables

During the study period, capital adequacy exhibits a random unsteady trend.

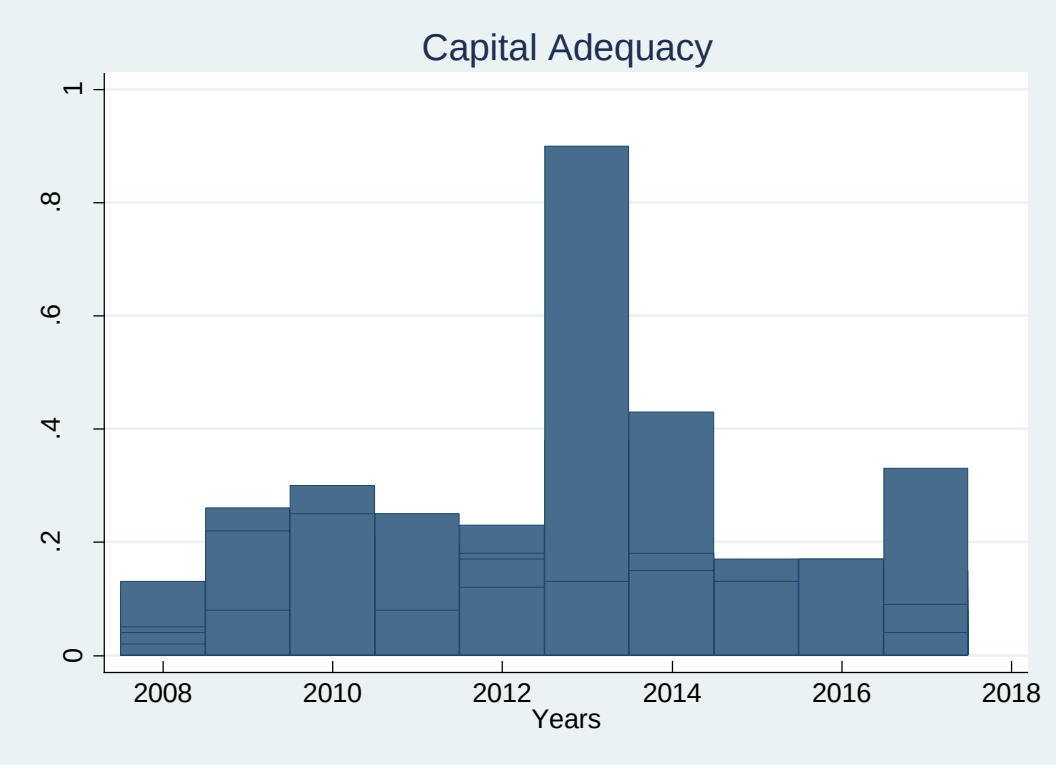

Figure 4.1: Trends in Capital Adequacy

Source, Research data, 2019

Capital Adequacy as shown in figure 4.1 exhibits a random trend and is seen to peak in 2013 this is occasioned by a dramatic change in the capital structure in the industry by the introduction of the Risk Based Capital (RBC) regime by the IRA and an increase in the minimum capital requirement each insurer is expected to hold. The introduction of the RBC regime is meant to support the implementation of the risk-based supervision framework that was introduced in the year 2008

Dynamic Panel Regression Analysis

The first empirical analysis sought to establish the effect of capital adequacy on revenue efficiency. In research it represents direct relationships between dependent variable and the independent variable. The results are presented in two stages. First stage was determining revenue efficiency scores

using DEA. Stage Two involved the determination of the potential effect of capital adequacy on the revenue efficiency scores obtained in stage one using the dynamic panel regression model. The study used the Dynamic Panel Data Model proposed by Arellano-Bover (1995) and Blundell-Bond, (1998). The Arellano-Bover/Blundell-Bond Generalized Methods of Moments estimator enables us to control for potential biases without relying on strictly exogenous instrumental variables. The results are as shown below:

Table 3: Dynamic Panel Regression Analysis

revenueeffi~y	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
revenueeffi~y L1.	-.0514045	.0604531	-0.85	0.395	-.1698904	.0670814
capitaladeq~y	.1466093	.0703283	2.08	0.037	.0087684	.2844501
_cons	1.421316	.1432542	9.92	0.000	1.140543	1.70209

Source: **Research data, 2019, At 5% significant level**

4.4.1. The effect of Revenue Efficiency at time (t -1) on Revenue Efficiency

From table 3, revenue efficiency at time (t-1) ($P = 0.395$) at 0.05 significant level implies previous revenue efficiency had no significant effect on the current revenue efficiency of insurance companies in Kenya.

4.4.2. The Effect of Capital Adequacy on Revenue Efficiency

From Table 3, Capital Adequacy has a positive statistically significant effect on revenue efficiency (β = 0.1466093, P = 0.037) at 0.05 significant level. This means that the more an insurance company improves on its capital adequacy in relation to the minimum required capital, the more revenue efficient it becomes. This finding supports the findings by Malik, (2011), who suggested that capital adequacy promoted the efficiency and stability of a financial system and Sentero, (2012), using DEA, suggested that there was a significant relationship between capital adequacy and efficiency.

The following regression model was established:

$$RE_{it} = 0.147CA_{it} + 1.421$$

Where:

CA – Capital Adequacy

RE_{it} - The revenue efficiency measure

Summary, Conclusion and Recommendation

5.1. Summary of the Findings

The null hypothesis stated that capital adequacy had no significant effect on revenue efficiency but the study findings revealed that capital adequacy had a positive statistically significant effect on revenue efficiency of insurance companies in Kenya. Therefore, we reject the null. The positive effect of capital adequacy on revenue efficiency is consistent with the earlier findings of Malik, (2011) and Sentero, (2012) who concluded that the effect of capital adequacy on revenue efficiency was positive and significant.

5.2. Policy Recommendations and Practice

The findings of this study have some crucial policy implications. The results indicate that capital adequacy is a very significant firm characteristic affecting the revenue efficiency of insurance companies in Kenya for it was found to have a significantly positive effect on revenue efficiency. Therefore, the capital maintained by an insurance company in relation to the minimum required capital set by the IRA at a particular time is an important factor to the revenue efficiency of the company. The study recommends that the IRA through a holistic analysis of an insurer's risk position and capital held at all times should be able to link the company's capital adequacy to the amount of risk the company underwrites, therefore adopting risk-based approach and emphasize on implementation of solvency II framework.

5.3. Future study Directions

Basing on the findings of this study, three areas are suggested for further research. Researchers may use different frameworks on the same data set, different assumptions and different research methods. Future researchers should attempt to improve on the decision-making techniques used in this study by expanding the model through addition of more firm characteristics and improving the model performance by the use of parametric frontier efficiency methods instead of the nonparametric DEA. Furthermore, research in this area can be improved by looking at different time periods- before the risk-based supervision was established by the IRA.

5.4. Suggestions for Further Research

Future researchers should attempt to improve the decision-making techniques used in this study by expanding the model through addition of more firm characteristics and by improving the model performance by the use of parametric frontier efficiency methods such as the stochastic frontier approach, thick frontier approach and distribution free approach instead of the nonparametric DEA. Furthermore, research in this area can be improved by looking at different time periods- before the risk-based supervision was established by the IRA. Future researchers should attempt to establish other firm characteristics that significantly affect the revenue efficiency other than the once identified in this study. Researchers may use different frameworks on the same data set, different assumptions and different research methods.

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3. Foreign Portfolio Investment and Stock Market Development at the Nairobi Securities Exchange, Kenya: An Ardl Bound Test Approach

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Abstract
The Nairobi Securities Exchange market has often been characterized by slow growth in the number of listed firms and very low liquidity. Moreover, the market is highly volatile as evidenced by the numerous erratic declines in key market indicators such as market capitalization, market turnover and the NSE 20 share index. Foreign investors play a significant role towards stock market development by enhancing the value of stocks and their liquidity. Hence, this study sought to shed light on the effect of foreign equity portfolio investment and foreign debt portfolio investment on stock market development at the Nairobi Securities Exchange, Kenya. The study adopted a census design and time series data for the period 2008-2018 was obtained from Capital Markets Authority quarterly statistical bulletins and the Nairobi Securities Exchange annual reports. The data was then analysed using correlation analysis and the Autoregressive Distributed Lag Model for both long and short run relationship between the study variables. The autoregressive distributed lag test results support the existence a significant short run positive effects of both foreign equity portfolio and foreign debt portfolio investment on stock market development. However, in the long run foreign debt portfolio had a significant positive effect on stock market development while the effect of foreign equity portfolio on stock market development was significant in the short run but insignificant in the long run. In view of the foregoing findings, the study recommends that the Kenyan governments' foreign investment policy should only target foreign portfolio investments that have a productive long run effect on the stock market and other sectors of the economy.
Key Words: *Foreign Portfolio Investment, Stock Market Development, Nairobi Securities Exchange and ARDL Bound Test Approach.*

1.0 Introduction

The development of emerging capital markets has led to improved quality and quantity of investments thus hastening the pace of economic growth and improving the living standards of the citizens (Nera & Eke, 2017). The Kenyan economic blue print of vision 2030 aims at transforming the country into a newly industrialized middle income country that provides high quality life to its citizens. Moreover, the vision 2030 envisions an efficient and transparent stock market. This huge milestone is to be achieved through deepening of the financial markets, expanding the bond market, equity markets and leveraging on remittances and other long term foreign capital inflows (Republic of Kenya, 2007). Notwithstanding the stock markets' pivotal role towards the countries' economic growth, stock market development in Kenya and its contribution to economic growth is still an issue of great concern (Republic of Kenya, 2016). According to Nyangoro (2013), the Nairobi Securities Exchange market is characterized by small size and very low liquidity. Further, the stock market demonstrates significant structural and regulatory weaknesses (Ngugi, Amanja & Amana, 2013).

Notably, the growth in the number of listed firms at the Nairobi Securities Exchange (NSE) and the market liquidity is very low with the annual market turnover averaging at less than 10 percent of the overall market capitalization throughout the study period (2008-2018). The bourse is equally characterized by high volatility as demonstrated annual trend in key equity market indicators for the period 2008-2018 are summarized in Table. 1.1.

Table 1.1: Key Equity Market Indicators (2008-2018)

Market indicators	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Market capitalization (B	853.8	834.17	1167	868.2	1272	1920	2316	2054	1931	2521.8	2102
Equity Turnover (Bn)	97.52	38.16	110.3	78.06	86.79	115.8	215.7	209.4	147.2	171.6	175.6
NSE 20 Share Index	3521	3247	4432	3205	4133	4927	5113	4041	3186	3732	2834
NSE All Share Index	73.37	71.64	97.82	68.03	94.86	136.65	162.89	145.70	133.34	171.20	140.43
Listed Firms	55	55	55	58	61	61	64	64	66	67	67

Source: CMA quarterly statistical bulletins (2008-2018)

Table 1.1 indicates that Market capitalization declined from Kshs. 853.1 Billion in 2008 to Kshs. 834.1 Billion in the year 2009 representing a loss of Kshs. 20 Billion while market turnover declines sharply from Kshs. 97.52 Billion to Kshs. 38.16 Billion over the same period. This can be attributed to the lagged aftermath effects of the global financial crisis and the post-election violence as foreign investors moved away their investments from the domestic market (Kibaara, 2008). The market recovered from the effects of the global financial crisis and the post-election violence in the year 2010 experiencing a steady bullish run till 2015 when the market capitalization decelerated from Kshs.2,316 Billion in the year 2014 to Kshs.2,054 Billion in the year 2015 representing a loss of Kshs. 262 Billion in a single financial year (CMA, 2016). However the worst decline throughout the period is experienced in the year 2018 attributed to the aftermath effects of the prolonged election period of 2017-2018. During this period the market capitalization dropped by over Kshs.400 Billion from Kshs. 2521 Billion in 2017 to Kshs. 2102 Billion in 2018 (NSE, 2018). Additionally, the stock market is characterized by frequent volatility with the NSE 20 share index often falling below the psychological mark of 4000. Figure 1.3 demonstrates the quarterly trend of the NSE 20 share index for the period January 2008- December 2018.

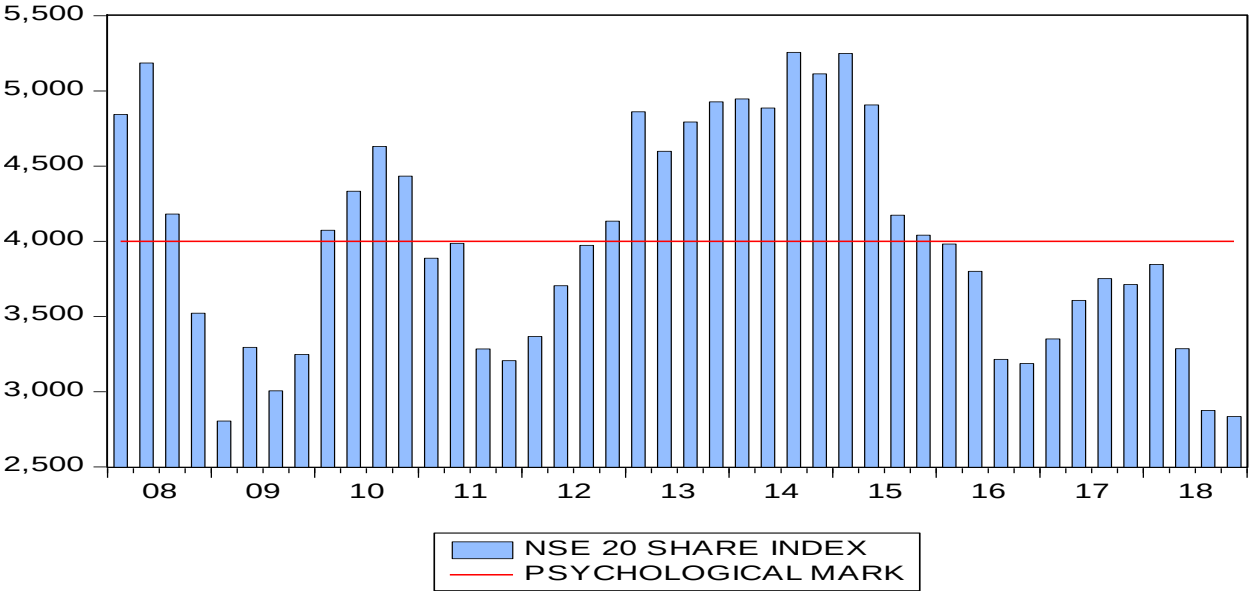

Figure 1.3: Trend of the NSE 20 Share Index

Source: CMA Quarterly Statistical Reports (2008-2018)

Figure 1.3 indicates that the NSE 20 share index moved from 4843 basis points in the first quarter of the year 2008 to 3521.18 points by the end of the fourth quarter of 2008 and further dropped to 3247.44 points by the end of 2009. This decline is far below the NSE 20 share index psychological mark of 4000 basis points. In 2010 the index registered steady increase to 4432.6 points but further declined to 3224.18 points in the year 2011.The index increased steadily to reach 5212.11 basis points in 2014 but further

declined to 4040.75 in 2015. The index further registered an increase to 3186 points before increasing by 17% to close at 3712 points in 2017 (NSE, 2017). However the worst decline is registered in the year 2018 when the market index declined by 24% to close the year at 2834 points (NSE, 2018).

Foreign investors' participation in the stock market is an important source of stock market liquidity. This is attributed, but not entirely, to the fact that foreign investors, unlike the domestic investors who often buy and hold stocks, are likely to trade in the instruments thus improving the market liquidity and hence development of the stock market. Foreign portfolio flows represent additional capital investment in the stock market leading to increased market liquidity (Kumar & Devi, 2013). Moreover, the significant role of foreign financial inflows towards stock market development is attributed the fact that foreign capital inflows increases the depth and breadth of the stock market consequently enhancing stock market size and liquidity. Besides, increased foreign financial flows eventually encourage the political elite to review regulations on foreign investors' protection further leading to stock market development. Such improved regulations include amendment of Exchange Control Act that allowed foreign investor participation at the Nairobi Securities Exchange market (Ngugi, 2005). Despite the substantial returns generated in emerging capital markets, the cyclical nature of the markets makes it impossible for the existing and potential investors to accurately predict market returns. Excessive volatility affects the smooth operations of the market and consequently the reduce returns on investment (Barnor, 2014). Despite the theoretical link between foreign financial inflows and development of stock markets, the nature of relationship in the context of NSE remains an issue of empirical investigation and therefore forms the motivation of the current study.it is against this back drop that this paper sought to establish:

The effect of foreign equity portfolio flows on stock market development at the Nairobi Securities Exchange, Kenya.

The effect of foreign debt portfolio flows on stock market development at the Nairobi Securities Exchange, Kenya.

2. literature Review

Stock market development is the process through which the stock market increases in size, liquidity, price stability, linkage with other markets, and variety of instruments, improved technology and market concentration (Wassal, 2013). From the foregoing stock market development is therefore a multi-faceted, long-term and complex process that is measured by several factors. However, recent studies conducted globally and in the emerging markets of Sub-Saharan Africa indicate that a lot of emphasis has been placed on Market size, liquidity and volatility as the most appropriate indicators of stock market development (Oziengbe & Ovuefyen, 2013; Soumare & Tchana, 2011; Idenyi *et al.*, 2016; Mohanty, 2016; Raza & Jawaid, 2014 and Nyangoro,2013). This can be attributed to the fact that foreign financial flows into and out of the domestic market leads to increased fluctuation in the value of stocks and liquidity of the market. Market size is measured using the number of listed firms or the value of market capitalization (Nwiado & Deekor, 2013). Stock market capitalization is however preferred due to its direct relationship with the firms' ability to mobilize capital and its future growth prospects (Rajan & Zangles, 2003).

The Base Broadening theory proposed by Merton (1987) contends that expanding the number of investors, through the liberalization of the financial markets, to include investors from foreign countries would lead to increased diversification. Increased diversification leads to lower risk and consequently

lowering the required risk premium. This has the effect of increasing capital availability in the stock market, liquidity and price stability hence leading to development of the stock market (Galindo *et al.*, 2007). The liberalization of the financial markets, leads to increased market efficiency and better allocation of resources to the most optimum users in the domestic capital markets (Yartey & Adjasi, 2008). According to the theory, the assumed factors barring foreigners' investments from holding fully diversified portfolios are informational in that; investors will fail to invest in stocks if they are not fully informed about the returns available in the capital markets.

There is yet another view point, Torre and Schmukler (2007) posit that foreign financial inflows influence the stock market development in two ways; first it enhances availability of capital from the international financial markets. Since most developing markets suffer from severe scarcity of capital, this problem can be diverted through increased foreign investment (Kumar & Devi, 2012). Secondly, the developing countries will try to emulate the developed stock markets by implementing several reforms and adopting better technology. This has seen the introduction of the central depository system to ease trading and derivatives market to increase the variety of instruments available for trade at the Nairobi Securities Exchange (NSE). According to Ghose (2014), the economic crisis of the 1990s highlighted the character of certain types of foreign capital flows such as private equity which appear to be driven by short run speculative objective in a world of asymmetric information. Therefore, private portfolio flows intensify the recipient countries susceptibility to global shocks especially during periods of spontaneous reversal of portfolio flows.

3.0 Methodology

The study adopted a census design and time series data for the period 2008-2018 was obtained from Capital Markets Authority quarterly statistical bulletins, Central Bank of Kenya quarterly reports and the Nairobi Securities Exchange annual reports. The data was then analysed using correlation analysis and the Autoregressive Distributed Lag Model (ARDL).The ARDL bound testing developed by (Pesaran and Shin, 1995; Pesaran *et al.*,2001) was used to establish the long run and short run effect of foreign financial portfolio flows on stock market development (Raza & Jawaid, 2013). The ARDL is appropriate since its applied irrespective of the underlying variables being integrated of order I(0), I(1) but not I(2). ARDL is more robust and performs better in small samples and large than other cointergration techniques (Kalim & Shahbaz, 2008). Further, ARDL adjusted with an Error Correction Model (ECM) is applied in testing for both long run and short run dynamics simultaneously (Abubakar & Danladi, 2018). The ARDL model for the study is given in model 3.1, 3.2 and 3.3.

$$\Delta lnMCAP_t=\beta_0+\Delta lnMCAP_{t-p}+\beta_1\sum^{n}_{t=1}\Delta lnFEP_{t-p}+\beta_2\sum^{n}_{t=1}\Delta lnFDP_{t-p}\ \mu_t \quad \text{3.1}$$

$$\Delta lnMTNR_t=\beta_0+\Delta lnMTNR_{t-p}+\beta_1\sum^{n}_{t=1}\Delta lnFEP_{t-p}+\beta_2\sum^{n}_{t=1}\Delta lnFDP_{t-p}+\mu_t \quad \text{3.2}$$

$$\Delta lnNASI_t=\beta_0+\Delta lnNASI_{t-p}+\beta_1\sum^{n}_{t=1}\Delta lnFEP_{t-p}+\beta_2\sum^{n}_{t=1}\Delta lnFDP_{t-p}+_p+\mu_t \quad \text{3.3}$$

Where:

$_{p=}$ The maximum lag period

Δ is the difference operator.

$lnMCAP_t$ = Natural Log of Market Capitalization at time t

$lnMTNR_t$ = Natural Log of Market Turnover at time t

$lnNASI_t$ = Natural Log of NSE All Share Index at time t

$lnFEP_t$ = Natural Log of Foreign Equity Portfolio at time t

$lnFDP_t$ = Natural Log of Foreign Debt Portfolio at time t

μ_t = Error term.

However, to test for short run effect of foreign financial inflows on stock market development the Autoregressive Distributed Lag (ARDL) model is adjusted with an Error Correction Model (ECM) as demonstrated in models 3.4, 3.5 and 3.6.

$$\Delta MCAP_t=\beta_0+\Delta MCAP_{t-p}+\beta_1\sum^{n}_{t=1}\Delta FEP_{t-p}+\beta_2\sum^{n}_{t=1}\Delta FDP_{t-p}+\alpha_1\Delta FEP_{t-p}+\alpha_2\Delta FDP_{t-p}+\mu_i \ldots\ldots\ldots\ldots 3.4$$

$$\Delta MTNR_t=\beta_0+\Delta MTNR_{t-p}+\beta_1\sum^{n}_{t=1}\Delta FEP_{t-p}+\beta_2\sum^{n}_{t=1}\Delta FDP_{t-p}+\alpha_1\Delta FEP_{t-p}+\alpha_2\Delta FDP_{t-p+}\mu_{it} \ldots\ldots\ldots 3.5$$

$$\Delta NASI_t=\beta_0+\Delta NASI_{t-p}+\beta_1\sum^{n}_{t=1}\Delta FEP_{t-p}+\beta_2\sum^{n}_{t=1}\Delta FDP_{t-p}+\alpha_1\Delta FEP_{t-p}+\alpha_2\Delta FDP_{t-p}+\mu_{it} \ldots\ldots\ldots\ldots 3.6$$

Where:
Δ is the difference operator.
$\beta 1 \ldots\ldots \beta 5$ are the long run coefficients.
$\alpha_1 \ldots\ldots \alpha_4$ are the short run coefficients.
$lnMCAP_t$ = Natural Log of Market Capitalization at time t
$lnMTNR_t$ = Natural Log of Market Turnover at time t
$lnNASI_t$ = Natural Log of NSE All Share Index at time t
$lnFEP_t$ = Natural Log of Foreign Equity Portfolio at time t
$lnFDP_t$ = Natural Log of Foreign Debt Portfolio at time t
μ_t = Error term.

ARDL model is thus divided into two parts; the first part of the equation with $\beta 0$ to $\beta 2$ denotes the long run coefficients of the model, while the coefficients $\alpha 1$ to $\alpha 2$ signifies the short run coefficients of the model. Before conducting any conducting any cointergration test on the data collected the researcher determined the optimal number of lags. This is performed whenever the ARDL bound testing is used (Kalim and Shahbaz, 2008). Subsequently, the study conducted diagnostic tests before testing for the existence of long run and short run relationship between the study variables.

4.0 Research Findings and Discussion

4.1: Descriptive Statistics

The findings of the study depend on the nature of the data and the methods applied in analyzing such data. Descriptive statistics such as the mean, maximum, minimum and standard deviation are used to describe the nature of the data used in the study. The use of the mean and standard deviation in the description of the study data is informed by the fact that in comparison to other statistical measures the mean is the most robust statistic while the standard deviation is the most stable statistical measure of dispersion (Mungami, 2013). Table 4.1 presents the results from the description statistics of the study data.

Table 4.1: Descriptive Statistics Results

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Market Capitalization (MCAP)	44	689.05	2817.36	1612.002	624.25575
Market Turnover (MTNR)	44	6.68	65.00	33.6141	15.48421
NSE All Share Index (NASI)	44	59.49	175.11	118.4795	35.69024
Foreign Equity Portfolio (FEP)	44	-11.12	13.53	1.2017	4.89884
Foreign Debt Portfolio (FDP)	44	.15	3.25	1.5054	.70601

Source: Study Data 2019

Table 4.1 indicates that the mean quarterly market capitalization (MCAP) for the period under the study is Ksh.1612.002 Billion with a standard deviation of Ksh. 624.256 Billion. The standard deviation indicates a high variation of market capitalization in the period under review as evidenced by a maximum market capitalization of Ksh. 2817.36 Billion and minimum value of Ksh. 689.05 Billion. The market liquidity as measured using the quarterly market turnover (MTNR) had a mean of Kshs. 33.614 Billion with a standard deviation of Kshs. 15.484 Billion. The average market turnover is less than 3% of the average market capitalization during the period. This is an indication of very low liquidity at the NSE supporting the findings of Nyangoro (2013) that the Kenyan stock market is characterized by small size and extreme volatility.

4.2 CUSUM Model Stability Test Results

The CUSUM Model Stability Test has been used by the study to assess the stability of the model coefficients. The CUSUM test involves testing the null hypothesis that all the model coefficients are significant. Therefore if the plot of CUSUM statistic is within the critical bounds at the level of significance then the study fails to reject the null hypothesis and the study finds that model coefficients are stable (Adjasi & Biekle, 2005). However, if the plot of the CUSUM statistic lies outside the critical bounds at the level of significance then reject the null hypothesis. Figure 4.1 presents the CUSUM test results with Market capitalization as the dependent variable.

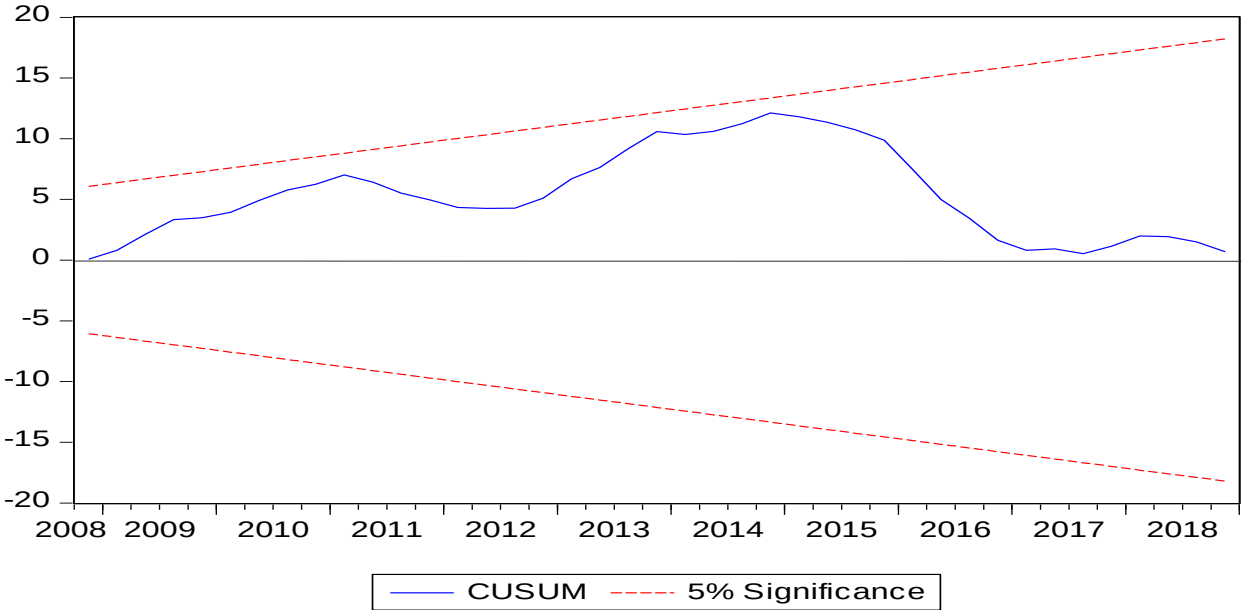

Figure 4.1: CUSUM Test Results with Market Capitalization as the Dependent Variable

Source: Study Data (2019)

Figure 4.1 indicates that the plot of CUSUM statistic is within the critical bounds at 0.05 level of significance. Hence the study fails to reject the null hypothesis and study finds that Model 3.2a coefficients are stable at 0.05 level of significance. Fig 4.2 Presents the CUSUM test results with Market Turnover as the dependent variable (Model 3.2b).

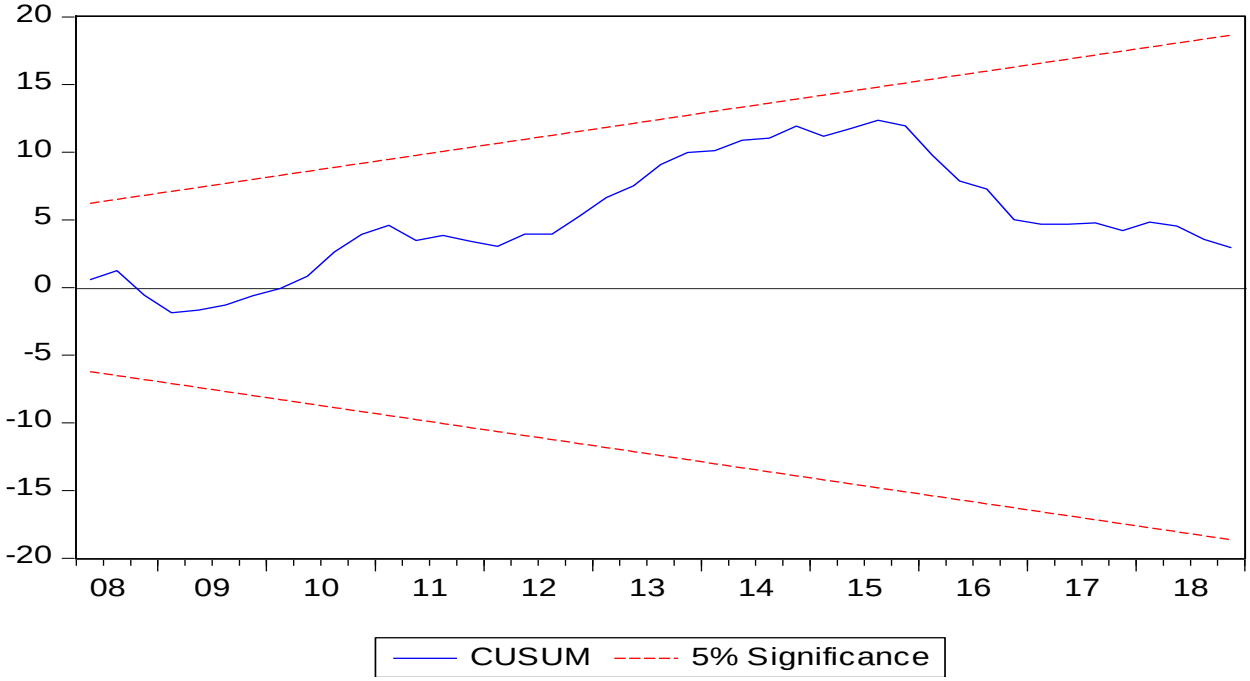

Figure 4.2: CUSUM test results with Market Turnover as the dependent variable

Source: Study Data (2019)

Figure 4.2 indicates that the plot of CUSUM statistic is within the critical bounds at 0.05 level of significance. Hence the study fails to reject the null hypothesis and study finds that Model 3.2b coefficients are stable at 0.05 level of significance. Fig 4.3 is a presentation of the CUSUM test results with Market Index as the dependent variable.

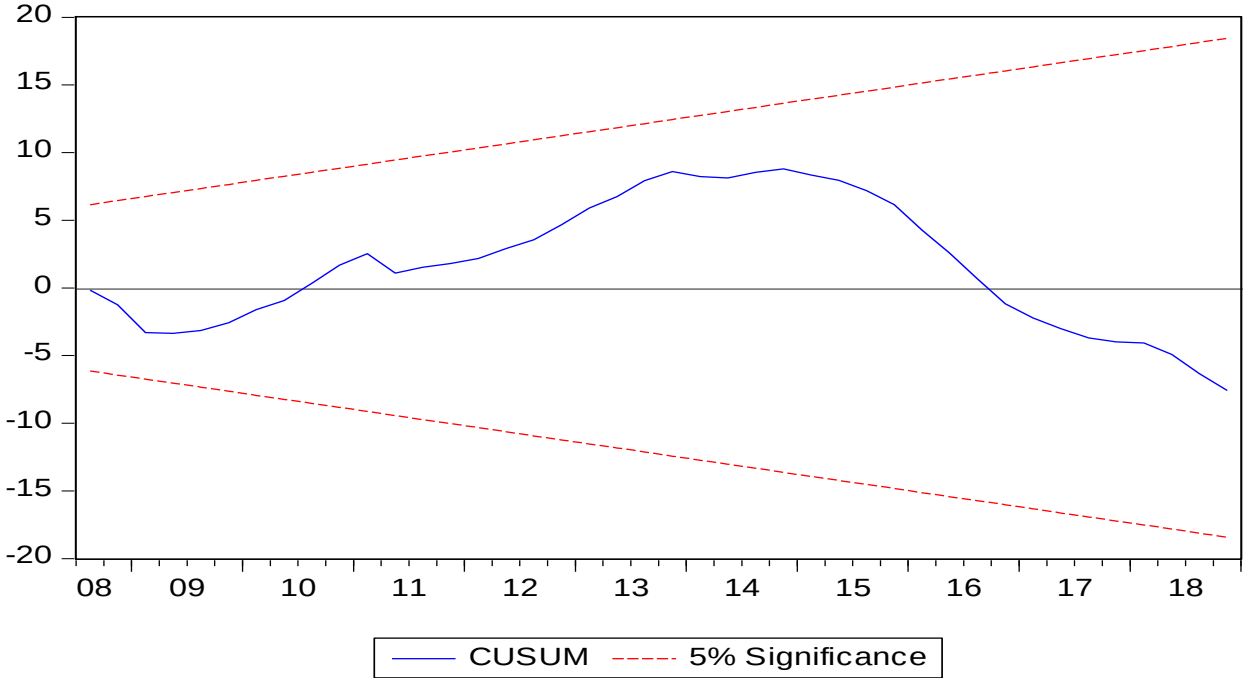

Figure 4.3: CUSUM test results with NSE All Share Index as the dependent variable

Figure 4.3 indicates that the plot of CUSUM statistic is within the critical bounds at 0.05 level of significance. Hence the study fails to reject the null hypothesis and study finds that Model 3.2c coefficients are stable at 0.05 level of significance.

4.3 ARDL Cointergration Test Results

The ARDL bound test was based on the assumption that there is no long run significant relationship between the foreign portfolio flows and stock market development at the Nairobi Securities Exchange (NSE), Kenya. Table 4.2 below presents a summary of the estimated ARDL long run coefficients with market capitalization, market turnover and the NSE all-share index as the dependent variable.

Table 4.20: Summary of ARDL Cointergration Test Results

Table 4.30a ARDL-ECM Coefficients (Dependent Variable: Market Capitalization)				
	Short Run Coefficients		Long Run Coefficients	
Variable	Coefficient	Prob	Coefficient	Prob.
lnFEP	Positive	0.0417<0.05(significant)	Negative	0.2395>0.05(Insignificant)
lnFDP	Positive	0.0240<0.05(significant)	Positive	0.0177<0.05(significant)
Table 4.30b ARDL-ECM Coefficients (Dependent Variable: Market Turnover)				
Variable	Coefficient	Prob	Coefficient	Prob.*
lnFEP	Positive	0.0481<0.05(significant)	Negative	0.1873>0.05(Insignificant)
lnFDP	Positive	0.0381<0.05(significant)	Positive	0.0040<0.05(significant
Table 4.30c ARDL-ECM Coefficients (Dependent Variable: NSE All Share Index)				
Variable	Coefficient	Std. Error	Coefficient	Prob.*
lnFEP	Positive	0.0007<0.05(significant)	Negative	0.0579>0.05(Insignificant)
lnFDP	Positive	0.0185<0.05(significant)	Positive	0.0280<0.05(significant)

Source: Study Data (2019)

Table 4.30 above indicate that all the study variables have a significant positive short run effect on market capitalization, market turnover and the NSE All Share index as indicators of stock market development. However, in the long run only foreign debt portfolio and diaspora remittances have a significant long run effect. Foreign direct investment has a significant long run effect on stock market development while foreign equity portfolio has no significant effect on stock market development.

5.0 Conclusions and Recommendations

Foreign Equity Portfolio had an insignificant long run effect and a significant short run positive effect on market capitalization, market turnover and NSE All Share index as indicators of stock market

development. Since Foreign Equity Portfolio had a significant positive short run effect on market capitalization, Market turnover and the NSE All Share the study therefore concludes that an increase in foreign equity portfolio leads to an increase in the market value, liquidity and price stability at the Nairobi Securities Exchange in the short run. However, in the long run, increased foreign equity portfolio inflows does not have a noticeable effect on market value, liquidity and price stability at the Nairobi Securities Exchange market. Since stock market development is a long term phenomenon the study therefore concludes that changes in foreign equity investments will not have a significant effect the development of the stock market at the Nairobi Securities Exchange market.

Foreign Debt portfolio has a significant long run and short run positive effect on market capitalization as an indicator of stock market development. Moreover, Foreign Debt Portfolio had a significant long run and short run positive effect on stock market development as measured using market turnover. Equally the effect foreign debt portfolio on the NSE All Share index was positive and significant in both the short run and the long run. Since foreign debt portfolio has significant positive effect on market capitalization, market turnover and the NSE All Share index the study concludes that an increase in foreign debt portfolio will lead to enhanced market value, liquidity and price stability.

5.1 Policy Implications and Recommendations of the Study

First, the Kenyan government thorough the ministry of foreign affairs and other government agencies need to reconsider the Kenya foreign investment policy and the effectiveness of each foreign portfolio flow with the sole objective being to attract productive foreign portfolio inflows. The Kenya government should create a department of economic relations to be located at all Kenyan foreign embassies abroad. The department will be charged with the role of sensitizing the Kenyans in the diaspora on the available investment opportunities at the Nairobi Securities Exchange.

Secondly, the government needs to devise measures that would boost investor confidence and thus attract increased foreign portfolio flows. The government should institute aggressive campaigns targeting the Kenyans living in the diaspora to educate them on the importance of investing back at home. Further, The Capital Markets Authority (CMA) needs to work together with Kenyan government to come up with more aggressive marketing activities to attract foreign investors to the Kenyan stock market.

Lastly, Capital Markets Authority (CMA) needs to devise measures of encouraging the local investors to invest and access funds through the stock market. The CMA needs to implement policy measures that would attract the local small and medium enterprises to have their stocks listed at the stock market. The Capital Market and the Nairobi Securities Exchange need to work together to ensure that more Kenyans are conversant with listed securities and are participating in buying and selling of shares listed at NSE. They will also benefit from capital gains and when there is more foreign portfolios flows.

5.2 Areas for Further Research

This study is limited to eleven years' period of January 2008-December 2018 and the data was analysed on quarterly basis. This period relates to the post-global financial crisis of 2008. The post global financial crisis period is characterized by increased volume and volatility of foreign financial inflows in comparison to the pre-global financial crisis period. Therefore, future studies can be conducted on the

period after the global health and economic crisis occasioned by the Covid 19 pandemic. Equally, with the advancement of technology in data collection and storage future studies can be conducted based on data analysed on more frequent observations such as monthly, weekly and even on daily basis. This would capture the short run dynamics of the Nairobi Securities Exchange market better and provide more precise findings.

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4. Vector Autoregressive Modelling of Kenyan Economic Uncertainty of the COVID-19 Pandemic on Stock and Oil Markets Volatility

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The widening uncertainty related to COVID-19 has stressed the business cycle of both local and global economy. The adverse effects of imbalances of demand and supply of oil products as well as stock returns pose a great threat to economic certainty. This paper focused on analysing the effect of economic uncertainty of the COVID-19 pandemic on oil and stock markets volatility in Kenya using Vector Autoregressive (VAR) model. The study considered a sampling period of between 13th March, 2020 to 30th September, 2020, yielding 202 observations. The study followed a purposive sampling technique in selecting the study sample size of daily data of COVID-19 new death and new infection cases, oil prices, number of days of travel bans and stock prices. The paper demonstrates that a positive shock of economic uncertainty caused by COVID-19 pandemic results to a decrease in the oil prices during the impact period. In regards to stock market volatility, the findings indicate that increase in new cases and new deaths creates worst economic uncertainty associated with travel bans and business restrictions thereby increasing the stock market volatility as several stock investors lose confidence in the market. Therefore, in light of this, concerted efforts should be put in place by the Kenyan government so as to speed the economic recovery. These may include easing on business travel restrictions and reduced interest rates. This will increase money supply and by extend result into increased lending to the business investments.

Keywords: *Economic Uncertainty, COVID-19 Pandemic, Oil Prices, Stock Prices, Volatility*

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5. Promotional Mix Strategies, Behaviour Change and Social Product Adoption among Rural Households in Kenya

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Not for Profit organizations promote the change of behaviours that have a negative impact to the environment and to the community. Such behaviours are associated with causing diseases or environmental degradation. Various strategies have been used to help people quit smoking, prevent HIV-Aids, Prevent Malaria, improve dietary intake, reduce lifestyle diseases, improve sanitation, water purification, improve maternal health or even conserve forests. The choice of communication channels and tools is critical in behaviour change and adoption of social goods. The choice of information placement, ensuring that people are reached can also influence adoption. Most campaigns end without any change, or with minimal change that is not sustainable. The sustainability of this change in behaviour relies mostly on ability to recall the message, cues of action or adoption of products and services that facilitate or reinforce the behaviour change. Social Marketing has been used to improve adoption of social products and services and ensure sustainability. This paper explores the various promotional strategies used in social marketing, how they link to theories of change and product adoption. The paper demonstrates the effectiveness of promotional channels, tools in initiating change, the mediating effect of awareness and knowledge and how it predicts adoption of new behaviour /social products. The next paper will demonstrate the moderating effect of product and service accessibility/availability in social behaviour change and sustainability. This is an applied research from program implemented between 2016-201 in 4 counties in Kenya.

Keywords: *Improved sanitation, sustainable development goals, SDGs, sanitation marketing, promotional mix, Social Behaviour Change Communication, BCC, SBCC, Open defecation, CLTs, handwashing, improved toilets, hierarchy of effect model.*

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6. Solar Technologies for Off-Grid Rural Fishing Communities Consultations Camiguin Island, Philippines, March 2020

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This study describes a concept for the productive use of renewable energy to support the economic development in a rural area of the Philippines. As an example for productive use serves the application of cooling equipment based on electricity generation by solar technology. More precisely, the business case of an off-grid ice maker generating ice cubes for fishermen of a small island in the Philippines is analysed. The result is compared with the existing case, i. e. buying ice cubes from an ice cube producer using the island grid based on a large Diesel Genset. The business case is based on a series of interviews of important stakeholders included in the value chain of the fishery business in March 2018. These are the fishermen, the officials of the province level and the local level and further the fish traders being involved in the sale and distribution process. The result shows that the application of a pure off-grid ice making

facility is economically feasible. The biggest challenge for a successful implementation of the concept is the lack of capital for the investment in the off-grid facility. The investment demand typically exceeds classical pay-as-you-schemes. Thus ways of developing alternative microfinance instruments have to be elaborated further for a successful implementation. The proposed concept of a foundation of a cooperative with fishermen as shareholders and a micro finance institution as a debtholder contributes to an increase of the income of the fishermen of roughly 14%.

Keywords: *Decentralized rural electrification; productive use, solar freezer, solar cooler, business models*

7. Investment Incentives as a Mediator in the Relationship between Macroeconomic Variables and the Growth of Domestic Private Investment

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ABSTRACT

The objective of this study was to investigate the mediating effect of investment incentives on the growth of domestic private investment in Kenya using time series data for the period 1997 to 2018. To test for mediating effect, the study used (Baron & Kenny, 1986) approach which proposed a four-step procedure in which several regression analyses were conducted and the significance of the coefficients examined. The results did not consistently support a full mediation hypothesis given that the coefficients did not consistently change in magnitude and significance. Since Therefore, the study does not rejected the null hypothesis that investment incentives do not meditate on the relationship between macroeconomic variables and the growth of domestic private investment in Kenya. The results of this study will benefit policy makers by providing them with data-based evidence that will guide them in making appropriate policies that encourage growth of domestic private investment in Kenya and institute proper management of domestic private investments to boost economic growth in Kenya.

Keywords: Tax expenditure, domestic private investment, government expenditure in infrastructure

Introduction

The growth in domestic private investment has been recognized as a promoter of economic growth of any economy. The level of domestic private investment is influenced by resource mobilization which also depend on the macroeconomic environment of any economy (Lawrence & Funso, 2018). Kalu & Onyinge (2015) opines that private sector investment is the number one catalyst for economic growth whereas the public sector is tasked with providing a conducive environment. This is because private investment forms an important portion of the Gross Domestic Product (GDP), when investment grows GDP also grows (Altaleb & Alokor, 2012). To be able to stimulate and sustain economic growth, it is paramount that developing countries have a private investment as a significant portion of GDP (CBK & World Bank,

2017). According to Gillis, Perkins, Roemer and Sodgrass (1987), private investment as portion of GDP should not be less than 15 at any given time, whereas the target percentage of private investment should be at least 25% of GDP.

With a stated government policy objective of achieving an average economic growth rate of 10 percent per annum, investment levels should be above 32 percent of the GDP with public investment being above 9 percent of the GDP and private investment being above 24 percent of the GDP (ROK, 2012). The growth in domestic private investment has been identified as a promoter of economic growth of any economy. The level of domestic private investment is influenced by resource mobilization which also depend on the macroeconomic environment of any economy (Lawrence & Funso, 2018). The level of domestic private investment is influenced by resource mobilization which also depend on the macroeconomic environment of any economy (Lawrence & Funso, 2018).

Investment incentives are quantifiable economic benefits provided by government to entrepreneurs with an aim to promote investment and direct them to specific sectors of the economy (Gitonga, 2017). United Nations (2010) notes that these incentives can be categorized as either fiscal or non-fiscal. Fiscal benefits include tax concessions while non-fiscal benefits include loans and grants. The previous few decades have been characterized by massive efforts by government to make the country investment hub for both foreign direct investment and private investments. In this regard, the government has embarked on formulation of policies and incentives that are meant to attract investors into the country. Investors are set to enjoy tax incentives yet another strategy to promote investment (Abdulla, Othman, & Hongzhong, 2012).

Statement of the Problem

The vision 2030 economic pillar aims to achieve an average economic growth rate of 10 per cent per annum and sustaining the same until 2030 (GOK, 2012). Sufficient economic growth of at least 7% is needed so as to achieve the sustainable development goals this will be made possible by a thriving private sector which is also crucial for poverty reduction in any country (World Bank, 2017). The envisioned economic growth is anchored on increase in private and public investment specifically, private investments were expected to rise from 15.6% of GDP in 2006/07 to 22.9% in 2012/13, and to over 24% of GDP during the period 2020/21 to 2030 (KIPPRA, 2017). At 4.3% of GDP in 2016 and 5.3% of GDP in 2017, this remains below 12%-15% required to sustain a robust private investment for economic growth (World Bank, 2017). Notably, Kenya's Private sector investment has continued to perform below expectations (Kanyua, 2014).

Several studies have been conducted on growth of domestic private investment in Kenya. Gachoki and Nyang'oro (2016) studied the impacts of capital flight on private investment in Kenya, Mwenda (2017) researched on how to strengthen a vibrant domestic investment market for economic growth in Kenya, Kamundia (2015) studied the effects of public debt on private investments and economic growth in Kenya, Mbaye (2014) researched on determinants of domestic private investments in Kenya, Njuru (2012) studied the effects of fiscal policy on private investments in Kenya, Cherono (2013) researched on the effects of remittances and financial development on private investment in Kenya. From the literature reviewed, it is worth noting that little attention have been paid to the mediating role of investment

incentives on the relationship between macroeconomic variables and growth DPI in Kenya. This study will fill in on this existing knowledge gap.

Specific Objectives of the study

To determine the mediating effect of investment incentives on the relationship between macroeconomic variables and growth of domestic private investment in Kenya.

Research Hypotheses

H_{01}: Investment incentives do not mediate on the relationship between macroeconomic variables and growth of domestic private investment in Kenya.

Literature Review

Theoretical Review

Keynesian Theory of Investment

Keynes (1936) laid emphasis on the central role of investment as a driver influencing aggregate output, employment and short term fluctuations in economic activities. The theory is based on marginal efficiency of capital and liquidity preference pillars. The theory stresses that investment is as a result of firms matching the expected return on new capital, referred to as the marginal efficiency of capital (MEC), and with the cost of capital, which depends principally on the real interest rate. Keynes articulated an investment function of the form I = I0 + i(r), where I is investment, I0 is autonomous investment and i(r) is interest rates. The theory put forward that investment is inversely proportional to interest rates. The higher the interest rate, the less likely the firm will be willing to undertake any given investment project. Keynes stated that firms rank various investment projects depending on the internal rate of return (IRR), or marginal efficiency of investment.

Neoclassical Flexible Accelerator Theory

The basic assumption of the flexible accelerator principle is that investment is a function of the level of output and the user cost of capital. The user cost of capital is, however, dependent on the price of capital goods, the real interest rate, and the rate of depreciation of capital assets.

This theory also links monetary and fiscal policy adjustment to investment (Olweny & Chiluwe, 2012). If expansionary fiscal policy (high government spending and low personal tax policy) is combined with a tax policy such as a greater investment tax credit will promote private investment. Secondly, the expansionary fiscal policy raises the level of income and expected output of the firms and will therefore raise the level of desired capital stock and hence stimulate investment. On the other hand, expansionary monetary policy lowers interest rate which would reduce rental cost of capital and will increase the desired capital stock, (Mundia, (2015) ; Hassan (2015.

Conceptual Framework

The key variables in this study were put in a conceptual framework and categorized as independent, mediator and dependent variables. This study investigated the mediating role of investment incentives on the relationship between macroeconomic variables and growth of domestic private investment Kenya. The variables in the conceptual framework were derived from the theories identified in this study.

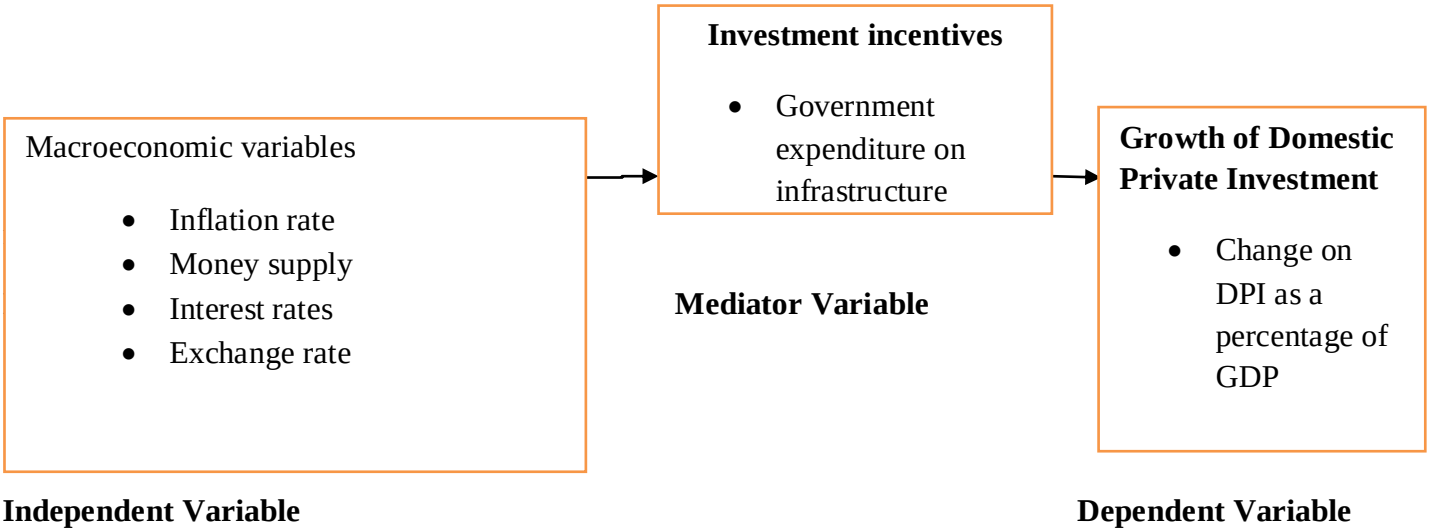

Figure 1: Conceptual framework

Macroeconomic Variables, Investment Incentives and Growth of Domestic Private Investment

Gitonga (2017) defines investment incentives as quantifiable economic benefits provided by government to entrepreneurs with an aim to promote investment and direct those to specific sectors of the economy. United Nations (2010) notes that these incentives can be categorized as either fiscal or non-fiscal. Fiscal benefits include tax concessions while non-fiscal benefits include loans and grants. The previous few decades have been characterized by massive efforts by government to make the country investment hub for both foreign direct investment and private investments. In this regard, the government has embarked on formulation of policies and incentives that are meant to attract investors into the country. Investors are set to enjoy tax incentives yet another strategy to promote investment (Abdulla, Othman, & Hongzhong, 2012).

The Kenya Revenue Authority (2018) characterizes the tax incentive as an arrangement that grants any individual or action positive conditions that stray from the typical arrangements of the tax enactment. This affects the individual in a constructive way, for that individual or action or any measure that accommodates a more good tax treatment of specific exercises or sectors contrasted with what is accessible to the general business. Tax incentives may take various structures. In Kenya, tax incentives incorporate, tax occasions, investment stipends, and tax credits, accelerated deterioration, extraordinary zones, investment sponsorships, tax exceptions, decreases in tax rates and backhanded tax incentives.

Generally, tax incentives greatly play a significant role in attracting private investment in developed countries. Conversely, it is not the same case in developing countries where major concern is attributed to loss of much needed revenue by the government (Githaiga, 2013). Various countries governments have greatly been engaged in dynamic processes intended to experiment range of tax incentives that will be capable of stimulating Private investment, boosting economic growth, production expansion and promoting technological transfer. Since taxes have a significant influence on the net return on capital it is then the mandate of governments to ascertain they influence the capital movements among other countries (Thuita, 2017). One of the objectives of this study is to explore if investment incentives mediates the relationship between macroeconomic variables and domestic private investment.

Empirical Review

Babar, Awan, and Nadeem, (2017), studied the relationship between investment and corporate tax in Pakistan. The time series data for the period 1984-2014 was used for the study. Auto Regressive Distributed Lag (ARDL) technique was applied in the econometrics analysis. Results showed that private investment in Pakistan was mitigated by higher corporate tax rate. High tax rate for corporate sector reduces the corporate profits while increasing the operational cost; hence it discourages private investment. The study recommended that corporate tax rate should be decreased to enhance private investment.

Munongo (2015) investigated the tax incentives effectiveness to attract private investment. This study involved a case study on Southern African Development Community (SADC). In respective to the research findings, tax incentives are significant in attraction private investment inflows in the SADC countries; as a result, in order to ensure sustainable private investment into the region, tax mix which is effective will be capable of ensuring efficient use of tax incentives. Additionally, it was also important to articulate good governance to increase private investment inflows in the region. On the other hand, the study made some recommendations that SADC infrastructure needs consistence improvement to ensure foreign investment dynamic nature is sustained. Also, if they develop other financial markets they will be able to ensure that there is effective flow of capital and growth in economies by gaining more investment.

Musyoka (2012) carried out an investigation to find out the relationship between tax incentives and private Investment. The study employed data from a period of ten years that included investments incentives, trade related incentives, import duty exemption as well as FDI inflows. Dispersion in the dataset was measured using the measure od dispersion methods which included measures of variability (sd), measure of central tendency (mean), and measures of relative frequencies. The relationship between the response variable and the explanatory variables was determined by the regression and correlation analyses. The study findings revealed that tax incentives led to major losses of revenue by the government.

Gumo (2013) conducted a research to examine the effect of tax incentives on private Investments in Kenya. The study concluded that tax incentive would have a positive resultant effect on private investment and recommended that Government need to evaluate its tax incentives policy, and weigh

against the benefits that accrue with the intention of spurring investment including introducing evidence based tax incentives that would minimize tax evasion.

Methodology

This study adopted causal research design. The sampling frame consisted of licensed local and internationally recognized data collection institutions and agencies. Purposive sampling was adopted to select secondary data for the period 1997 -2018. Panel data OLS regression model was used to test the Baron and Kenny (1986) conditions to examine the mediating effect of investment incentives on the relationship between macroeconomic variables and growth of domestic private investment in Kenya. A variable may be referred to as a mediator "to the extent that it accounts for the relation between the predictor and the criterion" (Baron & Kenny, 1986). The proxies for macroeconomic variables used in this study were inflation, interest rates, money supply and exchange rates. The below two diagrams capture the Baron's Model diagrammatically. Path c in figure 2 below is called the direct or total effect which is unmediated. X represents macroeconomic variables and Y growth in domestic private investment.

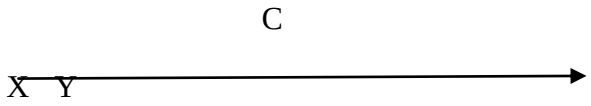

Figure 2

The effect of X on Y might be mediated by a process or mediating variable M and the variable X might still affect Y. The mediated model is as shown in figure 3 below;

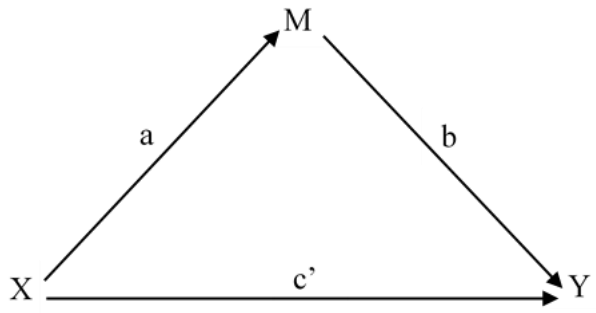

Figure 3

Baron and Kenny (1986) projected a four-step approach where several regression analyses were conducted and significance of the coefficients examined at each step. In step 1, Baron and Kenny suggested to conduct a regression analysis with X (macroeconomic variables) predicting Y (growth of domestic private investment) to test the total effect pronounced by path c alone. Step 2 conducted a regression analysis with X (macroeconomic variables) predicting M (investment incentives) to test for path a. Step 3 conducted a regression analysis with M (investment incentives) predicting Y (growth in domestic private investments) to test the significance of path b alone. Step 4 conducted a multiple

regression analysis with X (macroeconomic variables) and M (investment incentives) predicting Y (growth in domestic private investments), so as to test the significance of path c'. Path c' is known as the direct effect. Complete mediation is the case in which variable X no longer affects Y after M has been controlled hence path c' is zero. Partial mediation occurs when the path from X to Y is reduced in absolute size but is still different from zero when the mediator is introduced.

Baron and Kenny (1986) put forward that full mediating effect is seen if the following four conditions are seen. The first condition is satisfied if the independent variable (macroeconomic variables) directly affects the mediator (investment incentives). The second condition will be met if the mediator (investment incentives) affect the dependent variable (growth in domestic private investments). The third condition is satisfied when the independent variable (macroeconomic variables) directly affects the dependent variable (growth in domestic private investments) once the mediator is scrapped from the model. Lastly, full mediation will be supported if the direct path from the independent variable to the dependent variable becomes insignificant, when the paths to and from the mediator are once again included in the model. If all four of these steps are met, then the data are consistent with the hypothesis that M completely mediates the X-Y relationship, and if the first three steps are met but the Step 4 is not, then partial mediation is indicated.

Result and Discussion

To test for mediating effect, the study used (Baron & Kenny, 1986) approach which proposed a four-step procedure in which several regression analyses were conducted and the significance of the coefficients examined. Generally, mediation analysis is comprised of testing various chains of impact using regression. These are; X → Y, X → M, M→Y, and X + M → Y, where X is a set of macroeconomic variables, Y is the predicted variable (growth domestic private investment) while M is the mediating variable, in this case, investment incentives.

The first step is to determine if there is a relationship between the macroeconomic variables (X) and private domestic investment (Y). This is determined by estimating a long-run model as depicted in table below.

*DPIG_GDP = - 0.3249 * CBK_RATE - 0.1289* LENDING_RATE + 34.3538 * LNCPI + 8.2595 * LNM1 - 10.8651 * LNNEER + 0.2240 * REPO - 0.0099 * TBILL - 147.9843 - 0.9399 * @TREND*

All the variables in the base model are statistically significant at a 5% level apart from the T-bill rate which has a p-value of 0.9217.

The second step as suggested by Baron & Kenny, 1986 is to regress the set of independent variables (X=macroeconomic variables) on the hypothesized mediating variable (M= investment incentives). The results in table 1 below show that all the variables are statistically insignificant at a 10% level implying that they do not explain the variations in the investment incentives.

Table 1: Mediating regression with investment incentives as the predicted variable.

Dependent Variable: LN_INV_INC				
Sample (adjusted): 2000Q2 2018Q4				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CBK_RATE	0.005787	0.110117	0.052558	0.9582
L_RATE	0.018084	0.064388	0.280853	0.7797
LNCPI	2.099244	3.449165	0.608624	0.5449
LNM1	1.192085	2.513669	0.474241	0.6369
LNNEER	0.818596	2.609931	0.313647	0.7548
REPO	-0.010321	0.086849	-0.118835	0.9058
TBILL	-0.002968	0.076489	-0.038805	0.9692
C	-15.60885	27.66511	-0.564207	0.5745
@TREND	-0.038647	0.063941	-0.604413	0.5476
R-squared	0.585308			
Adjusted R-squared	0.535042			
Log likelihood	-94.64808			
F-statistic	11.64428			
Prob (F-statistic)	0.000000			

The results imply that there is no effect of X (macroeconomic variables) on M (investment incentives). The full mediation effect makes sense only if X (macroeconomic variables) significantly affects M (investment incentives). As cited earlier in the study, on the off chance that at least one of these connections are non-noteworthy, the will presume that intercession isn't conceivable or likely. Since step two above is violated, there is no possible mediation effect. Therefore there is no need of proceeding to step 3 and 4.

If a mediation effect exists, the effect of X (macroeconomic variables) on Y (private domestic investment) is expected to disappear (or at least weaken) when M (investment incentives) is included in the regression. If the effect of X on Y completely disappears, M fully mediates between X and Y (full mediation). If the effect of X on Y still exists, but in a smaller magnitude, M partially mediates between

X and Y (partial mediation). The results depicted in table 3 do not consistently support a full mediation hypothesis given that the coefficients do not consistently change in magnitude and significance. Since Therefore, the study does not rejected the null hypothesis that investment incentives do not meditate on the relationship between macroeconomic variables and the growth of domestic private investment in Kenya. Investment incentives are a potential explanatory variable for variations in growth domestic private investment in Kenya. A 1% increase in investment incentives (in Kenya Shillings) increases private domestic investment by 1.3%. From a different perspective, the results imply that government expenditure, specifically on infrastructure crowds in private domestic investment other than crowding it out.

CONCLUSIONS

While there are a considerable number of empirical studies on the impact of macroeconomic variables on growth domestic private investments in developing countries in the Sub Saharan Africa, this study was keen on exploring the mediating effect of investment incentives on the relationship between the relationship between macroeconomic variables and growth of domestic private investment.

This study found out that there was a positive relationship between inflation rate and growth of domestic private investment the results were significant during the period of study. This implies that domestic private investment seem to increase with increase in general price level (CPI) in the long run. This signifies that inflation rate have as general prices increase in the long run it is more profitable for investors to operate their businesses leading to growth of domestic private investments in Kenya for the period studied.

Money supply was found to have a positive relationship with growth of domestic private investment the effect were significant for the period of study. The results demonstrated that domestic private investments would benefit from an increase in money supply especially increase in M1 which includes all currency in circulation, traveller's checks, demand deposit at commercial banks or other depository taking institutions held by the public, and other checkable deposits. M2 and M3 also referred to as broad money are forms of money but mostly in money market asset forms and therefore do not really reflect the volume of economic activities, unlike M1.

The study demonstrated that increase in interest rate had a negative relationship with growth of domestic private investment the effect was also significant. The study found the need to keep the lending rates as low as possible so as to attract investors who would wish to borrow or investment. The results emphasize the role of interest rate policy and monetary policy in driving domestic private investment in Kenya. The findings of this study will be of benefit to policy makers through provision of data-based evidence that will be used as a guide while making appropriate policies to encourage growth of domestic private investment in the country leading to economic growth.

Exchange rates were found to have negatively affected growth of domestic growth in Kenya during the period of study. Depreciation increases the cost of imports especially for investment goods hence reducing private domestic investment. Secondly, depreciation induces financial outflows from the economy as investors seek more stable investment markets in the world markets. This leads to capital outflow and a reduction in private domestic investment.

As much as investment incentives did not mediate in the relationship between macroeconomic variables and growth of domestic private investment, the results concluded that Investment incentives are a potential explanatory variable for variations in domestic private investment in Kenya. A 1% increase in investment incentives increases domestic private domestic investment by 1.3%.

The aim of this study was to offer insights to future studies in the field of macroeconomic variables, investment incentives as well as growth of domestic private investments and help policy makers and investors appreciate that foreign exchange rate is a critical component of capital flight and economic growth. More studies need to be undertaken with researchers extending the scope to more sub-variables to make more informative conclusions.

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8. Strategy Implementation and the Performance of Kenya Commercial Bank, Nairobi City County, Kenya

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Abstract

Kenya Commercial Bank has faced challenges in the implementation of strategic plans despite its annual efforts channeled towards developing workable strategies. Therefore, to ensure effective performance, it's important that hindrances to effective strategy implementation are identified and dealt with. The main objective of this study was to investigate the effect of resource utilization and Performance of Kenya Commercial Bank, Nairobi City County Kenya. The study was guided by the Resource-based view theory. A descriptive study design was employed. The study population comprised of 371 staff from 11 targeted branches. Stratified random sampling was used to get a sample of 281. Data was collected by use of questionnaires. A pre-study was done to measure how valid and reliable the study tools are. Validity tested content, functional and criterion validity by help of experts while reliability was measured by Cronbach alpha test, at a threshold of 0.7. Descriptive statistics was measured using frequencies and percentages and inferential statistics was measured using correlation as well as regression coefficients. Analyzed data was presented using tables. From the findings, the study concludes that strategy implementation influences positively banks performance in the bank Kenya. The study recommended that strategy implementation should enhance banks performance through the following ways: effective application of new modern technologies, effective leadership, efficient resource utilization and constant innovation.

Keywords: *Resource Utilization, Strategy implementation, KCB*

9. Social Media and Product awareness among the Youth during Corona Pandemic in Kenya

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Abstract

There has been an upsurge in the use of social media platforms by young Kenyans to advertise their products and services during this period of the corona pandemic. This paper will show a few examples of products and services that are popular with the youth and are sold online. The paper will also address the perception of consumers on the use of some of the major social media platforms including, Facebook, Instagram, WhatsApp and Twitter and how their use has risen especially in this period of the corona pandemic. There has been an ardent advertising effort by young Kenyans, who dominate the social media platforms selling products and services, the popular ones being a wide variety of clothes, shoes, and accessories. This paper aims to determine whether there is a significant change in product visibility after creating awareness of the products or services through the major social media platforms as compared to the conventional methods of advertising. This paper will specifically investigate whether the effects of social media advertising has led to an increase in product awareness during the period of corona virus pandemic. The paper will seek to confirm whether the lockdown rules have led young Kenyans to look for alternative and safer ways of doing business without flaunting the lockdown rules laid down. The paper will target young Kenyans who buy products online, and will be limited to the popular type of products sold on the major social media platforms.

Key words: Social media platforms, Awareness, Young Kenyans, Corona Pandemic, Lockdown.

10. Moderating Effect of Bank size on the Relationship between Financial Innovations Adoption and Financial Deepening of Commercial Banks in Kenya

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Abstract

Despite commercial entities amplifying financial innovation there is need for empirical inquiry on their contributions towards economic development through financial inclusion and deepening. Financial deepening is the capacity of financial institutions to enhance access to its services. Financial innovations have reduced turnaround time for banking services such as withdrawals, deposit and loan approval process. Despite this documented evidence its contribution to economic development through financial deepening is barren empirical ground. Hence, this paper investigated the relationship between financial innovations adoption and financial deepening of listed commercial banks in Kenya with moderation of bank size. The study was anchored on technology acceptance model. Expo facto research design was adopted, census of 12 listed commercials was considered for five years. A significant relationship between financial banking innovations and financial deepening was reported. Also, there was significant moderating effect of bank size on the relationship between financial innovations adoption and financial deepening of listed commercial banks.

Key words: Financial innovations adoption, Bank size, Financial deepening, Commercial banks

Introduction

Traditionally innovation was perceived as cost minimization strategy, risk reduction, market penetration and service efficiency enhancement and amplified commercial entity growth (Francesca & Claeys, 2010). The situations have been altered since its currently viewed owing to sporadic and turbulent business environment which has altered commercial entities performance targets (Gardachew, 2010). Through

financial products engineering business dynamism response can be easily managed. According to Henderson & Pearson (2011) there are chances of information asymmetry which may create chances of business losses but through technological innovations due diligence prior to commercial enterprise engagement can be easily evaluated. Despite of commercial entities amplifying financial innovation there is need for empirical enquiry on their contributions towards economic development through financial inclusion and deepening.

Financial deepening is the capacity of financial institution to enhance access of its services. According to Omwansa and Waema (2014) growth of telecommunication and mobile phones penetration has amplified financial deepening especially amongst those who were unbanked and those who earn their living in the informal sector. Financial inclusion is a relatively new terminology that refers to the process or methods by which financial service options are made available, at reasonably affordable costs or free of charge, to persons who are mainly bottom of the pyramid, that traditional financial channels have a lesser interest in delivery to; via institutionalized and rigid structures, low returns and/or the modus operandi of financial service providers (Hannig & Jansen, 2010). Financial system development is attributed to its ability to bridge the gap between deficit saving units and surplus units and introduction of non-banked population to banking services.

Innovation in banking sector lead to operational costs reductions and enhanced customer satisfaction, this is due to amplification on banking services access upon adoption of digital financial products. It has been argued that unless commercial banks adopt digital financial products then there are low chances of enhancing their performance and retaining their customers since there will exude to those institutions which have incorporate innovations in their strategic plans (Jegede, 2014). This can only through continued interrelationship between all stakeholders such as regulatory institutions and political elite who are bestowed with the responsibility of legalizing banking operating guidelines through passing of relevant legislations.

Mwangi (2013) argued in favour of considering customers interest whenever developing innovative products because despite turbulence of business environment adoption of new innovation is paramount for its success. Similar, arguments were put forth by Joshua (2010) who argued that net present value of investment project can only be achieved through incorporation of all stakeholder's interest and in situations where commercial banks are driven by desire to enhance efficiency they must consider customer needs and ease of using new development.

In Kenya the situation on financial innovation have intense competition from telecommunication communications such as Safaricom M-pesa services. This innovation is credited for its easy to use human user interface and due to this it has escalated financial innovation to the extent of creating overdraft facility for its users. According to Weil, Mbiti and Mwega (2012) financial innovations has reduced turnaround time for banking services such as withdrawals, deposit and loan approval process. Despite of this documented evidence its contribution on economic development through financial deepening is barren empirical ground. Hence, this paper investigated the relationship between financial innovations adoption and financial deepening of listed commercial banks in Kenya.

General Objective

The general objective of this study was to analyze the relationship between financial innovations adoption and financial deepening of listed commercial banks in Kenya.

Specific Objectives

i. Specifically, the following objectives guided the study:

ii. To determine the relationship between mobile phone banking and financial deepening of listed commercial banks in Kenya.

iii. To examine the relationship between ATM banking and financial deepening of listed commercial banks in Kenya.

iv. To establish the relationship between online banking and financial deepening of listed commercial banks in Kenya.

v. To find out the relationship between agency banking and financial deepening of listed commercial banks in Kenya.

vi. To determine the moderating effect of bank size on the relationship between financial innovations adoption and financial deepening of listed commercial banks in Kenya.

Research Hypotheses

The following hypotheses were adopted in the study:

Ho_1: There is no significant relationship between mobile phone banking and financial deepening of listed commercial banks in Kenya.

Ho_2: There is no significant relationship between ATM and financial deepening of listed commercial banks in Kenya.

Ho_3: There is no significant relationship between online banking and financial deepening of listed commercial banks in Kenya.

Ho_4: There is no significant relationship between agency banking and financial deepening of listed commercial banks in Kenya.

Ho_5: There is no significant moderating effecting of bank size on the relationship between financial innovation and financial deepening of listed commercial banks in Kenya.

Empirical and Theoretical Review

Theoretical Review

Technology Acceptance Model

This was developed by (Davis, 1989). The theory supports use of technology to enhance service delivery. Its anchored-on aspects such as "perceived usefulness, perceived ease of use and perceived enjoyment" while using it. Successful adoption of technology is based on organization capacity to address customer's unique needs (Pedersen, Leif, Methlie and Thorbjornsen, 2002). Incorporation of Automatic Teller

Machines by commercial banks ought to be addressing customer needs there is need for its continued development and interlinking with alternative technological development.

The theory is relevant in the study since incorporation of online banking in provision of banking services have not only enhanced banking performance but amplified the state of financial deepening.

Empirical Review

A Bangladesh examination of role of mobile banking on financial performance was put forth by (Rayhan, Sohel, Islam & Mahjabin, 2012). Descriptive research design was adopted and purposive sampling applied to select respondents. Semi structured questionnaire was adopted to gather primary data. Quantitative data was analyzed using classical regression modelling. It was found that mobile banking had positive significant effect on access of banking services which increased their market share. Increased market share through mobile banking could signal positive impact on financial inclusion and deepening. Since Bangladesh and Kenya are in different states of economic development study findings in Bangladesh cannot be generalized in Kenya hence the need to customize an empirical enquiry. Furthermore, use of purposive sampling to select respondents would have created possibilities of biased selection of respondents.

Al-Jabri (2012) investigated the effect of mobile banking technological adoption on commercial banking performance in Saudi Arabia. Specifically, the study investigated what inhibits or promotes mobile banking. Qualitative and quantitative research design were adopted. Primary data was collected through interview guide and structured questionnaires. It was found that success of mobile banking was dependent on telecommunication penetration, quality network, availability of mobile phones. Technical awareness of respondents impacted penetration of mobile banking. These findings may not be generalized in Kenya since the state of mobile penetration may not be the same. Also, the study limited its inferential statistics to correlation and regression it would have been appropriate to incorporate structural equation modelling.

Adewoye (2013) investigated the effect of Automated Teller Machine (ATM) on commercial banking performance in Nigeria. Descriptive research design was adopted. Primary data was collected through use of questionnaires amongst respondents who were drawn purposively. Inferential and descriptive statistics were adopted to analyze the data. It was found that ATM impacted positively on quality of services accorded to commercial banks customers.

Mwatsika (2016) investigated the effect of ATM on banking customer's satisfaction in Malawi. Descriptive research design was adopted. Stratified sampling was used to select respondents whom questionnaires were administered. Inferential and descriptive statistics were used to analyse the data. It was found that ATM impacted customer satisfaction positively. Through, ATM commercial banks were able to cannibalize each other and this triggered innovative ways of attracting and retaining customers. This enhanced access of commercial banking services. It would have been appropriate to blend quantitative data with qualitative which would have been gathered through use of interview guides and focus group discussion. In addition, to classical regression modelling, structural regression model ought to have been adopted so to examine the strength of contribution of each construct.

Hasan et al., (2012) investigated the effect of internet banking on commercial banking in Italy. Correlation research design was adopted and panel secondary data collected from annual financial statements. Classical regression and descriptive statistics were used to analyze the data. The study revealed that there was positive and significant effect of internet banking on commercial banks performance in Italy. Further, internet banking impacted negatively on commercial banks risk levels.

Chipeta and Muthinja (2018) investigated the effect of financial innovations on commercial banks performance in Kenya. Specifically, the study examined the effect of internet banking, mobile banking, agency banking and ATM banking on commercial banks performance. Secondary panel data was gathered from annual financial statements. Koyck dynamic distributed lag model was fitted. It was found that financial innovation had significant contribution on financial performance. Time specific characteristics had significant contribution on financial performance as compared to industry characteristics. Since there were only 42 commercial banks in Kenya it was appropriate to consider data for long periods of time to alleviate challenges associated with small sample while analyzing panel data.

Arif, Khan and Iqbal (2013) investigated the effect of bank size on commercial banks performance in Pakistan. Panel research design was adopted and quarterly secondary data collected for period 2005 to 2009. Univariate and bivariate data were used to analyze the data. It was found that bank size had positive and significant effect on profitability of commercial banks. These findings cannot be generalized in Kenya owing to different state of business environment and economic development. Further, failure to report panel diagnostic tests increased likelihood of reporting biased findings.

Muhindi and Ngaba (2018) examined the effect of bank size on commercial banks performance in Kenya. Panel research design was adopted. Secondary data was collected from annual financial statements. Ordinary least squares model was fitted. Study findings revealed positive and significant effect of bank size on commercial banks performance.

Sreesha (2014) examined the effect of firm size, operational efficiency and financial performance in India. Panel research design was adopted and secondary data for 2009 to 2013. Classical regression modelling was applied to analyze the data. It was found that there was positive and significant effect of firm size on financial performance of commercial banks.

Terrazza (2017) examined the effect of bank size on financial performance of commercial banks in Europe. Secondary of 1270 commercial banks between 2005 to 2012 was collected. Fixed effects regression model was fitted in addition to descriptive statistics. It was found that firm size had significant effect on commercial bank financial performance.

Conceptual Framework

Conceptual framework can be perceived as logical flow of interaction amongst study variables (Kombo & Tromp, 2009). Direct and moderating effect of bank size on relationship between financial deepening and financial innovations is conceptualized in Figure 2.1.

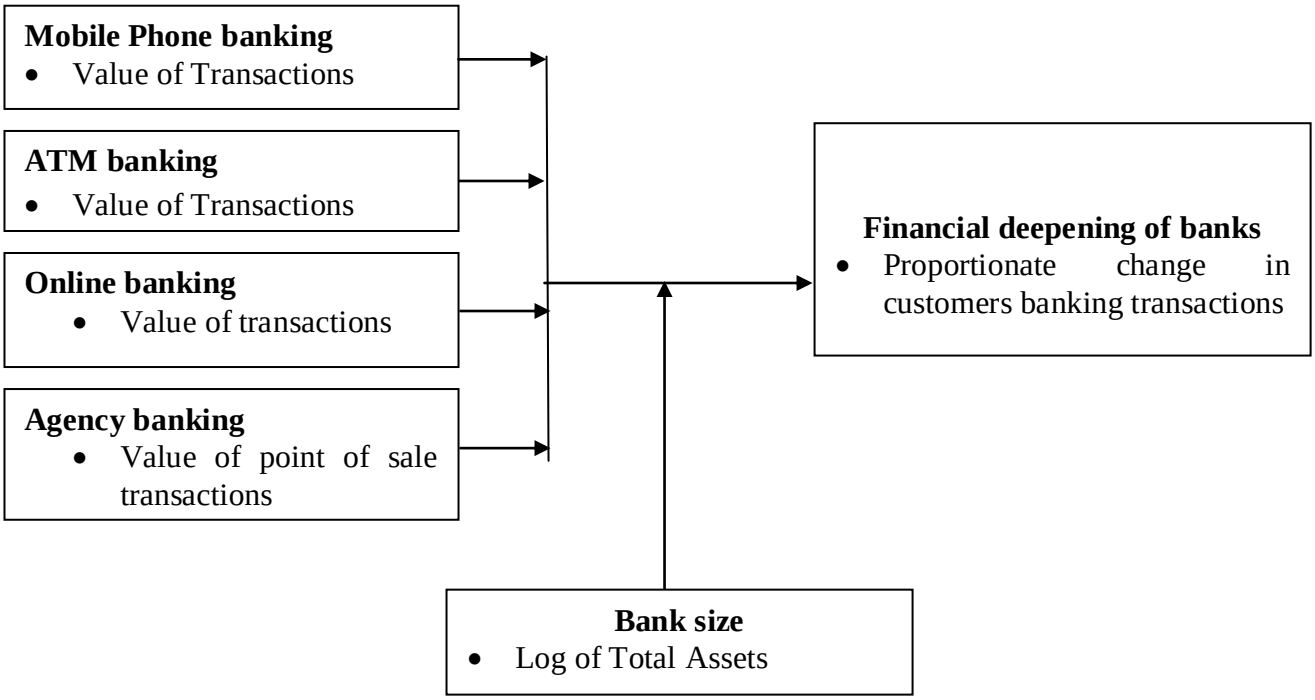

Figure 2.1 Conceptual Framework

Research Methodology

Research Design

Research is schematic flow of how study will be executed to achieve study objectives (Sekaran & Bougie, 2013). This study adopted expo facto research design that sought to examine the relationship between financial innovation adoption and financial deepening of listed commercial banks in Kenya.

Target Population

Target population is total collection of all respondents under consideration (Sekaran & Bougie, 2013). Currently, they are 12 listed commercial banks in Kenya and all were considered in the study. Secondary data was collected from annual banking report prepared by Central Bank of Kenya on annual basis and from annual banking survey reports.

Data Processing and Analysis

Data collected was analyzed through use of descriptive statistics such as mean, standard deviation, kurtosis and skewness and inferential statistics such as regression and correlation analysis. Moderation

was examined through use of stepwise regression modelling and partial differentiation to examine marginal contribution of bank size. The multiple regression model for the study were:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \varepsilon_{it} \quad \text{Equation 3.1}$$

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 Z_{it} + \beta_6 X_{1it} Z_{it} + \beta_7 X_{2it} Z_{it} + \beta_8 X_{3it} Z_{it} + \beta_9 X_{4it} Z_{it} + \varepsilon_{it} \quad \text{Equation 3.2}$$

Where;

Y_{it} represent Financial Deepening of Commercial banks

X_{1it} represent Mobile phone banking (MB) for bank i in period t;

X_{2it} represent ATM banking (ATMB) for bank i in period t;

X_{3it} represent Online banking for bank i in period t;

X_{4it} represent Agency banking for bank i in period t;

Z_{it} represent Bank size for bank i in period t

$X_{it}*Z_{it}$ represent interaction between respective independent variable with bank size for bank i in period t.

Findings and Discussion

4.1 Descriptive Statistics for Listed Commercial Banks in Kenya

Commercial banks were classified into listed and non-listed and their extent of financial innovations was examined. Findings in Table 4.1, summarized descriptive statistics of listed commercial banks, on average financial deepening of listed commercial banks was 16.03, with minimum of -25.21 and maximum of 48.28, this depicted wide variations on their extent of financial deepening. Average mobile banking of listed commercial banks was 15.97, with standard deviation of 4.69. ATM banking averaged at 18.18, with minimum of 1.64 and maximum of 28.85, online banking averaged at 19.43 with maximum of 30.19 and minimum of 2.98. Agency banking had an average of 19.39 with minimum of 1.17 and maximum of 32.17. Amongst banking financial innovations, the highest volatile innovation was online banking (standard deviation, 5.07) and least was ATM banking (standard deviation, 4.23). This depicts most listed banks had adopted ATM banking as compared to online banking. The average banking size was 19.63, with minimum of 12.56 and maximum of 36.96. The data was not normally distributed as indicated by Jarque Berra coefficient with p value less than 0.05; this presented enough evidence to warrant rejection of the null hypothesis which stated that the data was normally distributed.
These finding supported Mwangi (2013), Adreniran (2014) and Ngumi (2014) who reported that financial innovations were adopted by commercial banks in Kenya to aid in provision of banking services. Increased access of banking is possible through technological innovation if alternative banking services are easier to use and are more secure as advocated for by technology advancement model.

Table 4.1 Descriptive Statistics for Listed Commercial Banks in Kenya

	Financial Deepening	Mobile Banking	ATM Banking	Online Banking	Agency Banking	Bank Size
Mean	16.03	15.97	18.18	19.43	19.39	19.63
Median	14.94	14.64	18.71	21.89	20.44	19.22
Maximum	48.28	30.30	28.85	30.19	32.17	36.96
Minimum	-25.21	4.24	1.64	2.98	1.17	12.56
Std. Dev.	11.10	4.69	4.23	5.07	4.79	3.23
Skewness	0.22	1.24	-1.14	-0.73	-1.19	3.20
Kurtosis	6.64	4.55	7.73	3.33	6.25	17.25
Jarque-Bera	33.53	21.41	68.91	5.64	40.65	610.10
Probability	0.00	0.00	0.00	0.06	0.00	0.00
Sum	961.64	958.39	1090.52	1165.66	1163.34	1178.09
Sum Sq. Dev.	7270.88	1298.86	1055.91	1517.18	1351.16	614.36
Observations	60	60	60	60	60	60

4.2 Diagnostic Tests

4.2.1 Panel Unit Root for Listed Commercial Banks in Kenya

The null hypothesis for unit roots stated that there was unit root (the data was not stationary). Study findings in Table 4.2 revealed that there was enough evidence to warrant rejection of the null hypothesis at 5 percent level of significance since all p values were less than 0.05. Thus, we conclude that financial deepening, mobile banking, ATM banking, online banking, agency banking and bank size of listed commercial banks in Kenya were stationary at levels. Consequently, regression modelling without lagging was fitted with no likelihood of fitting spurious model. There was no need for lagging prior to fitting regression model since the findings concurred with Tarus and Omandi (2013) and Githira et al., (2019b) who found panel data of listed companies to be stationary at levels.

Table 4.2 Panel Unit Root for Listed Commercial Banks in Kenya

Variable	Test	Statistic	P value
Financial deepening	Inverse Chi-squared	64.0374	0.0000
	Inverse Normal	-4.8448	0.0000
	Inverse logit	-5.3217	0.0000
	Modified Inverse chi-squared	6.9629	0.0000
Mobile banking	Inverse Chi-squared	107.0105	0.0000
	Inverse Normal	-3.5206	0.0000
	Inverse logit	-7.7561	0.0000
	Modified Inverse chi-squared	13.7576	0.0000
ATM banking	Inverse Chi-squared	106.3522	0.0000
	Inverse Normal	-4.1693	0.0000
	Inverse logit	-8.1690	0.0000
	Modified Inverse chi-squared	13.6535	0.0000

Online banking	Inverse Chi-squared	111.9973	0.0000
	Inverse Normal	-5.3041	0.0000
	Inverse logit	-9.3452	0.0000
	Modified Inverse chi-squared	14.5460	0.0000
Agency banking	Inverse Chi-squared	27.2511	0.0000
	Inverse Normal	-9.1810	0.0000
	Inverse logit	-8.6046	0.0000
	Modified Inverse chi-squared	11.4065	0.0000
Bank size	Inverse Chi-squared	110.0905	0.0000
	Inverse Normal	-4.1621	0.0000
	Inverse logit	-8.5879	0.0000
	Modified Inverse chi-squared	14.2446	0.0000

4.2.2 Multicollinearity Test for Listed Commercial Banks in Kenya

Results shown in Table 4.3 revealed that there was no collinearity since the highest VIF was 4.05 and minimum 1.59. This implied that joint significant relationship between mobile banking, ATM banking, online banking and agency banking could be fitted amongst listed commercial banks in Kenya. It was concluded that financial innovations in listed commercial can be jointly evaluated on their influence on financial deepening since VIF and tolerance were within acceptable limits (Baltagi, 2005).

Table 4.3 Multicollinearity Test for Listed Commercial Banks in Kenya

	Collinearity Statistics	
	VIF	**Tolerance**
Mobile Banking	1.59	0.63
ATM Banking	2.77	0.36
Online banking	2.09	0.48
Agency Banking	4.05	0.25

4.2.3 Correlation Analysis for Listed Commercial Banks in Kenya

Correlation analysis on the relationship between financial innovations and financial deepening of listed commercial banks in Kenya are presented in Table 4.4. It was found that mobile banking had strong positive relationship with financial deepening (rho = 0.7632, p value <0.05). Secondly, ATM banking had strong positive relationship with financial deepening amongst listed banks (rho = 0.7260, p value <0.05). Thirdly, there was strong positive and significant relationship between online banking and financial deepening of listed banks (rho = 0.6985, p value <0.05). Fourthly, there was strong positive relationship between agency banking and financial deepening of listed banks in Kenya (rho = 0.7683, p value <0.05). Bank size had strong positive relationship with financial deepening of banks in Kenya (rho = 0.7448, p value <0.05).

These findings disagreed with Hasan et al., (2012) who reported inverse effect of internet banking on banking penetration. The study concurred with Kingori and Gekara (2015) and Mbugua and Omagwa (2017) who reported positive and significant relationship between agency banking and market penetration of commercial banks. These results supported innovations diffusion theory since adoption of technology has trickling down effect on financial deepening.

Table 4.4 Correlation Analysis for Listed Commercial Banks in Kenya

	Financial Deepening	Mobile Banking	ATM Banking	Online Banking	Agency Banking	Bank size
Financial Deepening	1					
Mobile Banking	0.7632	1				
	0.0000	-----				
ATM Banking	0.7260	0.5500	1			
	0.0000	0.0000	-----			
Online Banking	0.6985	0.4575	0.5684	1		
	0.0000	0.0002	0.0000	-----		
Agency Banking	0.7683	0.5938	0.3691	0.2173	1	
	0.0000	0.0000	0.0000	0.0000	-----	
Bank Size	0.7448	0.6587	0.4655	0.4589	0.5187	1
	0.0000	0.0000	0.0002	0.0002	0.0000	-----

4.2.4 Panel Heteroskedasticity for Listed Commercial Banks in Kenya

For listed commercial banks study findings revealed that the data was not homoscedastic as indicated by Chi square values of 37.95 and 100.58 and p values <0.05, for non-moderated and moderated regression models. Due to this robust standard error were used instead of normal standard errors, this was in line with (Woodridge, 2012).

Table 4.5 Panel Heteroskedasticty for Listed Commercial Banks in Kenya

Model	χ^2–Value	P value
Without Moderation	37.95	0.00
With Moderation	100.58	0.00

4.2.5 Panel Serial Correlation for Listed Commercial Banks in Kenya

First order serial correlation test amongst listed commercial banks test in Table 4.6, had p value greater than 0.05 for moderated and non-moderated models. This indicated absence of first order serial correlation, thus no need to fit FGLS. These results agreed with (Wanjau, Muturi & Ngumi, 2018) who reported absence of first order serial correlation amongst listed companies in East Africa securities exchange. They contrasted (Muchiri, Muturi & Ngumi, 2016) who reported presence of first order correlation on their examination on the effect of financial structure on financial performance of listed companies in East Africa Securities Exchanges.

Table 4.6 Panel Serial Correlation for Listed Commercial Banks in Kenya

Model	F–Value	P value
Without Moderation	0.263	0.523
With Moderation	0.868	0.756

4.2.6 Panel Granger Causality Test for Listed Commercial Banks in Kenya

Granger causality was applied to evaluate causality between banking financial innovations and financial deepening of listed banks in Kenya. Results shown in Table 4.7, indicated that there was no causality

between mobile banking and financial deepening, ATM banking and financial deepening, online banking and financial deepening, agency banking and financial deepening. Further there was no causality between mobile banking, ATM banking, online banking and agency banking respectively. Bank size had no causality with financial deepening. In addition, there was unidirectional causality between mobile banking and bank si

Table 4.7 Panel Granger Causality Test for Listed Commercial Banks in Kenya

Null Hypothesis:	F-Statistic	Prob.
Mobile banking does not Granger Cause financial deepening	1.8550	0.1715
Financial deepening does not Granger Cause mobile banking	2.4337	0.1024
ATM banking does not Granger Cause financial deepening	0.2340	0.7926
Financial deepening does not Granger Cause ATM banking	0.9681	0.3898
Online banking does not Granger Cause financial deepening	0.1163	0.8906
Financial deepening does not Granger Cause online banking	1.5476	0.2270
Agency banking does not Granger Cause financial deepening	0.3345	0.7180
Financial deepening does not Granger Cause agency banking	0.1166	0.8903
Bank size does not Granger Cause financial deepening	1.2710	0.2932
Financial deepening does not Granger Cause bank size	0.0103	0.9898
ATM banking does not Granger Cause mobile banking	0.8355	0.4421
Mobile banking does not Granger Cause ATM banking	0.8095	0.4532
Online banking does not Granger Cause mobile banking	0.0290	0.9714
Mobile banking does not Granger Cause online banking	0.9458	0.3981
Agency banking does not Granger Cause mobile banking	0.9140	0.4103
Mobile banking does not Granger Cause agency banking	0.3917	0.6788
Bank size does not Granger Cause mobile banking	6.6973	0.0034
Mobile banking does not Granger Cause bank size	1.7923	0.1815
Online banking does not Granger Cause ATM banking	0.5556	0.5787
ATM banking does not Granger Cause online banking	0.0044	0.9956
Agency banking does not Granger Cause ATM banking	0.1115	0.8949
ATM banking does not Granger Cause agency banking	0.0475	0.9537
Bank size does not Granger Cause ATM banking	0.6102	0.5489
ATM banking does not Granger Cause bank size	0.0061	0.9939
Agency banking does not Granger Cause online banking	0.3117	0.7342
Online banking does not Granger Cause agency banking	0.4097	0.6670
Bank size does not Granger Cause online banking	0.9632	0.3916
Online banking does not Granger Cause bank size	0.1134	0.8932
Bank size does not Granger Cause agency banking	0.8650	0.4299
Agency banking does not Granger Cause bank size	0.2055	0.8152

4.2.7 Panel Hausman Test for Listed Commercial Banks in Kenya

As shown in Table 4.8, Chi square statistics was 4.9439 and p value of 0.2931 which was greater than 0.05. Consequently, there was enough evidence to warrant rejection of the null hypothesis and conclusion that the most appropriate model to examine relationship between banking financial innovations and financial deepening of listed banks in Kenya was random effects. These findings agreed with Muchiri et

al., (2016) who adopted random effects model and they concurred with Kariuki (2017) on examination on effect of firm characteristics on efficiency of savings and credit cooperative societies of Kenya.

Table 4.8 Panel Hausman Test for Listed Commercial Banks in Kenya

Test Summary		**Chi-Sq. Statistic**	**Chi-Sq. d.f.**	**Prob.**
		4.9439	4	0.2931
Variable	**Fixed**	**Random**	**Var (Diff.)**	**Prob.**
Mobile Banking	1.2427	1.0280	0.0219	0.1472
ATM Banking	0.6631	0.5904	0.0133	0.5283
Online Banking	0.5699	0.6050	0.0265	0.8291
Agency Banking	0.1446	0.3068	0.0299	0.3483

4.3 Relationship between Commercial Banking Financial Innovations and Financial Deepening of Listed Commercial Banks in Kenya

Multiple regression analysis revealed that banking innovations had significant relationship with financial deepening ($F = 51.5826$, p value < 0.05). An R squared of 0.7895, indicated that mobile banking, ATM banking, online banking and agency banking explained 78.95 percent of changed in financial deepening can be jointly explained by banking innovations while the remaining percentage can be accounted by other attributes excluded in the model amongst listed banks.

The first hypothesis stated that mobile banking had no significant relationship with financial deepening. Results in Table 4.68 revealed positive and significant relationship between mobile banking and financial deepening of commercial banks in Kenya ($\beta = 1.0280$, p value <0.05). This implied that unit increase in mobile banking increased financial deepening by 0.8903 while holding constant ATM, online and agency banking in listed banks.

The second hypothesis stated that ATM banking had no significant relationship with financial deepening. It was found that ATM banking had positive significant relationship financial deepening of commercial banks in Kenya ($\beta = 0.5904$, p value <0.05). This implied that unit increase in ATM banking increased financial deepening by 0.5904 while holding constant mobile, online and agency banking in listed banks.

The third hypothesis stated that online banking had no significant relationship with financial deepening. It was found that online banking had positive significant relationship financial deepening of commercial banks in Kenya ($\beta = 0.6050$, p value <0.05). This implied that unit increase in online banking increased financial deepening by 0.3050 while holding constant mobile, ATM and agency banking in listed banks.

The fourth hypothesis stated that agency banking had no significant relationship with financial deepening. It was found that online banking had positive significant relationship financial deepening of commercial

banks in Kenya (β = 0.3068, p value <0.05). This implied that unit increase in agency banking increased financial deepening by 0.3068 while holding constant mobile, ATM and online banking in listed banks.

Financial Deepening = -28.8245 + 1.0280 * Mobile Banking + 0.5904 * ATM banking + 0.6050 * Online banking + 0.3068 * Agency banking……4.1

Table 4.9 Relationship between Commercial Banking Financial Innovations and Financial Deepening of Listed Commercial Banks in Kenya

Variable	Coefficient	Robust Std. Error	t-Statistic	Prob.
C	-28.8245	3.3145	-8.6965	0.0000
Mobile Banking	1.0280	0.1852	5.5490	0.0000
ATM Banking	0.5904	0.2714	2.1755	0.0339
Online Banking	0.6050	0.1967	3.0762	0.0033
Agency Banking	0.3068	0.2898	1.0587	0.2944
R-squared	0.7895	Mean dependent variable		16.0273
Adjusted R-squared	0.7742	S.D. dependent variable		11.1011
S.E. of regression	5.2747	Sum squared residuals		1530.2410
F-statistic	51.5826	Durbin-Watson stat		2.1011
Prob (F-statistic)	0.0000			

4.4 Moderating Effect of Bank Size on Relationship between Banking Financial Innovations and Financial Deepening of Listed Commercial Banks in Kenya

Regression results in Table 4.10, revealed that 88.76 percent of changes in financial deepening of listed banks was accounted for by mobile, ATM, online, agency banking, bank size, moderated banking financial innovations while the remaining percentage was accounted for by other factors excluded in the model. R squared increased by 9.81 percent (0.8876-0.7895) after moderation which indicated banking size had moderating effect on the relationship between banking financial innovations and financial deepening of listed banks in Kenya. Further, bank size had positive significant effect on financial deepening of commercial banks in Kenya (β = 0.5958, p value <0.05).

After bank size moderation on mobile banking, MB*BS there was positive not significant relationship with financial deepening (β = 0.0111, p value > 0.05). Secondly, bank size had positive non-significant moderating effect on ATM banking, ATMB*BS (β = 0.0068, p value >0.05). Thirdly, online banking had

positive and non-significant moderation on bank size (β = 0.0088, p value >0.05). Finally, bank size had positive non-significant moderating effect on agency bank, AB*BS (β = 0.0084, p value >0.05).

Financial Deepening = -26.1387 + 0.1670 * Mobile banking + 0.3139 * ATM banking+ 0.3269* Online

banking + 0.0724*Agency banking + 0.5958 * Bank size + 0.0111*MB*BS + 0.0068 * ATMB*BS+0.0160*OB*BS+0.0084*AB*BS……. (4.3)

Bank size moderating effect was confirmed through comparison

of moderated and non-moderated coefficients with marginal change of banking innovations on financial deepening of commercial banks in Kenya. Bank size moderating effect will be present if marginalized coefficients will differ from non-moderated banking innovations coefficients. The following equations were adopted:

$\frac{\delta FDi,t}{\delta MBi,t} = \beta_1 + \beta_6 BS = 0.1670 + 0.0111 * 19.63 = 0.3849$

$\frac{\delta FDi,t}{\delta ATMBi,t} = \beta_2 + \beta_7 BS = 0.3139 + 0.0068 * 19.63 = 0.4474$

$\frac{\delta FDi,t}{\delta OBi,t} = \beta_3 + \beta_8 BS = 0.23269 + 0.0088 * 19.63 = 0.4054$

$\frac{\delta FDi,t}{\delta ABi,t} = \beta_4 + \beta_9 BS = 0.0724 + 0.0084 * 19.63 = 0.2373$

Comparison between marginalized coefficients and those in equation 4.1 (Financial Deepening = -28.8245 + 1.0280 * Mobile Banking + 0.5904 * ATM banking + 0.6050 * Online banking + 0.3068 * Agency banking), these coefficients differed. Consequently, it can be concluded that bank size had moderating effect on relationship between banking financial innovations and financial deepening of listed commercial banks in Kenya.

Table 4.10 Moderating Effect of Bank Size on Relationship between Banking Financial Innovations and Financial Deepening of Listed Commercial Banks in Kenya

Variable	Coefficient	Robust Std. Err.	Z	P>z
Mobile banking	0.1670	0.1992	0.8400	0.4020
ATM banking	0.3139	0.2262	1.3900	0.1650
Online banking	0.3269	0.1788	1.8300	0.0680
Agency banking	0.0724	0.2491	0.2900	0.7710

Banking size	0.5958	0.2498	2.3900	0.0170
MB*BS	0.0111	0.0073	1.5300	0.1260
ATM*BS	0.0068	0.0097	0.7000	0.4840
OB*BS	0.0088	0.0101	0.8700	0.3840
AB*BS	0.0084	0.0102	0.8200	0.4110
Constant	-26.1387	4.7048	-5.5600	0.0000
R-sq: within = 0.8843	between = 0.9085	overall = 0.8876	Wald $chi^2(9)$ =394.81	Prob > chi^2 =0.000

Conclusion and Recommendations

The mobile banking concept is in positive trend towards full realization of financial deepening in its full impact hence the Government must develop better policies to manage this subsector which has potential to be a very high-volume financial transaction platform. Since mobile banking may over step and overtake some commercial banking functions, there is need to regulate and rehabilitate it to its main objective of remittances. The Government should also make it compulsory for every mobile network companies to participate in this product to reduce costs for consumers though there is need for its independent regulation.

There is need for banking companies to improve securities on use of debit and credit cards to execute online purchases and payments. This would minimize financial fraud associated with unauthorized access personal credit cards information. Alternative security approaches beyond use of personal identification numbers, biometric identification should be incorporated during ATM banking transactions.

Although, online banking services have received positive reception, it is faced by several security threats. Customer's sensitization against use of public internet services, this would minimize possibilities of financial losses. Banking institutions should develop financial services which can be easily accessed through use internet instead of traditional approaches. This would save on environmental degradation and eliminate wastages.

From the findings, over the period agency banking has been in operation, the kind of service offered by the agents has been limited to simple transactions and supportive functions like deposits and withdrawals. A more interesting perspective will be when banks allow agents to perform core activities like vetting loan applications and collecting loan repayment, it is recommended that the banks transfer the basic knowledge to the agents to enable them perform these extra activities. The banks also need to advertise the other kinds of service that can be done via agency banking to ensure an uptake of all services offered by agents who will be more efficient and cost effective.

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11. K-Mean Algorithm for Data Quality Analysis in Cybercrime Prediction using Big Data Analytics

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Abstract

Law enforcement agencies are faced with the challenge of rapidly increasing crime rates leading to increasingly large volumes of crime data. This calls for use of sustainable policing approaches and technologies to guarantee efficiency and effectiveness. Data is a critical pillar of predictive policing. Data quality is the lifeline of predictive policing which has been found to greatly impact crime prevention which in turn facilitates sustainable development. The law enforcement agencies should contribute to sustainability by actively identifying and analyzing crimes using quality data on potential threats, crime types, likely perpetrators and geographical locations where particular crimes often occur. This is possible through partnership between law enforcement agencies, support industries and the society. This paper proposes and algorithm for data quality analysis of big data in cybercrime prediction in Nairobi County. Cybercrime is a major global problem affecting businesses and is fast becoming an area of great concern in Kenya. With millions of citizens using the cyberspace and presence of loosely controlled cyber cafes, mobile devices and unregulated outlets, prediction and identification of offenders is a problem. Big data analytics was employed in this research to identify patterns and to relate patterns to possible offender online activities. Results show that cyber cafes and unregulated internet outlets are the most vulnerable to cybercrime and common file types that are exchanged during server requests were found to be animated photos, unknown types, driver files, extensible markup language files and javascript that increase vulnerability. It is recommended that use of better big data analytics and coded internet access cards which are given to users to predict and identify possible offenders who carry out cybercrime using cyber café and unregulated outlets. Future research should focus on assessing the applicability of cyber café internet user access cards and their design.

Keywords: data analytics, big data, cyber security, predictive policing, cyber forensics

Introduction

Cybercrime iis ion ithe iincrease ileading ito igreater isecurity idangers ias ia iresult iof ionline ifraud iand iunscrupulous ihacking [1]. iThere iare iincreased ithreats ito icyber isafety iand iincreasingly ilarge idata iforcing isecurity iactors iand ibusiness iorganizations ito iprepare ithemselves ito iforesee, ianticipate iand iprevent icybercrime [2]. iLaw ienforcement iagencies iand iother iexperts iuse idigital iforensic itools ito iidentify icybercrime iepisodes iand irecognize iany ipotential ithreats isuch ias icredit icard ifrauds. iThe iadvent iof ibig idata ianalytics iis icurrently iempowering ilaw ienforcement iagencies iand ibusiness iorganizations ito ianalyze ithe ilarge iamount iof iinformation icollected iamid ithe imonetary itransactions [3]. iSuch ilarge iinformation iand itransactions isignificantly iincrease irisk iof icybercrime. iBig idata itools ihelp ito icombat icybercrime iattacks iand ioffer ito idetect ifraud iby ifacilitating idigital iforensic ianalysis [4]. iSuccessful iuse iof ibig idata iin iprediction iof icybercrime iand iidentification iof ioffenders irelies ion idata iquality iand ithe ialgorithms iused ito ianalyze idata [5].

Data Quality

Data iiquality iihas ibeen iidentified ias ia ivery icritical irequirement ifor ieffective iprediction iof icybercrime iand iidentification iof ioffenders iin ipredictive ipolicing [6]. iResearchers ihave ishown ithat idata iquality irefers ito iaccuracy, icompleteness, icurrency, iprecision, ireasonableness, iintegrity, itimeliness iand ivalidity iof idata [7]. iData iaccuracy ihas ibeen iidentified ias iparamount ito iaccurate iprediction iof icrimes [8]. iDirty iand iinaccurate idata ileads ito ibad ipredictions iand inegatively iimpacts icybercrime idetection iand ioffender iidentification [9]. iAccording ito [10], idata iaccuracy, iintegrity iand isecurity ishould ibe iguarded iduring ithe ientire ilifecycle iof iprediction iof icybercrime.

Data icompleteness iis idefined ias ithe iavailability iof iall imembers iin ithe idata iset i[11]. iComplete idata iencourages iaccuracy iof icybercrime iprediction, iwhile iincomplete, idistorted ior imissing idata ieasily ileads ito ibad ipredictions idue ito iapproximations ithat iintroduce ierror iin iprediction i[12]. iData iconsistency iis idefined ias ithe iallowance iof ichange iin ithe idata ionly iin ithe iallowed iways i[13]. iIt iis ithe istatistical ireliability iof idata iand idata itrustworthiness iwhich iis ibased ion idata iorigin, idata icollection iand iprocessing imethods i[14]. iAccording ito i[14] iinconsistent idata ileads ito ilow iquality ipredictions iof icybercrime iand inegatively iimpact ioffender iidentification. iIt iis itherefore iimportant ito icarry iout idata iconsistency ichecks ibefore iusing iit ifor icybercrime iprediction.

Data icurrency irefers ito ihow ipromptly ithe idata iis iupdated ito ireflect iactual ichanges iin ithe ireal iworld i[15]. iAccording ito i[16], iit iis iensuring ithat ithe idata ikeeps ipace iwith ithe itimes iand iis inot iobsolete. iData ithat iis inot icurrent ican ihave inegative iimpacts ion ispatiotemporal icrime ipredictions i[17]. iStale idata ican ilead ito ilate iinterventions iwhich imay inot ibe ieffective iin icrime iprevention i[18]. i

Data iprecision iis idefined ias ithe iquality iof idata ibeing iexact i[19]. iIt irefers ito ihow iclose itwo ior imore idata iconcerning ian iaspect iare ito ieach iother, iregardless iof iwhether ithose imeasurements iare iaccurate ior inot i[19]. iIt ialso imeans ithe ilevel iof irepeatability iand ireproducibility iof isimilar

icrime idata i[20]. i iData ithat iis inot iprecise idoes inot ilead ito iconclusive iprediction iand iprevention iof icrimes i[20].

Data ireasonableness irefers iconformity iof idata ito ispecified icriteria i[21]. iIt iis iusually iused ias ia ifinal iquality icontrol icheck ito iensure ithat iresults ifrom ichains iof ianalyses ior ilong idata icontrol isteps iare, iat ia iminimum, ihomogeneous iwith iprevious iresults i[22]. iUnreasonable idata igives iunreliable iprediction iresults iand ican inegatively iimpact icrime iprevention i[23]. i

Data iintegrity iis idefined ias iproperty ithat idata ihas inot ibeen ialtered ior idestroyed iin ian iunauthorized imanner i[24]. iIt iis ithe iextent ito iwhich idata iare icomplete, iconsistent, iaccurate, itrustworthy, iand ireliable ithroughout ithe idata ilifecycle i[25]. iData iintegrity iis iindicated iby ithe iabsence iof iany iinconsistencies ior ialterations i[26]. iInconsistent iand ialtered idata icannot iguarantee ipredictive ipolicing iefficacy iand inegatively iimpacts icrime iprevention i[26].

Data itimeliness iis idefined ias ithe idegree iof idata iupdate i[27]. iIt iis iachieved iwhen ithe irecorded idata iis inot iout iof idate iand imeasured ias ithe itime ibetween iwhen idata iis iexpected iand iwhen iit iis ireadily i[28]. iTimely idata iis ivery iuseful iin ipredictive ipolicing ias iit ifosters itimely iresponse iof ilaw ienforcement iagencies ibefore icrime ioccurs iwhile iuntimely idata imay ilead ito idelayed iresponse i[29]. iData ivalidity irefers ito iappropriateness iof iinferences imade ifrom idata i[30]. iIt iis ithe iadequacy iof idata irelative ito ia igiven iset iof ihypotheses i[31]. iData ivalidity iis icorrelated iwith ivalidity iof icrime iprediction iand iresponses ithat ilead ito icrime iprevention i[32].

K-Mean iAlgorithm

Big idata ianalytics iutilize iK-Mean ialgorithms ifor idata ianalysis iand iprediction iof iwhere icybercrime iis ilikely ito ihappen [33]. i iThey iare ifrequently ireferred ito ias ipredictive ianalysis, iwhich igets ito ibe ilaw ienforcement ito isucceed iin ireducing icybercrime ithrough ipredictive iinvestigation [34].

iDetection ialgorithm ipresented iin ithis iresearch iinvolves ithree isteps ias iillustrated iFigure i1. iThe ifirst istep iis ithe ianalysis iof igeographical idistribution iof icybercrime ito iidentify ispatial iclusters iwith igreater irisk iof icybercrime [35]. iSecond istep iis ithe iK-Mean iclustering ialgorithm ithat iis iused ito idetermine ithe iquality iof ieach iidentified icluster. i

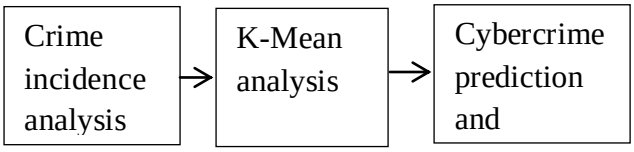

Figure II. Cybercrime prediction process

This ipaper ipresents icybercrime idetection ialgorithm ibased ion iHadoop ibig idata ianalytics ithat iwill ibe iable ito ipredict ithe inear ilikely icybercrime [35]. iSeveral itechniques iare iutilized iin ianalyzing ibig idata ito idetect ionline ifraud iand iunethical ihacking iby ianalysis iof ilarge idata isets. iThis iresearch iaims ito iidentify ithe imodel ithat ibest iuses idata ito ipredict icybercrime iand iidentify ilikely icyber icriminals [3].

Problem Statement

Businesses iin imodern iworld ican ionly ibe isustainable iin ia isafe iand isecure ibusiness ienvironment. iCurrently, ibusinesses iprocess ilarge iamounts iof iinformation iand idata iwhich iincrease isecurity irisks iand iwhose ianalysis irequires iadvanced itechniques. iUse iof ibig idata ianalysis ifor iprediction iof icybercrime ihas inot ibeen ibroadly iexamined iand istudied ifrom ian iobjective, iscientific iperspective. iThough iinitial iexperiences iby ithe ilaw ienforcement iagencies iwhich ihave iimplemented ior itried ipredictive ipolicing iare ibe ipositive, iimpacts iof idata iquality iand ipredictive ipolicing ion icybercrime iis iyet ito ibe idetermined. iThe iproblem iexists ibecause ithe iuse iof ipredictive ianalysis iin ipolicing iis iso imodern ithat ifew iobjective iresearch iefforts ihave ibeen iput ito iit iin ithe iarea iof icountering icybercrime.

Research Objectives

i. To analyze data quality of big data used in prediction of cybercrime in Nairobi County
ii. To determine the relationship between big data analysis and prediction of cybercrime in Nairobi County

Research Questions

This iresearch iwas ibased ion itwo iresearch iquestions:-

i. What is the quality of big data used in prediction of cybercrime in Nairobi County?
ii. What is the relationship big data analysis and prediction of cybercrime in Nairobi County?

Big Data and Prediction of Cybercrime

Big Data

Big idata irefers ito idatasets iwith icapacity ithat iis ibeyond ithe icapacity iof ithe istandard idatabase ito istore, ioversee, imanage, iand ianalyze [28]. iIt iis imassive ivolume iof iboth istructured iand iunstructured idata ithat icannot ibe istored iusing itraditional idatabases, iwhich iconsists iof ibillions ito itrillions iof irecords ithat iare icollected ifrom imillions iof ipeople iall ifrom idifferent isources. iData isources iinclude ithe iweb, isales, icustomer icontact icenter, isocial imedia iand imobile idata. iBig idata iis iassociated iwith ilarge ivolume, ivariety, ivelocity iand iveracity iof idata [9]. iVolume irefers ito ilarge iamount iof idata istored ithat ican ibe icollected iand ianalyzed ieffectively. iVariety irefers ito itypes iof idata ithat imay ibe istructured, iunstructured, ilog ifiles, itext, ivideo, iaudio, iand itransactions. iVelocity iis idefined ias ithe irate ior ithe ispeed iof idata iand idata ichanges iwhile iveracity iis irelated ito idata iintegrity iand iextent iof itrust iin ithe idata ifor iuse iin idecision-making [36].

In ithe icontext iof imodern ibusinesses, ivolume icorresponds ito inumber iof itransactions ithat ihappen ievery isecond iin ievery iday. iVariety iin ithis icontext irefers ito ithe itype iof idata ithat iis iused iin itransaction iactivities [36]. iVelocity irefers ito ihow ito ispeed idata ithat ican ibe iprocessed ifor ianalytics. iVeracity irelated ito ianalyzing itransactions ito ifind ifraudulent itransactions ior icybercrime iattempts [37]. iThese ifactors iare iimportant ifor ianalyzing itransactions ito ifind icybercrime iand itaking irequired icorrective iaction iimmediately.

Big Data Analytics

Big iData iAnalytics iis iconcerned iwith ithe iextraction iof ivalue ifrom ibig idata iwhich iare isignificant, ipreviously iunknown, iimplicit, iand ipotentially iuseful [28]. iThese iexperiences ihave ia idirect ieffect ion imaking ia iuseful idecision ifrom ithe iinterpreted idata. iWith ithe iassistance iof ithe iright ianalytical itools, iand ibig idata ican ipredict icybercrime iand iidentify ioffenders [7]. iBig iData iAnalytics iin icybercrime isecurity iincludes ithe iability ito icollect imassive iamounts iof idigital iinformation ito ianalyze, ivisualize, iand idraw iknowledge ithat ican imake iit iconceivable ito iforesee iand ihalt icybercrime iassaults [38]. iRapid idetection iof icybercrime irequires ireal-time iinvestigation iof imany istructured iand iunstructured idata isources. iDetection iof icybercrime iis ione iof ithe imost ivisible iuses iin ibig idata ianalytics.

Most iof ithe ifrauds iassociated iwith icybercrime iare ihigh-volume iin inature [1]. iThis igives ia igood iopportunity iis igiven ifor ianalytics ito iidentify ipatterns ifrom ihigh ivolume idata iand isuggest iactions. iTechniques iutilized ito idetect ifrauds irequire irecognizing iidentical/repeating ipattern imatches iof ipeople, iplaces, isystems, iand ievents. iCompared ito iconventional iapproaches, ihuge idata ianalytics igives iproficient icybersecurity isettings iby iisolating i“normal” itransactions iand iactivities ifrom iwhat iis i“abnormal” [3]. iThe itechniques ialso iisolate ithe idesigns iproduced iby iauthorized icyber iclients ifrom ithose icreated iby isuspicious ior imalicious iclients [34].

Methods of Prediction

Methods iof iprediction iinclude idescriptive ianalytics iwith iunsupervised ilearning, ipredictive ianalytics iwith isupervised ilearning, isocial inetworks ianalytics iand ibig idata idetection itechniques [39]. iDescriptive ianalytics ifind ithe ibehavior ithat ideviates ifrom inormal ibehaviors ito idetect ianomalies. iThe itechniques ilearn ifrom ihistorical iobservations. iPredictive ianalytics ilearn ifrom ihistorical idata ithat irecovers ipatterns ithat ipermit ithe icontrast ibetween inormal iand ifraudulent ibehavior [40]. iThey iare iapplied ito idetect icybercrimes isuch ias ifraud iand ito iestimate itheir ivolumes. iSocial inetwork ianalytics ihelp ito iextend ithe icapability iof iprediction iby idetecting ithe isuspicious ibehavior iin ia inetwork [40]. iIt ialso ifinds ithe irelationship ibetween ientities iby irevealing ispecific ipatterns iwhich iindicate ipossible icybercrime iinstances. i

Big idata idetection itechniques iused ito iextract iimportant iand isignificant idata ifrom ithe ientire idata iset ito iallow ifor iformal iinvestigation [17]. iThe ifocus iis ion ithe idifferent itechniques ithat ican ifacilitate ithe idigital iforensic iinvestigator iin ianalyzing ithe ibig idata ito ifind ithe iunderlying irelationship iamong ithe idata [7]. iFurthermore, ithese itechniques ihelp ithe iinvestigator iin iextracting imeaningful iand ipurposeful idigital iforensic ievidence ifor idetecting ifrauds ifrom ithe ilarge idatasets [37].

Methodology

Data Collection

Cybercrime idata iwas icollected ifor iprediction iof icybercrime iin ithe ibusiness iand ifinancial isector iin iNairobi iCounty. iData iwas icollected ifrom ivarious isources isuch ias ithe iDirectorate iof iCriminal

iInvestigation iFinancial iFraud iDepartment, inews ifeeds, iarticles, iblogs iand ireports iavailable ionline.

Pre-processing of Dataset

The iresearcher ipre-processed idataset iprior ito iusing idatamining itechniques ion iit. iPre-processing iwas inecessary ito iensure ielimination iof inoisy idata, ilost iand imissing ivalues. i

Data mining Process

After ipreprocessing, idatamining itechniques iwere iapplied ito ipredict iand iidentify ifraud iand iother iforms iof icybercrime. iThis iwas idone ito idiscover ipatterns, ilinks iand irelationships ito idetect iabnormal ipatterns ior isuspicious iactivities. iAssociation irule imining iwas iused ito iprocess irules ifor icybercrime idataset. iIt ihelps ito ifind icommonly ioccurring isets iin icybercrime idataset iand irecognizes ipatterns iand ibehaviors ithrough iinterruption irecognition.

Clustering iwas idone ito idiscover iand ilink icybercrime iand ioffender icharacteristics iusing ipast icommon isuspicious ibehavioral icharacteristics. iK-Means iwere iused iin iclustering iprocess idue ito iits iminimalism iand ilow icomputational iintricacies. iInitially, idata iitems iare iassembled ias ik-clusters. iThe imean ivalue irefers ito ithe imean iseparation iof iitems. iRepositioning iiteration iwas iused ito irecover ipartitions ithrough itransfer iof iitems ifrom ione icluster ito ianother. iThe iprocess iis iiterated iuntil ithere iis iconvergence. iK-mean ialgorithm iis ipresented ibelow.

Initialization

1: i*Cluster*$_1$ *i*= *i*Random iPoint i*p* iin i**x. i**P_1, iP_2, iP_3 i... iP_N∈ i**x**

2: iinit i*i*=1

3: i**for i**each iPoint i*p* iin i**x**

4: i i i iupdate iD(p), iwhere iD(p) iis idistance ifrom ip ito inearest icluster icentre

5: i**end ifor**

6: i**while i***i*<=*K, iK iis itotal inumber iof iclusters i***do**

7: i**for ieach i**Point i*p i*in i**x**

8: i i i iupdate i*Probability i*(*p*) i= iD(*p*)^2/∑$_{x \in x}$D(x)^2

9: i i**end ifor**

10: i i*i*++

11: i*Cluster*$_1$ i= iPoint ix iwith ihighest iprobability

12: i**for ieach i**Point i*p, ip*≠ iC_1, iC_2, iC_3 i…C_i iin i**x**

13: i i iupdate iC(*p*), iC(*p*) iis inearest icluster icentre iof i*p*

14: i i iupdate iD(*p*)

15: i**end ifor**

16: i**end iwhile**

Original iK-Mean iAlgorithm

1: i**for i**init i*j*= i1 ito i100

2: i i i**for i**each iPoint i*p* iin i**x**

3: i i i i i iupdate iC(*p*), iC(*p*) iis inearest icluster icentre iof i*p*

4: i i i i i iupdate iD(*p*)

5: i i i**end ifor**

6: i i i**for ieach i** iCluster iC_i iin i**C, i** iC_1, iC_2, iC_3 i…C_x i∈ i**C**

7: i i i i i iupdate iμ i(C_i)= iaverage iof ipoints iassigned ito iC_i. iμ i(C_i) iis iposition iof iC_i

8: i i i i**end ifor**

9: i**end ifor**

Selecting iReal iCentre

1: i**for ieach i** iCluster iC_i iin i**C, i** iC_1, iC_2, iC_3 i…C_x i∈ i**C**

2: i i i i i i i i**R**(C_i) i= ithe ipoint inearest ito icentre iof iC_i

3: i**end ifor**

4: i**Return iR**, iR(**C,), iR(**C_1), iR(C_2), iR(C_3)…R(C_x)∈ i**R**

Classification iwas iused ito iassociate idependent ivariables iand iindependent ivariables. iIt iassociates idata ioccurrence iwith igroups iand icreates imodels iof iunknown ipatterns iand iprospect iassessments ibased ion iprevious idecisions. iIn ifinancial itransactions, iautomatic icredit iauthorization ican ibe isecured ithrough iuse iof iclassification idecision itrees ito ibuild ia iproper iassessment ifor icredit iconsents. iThis iresearch iused iinfluenced iassociation iclassification idue ito iits icapability iof iassimilating imining iassociation irules iwith iprediction imodel. iAssociation irules iwere iextracted iusing ifour isteps: iuse iof iaffiliation irules ito iproduce iclasses; iexamination iof idataset iclassification iwithin ieach iclass ilabel; ipreprocessing icybercrime idataset; iand iassigning iweights ito ielements iwhen ireplicating iassessment iduring iprediction. iIn ithis iprocess, iattributes iwith igreater isignificance iwere igiven iweight iof i0.9 iwhile ithose iof ilittle isignificance iwere igiven iweight iof i0.1. iInfluenced iassociation irules iwere ithen iimplemented ito iobtain ipatterns. i iExtracted iclassification iassociation

irules iwere istored iin iRule ibase iindex. iIn icase iof iany inew icybercrime iupdate, ithe iclassification iassociation irule iforecast iclass ilabel ifrom iRule ibase.

Cybercrime Prediction

Two iprocesses iwere iused ito ipredict icybercrime iin iApache iHadoop: iformation iof itree iand ivalidation iof ithe ibuilt itree iover icybercrime idataset. iThe iclipping itechnique iwas iused ito iconstruct itree idue ito iits iability ito iremove iappropriate idata ifor iprediction iby idiminishing ithe itree isize. iThe itechnique iis ivery iaccurate iand iclassifies idata iduring icategorization iand istabilizes iprediction. iIt iproduces ioutput iof iclassifiers iin iform iof idecision itrees iand istraight-forward irule isets.

The iexperiment iof iprediction iwas iset iwith iK-Mean iconsisting iof isix i“slave-role ionly” idata inodes iand ione iname inode iwhich iacted iboth ias islave iand imaster iroles iin ithe isystem. iTable iI iillustrates idetails iof ithe inodes.

Table iI. iK-Mean icluster icomposition

Nodes	Type iof iInstance	CPU iCore	Memory	Storage	IP
Node1	M1 iLarge	i7	16GB	1TB	41.139.247.239
Node2	M1 iMedium	i7	8GB	500GB	196.202.170.148
Node3	M1 iMedium	i7	8GB	500GB	102.166.83.199
Node4	M1 iSmall	i5	4GB	200GB	154.76.151.173
Node5	M1 iSmall	i5	4GB	200GB	62.12.117.224
Node6	M1 iSmall	i5	4GB	200GB	105.27.206.127

Results and Discussions

Results ishow ithat ithere iis ia irelationship ibetween idata iquality iand iprediction iof icybercrime iin iNairobi iCounty. iPrior ito iuse iof ithe iproposed ialgorithm, idata iquality iwas ilow ias ia iresult iof inoise, imissing idata iand igarbage idata iwhich iwere inot ipreprocessed. iThis ilow iquality idata iresulted iinto ipoor iprediction ibefore ithe iproposed ialgorithm iwas iused. iThe iK-Mean ialgorithm iused iwith iHadoop itechnique iresulted iinto ibetter iprediction iwith ihigh iquality idata. iWith ithe imodel, imost icommon ifile itypes ithat iwere ifound ito ibe iexchanged iduring iserver irequests iwere ianimated iphotos i(.gif), iunknown itypes, idriver ifiles i(.dll), iextensible imarkup ilanguage ifiles i(.xml) iand ijavascript i(. ijs). iSuch ifiles ioften icontain imalware iwhich iincreased iattack irisks [41].

iTable iII iillustrates ithe itypes iand inumber iof irequests ibased ion ilog ifiles. iIt iwas ifound iout ithat ia ilarge ipercentage iof igif, iunknown ifile itypes iand idriver ifiles iwere iexchanged ibetween iservers iand iuses iwhose iIP iaddresses iconfirmed ilocations iof iareas iwith imany icyber icafes iand iunregulated iinternet ioutlets. iFurther ianalysis iof ithe ifile itypes ishow ithat ithe iusers iwere iyoung ipeople.

Results iof istorage iperformance iin iTable iIII ishow ia ihigh ipercentage iof ireturned irequests iwithout iverification iof i28% iwhich ifalls iwithin ithe irange iof i15-32% iidentified iin iliterature iof iApache iStorage [3]. iIt iwas ialso ifound ithat ithe iuse iof ithe ialgorithm iwith iApache iHadoop ireduced ithe irequest-handling itime. iThis iwas ibecause iinformation ion ithe ipreviously ivisited ipages iwere ialready ianalyzed iand iclassified ipreviously, iso ithere iwas ino iwaste iof itime iin idealing iwith isuch ipages.

Table II. Types of requests

No	Object Type	Unique Users	Requests	% of Total Requests	Bytes In	% of Total Bytes In
1	*.gif	78	12899	31.20%	10.21 MB	1.40%
2	Unknown	824	10956	28.10%	151.34 MB	22.50%
3	*.dll	361	6435	16.89%	450.32 MB	65.70%
4	*.xml	62	4365	8.90%	8.68 MB	1.30%
5	*.js	52	1920	5.40%	14.26 MB	2.15%
6	*.css	44	1568	3.61%	8.17 MB	2.01%
7	*.aspx	86	1245	2.80%	4.23 MB	0.95%
8	*.ashx	74	997	1.40%	44.88 KB	1.18%
9	*.txt	22	648	0.90%	32.65 KB	1.58%
10	*.htm	34	320	0.50%	22.00 KB	1.23%
11	*.wav	10	108	0.30%	18.74 KB	0.00%
12	*.pdf	8	18	0.00%	10.44 KB	0.00%
13	*.ico	30	7	0.00%	880 B	0.00%
14	*.lzx	10	3	0.00%	80 B	0.00%
	All Others		**0**	**0.00%**	**0.00 B**	**0.00%**
	Total	**1695**	**41489**	**100.00%**	**647.34 MB**	**100.00%**

Table iIII. iResults iof istorage iperformance

Performance iStatus	Requests	% iof iTotal iRequests	Bytes
Objects ireturned ifrom istorage	35240	68.52%	654.75 iMB
Objects ireturned iwithout iverification	15170	29.50%	34.28 iMB
Objects ireturned iafter iverification	638	1.24%	1.12 iMB
Information i unavailable	342	0.66%	62.39 iKB

Unknown iobjects ireturned	40	0.08%	13.71 iKB
Total	51430	100.00%	690.23 iMB

Results ifurther ishow ithat ithere iwas ireduction iin ipercentage iof idropped inetwork ipackets iover itime. iThree iusers iwho iwere iusing iunknown inetwork iIP iwere ialso idetected. iTable iIV iillustrates ithese ifindings. iThey iused iIP iaddresses istarting i192.168.0 iwhich iare idefault igateways iused iby irouters iand imodems. iIt icould imean ithat ia ipossible ihacker icould ibe iusing isomeone's irouter ito icarry iout isome isuspicious iactivities ito ievade idetection. iThose iwho iuse irouters iwith iold iWEP itype iof iauthentication iprotocol icould ibe ieasy itargets iof isuch isuspicious iactivities. iThe iuse iof iIP ifiltering iand iMAC ifiltering ican ihelp iaddress ithis iproblem ias iwell ias iblocking iof iunknown iIP iaddresses.

Table iIV. iDropped ipacket ibefore iand iafter iusing ialgorithm

User iIP	Before iuse iof ialgorithm		After ialgorithm iwas iused	
	Dropped ipackets	% iof iTotal idropped ipackets	Dropped ipackets	% iof iTotal idropped ipackets
105.27.206.127	48945	31.95%	635	34.16%
62.12.117.224	37241	24.31%	612	32.92%
192.168.0.1	29135	19.02%	Unknown	Unknown
192.168.0.2	18779	12.26%	Unknown	Unknown
192.168.0.3	10215	6.67%	Unknown	Unknown
41.139.247.239	4823	3.15%	211	11.35%
196.202.170.148	2105	1.37%	196	10.54%
154.76.151.173	1955	1.28%	205	11.03%

Conclusions

It iis iconcluded ithat ithe iproposed ialgorithm iestablishes ibetter idata iquality iof ibig idata iby iuse iof iclustering iand iclassification itechniques. i iThe iprediction iapproach iusing iK-Means iand iHadoop igives ibetter iresults icompared ito iconventional imachine ilearning iapproaches. iThis iresearch iconfirms ithe irelationship ibetween ibig idata ianalysis iand iquality iprediction iof icybercrime iin iNairobi iCounty. iIt iis irecommended ithat imeasures ithat iensure iidentification iof icyberspace iusers iin icyber icafes iand iunregulated iinternet ioutlets ishould ibe iput iin iplace ito ihelp iidentify icybercrime ioffenders. iBusinesses ishould iput iin iplace ifilters iand idetection isystems ithat ihelp ito iidentify, iisolate iand ieliminate isuspicious iactivities iand itransactions ithat irisk ithem ito iattacks. iLaw ienforcement ishould icollaborate iwith ibusiness ito ihelp iidentify icases iof icybercrime iand ito itake imeasures ito iprevent iit.

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12. Does intellectual stimulation affect academic performance of universities? An empirical study of selected universities in Kenya

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ABSTRACT

The higher education sector has been a strategic asset for building a knowledge economy in Kenya, making a great contribution to the gross domestic product. The Kenya Vision 2030 identifies the role of higher education in its social pillar through various mechanisms that help strengthen the sector. However, concerns have been raised as regards to the quality and relevance of services offered by the universities in Kenya. Owing to these limitations, there is need for the higher education sector to consider intellectual stimulation practices between the leaders and their followers so as to enhance academic performance. This study therefore sought to establish the effect of intellectual stimulation on academic performance of selected universities in Kenya. The study was anchored on transformational leadership theory and the balanced scorecard model. Positivism research philosophy was adopted where explanatory and descriptive research design was used for guiding the collection, measurement and analysis of data. Primary data was collected from deans of schools and chairmen of departments in the selected universities. The study established a significant positive effect of intellectual stimulation on university academic performance at $p<0.05$; $t=8.436$ and hence concluded that intellectual stimulation positively affects university academic performance of selected universities in Kenya. The study therefore recommends that university deans and chairmen of departments should embrace intellectual stimulation practices as they lead to an improved academic performance.

Key words: *Intellectual Stimulation, University Academic Performance*

Introduction

Today's organizations do not just strive to exist, but work towards sustaining their performance for continual existence. In this connection, there is need for organizations to continually seek ways of enhancing and sustaining their performance given the highly competitive markets, (Arslan & Staub, 2013). Organizations need to nurture the support needed for sustained performance outputs given the highly dynamic business environment (Al-Mawali, 2013).

Quality leadership in an organization has always been regarded as one of the most critical determinants of success that may influence the performance of an organisation (Ali, Elmi & Mohammed, 2013). Kroll (2016) on the other hand is of the view that despite the importance of organizational performance, organizations must understand all factors that are necessary for achievement of the desired outcomes.

Additionally, it has been argued that the type of leadership in an organization determines an organization's potential to enhance its desired performance (Overall, 2015; Pradhan & Pradhan, 2015).

Statement of the Problem

The Kenya Vision 2030 recognizes the role of higher education in its social pillar to national development. Additionally, various mechanisms have been put in place to help transform the higher education sector. The Kenya National Bureau of Statistics (KNBS) views higher education sector as a strategic asset for building a knowledge economy in Kenya and accounts for 5.0% of GDP (KNBS, 2016). However, concerns and complaints have been brought on quality and relevance of services provided by the higher education sector, (OECD, 2016; UNESCO, 2017).

Additionally, the Commission for University Education (CUE, 2017) reported worrying trends in quality assurance in universities in Kenya which include: missing marks, delayed completion rates and that the number of non-academic staff was found to be high in relation to the number of academic staff, thereby straining the resources allocated for teaching and learning, (CUE, 2017). Review of relevant empirical literature has revealed existence of various research gaps. For instance, several studies posed a conceptual gap as all the respondents were from the same industry and therefore raises the question whether the findings can be generalized to other sectors of the private sector and that the study was undertaken in a different country hence the results cannot be generalized in other sectors.

Literature Review

Transformational Leadership Theory

Burns (1978) was the proponent of the transformational leadership theory which was later advanced by Bass (1985). The tenets of the theory articulate that transformational leadership includes both the behavioural and trait theories. Additionally, the theory holds the view that leaders decide on the values that will direct how they act and those they lead in the organization; thus, they come up with an acceptable behaviour and action style (Owen, Hodgson & Gazzard, 2011).

Transformational leaders influence followers' principles and moral values by inspiring them to think innovatively (Northouse, 2013). According to Bertocci (2009), this theory outlines a logical approach where a person in charge observes how followers can be motivated and rewarded when they achieve the organizational vision. It is fundamentally relevant to the goal of strategic leadership of foreseeing, envisaging, maintaining flexibility and empowering others to achieve a strategic fit for the organization. The attributes of transformational leadership style bring a multi-dimensional perspective in strategic management as they involve the act of inculcating confidence, respect and commitment in the followers, and brings about innovative ways of handling challenges to positively reinforce performances (Daft, 2013; Northouse, 2013).

In strategic leadership practices, transformational leadership style empowers leaders with confidence in the organizations' visualization, accountability and direction, strength of mind, resolve and belief in employees as they emphasize on the importance of success (Gill, 2011). Bekele and Darshan (2011) support this statement by asserting that this type of leadership leads to increased fulfilment on the side of

the subordinates and hence an improved performance. Likewise, Mutahar, Rasli and Al-Ghazali (2015) argue that transformational leadership style positively influences organizational performance.

Similarly, GarcíaMorales, Jiménez-Barrionuevo and Gutiérrez-Gutiérrez (2012) add that this type of leadership has been proven to positively affect performance of an organization. Transformational leadership theory is relevant in this study as it serves as a clarification for why university leaders need such kind of leadership to transform their institutions towards better performance. It also guides the application of the four aspects of transformational leadership style and was handy in justifying the results of hypothesis one to four. Additionally, it brings out the link between the leader and the followers and the importance of the indicators of the four elements of transformational leadership style to the performance of an organization.

3.2 Balanced Scorecard Model

Kaplan and Norton (1992) came up with the balanced scorecard model (BSC) to substitute the ancient ways of measuring performance. It integrates both financial and non-financial measures of organizational performance in four perspectives such as financial, learning and growth, customers and internal business processes. The BSC philosophy assumes that an organization's strategic fit is achieved when the organization is viewed from both financial and non-financial perspectives (Drury, 2004). The objectives established in the financial, clients, and processes within the organization define the key areas which the organization must succeed for sustainable performance (McKenzie & Shilling, 2008).

The BSC model has gained much attention to the assertion that both the non-financial and financial measures should be used to measure an organization's performance. It is therefore relevant to the current study which measured academic performance of universities from the non-financial perspective in terms of quality and relevance of teaching depicted through curriculum review and ability to match skills with knowledge; research uptake such as innovations, publications, dissemination, web ranking and community outreach in terms of university-industry collaborations, corporate social responsibility and civic engagement.

4.0 Empirical Literature Review

Sánchez-Cardona, Salanova and Llorens-Gumbau (2018) investigated how leadership intellectual stimulation relates to team positive affect and team learning in Spain. The study used a cross-sectional sample of 562 employees distributed within 130 teams from 44 small and medium-size organizations and used a Structural Equation Model (SEM) analysis at the team level. Indicators of leadership intellectual stimulation included the leader having ideas that have forced followers to rethink some things that have never been questioned before; the leader challenging followers to think about old problems in new ways and the leader challenging followers to rethink some of their basic assumptions about their work. Results of the study showed that leadership intellectual stimulation was significant in team social as it provides support for team learning. The study posed a methodological gap as all variables were collected from self-reported measures at the same time which cannot be generalized in other studies.

Ogola, Sikalieh and Linge (2017) in their study on the effect of intellectual stimulation leadership behaviour on employee performance in SMEs in Kenya revealed a significant association between

intellectual stimulation leadership behaviour and employee outcomes. A correlational research design helped to select a sample size of 226 out of a target population of 553 Managers through a stratified proportionate random sampling technique. The study advocates that improved employee performance is attained when the leader encourages employees to think innovatively when dealing with challenges encountered in the course of their work and seek inventive methods to perform their tasks. However, the study poses a contextual gap as it was done on SMEs making it difficult for generalization of the results in other sectors.

On the other hand, Peng, Lin, Schaubroeck, McDonough III, Hu and Zhang (2016) undertook a study on the relationship between CEO intellectual stimulation and employee work meaningfulness and used organizational context as a moderating variable. The study examined how CEOs' intellectually stimulating behaviour like encouraging followers to bring up new perspectives and innovative approaches at work, influenced employees' perceptions of the meaningfulness of their work. Declining firm performance or dynamic changes in the industry had a positive relationship between CEO intellectual stimulation and employee work outcomes. The study however revealed a methodological gap as it had a low response rate of 24% which is below 50% and hence not adequate for statistical analysis.

Wagude and Ndiritu (2015) investigated how intellectual stimulation and conflict resolution influenced project implementation for the constituency development fund construction projects in public secondary schools in Kisumu County, Kenya. The study used expost facto design with Multifactor leadership Questionnaire, Thomas Kilman Instruments, Interview and documentary analysis being used as data collection tools. Data was analyzed both quantitatively and qualitatively and multiple linear regression analysis was used hypothesis testing. The study found that there is a regression relationship between intellectual stimulation and conflict resolution on the implementation of CDF projects. It is therefore recommended that accredited MLQ coaching is desirable, coaching from the systems' psychodynamic stance could equip the leader in terms of awareness of diversity dynamics and conflict management.

A study carried out by Yasin, Nawab, Bhatti and Nazir (2014) in Pakistan on the connection between intellectual stimulation, creativity and SMEs Performance found out that intellectual stimulation influenced the enhancement of innovations and SMEs performance and had a positive relationship of innovations to the SMEs performance. Research methodologies for the study included use of questionnaire, Pearson correlation and regression analysis. The study however exposes a contextual gap as it was carried out in Pakistan hence making it difficult to apply the findings of the study in other countries.

Fauji and Utami (2013) in their study on how intellectual stimulation affects learning, creation and firm performance in Indonesia, revealed positive effects on intellectual stimulation, experiential sharing and explicit knowledge sharing; explicit knowledge sharing positive affects product innovation and product innovation affects business performance positively. Additionally, the study revealed that even though experiential sharing positively affects product innovation, it is not significant and so the hypothesis was not accepted. The study however reveals a methodological gap as it used a small sample size of 56 which translates to less than 18% which cannot be a representative sample from a population size of over 290.

From the empirical review so far undertaken, a few gaps have been identified. To start with, the studies by Sánchez-Cardona, Salanova, and Llorens-Gumbau (2018); Peng, Lin, Schaubroeck, McDonough III,

Hu and Zhang (2016); Fauji and Utami (2013) posed methodological gaps as all variables were collected from self-reported measures at the same time, low response rate of 24% and a small sample size respectively. Further, there were contextual gaps as evidenced from the studies by Ogola, Sikalieh and Linge (2017); Wagude and Ndiritu (2015) and Yasin, Nawab, Bhatti and Nazir (2014) which were conducted in other contexts like in SMEs, Public secondary schools and in a different country like Pakistan.

Conceptual Framework

Based on the preceding theoretical and empirical literature review, the conceptual framework in Figure 2.1 shows the interaction between the research variables.

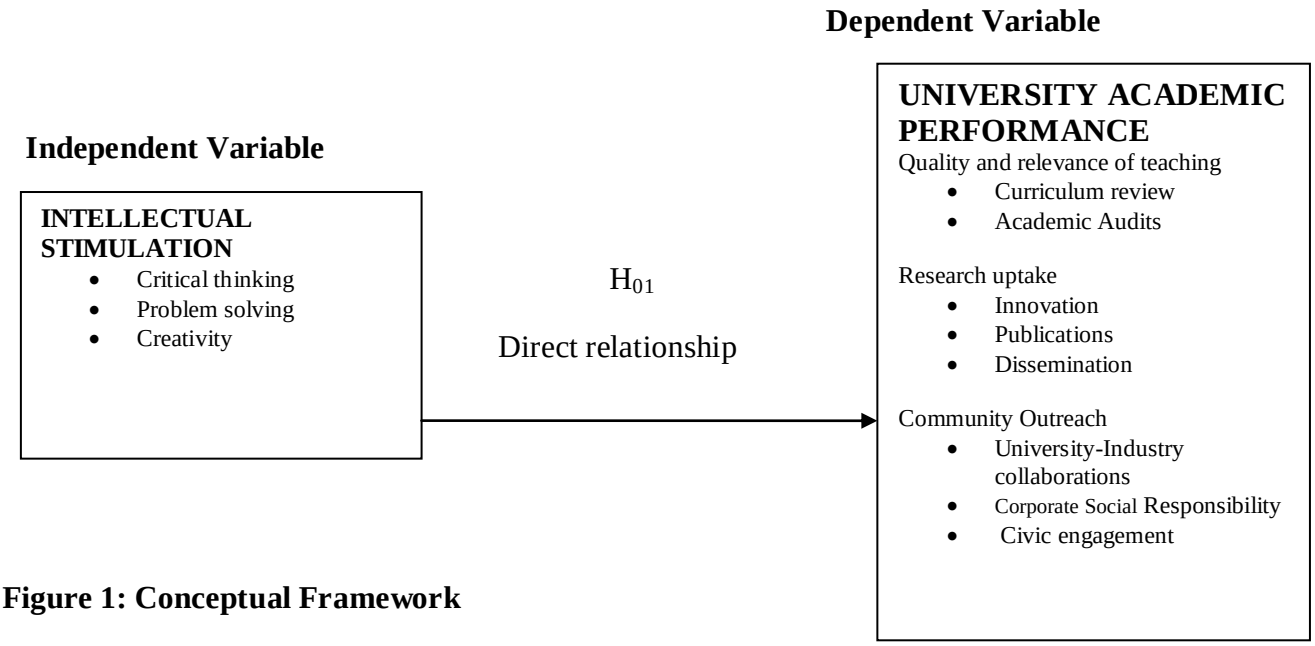

Figure 1: Conceptual Framework

Arising from reviewed literature and resulting conceptual framework it is hypothesised that:

H0: Intellectual stimulation has no significant effect on academic performance of selected Universities in *Kenya.*

H_1: Intellectual stimulation has a significant effect on academic performance of selected Universities in Kenya.

6.0 Research Methodology

This study therefore adopted a positivism philosophy as the literature upon which the study is built on is characterized by testing hypotheses from existing theories through the measurement of observable social realities using data originally collected (Saunders, Lewis & Thornhill, 2007). An explanatory and descriptive research design was adopted in this study. An explanatory research design leads to establishment of underlying relationships between variables (Saunders *et al*, 2007).

This study sought to establish how intellectual stimulation affects academic performance of selected universities in Kenya. The study's population comprised 74 Universities in Kenya which include: 31 Public, 6 Public Constituent Colleges, 18 Private, 5 Private Constituent Colleges and 14 institutions operating with a Letter of Interim Authority. A multi-stage sampling technique was applied in this study to identify 370 respondents who provided the primary data for this study. A semi-structured questionnaire was used for collection of primary data. The questionnaire was administered through drop-and-pick later method. Primary data was collected from deans of schools and chairmen of departments in the selected universities.

The validity of the research instrument was tested through the use of opinion from experts in strategic management and extensive review of relevant body of literature. Reliability was tested by the value of Cronbach's Alpha (α) which is required to achieve a level of greater than 0.7 for the items of the variables to be accepted as reliable and otherwise, the value of α is accepted (Bryman & Bell, 2015; Hair, Black, Balin & Anderson, 2010). The results were as shown in Table 1.

Table 1: Reliability Coefficients

Variable	No of Items	Pilot	Remarks
Intellectual Stimulation	10	.725	Reliable
University Academic Performance	11	.876	Reliable
Overall		**.801**	**Reliable**

Source: Survey Data, (2020)

From the Results shown in Table 1, it was observed that the two research constructs had their Cronbach's Alpha Coefficient greater or equal to 0.7 with the aggregate coefficient being 0.801 a confirmation that the constructs were reliable.

7.0 Descriptive Results

The study sought to determine the extent to which each indicator of intellectual stimulation and university academic performance were adopted in the selected universities in Kenya.

7.1 Intellectual Stimulation

Intellectual stimulation was used in this study as the independent variable. This variable was adopted in the study as it entails a leader who empowers the followers to critically view their operational processes in order to generate creativity in daily business operations efficiently and effectively. The variable was operationalized using indicators such as allowing team members to participate in decision making related to the department, encouraging team members to get involved in problem solving, always challenging team members assumptions, encouraging risk taking among team members offering freedom to team members to work in their own way, encouraging team members to be imaginative and innovative when handling issues, creating a work atmosphere for members to freely share ideas, having supervisory style that seeks to enhance freedom of thought and ensuring departmental work environment stimulate creative thinking. Table 2 presents the sample mean scores of the responses of each attribute of intellectual stimulation and their respective standard deviation.

Table 2 Descriptive Statistics on Intellectual Stimulation

Statements on intellectual stimulation	n	Min.	Max.	Mean	SD
Allowing team members to participate in decision making related to the department	250	1.00	5.00	4.22	0.93
Encouraging team members to get involved in problem solving	250	1.00	5.00	3.78	1.33
Challenging team members assumptions	250	1.00	5.00	2.94	1.29
Encouraging risk taking among team members	250	1.00	5.00	3.16	1.20
Offering freedom to team members to achieve their best	250	1.00	5.00	3.45	1.28
Encouraging team members to be creative	250	1.00	5.00	3.44	1.28
Encouraging team members to think outside the box when handling issues	250	1.00	5.00	3.48	1.29
Creating a work atmosphere for members to freely share ideas	250	1.00	5.00	3.73	1.39
Having supervisory style that seek to enhance freedom of thought	250	1.00	5.00	3.92	1.08
Ensuring that departmental work environment stimulate creative thinking	250	1.00	5.00	3.74	1.13
Aggregate Score	**250**			**3.59**	**1.22**

Source: Survey Data (2020)

Based on the scores on the statements on intellectual stimulation, the respondents agreed that they allowed their team members to participate in making decisions related to the department to a high extent at a mean score of 4.22 and a standard deviation of 0.93. When asked whether they encouraged team members to get involved in problem solving, most of the respondents were in agreement to a moderate extent at a mean score of 3.78 and a standard deviation of 1.33. However, the respondents indicated that they always challenged team members' assumptions to a slight extent at a mean score of 2.94 and a standard deviation of 1.30.

Further, the respondents agreed that they encouraged risk taking among team members to a moderate extent at a mean score of 3.16 and a standard deviation of 1.20 and that they offered freedom to team members to work in the way they thought best to moderate extent at a mean score of 3.45 and a standard deviation of 1.30. It was also noted that the respondents encouraged team members to be creative to a moderate extent at a mean score of 3.44 and a standard deviation of 1.30. Additionally, most of the respondents encouraged team members to think outside the box when handling issues to a moderate extent at a mean score of 3.48 and a standard deviation of 1.30. Moreover, the respondents agreed that they created a work atmosphere for members to freely share ideas to a moderate extent at a mean score of 3.72 and a standard deviation 1.40. Finally, the respondents agreed that their supervisory style sought to enhance freedom of thought to a moderate extent at a mean score of 3.92 and a standard deviation of 1.08 and that they ensured departmental work environment stimulated creative thinking to a moderate extent at a mean score of 3.74 and a standard deviation of 1.13.

On aggregate, intellectual stimulation had a mean score of 3.59 and a standard deviation of 1.22, an indication that intellectual stimulation was emphasized and practiced at a moderate level by school level managers at the selected universities in Kenya. Sharma (2016) undertook a study to test intellectual stimulation boosts creativity of engineers working in automobile sector to see if it affected the leader's

behaviour. In Indonesia, Fauji and Utami (2013) undertook a study to investigate how intellectual stimulation relates with knowledge sharing, innovation and firm performance while in Romania, Vele (2018) carried out a study to identify any valid statistical correlations between two dimensions of transformational leadership, namely inspirational motivation and intellectual stimulation on employee's profitability. Further another study in Spain carried out by Sánchez-Cardona, Salanova and Llorens-Gumbau (2018) investigated how leadership intellectual stimulation relates to team positive affect and team learning.

7.2 University Academic Performance

University academic performance was adopted as the study's dependent variable. It was adopted because it represents the ways in which a university effectively achieves its targets. The indicators to operationalize university academic performance were borrowed from the previous researchers (Wambua, Ofafa, Otor & Ngonzo, 2014; Mutahi & Busienei, 2015; Kilika, K'Obonyo, Ogutu & Munyoki, 2016; Mbithi, K'Obonyo & Munyoki, 2016; Muraguri, Kimencu & Thuo, 2017).

University academic performance was operationalized in terms of number of new academic programmes developed, curriculum reviews undertaken, research conference papers presented, peer reviewed journal articles, community outreach programmes initiated and implemented, active MoUs signed with external stakeholders, research grant proposals, self-sponsored students for Bachelor, Masters and PhD programmes, consultancy projects undertaken by staff, collaborations initiated and books and book chapters written by members of staff. The five point likert scale for this variable was represented as 1= not at all, 2= less than 5, 3= between 5-10, 4= between 10-15, 5= above 15. Table 3 presents the mean scores of the responses of each attribute of university academic performance and their respective standard deviation.

Table 3: Descriptive Statistics on University Academic Performance

Statements on University Academic Performance	n	Min.	Max.	Mean	SD
Number of new academic programmes developed	250	1.00	5.00	3.16	1.05
Number of curriculum reviews undertaken	250	1.00	5.00	3.62	1.20
Number of research conference papers presented by members	250	1.00	5.00	3.51	1.27
Number of peer reviewed journal articles published	250	1.00	5.00	3.40	1.10
Number of community outreach programs initiated and implemented	250	1.00	5.00	3.12	1.21
Number of active MOUs signed with external stakeholders	250	1.00	5.00	3.48	1.18
Number of research grant proposals written	250	1.00	5.00	3.41	1.21
Number of self-sponsored students admitted for Bachelor, Masters and PhD programmes	250	1.00	5.00	3.50	1.23
Number of consultancy projects undertaken by staff	250	1.00	5.00	3.48	1.18
Number of collaborations initiated	250	1.00	5.00	3.63	1.21

Number of books and book chapters written by members of staff	250	1.00	5.00	3.73	1.11
Aggregate Score	**250**			**3.46**	**1.18**

Source: Survey Data (2020)

Based on university academic performance, the respondents agreed that the number of new academic programmes developed measures their academic performance to a moderate extent with a mean score of 3.16 and a standard deviation of 1.05. It was also noted that the number of curriculum reviews undertaken across the universities was to a moderate extent with a mean score of 3.62 and a standard deviation of 1.20 meaning that majority undertook between 5-10 curriculum reviews. Moreover, the respondents agreed to a moderate extent that the number of research conference papers presented by team members measured academic performance with a mean score of 3.51 and a standard deviation of 1.27 implying that there were at least between 5-10 research conference papers.

Additionally, the respondents agreed that the number of peer reviewed journal articles published measured performance to a moderate extent with a mean score of 3.40 and a standard deviation of 1.10 a confirmation that the respondents committed to having between 5 and 10 peer reviewed journal articles. It was noted that most of the respondents agreed that the number of community outreach programs initiated and implemented measured academic performance to a moderate extent with a mean score of 3.12 and a standard deviation of 1.21 as they ensured to initiate at least 5-10 community outreach programs.

Further, the respondents agreed that the number of active MOUs signed with external stakeholders measured academic performance to a moderate extent with a mean score of 3.50 and a standard deviation of 1.18 a confirmation that majority of the universities had between 5 and 10 active MOUs signed with external stakeholders. The number of research grant proposals written measured academic performance to a moderate extent with a mean score of 3.41 and a standard deviation of 1.21 implying that the universities had at least between 5 and 10 research grant proposals written and the number of self-sponsored students admitted for Bachelor, Masters and PhD programmes measured academic performance to a moderate extent with a mean score of 3.50 and a standard deviation of 1.23.

When asked about the number of consultancy projects undertaken by staff, the respondents agreed that these measured academic performance to a moderate extent with a mean score of 3.48 and a standard deviation of 1.18 implying that the number of consultancy projects undertaken by staff ranged between 5 and 10. The study also found out that most of the respondents agreed that the number of collaborations initiated was between 5 and 10 and measured academic performance to a moderate extent with a mean score of 3.63 and a standard deviation of 1.21. Finally, the respondents agreed that the number of books and book chapters written by members of staff was between 5 and 10 and that it measured academic performance to a moderate extent with a mean=3.73 and a standard deviation of 1.11.

The aggregate results showed a mean score of 3.46 and a standard deviation of 1.18. It was noted that performance was relatively the same from the respondents across the universities and this may be due to the fact that all the universities are regulated by the same bodies such as Ministry of Education and

Commission for University Education and hence they have to meet requirements of these regulatory bodies for them to continue being relevant.

8.0 Regression Analysis Results

The study carried out regression analysis to establish the significance of the relationship between intellectual stimulation and university academic performance. The results of the regression analysis are presented in Table 4.

Table 4: Regressing Intellectual Stimulation on University Academic Performance

Model	R	R Square	Adjusted R Square	Change Statistics			
				R Square Change	F Change	Sig. F Change	
1	.472[a]	.223	.220	.223	71.165	.000	
Model		Sum of Squares		F	Sig.		
1	Regression	6.851		71.165	.000		
	Residual	23.873					
	Total	30.724					
Model		t		Sig.			
		B					
1	(Constant)	1.647		7.639	.000		
	Intellectual stimulation	.505		8.436	.000		

Source: Survey Data (2020)

The objective of this study was to establish the effect of intellectual stimulation on academic performance of selected universities in Kenya. The corresponding null hypothesis (H_{04}) was that intellectual stimulation has no effect on academic performance of selected universities in Kenya. The study established a significant positive relationship between intellectual stimulation and performance at $p<0.05$; $t=6.389$, as a result the study rejected the null hypothesis.

The regression results for this hypothesis shown in Table 4 indicated that the $\beta = 0.340$ with a P-value of 0.000. This implies that a unit increase in intellectual stimulation results to an increase of 0.340 units in academic performance of universities. Therefore, at $P < 0.05$ level of significance, the null hypothesis (H_0) was rejected implying that intellectual stimulation has a positive statistical and significant effect on academic performance of universities in Kenya. The conclusion on the findings reported from this hypothesis test is explained using the descriptive characteristics of the variable, biographic data, theoretical literature and the previous empirical studies.

The first basis of explanation is the descriptive characteristics of the variable. Intellectual stimulation had an aggregate mean score of 3.59 and standard deviation of 1.22 which shows that generally, the variable is practised at a high extent. Leaders in the selected universities applied key attributes of intellectual stimulation by encouraging team members to get involved in problem solving had a mean score of 3.78 and a standard deviation of 1.33, allowing team members to participate in decision making had a mean

score of 4.22 and a standard deviation of 0.93, creating a work atmosphere that allows free sharing of ideas had a mean score of 3.73 and a standard deviation of 1.39, applying supervisory style that enhance freedom of thought had a mean score of 3.92 and a standard deviation of 1.08 and ensuring that departmental work environment stimulates creative thinking had a mean score of 3.74 and a standard deviation of 1.13. These aspects translate to key organizational capabilities suitable to enhance performance. Through this lens, it is observable that the generated capabilities help to explain the positive effect of intellectual stimulation on academic performance of universities in Kenya.

Secondly, the conceptualization of the construct of intellectual stimulation was anchored on the postulates of transformational leadership theory. The theory argues that a leader should bring out innovative ways of handling challenges in an organization so as to positively influence performance. Kirkbride (2006) and Northouse (2013) articulate that intellectual stimulation require a leader to empower the followers to critically view their operational processes in order to generate creativity in daily business operations efficiently and effectively. The outstanding aspects of this theory are the emphasis on the need for the leader to bring out innovative ways of handling challenges in an organization so as to positively influence performance. Majority of the respondents exercised this to a high extent as depicted from the overall mean score of 3.59 and a standard deviation of 1.22. Muthimi and Kilika (2018) drawing from the work of Pasmore (2014) had conceptualized that deployment of a leadership strategy would lead to generation of capabilities at the individual employee level in the form of empowerment, creativity, innovativeness and process improvement. Using this lens thus and in addition to the arguments drawn from the RBV, it is observed that these generated capabilities among academic staff help to explain the positive effect of intellectual stimulation on the academic performance of universities in Kenya.

A number of previous studies have been on the construct of intellectual stimulation (Fauji & Utami, 2013; Yasin, Nawab, Bhatti & Nazir, 2014; Wagude & Ndiritu, 2015; Peng, Lin, Schaubroeck, McDonough III, Hu & Zhang, 2016; Ogola, Sikalieh & Linge, 2017; Sánchez-Cardona, Salanova, & Llorens-Gumbau, 2018). These studies were carried out in SMEs sector, private and the public sector as well as in other countries other than Kenya. The studies sought to investigate the impact of intellectual stimulation as an aspect of transformational leadership on team affect and team learning, employee performance, employee work meaningfulness, project implementation, SMEs performance and firm performance. Generally, the empirical studies concluded that intellectual stimulation positively and significantly affected organizational performance. The current study used the components of intellectual stimulation drawn from the tenets of transformational leadership theory and measured it against the academic performance of universities in Kenya.

Based on the findings reported and explanations given by the study, the findings of hypothesis one (H_{01}) contribute to enhancement of knowledge in strategic management and strategic leadership studies in a number of ways. First, is the complementarity at theoretical level where the RBV and transformational leadership theories complimented each other and at the conceptualization level where intellectual stimulation relies on dimensions of leadership strategies in explaining its contribution to performance of universities. The current study has extended the extant conceptual and empirical knowledge by adopting additional measure of the independent construct and the context of its application.

9.0 Conclusion

The objective of the study was to establish the effect of intellectual stimulation on academic performance of selected universities in Kenya. The study hypothesized that intellectual stimulation has no effect on academic performance of selected universities in Kenya. The results of this objective revealed that intellectual stimulation significantly and positively influenced academic performance of selected universities in Kenya. The study explained these conclusions using the descriptive statistics obtained on the indicators of intellectual stimulation, postulates of the transformational leadership theory and previous researchers.

From the descriptive characteristics of the variable, it emerged that majority of the respondents influenced and inspired their followers thus the postulates of transformational leadership theory seem to be well applied in universities in Kenya and accounting for the positive effect of intellectual stimulation on performance. The results of this study confirmed that leaders in the selected universities applied key attributes of intellectual stimulation by encouraging team members to get involved in problem solving allowing team members to participate in decision making, creating a work atmosphere that allows free sharing of ideas, applying supervisory style that enhances freedom of thought and ensuring that departmental work environment stimulates creative thinking which in this case recorded results at a high extent. This justifies the significant effect of intellectual stimulation on the academic performance of selected universities in Kenya.

The reported findings on the hypothesis raised implications in the enhancement of knowledge in strategic management and strategic leadership studies in a number of ways. First, are the complementarities at theoretical level where the resource based view and transformational leadership theories complimented each other and at the conceptualization level where intellectual stimulation influenced leadership strategies in the selected universities. The current study has extended the extant conceptual and empirical knowledge by adopting additional measure of the independent construct and the context of its application. This thus led to the conclusion that the complementarities at the theoretical level where the attributes of resource based view compliment those of transformational leadership theory leading to the conceptualization of the variable thus affecting academic performance of universities in Kenya.

10.0 Recommendations

The study provides more understanding of how university senates can apply the attributes of intellectual stimulation to impact on the academic performance of universities from the conclusions that these were found to be positively correlated to academic performance. The study guides policy makers on the need to pay more attention on the application of intellectual stimulation attributes in the education sector which was found to be the best predictor of academic performance among the universities under investigation. Finally, the study builds on already established body of knowledge on investigating how transformational leadership theory can be applied in the process of practising intellectual stimulation attributes and academic performance of universities.

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13. Effect of Entrepreneurial Capacity Building Services on Growth of Micro and Small Enterprises in Kenya

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Abstract
Human capital contribution on micro finance growth cannot be ignored. Entrepreneurial capacity building has significant contribution on MSEs growth globally, regionally and locally, consequently the current study examined the effect of entrepreneurial capacity building services and growth of micro and small enterprises in Kenya. Through cross sectional research design and use of primary data. Descriptive statistics and regression analysis were used to analyze the data. Regression analysis revealed positive and significant effect of entrepreneurial capacity building services and growth of MSEs in Kenya. It was concluded there was need to continuously training entrepreneurs to not only accelerate MSEs growth but also economic development.

Introduction
The contribution of MSEs to economic growth and sustainable development is globally acknowledged. Njuguna (2015), noted that MSEs represent about 78 percent of all the firms operating globally. Non-farm micro and small enterprises account for over 35 percent of total employment and 20 percent of the gross domestic product (GDP) in many developed and emerging economies (IFC, 2013). In 2012, the contribution of MSEs in the industrial sector to the national GDP was estimated at 40%, 52%, 55% and 47.5% for India, Japan, Sri Lanka, and Thailand respectively. Similarly, micro and small-sized enterprises (MSEs) are the backbones of Singapore's economy, contributing about 47% of the country's GDP and generating 62% of available jobs (UNCTAD, 2013). In the European Union countries, some 21 million MSEs provide around 59 million jobs and represent 73 percent of all enterprises. For instance, in Britain, SMEs are the backbone of the British economy (Rowe, 2010).
In Kenya micro finance services have become significantly important globally and more preferably at national levels in developing countries. Microfinance has evolved as an economic development approach intended to benefit low income. Across developing countries, small enterprises are turning to Microfinance Institutions (MFIs) for an array of financial services (Ngugi & Kerongo, 2014). Small scale enterprises comprise 99% of enterprises in the OECD economies and create 50–75% of value added in these countries (OECD, 2010). The existing literature reveals that small-scale enterprises play an important role in the sectors of economy all over the world as they account for nearly 99% of the enterprises throughout the European Union (Wielgorka, 2014).
Despite the contribution of MSEs in countries' development and economic growth, their growth and development in developing countries face a lot of challenges. These include difficulties in accessing financial credit, poor managerial skills, lack of skilled staff, uncontrolled growth, lack of government business support services, serial and historical traditions, high cost of inputs, advocacy capacity, inadequate quality control, and cultural environment (Mbura, 2013).

Problem Statement
From the previous researches, it is seen that most of the studies conducted in the MSE sector have focused more on factors influencing the growth and development of micro and small enterprises in Nairobi and other big towns. Also, researches have been conducted concerning the entrepreneur's

characteristics and growth of MSEs. Whereas this is important, an understanding is required on the MFIs services that influence that growth of the MSEs. This is because the future sustainability of MSEs is largely the result of these entrepreneurial services.

First, this research provides empirical evidence for microfinance entrepreneurial capacity building services and growth of micro and small enterprises in Kenya. To date, the literature lacks with regard to studies that consider individually the effect of entrepreneurial capacity building services, (Kinyua 2014). Moreover, Nthini, (2010) concluded that microfinance is an important asset to developing countries since it is able to cater for the financial needs of the very poor. Memba et. al., (2012) established that SMEs made significant growth after accessing financing from MFIs. Koech (2011) identified the factors hindering growth in relation to services offered by the MFIs. This study findings in this context add to those of other of MSEs growth and also most of the above studies are on SMEs and not MSEs.

Second, the studies presented offer empirical evidence for microfinance entrepreneurial services and growth of micro and small enterprises in Kenya. A number of scholars have already shown that entrepreneurial capacity influence performance (Nasrudin, & Othman, 2012; Mokua, 2013; Nikolaos, Robin, & Emmanouil, 2013). This study added to the arguments of these researchers as it considered the effect of microfinance entrepreneurial capacity building services and growth of micro and small enterprises in Kenya. Thirdly, the study results provided evidence that microfinance entrepreneurial services and growth of micro and small enterprises in Kenya. It is against this back drop the current study seeks to examine the effect of entrepreneurial capacity building services on MSEs growth in Kenya.

Objective of the Study

To assess the effect of entrepreneurial capacity building services on growth of Micro and Small Enterprises in Kenya

Theoretical and Empirical Foundation

Theoretical Foundation

2.2.3 Human Capital Theory

Human Capital Theory was proposed by Schultz (1961) and developed extensively by Becker (1964). Schultz (1961) in an article entitled "Investment in Human Capital" introduces his theory of Human Capital. Schultz argues that both knowledge and skill are a form of capital, and that this capital is a product of deliberate enterprise growth. The concept of human capital implies an investment in people through education and training. Schultz compares the acquisition of knowledge and skills to acquiring the means of production. The difference in earnings between people relates to the differences in access to education and health. Schultz argues that investment in education and training leads to an increase in human productivity, which in turn leads to a positive rate of return and hence of growth of businesses. This theory emphasizes the value addition that people contribute to an organization. It regards people as assets and stresses that investments by organizations in people will generate worthwhile returns.

Human Capital Theory is associated with the resource-based view of strategy developed by Barney (1991). The theory proposes that sustainable competitive advantage is attained when the firm has a human resource pool that cannot be imitated or substituted by its rival. For the employer, investments in training and developing people are a means of attracting and retaining people. These returns are expected to be improvements in performance, productivity, flexibility and the capacity to innovate that should result from enlarging the skills base and increasing levels of knowledge and competence. Schuler (2000) suggests that the general message in persuasive skills, knowledge and competences are key factors in determining whether organizations and firms will prosper.

Previous empirical research has emphasized that human capital is one of the key factors in explaining enterprise growth. Brüderl (1992) argues that greater entrepreneurial human capital enhances the

productivity of the founder, which results in higher profits and, therefore, lower probability of early exit. Moreover, highly educated entrepreneurs may also leverage their knowledge and the social contacts generated through the education system to acquire resources required to create their venture (Shane, 2003).

In addition to education, specific human capital attributes of entrepreneurs, such as capabilities that they can directly apply to the job in the firm, may be of special relevance in explaining enterprise growth. The specific human capital can be attained through precise trainings and previous experience. More focused business training can provide entrepreneur with a specific knowledge, compared to a formal education. This kind of specific human capital also includes knowledge of how to manage a firm, that is, entrepreneur-specific human capital. In particular, entrepreneurs with great industry-specific and entrepreneur-specific human capital are in an ideal position to seize neglected business opportunities and to take effective strategic decisions that are crucial for the success of the new firm (Collombo & Grilli, 2005).

A limitation of Human Capital Theory is that it assumes education increases productivity in the workplace, resulting in higher individual wages, but it provides little insight into the processes through which education and training are translated into higher wages. In statistical models, education and training account for about 30 percent of the variance in individual wages, which suggests Human Capital Theory leaves a significant percentage of wage variability unexplained.
A related limitation is that upper-level applications of Human Capital Theory (e.g., at the national or state levels) treat education as a relatively homogenous input. These applications assume that higher levels of educational attainment and quality will yield greater productivity and wages across the board. Such treatment of education is problematic because the process of human capital formation varies for individuals and groups. This theory is relevant to this study since it informs capacity building variable.

Empirical Foundation

2.4.3 Entrepreneurial Capacity Building Services and Micro and Small Enterprises Growth

A past review by Ogundele et al. (2012) revealed that, the skill required by an entrepreneur can be classified into three main areas namely, technical skills, business management and personal entrepreneurial skills. The authors went further to state that technical skills involve such things as writing, listening, oral presentation, organizing, coaching, being a team player and technical know-how. Business management skills include those areas involved in starting, developing and managing an enterprise. In addition, they asserted that personal entrepreneurial skills differentiate an entrepreneur from a manager. Skills included in this classification are inner control (discipline), risk-taking, being innovative, being change oriented, being persistent, and being a visionary leader among others
Another research by Rosnani, Babak, Z., Soaib, & Suhaida, (2011). found that the level of entrepreneurial skills of the entrepreneurs in Malaysia is still moderate and needs more entrepreneurship development training programs in areas, such as creativity enhancement and innovation, the skill to make business accounts, creating promotions and advertising skills, skill to set the right price and selling skills. These researchers also agreed that training and entrepreneurial education contributes to increase of knowledge, skill and experience required to make businesses more robust and competitive. The government and its agencies are responsible for providing appropriate entrepreneurial training to fulfill entrepreneurs' needs.
Bowen et al. (2009), in a study done in Nairobi, Kenya, found that 49.5% of those who had received training in the area of business reported that their businesses were doing well. The study results also showed that 60.8% of those not trained reported that their businesses were doing poorly as compared to

39.2% whose entities were doing well without training. This study was based on 198 respondents comprising of business owners and managers. Another study by Tubey (2012), that sought to establish the types of interventions offered by four agencies namely, the Catholic Church, ACK, K-Rep and World Vision in Eldoret municipality revealed that only 5% of the respondents who received training actually indicated that they had benefitted significantly with about 40% saying they needed training in bookkeeping. The above study was based on a sample of 195 entrepreneurs.

According to Oforegbunam & Okorafor, (2010), the performance level of most SMEs in Nigeria has been most unsatisfactory, as the problems of delay and high cost in service delivery have become a norm rather than exception. The possible reason for this may include, that majority of employees may not have received adequate training and exposure to perform the functions they are assigned to. However, in order to realize the objective of profit maximization by SMEs, the personnel involved in their operations must be adequately trained to enable them be alert in their responsibilities, more importantly given the over-bearing effects of competition from the very large firms and from SMEs operating in Asia, made possible by globalization.

Conceptual Framework

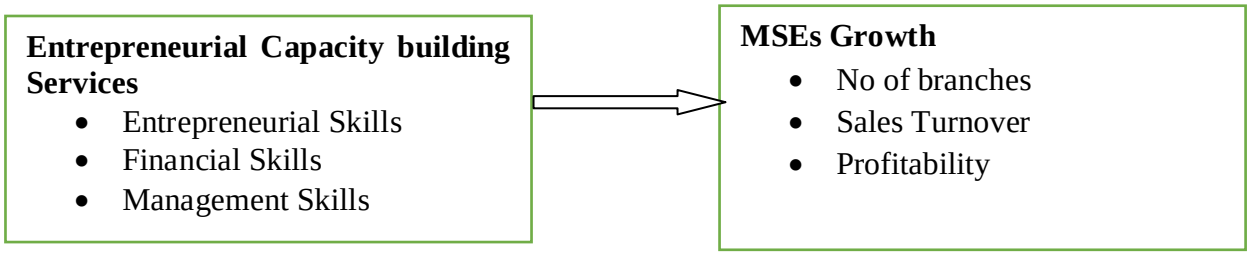

Figure 1 Conceptual Framework

Research Methods

Research design

Cross sectional research design was adopted in this study to show the effect of entrepreneurial capacity building on MSEs growth in Kenya. The design was appropriate since the study collected primary data through issues of structured questionnaires. According to Cooper and Schindler (2011) a research design ought to optimize utilization of given research resources to achieve study objectives.

Population of the Study

Complete count of study individuals is known as population of the study. In this study the target population will constitute of 519385 entrepreneurs who have benefited from five microfinance entrepreneurial services. The selected five deposit taking micro finance institutions were: Faulu Kenya DTM limited, Kenya Women Finance Trust DTM limited, SMEP deposit taking microfinance limited, Remu DTM limited and Rafiki deposit taking microfinance limited. These DTMs were selected since they have wide branch networks hence they can be easily accessible by many entrepreneur's country wide.

Sample size and Sampling Technique

Research are mostly constrained by time and resources thus there is need to consider a subset of the study population. Purposive sampling was used to select five micro finance institutions which were undertaking entrepreneurial training. Simple and stratified sampling were used to select 384 respondents. Thus, in this study sample size was estimated using (Yamane, 1978).

$$n = \frac{N}{1+N(e^2)}$$

Where: n = required sample size

N = Target population

e = margin of error at 5% (standard value of 0.05)

Therefore, the sample size was,

$$n = \frac{519385}{1+519385\,(0.05^2)} = 400$$

Stratification of respondents according to manufacturing, service, trade and others was adopted for proportionate selection of respondents.

Table 3.1 Sample Frame

Population Category	Target Population	Percentage	Sample size
Manufacturing	13232	3	10
Service	177421	34	137
Trade	194783	38	150
Others	133949	26	103
Total	**519385**	**100**	**400**

(Source: MSEA, 2014)

Data Collection Instrument

Primary data was collected through use of structured questionnaires. These questionnaires were administered amongst those who were undertaking entrepreneurial training. To ease the process of data collection introduction letter was sought from Jomo Kenyatta school of graduate studies. This letter was presented to facilitators of training amongst selected micro finance institutions who in turn allowed the researcher and research assistant opportunity to issue questionnaires during their respective training forums.

Pilot Study

Research instruments piloting is meant to authenticate quality of research instrument as per study research questions and objectives (Kothari, 2014). In fact, through piloting a study can examine respondents understanding of research instrument (Bryman, 2012). Piloting approach ought to mimic the actual approach to be adopted by the actual study. Bryman (2012) argued that piloting ought to be at least 10% of sample size, consequently 40 entrepreneurs were respondents during piloting. These respondents were excluded from the final study.

Data Analysis and Processing

Data analysis is the logical exploration of data with the sole purpose of understanding dominant patters and summarizing as per study objectives and hypothesis (Zikmund et al., 2012). According to Kothari (2009) data processing is a hierarchical process commencing with collection, editing, classification and tabulation with the sole purpose of easing its analysis. The main data collected in this study was

quantitative in nature and it was analyzed with assistance of Statistical Packages for Social Scientists (SPSS) version 23. Data was analyzed using descriptive statistics such as frequency, percentage, mean and standard deviation and presented in graphs and tables. Moreover, inferential analysis was carried out. To assess the effect of entrepreneurial capital services on growth of Micro and Small Enterprises in Kenya

$Y_1 = \alpha + \beta_1 X_1 + \mathcal{E}$

Where Y_1 = MSEs Growth

X_1= Entrepreneurial capacity building service
β_1= the coefficient of the first independent variable.
ε_1 = error term.

Results and Discussions

4.1 Descriptive Analysis Entrepreneurial Capacity Building Services

Thirdly, the effect of entrepreneurial capacity building services on MSEs growth in Kenya was sought. Entrepreneurial capacity building services was operationalized as number of training, job rotations and interviews carried out for the past four years. Study findings were presented as shown in pictorial presentations below.

Pictorial presentation shown in figure 4.1 revealed that the modal number of trainings carried out in a year were less than 2 as indicated by 87% in 2012, 72% in 2013, 76.4% in 2014, 73.9% in 2015 and 74.5% in 2016. Similar patterns were observed for two to three trainings per annum and more than three training cycles increased from 2012 (3.1%) to 9.9% in 2016. This showed an increase in training cycles amongst MSEs.

These findings were in support of Osoro and Muturi (2013) who argued that the MSEs moves away from the start up stages the need of trainings diminishes because they become busy thus lacking time to attend such trainings. Kisaka and Mwewa (2014) noted that MFI saving services have positively influenced positively to the growth and performance MSEs in Kenya. However, Kisaka and Mwewa argued that the training conducted by MFI does not address the material needs of MSEs which have led to many MSEs especially the mature and well established one to shun MFI services.

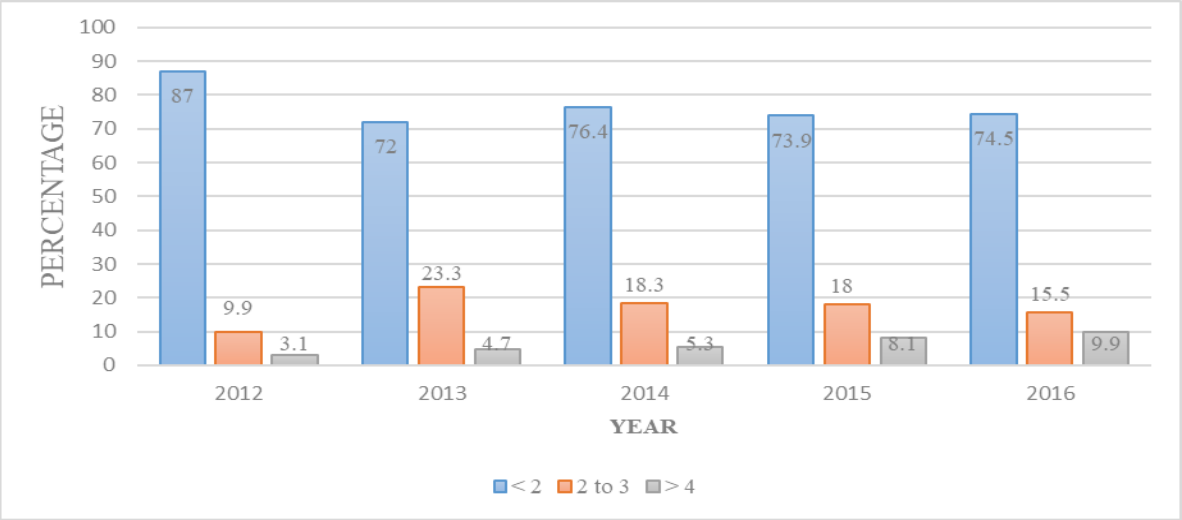

Figure 4.1 Number of Training Sessions Conducted by Micro and Small Enterprises in Kenya

Further the study investigated number of job rotations carried out amongst MSEs in Kenya. Job rotations would create an avenue to transfer and acquire new skills amongst employees. Pictorial presentation in Figure 4.2 revealed that modal job rotations amongst MSEs were less than two as accounted for by 87.3% in 2012, 75.5% in 2013, 73.9% in 2014, 77.6% in 2015 and 78.9% in 2016. Although, job rotations had upward trajectory for those firms with 2 to 3 rotations. The trend was reversed in the last two years under investigations. This calls for thorough sensitization on benefits accrued through job rotations this will enhance sharing employees in heterogenous departs.

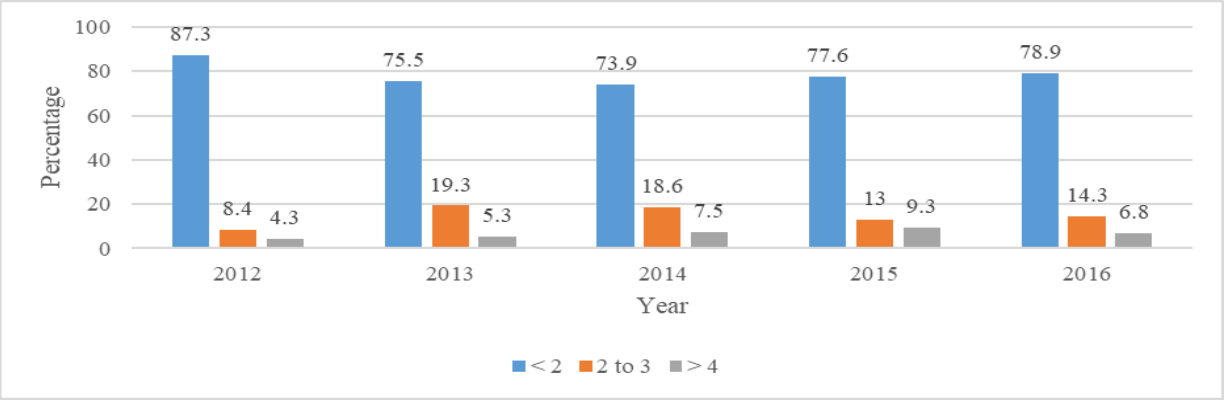

Figure 4.2 Number of Job Rotations Executed by Micro and Small Enterprises in Kenya

In addition, the study investigated the number of interviews executed prior to recruitment of employees amongst MSEs in Kenya. Employees interviews would enhance employees as per organization needs and skills which they can provide in the specific organization. Results of the study in Figure 4.3 revealed that majority 92.5% in 2012 carried out less than two interviews, 82.3%, 81.4%, 85.7% and 82.6% had similar interviews in years 2013, 2014, 2015 and 2016 respectively. Those who carried more than four interviews registered an upward trend throughout the period under investigation with 1.2% in 2013 and 5.3% in 2016. There is need for MSEs to adopt human resources management principles and policies which are customised towards addressing employee's quality of work life issues and embrace employee motivation strategies so as to leap optimal benefits from their skills.

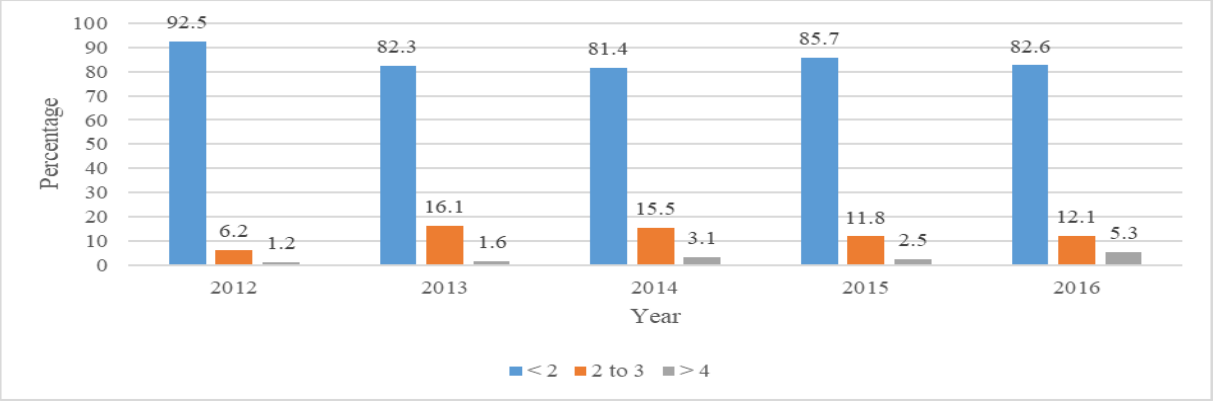

Figure 4.3 Number of Interviews Conducted Prior to Staff Recruitment by Micro and Small Enterprises in Kenya

Growth and sustainability of MSEs in Kenya is dependent on ability of firm customer development and market segmentation. This can be achieved through development of new products and services, consequently the study investigated on number of new products developed upon completion of MFIs training. Results shown in Figure 4.4 revealed that majority 70.2% had introduced one new product

followed by 18.9% who had two new products and only 2.5% had more five and above new products. From the findings it can be deduced despite undergoing training there were low chances of introducing new products. This could be attributed by low levels of formal education training which may hamper acquisition of research and development skills.

These findings agreed with Javed., Muhammad., Ahmed, Rana & Rauf. (2011), who argued that, for any business with growth market strategies, the organization is attempting to gain more sales from existing market and alternatively native growth perspective might lead the firm to develop a new product or service that can generate sales from existing customers.

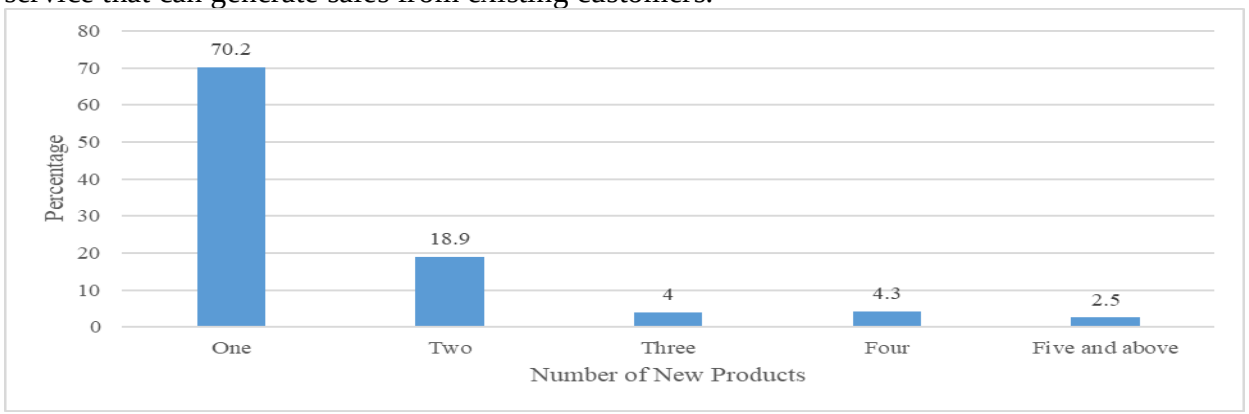

Figure 4.4 Number of New Products Developed by Micro and Small Enterprises in Kenya after Training

Further, the study investigated on the number of new services introduced by MSEs in Kenya. Incorporation of new products and services could be an epitome of superior performance and competitive advantage. Results shown in Figure 4.5 revealed that 52.8% of MSEs in Kenya introduced one service after training, 28% introduced two services and 5% introduced five and above products. There is need to customize MSEs training in Kenya since this would enhance acquisition of relevant skills which would aid in attainment of MSEs specific objectives.

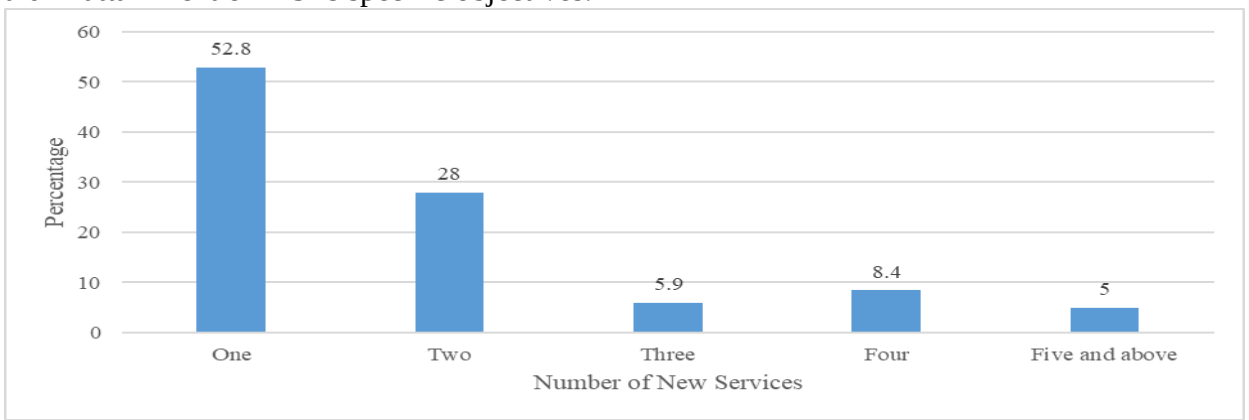

Figure 4.5 Number of New Services Introduced by Micro and Small Enterprises in Kenya after Training

Further, the study investigated the level of agreement on ability of entrepreneurial capacity building services to enhance MSEs growth in Kenya. On a five-point Likert scale ranging from strongly disagree to strongly agree responses were analysed using frequency, mean, percentage and standard deviation as shown in Table 4.1 (Appendix 1). From the finding's majority 79.2% agreed that planning and budgeting

skills had effect on MSEs growth. Secondly, majority agreed mean = 4.1 that skills to act quickly on detecting environmental changes, maintenance of good customer relationship, business environmental changes detections skills, financial management skills and market segmentation skills respectively had effect on MSEs growth in Kenya.

These finding concurred with Arasa, (2012) who contended that strategic planning enables a company to gain as effectively as possible a sustainable edge over its competitors and further states that strategic planning assists organizations to develop a comparative advantage or an edge over competitors and creates sustainable competitive advantage. Therefore, a range of potential benefits to intrinsic values accrues to both the company and external stakeholders from the use of strategic planning.

Further, the study found that majority mean = 4.1 agreed that ability to secure capital, management expertise, competent employees' retention and recruitment, effective cost control and management, clarity on organization structure, ability to focus on quality product design and provision of wide range of goods and services respectively had impact on MEs growth in Kenya. These findings confirmed the World Bank (2012) report that about 90% of small enterprises in the Sub-Saharan Africa had credit as a major constraint to new investment. Also, Abor and Bikpe (2006) found access to flexible credit as a dominant constraint facing the Ghanaian small enterprises. Further, the study investigated the effect of entrepreneurial training on MSEs performance. Comparative analysis was carried out to compare before and after training effects. Results shown in Table 4.12 shows that prior to training the rate of change of MSEs on aspects of general business overview, costing and pricing of product and services, record keeping, preparation of business plans and taxation management all were fair as accounted for by means of 1.9, 2.1, 2.3, 2.3 and 2.4 respectively. Moreover, there was good marketing strategy for goods and services.

Table 4.2 Rate of Micro and Small Enterprises Growth before Entrepreneurship Training

	Percentage (n=322)					
	Poor	**Fair**	**Good**	**Excellent**	**Mean**	**Std. Deviation**
Overview of Business Management	34.8	41.3	18.9	5	1.9	0.9
Costing & Pricing of Products/Services	24.5	48.8	22.4	4.3	2.1	0.8
Record Keeping	20.2	40.7	33.2	5.9	2.3	0.8
Preparing Business Plans	20.5	37	30.7	11.8	2.3	0.9
Taxation Issues in Business	20.2	31.4	32.9	15.5	2.4	1.0
Marketing of Business Products/Services	17.7	33.2	33.5	15.5	2.5	1.0
Overall average					**2.3**	**0.9**

Further, the study investigated the impact of MFIs training on several business aspects. Results of the study were summarised as shown in Table 4.3. From the study findings there were positive changes worth noting upon training since most MSEs recorded either excellent or good impact on their MSEs. It can be reported that the modal rating was good as accounted for by means of 2.9, 3.1, 3.3, 3.4, 3.4 and 3.5 respectively for general business management, costing of product and services, record keeping, business plans preparations, taxation and marketing strategies adopted by MSEs in Kenya. These findings were agreement with Osinde, Iravo, Munene, & Omaiyo (2013) who reported positive contribution of entrepreneurial training on SMEs performance. This was depicted by more 80% improvement on SMEs performance after managerial training as compared to 40% change amongst those who never attended any training. This calls for thorough evaluation of training curriculum to ensure that requisite skills are accorded to SMEs.

Table 4.3 Rate of Micro and Small Enterprises Growth after Entrepreneurship Training

	Percentage (n=322)					
	Poor	**Fair**	**Good**	**Excellent**	**Mean**	**Std. Deviation**
Overview of Business Management	5.6	17.4	42.9	34.2	2.9	0.9
Costing & Pricing of Products/Services	3.7	27.6	46.9	21.7	3.1	0.8
Record Keeping	9.6	26.7	46	17.7	3.3	0.9
Preparing Business Plans	14	31.7	35.4	18.9	3.4	1.0
Taxation Issues in Business	13.7	33.2	30.4	22.7	3.4	1.0
Marketing of Business Products/Services	16.8	33.9	29.5	19.9	3.5	1.0
Overall average					**3.3**	**0.9**

Leadership training has impact on governance and development of organization structure with MSEs which may impact positively on its performance. Pictorial presentation shown in Figure 4.6 revealed that 59% reported that they had not undertaken leadership training. This calls for incorporation of leadership skills in MFIs entrepreneurship training this would enhance skills development. This would concur with Makena (2011) did research on "Challenges faced by SMEs in accessing financing in Kiambu town and found out that 25% of the respondents had made effort at seeking financing from banks and of those, 56% had been turned down by the banks. Lack of structures in the firms and limited skills from the owners and managers were identified as the main hindrance to accessing to financing.

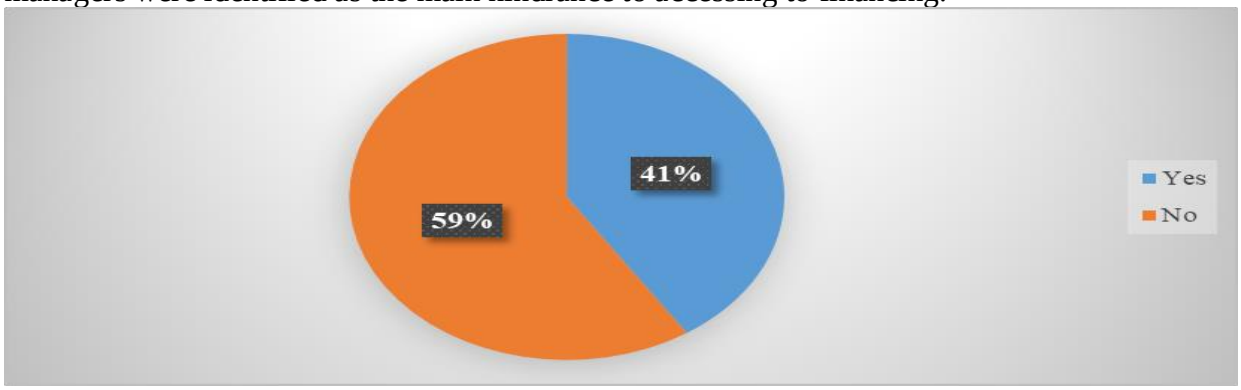

Figure 4.6 Leadership Training among Micro and Small Enterprises in Kenya

Further, the study investigated the extent to which MSEs growth improved after the training. Results of the study shown in Figure 4.7 revealed that there 30.1% reported that MSEs growth changed to low extent, 19.3% reported either moderate or very great extent on changes of MSEs growth. There is need to customize training programs so as to address unique needs of MSEs in Kenya.

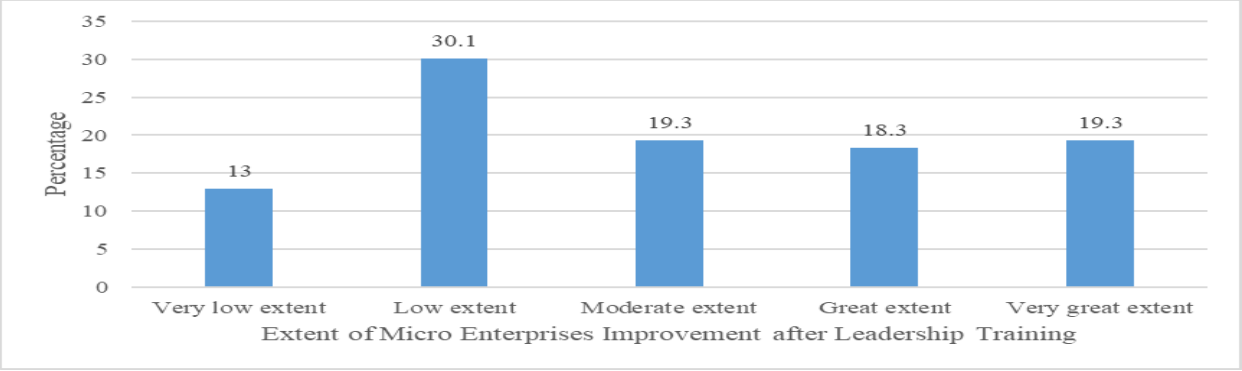

Figure 4.7 Extent of Leadership Training on Improving Business Management among Micro and Small Enterprises in Kenya

Employees capacity building is anticipated to enhance quality of work life and employee commitment within an organization. The duo will create an avenue for superior growth amongst MSEs consequently the study investigated the impact of capacity building on MSEs growth. Pictorial presentation in Figure 4.8 revealed that 42.2% reported an increase in MSEs growth, followed by 40.4% who reported no change and 17.4% who reported reduction of MSEs growth. These findings concurred with Maina (2013) who found the value of entrepreneurial training in alleviating youth unemployment.

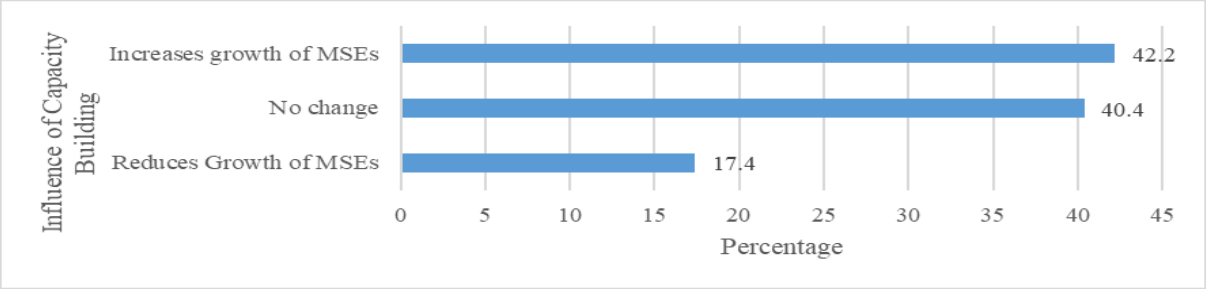

Figure 4.8 Influence of Capacity Building on Growth of Micro Enterprises in Kenya

4.2 Entrepreneurial Capacity Building Services has no significant effect on Micro and Small Enterprises Growth in Kenya

The third hypothesis of the study stated that entrepreneurial capacity building services has no significant effect on MSEs growth in Kenya. Simple linear regression was applied to test this hypothesis. Moreover, step wise regression analysis was used to test the moderating effect of external environment on entrepreneurial capital services. Model summary results in Table 4.4 revealed that 53.5% of changes in MSEs growth in Kenya can be accounted for by entrepreneurial capacity building services while the remaining percentage can be accounted for by other factors excluded in the model. Botha, Nieman, & Vuuren, (2010). also supported that the training provided by microfinance programs can develop new skills and knowledge relevant to running a business by increasing one's confidence in terms of entrepreneurial abilities and using these skills for business growth. This is aligned with a study by Al Mamun, Adaikalam, & Mazumder, (2012), that revealed an increase in microenterprise income with adequate training, and flexible and diversified microfinance programs.

Table 4.4 Model Summary on the Effect of Entrepreneurial Capacity Building Services on Micro and Small Enterprise Growth in Kenya

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics R Square Change	F Change	df1	df2	Sig. F Change
1	.732[a]	.535	.534	.68272897	.535	368.666	1	320	.000

a. Predictors: (Constant), Entrepreneurial Capacity Building Services

Analysis of variance results shown in Table 4.5 revealed that there was significant influence of entrepreneurial capacity building services on MSEs growth in Kenya (F= 368.666, p value <0.00).

Table 4.5 Analysis of Variance on the Effect of Entrepreneurial Capacity Building Services on Micro and Small Enterprise Growth in Kenya

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	171.842	1	171.842	368.666	.000[b]
	Residual	149.158	320	.466		
	Total	**321.000**	**321**			

a. Dependent Variable: MSEs Growth

b. Predictors: (Constant), Entrepreneurial Capacity Building Services

As shown in Table 4.6, there was positive and significant effect of entrepreneurial capacity building services and MSEs growth in Kenya (β = 0.732, p value <0.05). This implies that an increase in entrepreneurial capacity services increased MSEs growth in Kenya. Consequently, we reject the null hypothesis at 5% level of significance.

Table 4.6 Regression Coefficients on the Effect of Entrepreneurial Capacity Building Services on Micro and Small Enterprise Growth in Kenya

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.462E-016	.038		.000	1.000
	Entrepreneurial Capacity Building Services	.732	.038	.732	19.201	.000

a. Dependent Variable: MSEs Growth

Conclusion and Recommendation

Survival and sustainability of MSEs is dependent on capacity building modalities adopted by MSEs. Therefore, there is need for MSEs in Kenya to develop measures and strategies which are geared towards developing budgeting skills, customers relationship management, dynamic organizational structural realignment and skills on market segmentation. This can be achieved through development of a curriculum geared towards addressing specific sector MSEs needs.

There is need for the MFIs to stop putting emphasis only on savings by MSEs but also introduce other services that empower them to grow through maintaining their business books, manage expenses and how to increase their credit worthiness as well as improve general business skills. The MSEs need to consider job rotation as a way of training their employees and they need to introduce new services and products this should be emphasized by the MFIs during their training. The MFIs need to introduce tailored training that will change and renew how the MSEs are undertaking their business to foster innovation and growth from MSEs to large organization to compete in the dynamic global market that we at in 21st century

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Appendix 1

Table 4.1 Effect of Entrepreneurial Capacity Building Services on Micro and Small Enterprises Growth in Kenya

	Percentage (n=322)						
	SD	**D**	**NAD**	**A**	**SA**	**Mean**	**Std. Deviation**
Planning and budgeting skills affects growth	1.2	3.1	6.2	79.2	10.2	3.9	0.6
Skills to act quickly on detecting changes in the environment	2.5	1.9	1.9	69.9	23.9	4.1	0.7
Skills to maintain good customer relations affects growth	1.9	4	3.4	66.1	24.5	4.1	0.8
Skills to detect changes in the environment affects my MSE growth	0.9	5	2.8	64.9	26.4	4.1	0.8
Skills to ensure that financial records are maintained affects my MSE growth	2.5	4.3	2.2	67.7	23.3	4.1	0.8
Skills to assess sales problems affects my MSE growth	0	3.7	5.3	66.8	24.2	4.1	0.7
Skills to obtain market share that suits the size and capability of the business	1.6	5.3	5.6	68	19.6	4.0	0.8
Skills to secure capital.	0.3	3.4	2.5	75.5	18.3	4.1	0.6
Management expertise skills	0.3	3.7	1.9	69.6	24.5	4.1	0.7
Skills to attract and keep competent employees affects my MSE growth		3.4	2.8	72.4	21.4	4.1	0.6
Good cost control skills affect my MSE growth	0.6	3.1	3.1	73.3	19.9	4.1	0.6
Skills to arrange organizational structure with clear lines of authority affects my MSE growth	0.9	3.1	1.9	74.8	19.3	4.1	0.6
Skills to focus on quality and design of the products affects my MSE growth	0.3	4.3	1.6	69.9	23.9	4.1	0.7
Skills in working together with other businesses in the same industry affects my MSE growth	0.9	5.3	2.5	67.7	23.6	4.1	0.7
Skills to provide attractive range of products affects my MSE growth		2.8	2.5	73.9	20.8	4.1	0.6
Skills to delegate responsibility to employees when necessary affects my MSE growth	0.3	1.6	5	71.4	21.7	4.1	0.6
Marketing strategy skills affects my MSE growth	1.9	2.5	1.9	65.5	28.3	4.2	0.7
Overall average						**4.1**	**0.7**

SD: Strongly disagree, D: Disagree, NAD: Neither Agree nor Disagree, A: Agree, SA: Strongly Agree

14. Personality Traits, Entrepreneurial Competencies, Psychosocial Support and Mental Health of Entrepreneurs: A Theoretical Conceptualization in the Context of Coronavirus Disease Outbreak

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Abstract

Entrepreneurship has propagated because of its usefulness in economic development and the connected commercialization of innovations that improves the standards of living. A proportion of the global population is therefore in the process of either starting or running a business in the context of disruptions caused by coronavirus disease outbreak, without an understanding of its implications to mental health. Studies have been carried out to establish a link between entrepreneurship and mental health of entrepreneurs so as to come up with programmes germane to addressing risk factors and ameliorated dysfunction through treatment. Extant literature on entrepreneurship has however pursued discussions on the construct of personality traits separately from that of entrepreneurial competencies and psychosocial support, despite the inferred indication that the three can be integrated to register impact on the mental health of entrepreneurs. The purpose of this study then is to provide a review of pertinent literature on the perspectives associated with mental health of entrepreneurs as they passionately and creatively pursue business ideas from concept to actualization. This study has established that rivulets of research on entrepreneurship and mental health of entrepreneurs have returned conflicting results. The study has identified emerging data gaps in the context of Coronavirus disease outbreak and came up with critical propositions for purposes of progressing knowledge and forming a basis for future studies on sustainable entrepreneurship that takes into account national and global economy as well as mental health of the entrepreneurs.

Key Words*: Personality Traits, Entrepreneurial Competencies, Psychosocial Support, Mental Health of Entrepreneurs, Coronavirus Disease Outbreak*

Background Information

Entrepreneurship has been acknowledged globally as important towards the realization of 2030 global sustainability agenda due to the extraordinary value it adds to job creation, commercialization of innovation, poverty alleviation and enhanced standards of living (Weinberger, Wach, Stephan & Wegge, 2018; UN, 2017; Estrin, Mickiewicz & Stephan, 2013). Entrepreneurs also mobilize idle funds used not only to exploit new opportunities and promote productivity, but also creation of wealth that is essential for economic development (Kreiser, *et al*., 2013; Foo, 2011; Lechat & Torres, 2016). Additionally, impact entrepreneurship in which entrepreneurs pay attention to the economic, social and environmental impact of their products and investments ends up improving the society and the environment (Gatukui & Gatuse, 2014). More than 582 million people globally are therefore in the process of starting or running their own business in the context of disruptions caused by coronavirus disease outbreak (COVID-19),

without an understanding of its implications to their mental health and well being (GEM, 2020; Hessels, Rietveld & Van der Zwan, 2017; Alvarez & Sinde-Cantorna, 2014). The situation is exuberated by COVID-19 outbreak first reported in Wuhan City, Hubei province of the People's Republic of China in December 2019 (WHO, 2020). Due to the rapidly evolving nature of COVID-19 pandemic, governments and regulatory agencies around the world have had to implement containment measures such as embargos on international flights, total lockdowns and movement restrictions resulting in economic and social transformation of many countries around the world (WHO, 2020; GEM, 2020).

The international response strategies to COVID-19 pandemic has had implications on the network of organizations that are involved through upstream and downstream linkages, in the different processes and activities that produce value in the form of goods and services in the hands of the end users (GEM, 2020; Mwasiaji, Jagongo & Ogutu, 2020). COVID-19 has for instance impacted on global supply chains with lead times doubling and supply shortages for goods and services compounded by the lack of road, air and ocean freight options to move products along the value chains (Berman, 2020). The disruptions in global supply chains arising from COVID-19 response strategies have continued to impact different individuals, societies and organizations in varying proportions. For instance, small and medium enterprise sector firms are likely to be impacted more than larger enterprises due to inherent weaknesses connected to their small sizes and resource capabilities (Fisher, Maritz & Lobo, 2013; Mwasiaji, 2020). With many livelihoods affected due to the difficult economic conditions around the world, the COVID-19 outbreak in many parts of the world may worsen the situation especially for the SME sector development borrowing from lessons learnt during previous disease outbreaks (Nishiura, *et. al*, 2009; Kucharski, *et. al*, 2020; Lee, 2020).

The climate in the entrepreneurship ecosystem within which entrepreneurs are striving to create social and economic value therefore continues to rapidly metamorphose due to disruptions caused by COVID-19 disease outbreak (GEM, 2020). This has presented myriad opportunities and challenges for entrepreneurs and policy makers across the world. Opportunities include generation of value through the creation or expansion of economic activities, by identifying and exploiting new products, process or markets (Berman, 2020; Mwasiaji, Jagongo & Ogutu, 2020). Challenges include business related constraints as well as psychological, relational and physiological wellbeing of the entrepreneurs (WHO, 2020; Lechat & Torres, 2016; Hessels, Rietveld & Van der Zwan, 2017). While the economic benefits of entrepreneurial activity are clear, the outcomes for the individual entrepreneur appear mixed because being an entrepreneur has been characterized as one of the most stressful jobs (Cardon & Patel, 2015; Patzelt & Shepherd, 2011). Yet the different stakeholders in the field of entrepreneurship continue to direct their efforts in creating a policy framework to support entrepreneurship including keeping barriers low, rewards innovation, protection of private property and support to stakeholder networking for synergy towards the achievement of the 2030 global agenda (Reymen, Andries, Berends, Mauer, Stephan & Van Burg, 2015; **De Clercq** & **Voronov,** 2011).

Researchers in entrepreneurship have also continued to direct their effort towards generating empirical data sets to support the performance of business enterprises and the wellbeing of national and global economies at the macro levels. Unfortunately, little is being done to examine the mischievous impact that entrepreneurship may have on the physical and mental wellbeing of entrepreneurs especially at the micro level. Since a proportion of the global population is directly or indirectly affected by entrepreneurship related activities, there is need therefore to come up with programmes to support sustainable entrepreneurship, based on empirical evidence. The purpose of this paper therefore is to

provide a review of pertinent literature on the perspectives associated with mental wellbeing of entrepreneurs as they passionately and creatively pursue ideas from concept to actualization, within the context of disruptions caused by COVID-19.

Problem Statement

WHO alerted governments and agencies around the world about COVID-19 that was rapidly propagating mainly along international transit routes with over 100,000 cases and 3,800 deaths globally as of March 9, 2020 (WHO, 2020; Mwasiaji, Jagongo & Ogutu, 2020). The international containment measure in response to COVID-19 disease outbreak presented additional business constraints arising from disruptions in supply chains necessary for the delivery of products to consumers (GEM, 2020). International response strategies to the pandemic also interrupted provision of essential mental health services just when they are needed the most due to implications of COVID-19 disease outbreak (WHO, 2020). All this happening at a time when being an entrepreneur has been characterized as one of the most stressful jobs because entrepreneurs often undertake many roles and face numerous difficulties such as absence of an entrepreneurial environment, lost customers, disputes with partners, increased competition, staffing challenges, among others (Cardon & Patel, 2015; Patzelt & Shepherd, 2011). According to Freeman (2015), about one-half of entrepreneurs suffer from mental disorders especially at the start-up phase where they are twice as likely to suffer from depression, six times more likely to experience Attention deficit hyperactivity disorder (ADHD), three times more likely to abuse substances, ten times more likely to have bipolar disorder, twice as likely to be admitted in a psychiatric ward, and twice more likely to entertain suicidal thoughts. Freeman (2017) findings are in line with conclusions after a review of empirical data from rivulets of studies published by the National Institute of Mental Health which shows that about 72% of entrepreneurs are directly or indirectly more likely to suffer from mental health issues as compared to 48% of non-entrepreneurs (Berglund, Johansson Seva & Strandh, 2016; Substance Abuse and Mental Health Services Administration, 2020; Fernet, Torres, Austin & St-Pierre, 2016). In addition, COVID-19 itself can lead to neurological and mental complications, such as delirium, agitation, and stroke (WHO, 2020). Many entrepreneurs may therefore be facing increased levels of alcohol and drug use, insomnia, and anxiety, based on conclusion of different studies that have examined the link between entrepreneurship and wellbeing of entrepreneurs and close relations (Annink, Gorgievski & Den Dulk, 2016; Drnovsek, M., Ortqvist, & Wincent, 2010; Lechat & Torres, 2016; Sherman, Randall & Kauanui, 2016).

Rivulets of literature on sustainable entrepreneurship has however pursued discussions on the construct of personality traits separately from that of entrepreneurial competencies and psychosocial support (Feldstein & Miller, 2006; Holmes, *et al.,* 2009; Drechsler, 2008; Wiklund, Patzelt & Dimov, 2016; Williams & Shepherd, 2016; Sorensson & Dalborg, 2017; Pollack, Vanepps & Hayes, 2012; Pradhan, Costa, Rybski, Lucht & Kropp, 2017), in spite of the inferred indication that the three can be integrated to register impact on the psychological health of an entrepreneur. Further, streams of studies on entrepreneurship and psychological wellbeing of entrepreneurs have returned conflicting results with some reporting positive impact while others established negative effects. Wiklund, *et al.,* (2016) for instance reported that people with Attention-deficit Hyperactivity Disorder (ADHD) may even do better in entrepreneurship than individuals without such disorders because the afflicted persons felt they fit better in self-employment than in formal employment and even believed their ADHD symptoms provided them an advantage over those without ADHD. Similarly, Tafti *et. al.,* (2009) associated dyslexia with more original thinking, while White and Shah (2011) found a link between ADHD and sensation seeking. Other studies established a link between bipolar disorder with perseverance (Hayden *et al.,* 2008), and autism with pattern identification (Baron-Cohen *et al.,* 2009).

On the other hand, some studies have established that psychiatric temperaments negatively impact on entrepreneur performance, their business ventures and by extension the value created through commercialization of innovations (Anthsel, 2017; Frese & Gielnik, 2014; Kaplan & Kaiser, 2009). Similarly, studies by Freeman *et. al.,* (2017); Lerner (2016) and Grijalva and Harms (2014), reported an association between entrepreneurship and psychological health of entrepreneurs and their first-degree family relations especially during the startup phase of their business cycle. These findings are somewhat supported by other related studies that have revealed a correlation between entrepreneurship and various facets of mental health and relational wellbeing of entrepreneurs with those around them including employees. Johnson *et al.,* (2018), Kreiser *et al.,* (2013) and Hayden *et al.,* (2008) for instance variously reported that while risk-taking tendencies may foster business creation, extreme levels of risk-taking by persons such as those with bipolar disorder may conflict with financial stability and may be detrimental to profitability.

The conflicting results above coupled with inadequate empirical data does not form a firm basis upon which to emphatically conclude that entrepreneurship might be the sole cause of poor mental or relational wellbeing observed in some entrepreneurs, considering that mental illness is not a preserve of those engaged in entrepreneurial ventures. The lingering question is whether the perceived major depression, schizophrenia, substance abuse, bipolar disorder, dysthymia and anxiety disorders by entrepreneurs can be attributed to other contextual factors. There is therefore a public health uncertainty regarding a possible association between entrepreneurship and mental health, and policy making has been hindered by scarcity of conclusive empirical evidence. To clarify issues and put in place appropriate programmes to enhance sustainable entrepreneurship that takes into account the emotional and relational wellbeing of entrepreneurs, this study has identified crosscutting issues that require data sets to progress knowledge required for practice, business mentorship, and policy formulation to promote mental health. The study has identified emerging data gaps in the context of COVID-19 disease outbreak and came up with critical propositions for purposes of progressing knowledge and forming a basis for future studies on sustainable entrepreneurship that takes into account national and global economy as well as mental health of the entrepreneurs.

Review of Relevant Literature

3.1 Global Burden of Psychological Disorders

The World Health Organization's global burden of disease reports have continued to provide data on the implications of physiological and psychological ill health at the macro and micro levels, as a catalyst for policy formulation to guide the management and development of mitigation measures to reverse the current trend. For instance, mental disorders are reportedly responsible for nearly 13% of the global burden of disease with over 450 million people afflicted by specific neurological disorders and substance abuse. Moreover, untreated mental illnesses also cause mortality due to suicide, an issue that is of major concern considering that almost one million people die annually from suicide; a "global" mortality rate of 16 per 100,000 or one death in every 40 seconds. The increasing burden of mental disorders may be mainly attributed to pervasive structural stigma attached to mental illness, lack of resources, underutilization of services, outdated frameworks and practices, and organizational fragmentation that impacts the ability to adequately assess, prioritize, and respond to mental illness (Mwasiaji, 2020; Thyloth, *et. al.,* 2016; Freeman, 2017). Five types of mental illness appeared in the top twenty causes of global burden of disease in year 2013, that is Major depression, Anxiety disorders; Schizophrenia; Dysthymia and Bipolar disorder (WHO, 2013).

Studies from a macroeconomic perspective have reported that direct and indirect cost of mental disorders in a given population can be measured in terms of lost economic productivity by estimating the

projected impact of mental disorders on the gross domestic product of a country (Chisholm, *et. al.,* 2016). Direct costs of psychological disorders often relate to expenditure on diagnosis and treatment in the healthcare system; medication, physician visits, psychotherapy sessions and hospitalization costs. Indirect costs are incurred as a result of mortality, disability, and care seeking, including lost economic productivity due to work absence or early retirement (Chisholm, *et. al.,* 2016). This conclusion is anchored on the argument that economic growth requires labor and capital, both of which can be negatively impacted by physiological and psychological health related disorders. Financial resources are consumed through healthcare expenditures, while labor is depleted by disability and mortality of the afflicted persons (Bloom, *et. al.,* 2011). Capital depletion can be calculated using data on saving rates, costs of treatment, and the proportion of treatment costs that are funded from individual and family savings (Thyloth, *et. al.,* 2016). As a result, it is projected that globally, the collective economic output loss associated with mental disorders for the period 2011 to year 2030 is US$ 16.3 trillion, which is comparable to that of cardiovascular diseases, but higher than that of cancer, chronic respiratory diseases and diabetes (Gustavsson, *et. al.,* 2010).

Mental illness is therefore increasingly being acknowledged as a global health priority, and given its economic burden to individuals, communities and nations, it is now considered a global development priority, hence its inclusion in the Sustainable Development Goals adopted during a United Nations summit and the subsequent call for universal health coverage to be inclusive of mental health and well-being (Pradhan, *et. al.,* 2017). Unfortunately, weak policy frameworks in some countries, a lack of urgency, misinformation and competing demands for scarce resources are blinding policy-makers from taking stock of a situation where mental disorders is amongst the leading causes of disease and disability in the world today (WHO, 2020). Psychological wellbeing is therefore a core agenda item in entrepreneurship research considering its significant economic burden to entrepreneurs and society across the globe due to the negative impact that mental disorders have on resources and value generated from the commercialization of innovation.

3.2. Personality Traits and Entrepreneurial Outcomes

Empirical literature has observed the need to pursue research on entrepreneurship and mental health because of the increasing economic and social burden at the macro and micro levels (Stephan & Drencheva, 2017; Ludwing, 1992; Hayden *et al.,* 2008). According to World Health Organization (2020), mental health is not only the absence of mental disorders, but also the presence of well-being, living up to one's potential, positive coping and adaptation, productivity and community engagement. Mental disorders affecting brain function and characterized by symptom clusters that may present with varying levels of severity, have been shown to be genetically transmitted, though moderated by environmental factors (Sullivan *et al.* 2017; Burmeister, 2015; Goekoop & Goekoop, 2014; Doherty and Owen, 2014; Gratten *et al.*2014). Even though psychiatric disorders have been observed in the general population, across cultures, gender, professionals and age categories, there is an increasing interest by the research community to investigate the correlation between various facets of entrepreneurship, psychological, physiological wellbeing and business performance, using different methodologies based on their constructs and operationalization, theoretical anchorage and the research design employed.

Some of the said studies have reported the prevalence of bipolar spectrum conditions (Ghaemi, 2011; Kreiser *et al.,* 2013; Wiklund, Patzelt & Dimov, 2016), obsessive-compulsive disorders and other more severe conditions (Barlett & Steele, 2004) among business tycoons. Related studies have identified and reported on the personality characteristics of successful entrepreneurs (Sesabo, 2017; Bux & Honglin, 2015; Akanbi, 2013; Ferreira, *et. al.,* 2012). Such traits were found to include the need for achievement, locus of control, cognitive abilities and risk-taking propensity. Rauch and Frese (2017) study also reported that the need for achievement, passion, proactive personality, innovativeness, need for autonomy among other traits are associated with business success. Other studies reported that entrepreneurs

manifest a pattern of five personality traits consisting of higher levels of extraversion, conscientiousness, and openness coupled with lower levels of agreeableness and neuroticism (Brandstätter, 2011; Zhao *et al*. 2010). On the other hand, Baum and Locke (2004) reported that it's a combination of traits such as self-efficacy, goal setting and motivated extraversion that impact on venture growth modulated by passion, tenacity and new resource skill.

Other studies on entrepreneurial personality traits showed that risk taking propensity that is correlated with business establishment was found to be a feature of bipolarity, substance abuse conditions and ADHD (Feldstein & Miller, 2006; Holmes, *et al.,* 2009; Drechsler, 2008). Similarly, creativity which is the basis of business innovation because entrepreneurs must generate novel ideas for innovative new businesses was found to have a connection with mental health (Amabile, 1988). This finding was supported by other researchers that also identified a relationship between creativity and mental health conditions including substance abuse (Ghaemi, 2011); ADHD, (Healey & Rucklidge, 2006); psychosis, (Kyaga, S. *et. al*., 2012); depression, (Ludwig, 1992), and bipolarity (Ghaemi, 2011). However, studies have shown that mental disorders are not a preserve of entrepreneurs and that is why related studies on mental health differences in leadership reported the occurrence of bipolarity, depression, sociopathy and psychosis among political and military leaders (Ghaemi, 2011). For instance, a study of 238 entrepreneurs and 288 managers in the United States showed no differences on measures of depression, anxiety, and anger (Rahim, A., 1996). The finding is similar to Chay, (1993) study which reported that entrepreneurs and salaried employees in the United Kingdom don't differ on the Goldberg Health Questionnaire measures of psychological well-being. On the same vein, Stephan and Roesler, (2010) study found that 149 German self-employed individuals did not differ from their age- and gender-matched, employed comparison participants in prevalence rates of affective disorders, anxiety disorders, or alcohol abuse. Likewise, Jamal (1991) study of 235 entrepreneurs from Canada reported that there were no significant mental health differences as compared with employed control group. On the other hand, Freeman *et. al.*, (2019); Lerner (2016) and Grijalva and Harms (2014) studies reported an association between entrepreneurship and psychological health of entrepreneurs and relational wellbeing of their first-degree family members. Other studies have established that psychiatric temperaments negatively impact on entrepreneur performance, their business ventures and by extension the value created through commercialization of innovations (Anthsel, 2017; Frese & Gielnik, 2014; Kaplan & Kaiser, 2009). To add on the controversy in the research community, Patzelt and Shepherd (2011) in a study of about 2700 US citizens reported that entrepreneurs experience lower rates of negative emotions and show problem focused coping methods more freely and frequently than persons holding employment positions.

The reviewed empirical studies show that there is still controversy in the academia about entrepreneurship and the nature of entrepreneurs' mental health characteristics or that of their first-degree family members. For instance, streams of research have established that psychiatric temperaments and physiological medical conditions may significantly impact on an entrepreneurs' energy and activity levels, motivation, circadian rhythms, self-concept, creativity and interpersonal behaviors in ways that influence the performance of their business ventures (Lerner, 2016; Grijalva & Harms, 2014). As an offshoot of this, studies have been undertaken to establish a link between entrepreneurship and overall wellbeing of entrepreneurs and those around them. Some of the studies have shown that entrepreneurs especially at the establishment phase of their businesses have to grapple with a host of personality disorders such as narcissism, sudden wealth syndrome and the impostor syndrome (Freeman *et. al.,* 2019). In an earlier study by Freeman *et. al.,* (2017) comprising 242 entrepreneurs and 93 demographically matched comparison persons participated in an anonymous online self-report survey to assess their engagement in entrepreneurship and their individual and family mental health history. The findings were that start-up founders are twice as likely to suffer from depression, have suicidal thoughts and have a psychiatric hospitalization; three times more likely to suffer from substance abuse; six times more likely to suffer from Attention deficit hyperactivity disorder, and 10 times more likely to suffer from

bipolar disorder (Freeman *et. al.,* 2017). The limitation with this study includes reliance on self-report measures cross-sectional design and possible selection bias.

Taken together, the conflicting findings of the reviewed empirical exhibits research gaps that beg for additional largescale studies. There are several open questions on personality traits, entrepreneur strategic competencies, affective disorders and entrepreneurial outcomes. There is also no consensus as to whether affective states linked to mental disorders may modulate the influence of personality traits on entrepreneurial result. There is also scarcity of empirical evidence about psychological wellbeing among the families of entrepreneurs, even though some previous studies have reported that first and second-degree family members of bipolar probands have been shown to be high achievers across several domains that are important for entrepreneurial outcomes (Higier *et al.* 2014). These findings seem to be in agreement with Coryell *et al.* (1989) study which reported that the first-degree relatives of bipolar probands, including relatives with bipolar spectrum conditions, had significantly higher educational and occupational achievement than the close family members of people with other mental health conditions.

3.3 Psychosocial Stressors and Social Support

Ill health events are said to pose a substantial threat to organizational fiscal bottom line in terms of lost productivity and medical related expenditures. While some papers have documented the degree of catastrophic spending and impoverishment related to ill health at the work place, not much has been done to investigate the work stressors, mental disorders and its impact on the relational wellbeing of first-degree family member of the affected individual. The available studies on ill health have reported evidence of causal effects of psychological work - related risk factors, social environment of work, and its impact on the psychological and physiological wellbeing of individuals and families (Stansfeld & Candy, 2006). Estryn-Behar, *et al.,* (1990) and Bromet, *et. al.,* (1992) revealed that high levels of psychological demands, including fast work pace and high conflicting demands, are predictive of psychological health conditions such as depressive and anxiety disorders. However, high levels of social support at work from colleagues and team leaders have been found to be supportive of mental health (Dormann & Zapf, 1999). Likewise, decision latitude has been linked to common mental disorders (Kawakami, *et. al.,* 1992).

The above findings are relevant to entrepreneurship theory and practice because entrepreneurs pursue their ideas and innovations in a stressful work environment characterized by numerous constraints including under capitalization (Halkos & Tzeremes, 2010; Rice & Straham, 2010); limited accurate, complete and timely information (Tuan & Yoshi, 2010); difficulties in accessing latest technology (Bigliardi, *et. al.,* 2011) and deficiency in entrepreneurial technical skill level (Liesch, *et. al,* 2012). In addition, a decade before the beginning of the 21st Century witnessed an increased change in technology, political and social spheres, occasioning structural changes in economic systems and the configuration of enterprises, their relationships with each other and with the environment (Bausch, 2011; Vives, 2008). This occasioned the moving and blurring of industrial boundaries, and the entry of new competitors coming from different parts of the globe. With richer and more rapid information and communication systems characterising globalisation, has resulted in a faster feed-back mechanism that continues to allow business enterprises to become aware of business influencing events occurring in distant places, which occasion learning events ultimately leading to necessary changes in the product at the market place (Tuan & Yoshi, 2010). Hence, a striking trend in the world today has been the growing Internationalisation of business operations (Liesch, *et. al.,* 2012; Klapper, *et. al.,* 2008). Business enterprises are now able to have a richer and efficient inter and intra firm connectivity, resulting in an unimaginable opportunity for information sharing. On the other hand, the degree of risk and uncertainty in economic activities has increased, thus making it more challenging to make forecast (OECD, 2004). All this has been taking place in the context in which the investments required to launch a new product has become exorbitant. Due to the interplay of these factors, no company can consider itself immune from a situation of increasingly

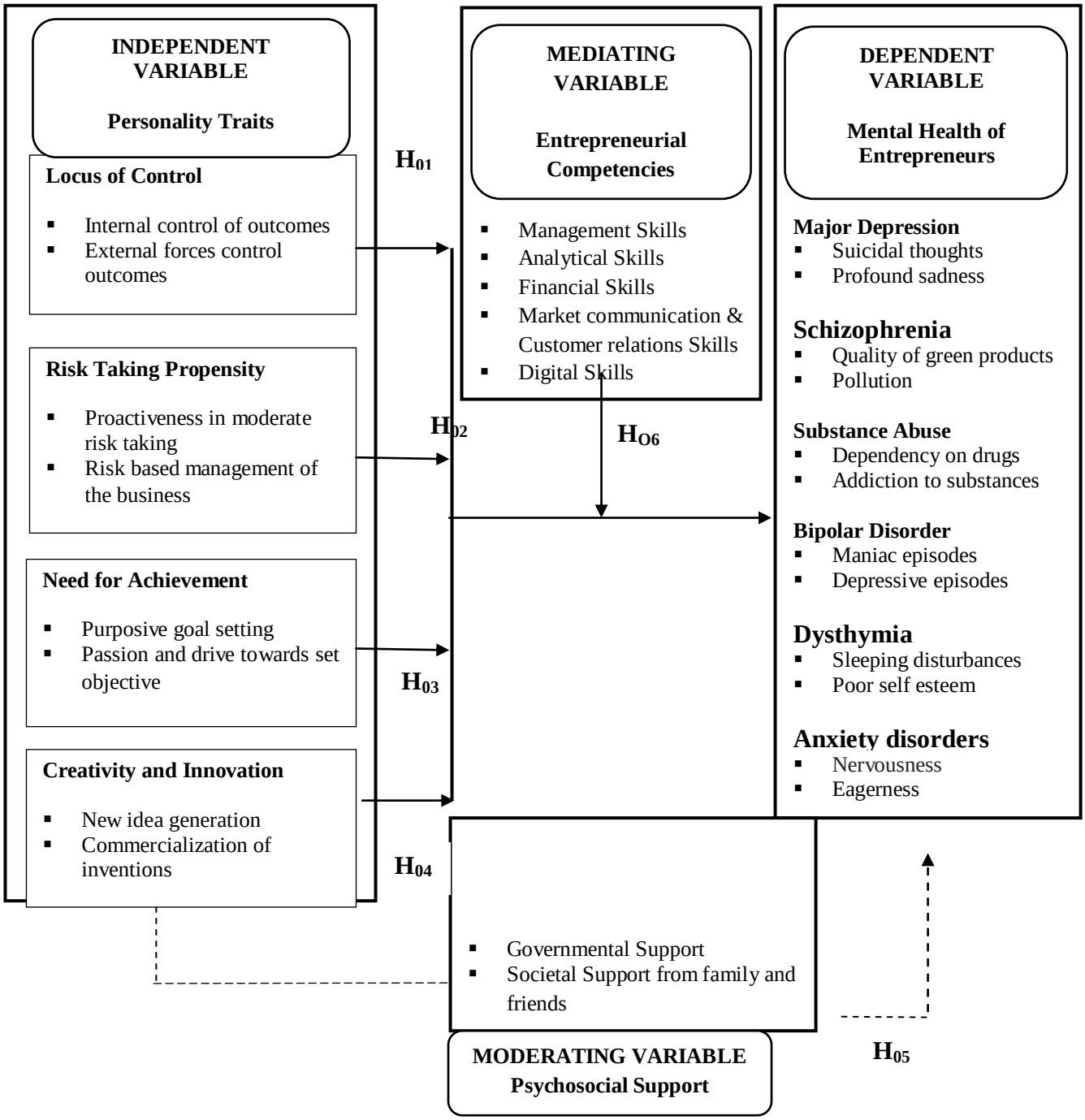
aggressive and difficult competitive environment (Brinkmsnn, *et al.,* 2010). Even international corporations whose competitive advantages were considered impregnable only a few years ago, now have to face an increasingly dynamic and pressing competition (OECD, 2004). As variously reported by Ayyagari, *et. al.,* (2007) and restated by Tuan and Yoshi (2010), managers must link their organization's unique capabilities to varying types of strategies over a period of time, including the in competitive conditions that shape the character of success (). Consequently, both large and small firms must quickly adapt to competitive pressures, something that continues to put supplementary strain on entrepreneurs' psychological and relational wellbeing with first degree family members and employees as they seek to enhance their business' sustainable credentials.

3.4 Entrepreneurial Competencies

Entrepreneurial competencies are the knowledge and skills needed to develop, sustain and lead a business organization. The more developed an entrepreneur's skills, the better able to respond to environmental forces so as to grow and sustain the business. Such competencies which may be taken to imply the understanding of principles, facts, processes and the interactions among them is of higher value for entrepreneurship if it is related to specific entrepreneurial activities (Marvel *et al.,* 2016). An entrepreneur should have knowledge of the market, of relevant technologies or of how to run a firm. Therefore, it can be summarized that relevant knowledge and skills set is an important predictor of entrepreneurial outcomes (Krieger, *et. al.,* 2018). Based on this, the study proposes that:

Proposed Theoretical Framework

The following is the proposed theoretical framework that demonstrates the role of entrepreneurial competencies and psychosocial support on the link between personality traits and mental health of entrepreneurs.



Source: *Author (2020). The conceptual framework of Personality traits, Entrepreneurial competencies, psychosocial support and mental Health of Entrepreneurs.*

4.1 Propositions

4.1.1 Personality Traits

Streams of research have reported on personality traits that are relevant to successful entrepreneurial outcomes (Sesabo, 2017; Bux & Honglin, 2015; Akanbi, 2013; Ferreira, *et. al.*, 2012). Such traits include the need for achievement, locus of control, cognitive abilities and risk-taking

propensity. Rauch and Frese (2017) study also reported that the need for achievement, passion, proactive personality, innovativeness, need for autonomy among other traits are associated with business success. Other studies reported that it is a combination of traits such as self-efficacy, goal setting and motivated extraversion that impact on venture growth moderated by passion, tenacity and new resource skill (Baum & Locke, 2004; Zhao *et al*., 2010; Brandstätter, 2011). Thus, the study proposes that:

Proposition 1 ***(P1****): Personality traits determines an entrepreneur's mental health but it is mediated by Entrepreneurial competencies*.

4.1.2 The role of Entrepreneurial Competencies

An entrepreneur should relevant competencies such as knowledge of the market, of relevant technologies or of how to run a firm. Therefore, it can be summarized that relevant knowledge and skills set is an important predictor of entrepreneurial outcomes (Krieger, *et. al.,* 2018). Based on this, the study proposes that:

Proposition 2 (P2): *Entrepreneurial competencies mediates the relationship between personality traits and mental health of entrepreneurs.*

4.1.3 The role of Psychosocial Support

Rauch and Frese (2017) study reported that entrepreneurial traits are associated with business success. However, studies on ill health have also reported evidence of causal effects of psychological work - related risk factors, social environment of work, including fast work pace and high conflicting demands, are predictive of mental health conditions such as depressive and anxiety disorders (Stansfeld & Candy, 2006; Estryn-Behar, *et al.,* 1990; Bromet, *et. al.,* 1992). However, high levels of social support at work from colleagues and team leaders have been found to be supportive of mental health (Dormann & Zapf, 1999). Thus, the study proposes that:

Proposition 3 (P3): *Psychosocial support moderates the relationship between personality traits and mental health of entrepreneurs.*

Conclusion

The purpose of this study was to review existing literature, identify gaps in the phenomenon of personality traits, entrepreneurial competencies, psychosocial support, mental health of entrepreneurs, and finally propose a conceptual model providing propositions for filling up the identified gaps. The reviewed writings show that psychological disorders have a direct impact on sustainable entrepreneurship. After reviewing results of relevant studies, it is concluded that there is a relationship between entrepreneurship and entrepreneurs' mental health whether directly or indirectly. This study cannot neglect the relation and its impact on entrepreneurs, entrepreneurial outcomes and relational wellbeing of close family members, including employees in a business enterprise. It is suggested that more studies should be done in this regard to clarify their nature of relations. While this study contributes to existing literature, it has identified emerging data gaps and came up with critical propositions for purposes of progressing knowledge and forming a basis for future studies on sustainable entrepreneurship that takes into account national and global economise as well as the emotional and relational wellbeing of the entrepreneurs.

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15. An Empirical Analysis of Electronic Passport System and Employee Performance in the Immigration Department, Nairobi City County, Kenya

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Electronic governance practices have been adopted globally to provide swift service, remove barriers to effective government services and efficiency by providing local access points. Electronic Passport System is an Electronic governance innovation that government agencies are implementing to ensure the delivery of efficient services and support development of government processes. The general objective of this study was to investigate the influence of electronic governance on employee performance in immigration department Nairobi City County Kenya. The specific focus was on the influence of Electronic Passport System on employee performance. Theory of change and Resource Base theory anchored the study. The study adopted a descriptive survey research design; cross sectional in nature. The target population was 516 comprising of employees of the immigration department of the three selected locations in Nairobi City County Kenya. A sample of 103 respondents was selected using stratified proportionate random sampling. Data was collected from primary and secondary sources using a structured questionnaire and official documents and reports from the department of Immigration. Content and construct validity of research tools were tested while Cronbach's alpha with a cut off 0.7 was employed to test the reliability of the research instrument. Data was analyzed using descriptive and inferential statistics and presented in tables and charts. The study concludes that Electronic Passport System has a significant influence on the employees' performance. The study recommends that, the immigration department should provide feedback system on electronic passport. The government should also develop policies that are in tandem with requirements for enhancing the application of electronic passports by the employees to realize effectiveness in employee performance by providing real-time service delivery. It is expected that the findings from this study will benefit the department and other the entire ministry of interior and co-ordination of national government in assessing the extent to which Electronic Passport System influence employee performance. The study will act as a reference point for researchers and academicians.

Keywords: *Electronic Governance, Electronic Passport System, Employees' Performance.*

16. Work Engagement and Employees' Performance: Assessing the Linkage and Leverage in Classified Hospitality Firms in Kenya

Paul Thumbi Njoroge, Dr. Hannah Bula, Dr. Rosemarie Wanyoike

ABSTRACT

Work engagement which relates to personal investment of individual physical, emotional and cognitive resources to role performance has continued to gain prominence in human resource practice and theory. Empirical literature reveal that work engagement explains employees' behaviour and outcomes that are consistent with organizational social and psychological contexts. However, there is no consensus in literature on the measures of work engagement that have a direct influence on employees' performance and how firms can create contexts for work engagement to drive performance at employees' level. Therefore, the purpose of this study was to determine the configuration of work engagement elements that influence employees' performance, assess the contextual factors that affect work engagement and ultimately examine how work engagement can be leveraged to enhance employees' performance. Using purposive and stratified random sampling, a sample of 225 respondents was selected from 75 classified hospitality firms in Kenya. Data was collected using a self-administered questionnaire and analyzed using multiple regression analysis. The results showed that work engagement constructs of physical engagement, emotional engagement and cognitive engagement were positively correlated with employees' performance. The study revealed that physical engagement influenced the quality and quantity of employees' output, emotional engagement influenced employees' citizenship behaviour, and cognitive engagement had higher influence on employees' efficiency in performance. The study established that work engagement is connected to employees' motivation, morale and job satisfaction. Organizations should manage the elements of motivation such as compensation and leadership support and job level elements such as decision making, scope of responsibility and supervision in order to create a climate for engaged workers. Work arrangement and job autonomy are crucial in improving employee's devotion and commitment in his role.

Keywords: Cognitive Engagement, Emotional Engagement, Employees' Performance, Physical Engagement, Work Engagement

1. Introduction

1.1 Background of the Study

Hospitality firms operate in a labour-intensive sector that relies heavily on human interactions to achieve optimal performance in terms of efficiency and service delivery. Isa, Ugheoke and Noor (2016) posit that success of hospitality firms is largely hinged on employee's performance. The proponents of the ability, motivation and opportunity theory postulate that organizational climate characterized by higher levels of support, engagement and autonomy is instrumental in developing employees' ability and motivation to perform and make contributions in the organization (Appelbaum, Bailey, Berg & Kalleberg, 2000; Mackay & Boxall, 2006). The main barriers to achieving optimal employee performance are attributed to unsupportive organizational climates (Bilgihan & Nejad, 2015). To address the customer needs for quality products and service delivery, hospitality firms have to improve performance at employee level (Li & Zheng, 2014).

Empirical literature indicates that that engagement influence job performance dimensions of task performance and organizational citizenship behavior with engaged employees exhibiting performing tasks with more enthusiasm, vigour, dedication and focus (Rich, LePine, & Crawford, 2010). Past studies have established that work engagement is positively correlated with task and contextual performance. This linkage is ascertained by engaged workers propensity to be persistent, intense, vigilant and focused in task performance while simultaneously investing energy and behaving in sync with the organizational values and goals. It is argued that engaged employees are cognitively alert, attentive and focused in their behaviour and are emotionally connected to their overall job performance (Christian, Garza & Slaughter, 2011).

Extant literature reveals that employee performance has been measured at various standpoints and using different measures (Luo, Shi, Li, & Miao, 2008). The construction of the dimensions of employee performance is informed by the need to manage employee's performance optimally and from the understanding that this performance is multidimensional. Although the concept of employee's performance has been extensively investigated, measurement of individual employee's performance remains contentious and of great concern both empirically and in practice in face of evolving organization and business dynamics (Dhammika, 2013). Extant literature reveals differences in the conceptualization and operationalization of the concept of employees' performance exist. Varied measures of employee's performance have been adopted with some scholars adopting unidimensional approach, which implies studying it as task performance, while others view it as a multidimensional concept encompassing task and contextual elements of job performance (Luo, Shi, Li, & Miao, 2008; Dhammika, 2013).

The task and contextual model by Borman and Motowidlo (1993) view task performance to comprise behaviours linked to the job processes while contextual performance relates to the behavior linked to social, cultural and psychological contexts of the organization. In this study, employee's performance was conceptualized as a multidimensional construct. The indicators of employee's performance included service delivery, efficiency, teamwork, citizenship behavior. These measures were adopted from validated scales used in past studies (Dhammika, 2013). Service delivery measured the quality of service in meeting customer needs, timeliness and service standards, efficiency involved performing roles competently without mistakes and solving problems related to tasks, team work entailed employee's contribution to team activities, commitment to team goals and leading team efforts, and citizenship behaviour which was measured in terms of assisting co-workers, following organizational rule and involvement in corporate affairs.

Work engagement, conceptualized as personal investment of individual physical, emotional and cognitive resources to role performance (Christian, Garza & Slaughter, 2011). Rich, LePine, and Crawford (2010) posit that physical resources relate to energy and vigour, emotional resources relates to dedication and attachment, and cognitive resources relate to job focus and absorption. Engagement theory proposes that the psychological experience that drive work related behaviour are influenced by individual and organizational factors (Kahn (1990). The construct of work engagement is understood to explain employee behaviour and performance (Newman & Harrison, 2008). Empirical literature suggests that work engagement entails motivational effect that lead to higher levels of job performance. Studies reveal

that work engagement leads to employee's behaviours and outcomes that are consistent with organizational social and psychological contexts (Christian, *et al.*, 2011).

For the purpose of this study, the measures of work engagement as espoused and advanced by Rich *et al*. (2010) and Christian, *et al.* (2011) were adapted. The indicators of work engagement which constitute the independent variables are physical engagement which entailed energy, resilience and vigour; emotional engagement which involved the attachment and dedication to one's work performance; and cognitive engagement which entailed job focus, absorption and vigilance (Christian, *et al.*, 2011).

1.2 Statement of the Problem

Classified hospitality firms in Kenya have been confronted with enormous market competition by other players in the East African region (KNBS, 2018). The sector's competitiveness is hinged on employee performance as they are instrumental in enhancing customer experience through effective service delivery (Bilgihan & Nejad, 2015). The threat to the competitiveness of the hospitality sector in Kenya is attributed to low productivity and performance at employee level. According to the National Tourism Blueprint (NTB) 2030, the human resource management practices in the sector are characterized by lack of proper strategies to enhance employee's performance which has ultimately led to the declining performance of the hospitality sector, which currently stands below 70 per cent of the projected performance level.

Empirical studies show that employee's performance plays a significant role in the success of service-oriented firms. In hospitality firms, employee's role is critical because they create and deliver the hospitality products and services (Lacap, 2014). Therefore, attention should be paid to ways in which the organization can enhance the performance of employees. However, hospitality firms in Kenya have focused on performance at organizational level and ignored it at employee level (NTB, 2017). Employees' Performance is influenced by organizational antecedents. Past studies have drawn positive relationship between work engagement and employees' performance (Rich, *et al*, 2010; Christian, *et al*. 2011; Anitha, 2014)

However, various scholars have adopted various methods to conceptualize and operationalize the construct of employee's performance. Constructs such as turnover intentions, commitment, motivation, engagement and job satisfaction have been included in the wider concept of employee's performance. Some studies have adopted a unidimensional view of employee performance by focusing exclusively on job performance while others have adopted a multi-dimensional approach that incorporates job-specific aspects and non-job specific aspects of performance. This state of literature brings empirical vagueness and compounds the challenge of conceptualizing employees' performance (Luo, Shi, Li, & Miao, 2008).

On the other hand, Empirical evidence reveal inconsistency in the operationalization of the construct of work engagement. To a large extent the construct has been measured using the Utrecht Work Engagement Scale (Schaufeli, *et al*, 2002). However, as Rich, *et al.* (2010) argue the measures do not incorporate the three dimensions (physical, emotional and cognitive) underlying the Kahn's (1990) engagement theory. In order to address these gaps, this study adapted Rich, *et al.* (2010) model of work engagement and

employees' performance was studied from the multidimensional approach in line with Borman & Motowidlo (1993) model.

1.3 Objectives of the Study

The general objective of this study was to examine the effect of work engagement on employees' performance in classified hospitality firms in Kenya.

The specific objectives of this study were:

To establish the effect of physical engagement on employees' performance in classified hospitality firms in Kenya

To determine the effect of emotional engagement on employees' performance in classified hospitality firms in Kenya

To assess the effect of cognitive engagement on employees' performance in classified hospitality firms in Kenya

1.4 Research Hypothesis

The research hypotheses for this study were stated in the null hypothesis as follows:

$Ho_{1:}$ Physical engagement has no significant effect on employees' performance in classified hospitality firms in Kenya

$Ho_{2:}$ Emotional engagement has no significant effect on employees' performance in classified hospitality firms in Kenya

$Ho_{3:}$ Cognitive engagement has no significant effect on employees' performance in classified hospitality firms in Kenya

1.5 Significance of the Study

This study makes significant contribution to theory and practice of human resource management. The study adds to the body of knowledge by empirically examining the linkage between work engagement and employees' performance using broader conceptualization of the two variables based on engagement theory and task and contextual model of performance. The configuration of work engagement adopted in this study has three constructs of physical engagement, emotional engagement and cognitive engagement. This deepens the understanding of the concept of engagement as it brings to fore the physiological, social and psychological elements of work. The concept of employees' performance is studied from a multidimensional standpoint that incorporates both task and contextual elements of performance. In this case, employees' performance is measured as a combination of task performance and contextual performance which encapsulates the reality of role performance.

The study provides insights on how organizations can harness work environment that creates, supports and sustains optimal level of work engagement and employees' performance. Having established the

connection between work engagement and employees' motivation, morale and job satisfaction, the organizational and contextual factors must have motivational influence. Organizations should manage the elements of motivation such as compensation and leadership support and job level elements such as decision making, scope of responsibility and supervision in order to create a climate for engaged workers. Work should be arranged in such a way that there is a high level of job autonomy and reduced supervision and micromanagement since findings show that workers are more likely to put more effort, dedicate more time and remain focused in activities for which they have some level of control and accountability.

1.6 Scope of the Study

This study focused on determining the relationship between work engagement and employees' performance in classified hospitality firms in Kenya. The variables studied are work engagement (independent variable) and employees' performance (dependent variable). The study was grounded on engagement theory to explain the linkage between the independent variable and dependent variable and supported by task and contextual performance model to further expound on the dependent variable. The target population comprised 75 firms classified as five star (15 firms), four star (35 firms), and three star (25 firms). The selected firms are located in Greater Nairobi region comprising Nairobi, Kajiado and Machakos counties, and South Rift Region comprising Nakuru and Narok Counties. The respondents targeted in this study were managers in charge of human resources, food and beverage, and accommodation and conferencing from the targeted population.

2. Literature Review

2.1 Theoretical Review

2.2.1 Task and Contextual Performance Model

The concept of employee's performance can be broadly described as an employee's output from task performance and behaviour linked to achievement of organizational goals (Campbell, 1990). The scientific management perspective view of employee's performance was largely concerned with quantity output of the worker. With advent of human relations school of thought, the view of employees' performance was enhanced to include both quantity and quality dimensions. Therefore, employees' performance was measured in terms of efficiency (rate of output), efficacy (goal accomplishment) and quality (standards of performance) (Dhammika, 2013).

Although the dimensions of employee's performance described by Campbell (1990) including job proficiency, communication, discretionally effort, discipline, team work, and leadership continue to elicit interest, the concept of employees' performance has not been operationalized uniformly in literature. Task and contextual performance model by Borman and Motowidlo (1993) has been embraced by some scholars The model view task performance as a description of employee's effectiveness in executing technical activities while contextual performance refers to employee's undertaking of activities that relate to social, cultural and psychological contexts or dimensions of the organization. The contextual performance dimensions comprise enthusiasm, extra effort, volunteering, assisting and cooperating with coworkers, adhering to rules and procedures and participating in corporate affairs (Borman & Motowidlo, 1993).

This model has gained traction in research with the conceptualization of employee performance gaining numerous empirical support, albeit with additional constructs such as job dedication, which entail self-discipline and following organizational rules and regulations, and interpersonal facilitation, involving cooperating and helping co-workers (Luo, *et al*. 2008). Dhammika (2013) tested the validity of the task and contextual model of performance and the results showed that measures such as task execution, job proficiency, efficiency, assisting coworkers, cooperation, and team work were valid measures of employee's performance. This study adopted task and contextual model to measure employee's performance. The indicators of employees' performance, therefore, included service delivery, efficiency, team work, and citizenship behaviour.

2.2.2 Kahn's Engagement Theory

The engagement theory proposes that work engagement entails the simultaneous employment of individual's physical, emotional and cognitive resources in assigned role (Kahn, 1990). This engagement is reflected in individual workers investment of energy and vigour, dedication and attachment and focus and absorption in their work. However, this involvement should be simultaneous rather than fragmented (Kahn, 1992). This conceptualization suggests a linkage between engagement and job performance (Rich, *et al*, 2010).

It is argued that work engagement influence employee's performance because the more an individuals is puts more energy, is focused and dedicated the more and better the outcomes of their labour (Hillman, Nicholson, & Shropshire, 2008). Employees who are absorbed and dedicated exhibit more enthusiasm, are more alert and attentive, and enjoy their work which leads to enhanced performance. Work engagement provides a mechanism that explains the relationship between individual characteristics and organizational factors related to job performance and behaviour. Empirical studies have drawn a direct influence between work engagement and employee's performance (Christian, *et al*. 2011)

The measures of work engagement as espoused and advanced by Rich *et al*. (2010) and Christian, *et al.* (2011) were adapted for this study. Therefore, the indicators of work engagement for this study were willingness to dedicate physical, emotional and cognitive resources to the job (task and contextual) performance. The physical construct entailed energy, resilience and vigour, emotional involved the attachment or dedication to one's work performance, and cognitive involved job focus, absorption and vigilance (Christian, *et al.*, 2011).

2.2 Empirical Review

Empirical evidence validates the positive influence of work engagement on performance outcomes at both organizational and employee level. Rich, *et al*. (2010) investigated the antecedents and effects of job engagement on job engagement. The study sampled 245 respondents in USA and analyzed data using inferential statistics, correlation analysis, structural modeling and factor analysis. The results indicated that engagement influence job performance dimensions of task performance and organizational citizenship behavior. In addition, the findings revealed that an engaged employee exhibit improved performance outcomes since they performed tasks with more enthusiasm, vigour, dedication and focus.

Christian, *et al*. (2011) sought to examine work engagement and its relationship with task and contextual elements of employee performance. The study adopted meta-analytic path modelling to determine the relationship between the variables. The study established that work engagement was positively correlated with task and contextual performance. This linkage is ascertained by engaged workers propensity to be persistent, intense, vigilant and focused in task performance while simultaneously investing energy and behaving in sync with the organizational values and goals. The study, further, revealed that engaged employee are cognitively alert, attentive and focused in their behaviour and are emotionally connected to their overall job performance.

A study by Anitha (2014) sought to establish the factors affecting employee engagement and employee performance. The study adopted causal study method in which a sample of 700 middle and lower managers from SMEs in India was selected using simple random sampling. Data was analyzed using regression and structural equation modelling. The results indicated that engagement had a positive influence on employee's performance and had a mediation role between its antecedents and effects. The study, further, drew association between work engagement and employee's job satisfaction and citizenship behaviour, intentions to quit, burnout level and employee performance.

Banihani and Syed (2017) conducted a study on gendered work engagement in telecommunication companies in Jordan. The study sampled thirty six employees from three firms. As an entirely qualitative research, the study used content analysis. The study revealed that contextual aspects of work environment influenced performance. Work engagement is associated with motivational influence on employee's performance as it creates a climate of trust, enthusiasm and warmth. Further, the results showed that work engagement characterized by vigour, dedication and absorption which has positive effects on employee's performance.

Kim and Park (2017) investigated the relationships between work engagement and employee's behavior. A sample of 400 employees from public-sector organizations in Korea were surveyed. Data was analyzed using structural equation modeling. The findings showed that work engagement impacted employee's performance. In addition work engagement influenced knowledge sharing, procedural justice and employee's innovative behaviour. Ajayi, *et al*., 2017 examined the relationship between the organizational context and employee engagement in Nigeria. Using Cross sectional design, a sample of 200 SMEs was selected for the study. The findings show that employee engagement increases their performance and consequently enhances organizational potential for growth and survival.

2.3 Conceptual Framework

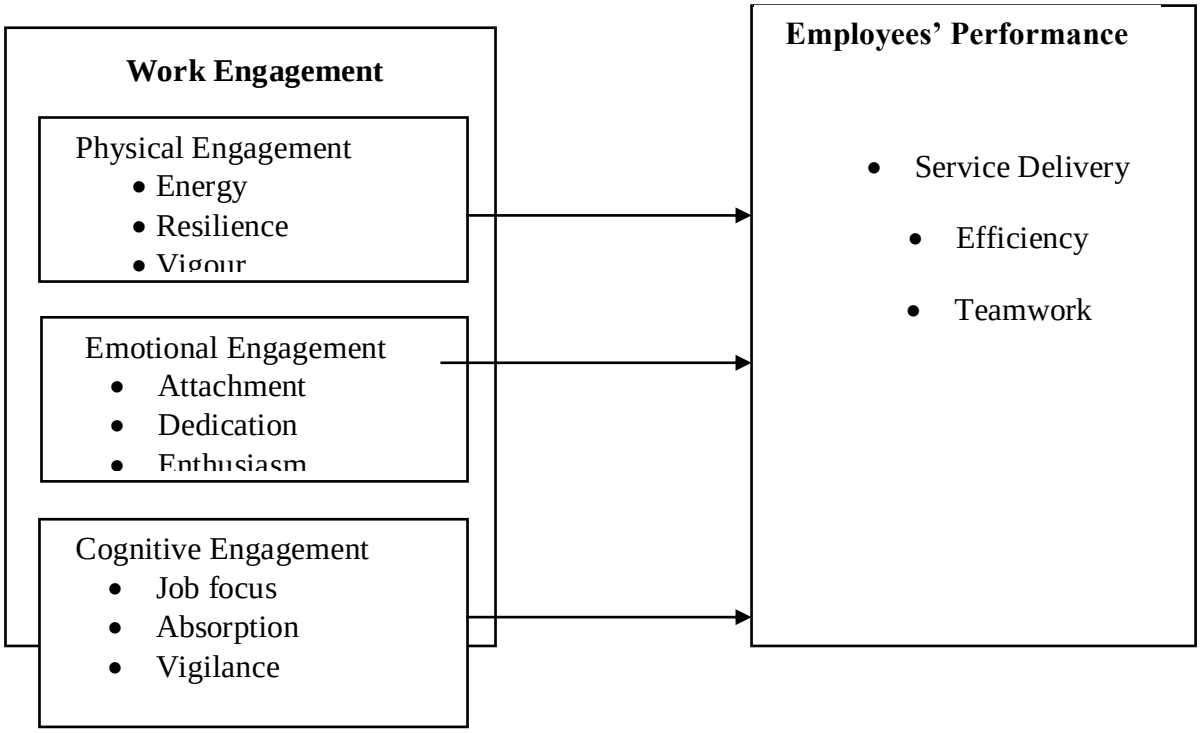

Figure 2.1: Conceptual Framework

Source: Njoroge, Bula and Wanyoike (2020)

3. Research Methodology

3.1 Research Design

This study adopted a positivist research philosophy to examine the effect of work engagement on employees' performance in classified hospitality firms in Kenya. The choice was also supported by Creswell (2009) recommendation that positivist research philosophy is appropriate for explaining relationships between variables with cause and effect attribute. According to Easterby-Smith, Thorpe and Jackson (2008), positivism is ideal for research that progresses from problem statement, setting of objectives and hypothesis formulation and testing, operationalization and measurement of study variables, and generalization of findings are made through statistical probability. Descriptive and explanatory research designs were adopted for the study. The designs are more reliable and suitable in determining the relationships between variables, establishing models of these relationships and testing hypotheses (Saunders, *et al*., 2012). Cross-sectional survey method was used as data was collected and the relationship between variables measured at a specified time.

3.2 Target Population and Sampling

A target population of 75 firms representing 38 % was selected using purposive sampling method. The firms comprised 15 five star, 35 four star and 25 three star firms located in Nairobi and South-Rift Valley regions. The unit of analysis was the classified hospitality firms while the unit of observation was the functional departments in each firm. The functional departments that were considered for observation were human resources, food and beverage, and accommodation and conferencing. These departments were considered because they had relevant information for the study. Using stratified random sampling, a proportionate number of respondents were selected from each category or strata and three functional departments. The total respondents was 225 respondents which was representative sample of the entire population.

3.3 Data Collection Instrument and Procedure

Data was collected using a questionnaire. A questionnaire provides a consistent and efficient way of collecting information related to individual attitudes, perceptions, and behavioural characteristics (Creswell, 2009). The use of a questionnaire was appropriate for this study as it is sufficient to collect both quantitative and qualitative data for descriptive research (Saunders, *et al.* 2012). In the development of the questionnaire, Creswell and Plano-Clark (2011) procedure was followed which entailed: determining relevant study constructs and measures; generation of questionnaire items and relevant questions; ensuring that items scales were validated by previous studies; determining the scales of measurement of the items; pre-testing to validate the instrument; and evaluating the items for reliability. Based on this systematic approach, a semi-structured questionnaire was developed comprising both closed-ended and open-ended questions. The closed ended questions were structured using a five-point Likert scale format.

A cross-sectional design was adopted for data collection in order to accurately capture the objectives of the study, provide valid measure of variables and get time-specific information from respondents. The questionnaire was administered to the respondents who comprised a human resource manager, food and beverage manager, and accommodation and conferencing manager from each selected firm. The questionnaire was delivered by hand to each respondent and collected later by the researcher. The pilot study was conducted and after revision of the questionnaire, data was collected over a period of one month.

3.4 Measurement of Variables

The measures of study variables were adapted from models used in past studies. Employees' performance, which is the dependent variable, was operationalized based on the indicators advanced in the task and contextual model. The measures adopted to indicate task and contextual performance for this study were service delivery, efficiency, teamwork, citizenship behavior espoused by Borman and Motowidlo (1993). Work engagement, the independent variable, was operationalized using measures of work engagement as espoused and advanced by Rich *et al.* (2010) and Christian, *et al.* (2011) which include physical resources, emotional resources and cognitive resources. The physical engagement indicators were energy, resilience and vigour; emotional engagement indicators included attachment,

dedication and enthusiasm; and cognitive engagement was indicated by job focus, absorption and vigilance.

3.5 Validity and Reliability

Tests for validity of research instrument was conducted to ensure that it measures what it is purported to measure using content validity assessment and criterion-related assessment (Cooper & Schindler, 2006). To ascertain validity, the questionnaire was reviewed by specialists in academia and practice. In addition, the researcher adapted measures that have been validated in previous studies. To test the reliability of the quantitative measures, Cronbach's Alpha Coefficient statistical method was used since it is considered suitable for measuring internal consistency when multiple Likert questions have been used (Saunders, *et al.* 2012). Internal consistency of questionnaire items was considered adequate if they had a Cronbach's alpha coefficient value of 0.7 or higher (Hair, *et al.* 2006).

3.6 Data Analysis

The collected data was analyzed and interpreted using descriptive and inferential statistics. The descriptive statistics that was used are mean and standard deviation and inferential statistics done included multiple regression and correlation analyses to measure causal relationship between and among study constructs and test hypotheses. In particular, regression analysis was used to test hypotheses to establish if there was a statistically significant relationship between work engagement constructs and employees' performance and examine how changes in these constructs influence changes on as well as predict employees' performance. Pearson correlation was used to determine the association between the explanatory variables (physical engagement, emotional engagement and cognitive engagement) and the dependent variable (employees' performance). The strength and direction of linear relationships between pairs of study variables were measured.

3.7 Hypotheses Testing

Table 3.1: Hypotheses Testing

Hypothesis (Ho)	**Hypothesis Test**	**Statistical Model**	**Interpretation**
$Ho_{1:}$ Physical engagement has no effect on employees performance in classified hospitality firms in Kenya	X_0: $\beta = 0$ X_0: $\beta \neq 0$ Reject H_0 if $p < 0.05$, If not fail to reject the H_0	$Y = \beta_{10} + \beta_{11}X_{11} + \beta_{12}X_{12} + \beta_{13}X_{13} + \varepsilon$ Where: Y = Employees Performance X_{11} = Physical engagement	Physical engagement, $X_{11,}$ has significant effect on employees performance, Y_1, if the regressed β_{11} coefficient for $\beta_{11}X_{11}$ product term is statistically significant, $p < 0.05$

$Ho_{2:}$ Emotional engagement has no effect on employees performance in classified hospitality firms in Kenya	X_0: $\beta = 0$ X_0: $\beta \neq 0$ Reject H_0 if $p < 0.05$, If not fail to reject the H_0	X_{12} = Emotional engagement X_{13} = Cognitive engagement ε = Error term β_{10} = Intercept β_{11}- = Slope coefficients	Emotional engagement, $X_{12,}$ has significant effect on employee's performance, Y_1, if the regressed β_{12} coefficient for $\beta_{12}X_{12}$ product term is statistically significant, $p < 0.05$
$Ho_{3:}$ Cognitive engagement has no effect on employees performance in classified hospitality firms in Kenya	X_0: $\beta = 0$ X_0: $\beta \neq 0$ Reject H_0 if $p < 0.05$, If not fail to reject the H_0		Cognitive engagement, $X_{13,}$ has significant effect on employee's performance, Y_1, if the regressed β_{13} coefficient for $\beta_{13}X_{13}$ product term is statistically significant, $p < 0.05$

Source: Njoroge, Bula and Wanyoike (2020)

4. Research Findings And Discussion

4.1 Reliability of Research Instrument

The results of reliability test presented in table 4.1 reveal that the questionnaire had internal consistency with all items having a coefficient value greater than 0.7 as recommended by Hair, *et al*. (2012).

Table 4.1: Reliability Test Results

Variables	**Measures**	**No. of Items**	**Cronbach's Alpha**
Work Engagement	Physical engagement	3	0.921
(Independent Variable)	Emotional engagement	3	0.870
	Cognitive engagement	3	0.853
Employees Performance	Service delivery	3	0.913
(Dependent Variable)	Efficiency	3	0.877
	Team Work	3	0.944
	Citizenship Behaviour	3	0.928

Source: Njoroge, Bula and Wanyoike (2020)

4.2 Response Rate

Two hundred and twenty five (225) questionnaires were administered to respondents who comprised human resource managers, food and beverage managers and accommodation and conferencing managers. One hundred and sixty two (162) of the completed questionnaires respondents were considered valid for the study which is equivalent to 72 per cent response rate.

4.3 Demographic Characteristics of Respondents

The study sought to establish the demographic characteristics of the respondents in terms of gender, age, level of education, length of service and department of operation. The results of demographic characteristics revealed that in classified hospitality firms studied, there is an almost even distribution of male and female in management with male respondents accounting for 52.5% and female 47.5% respectively. Majority of the respondents fall between the age of 20 years to 49 years, with highest category being aged between 30 -39 years which is 38.9% and the least category is aged between 50 -59 years which is 5.6%. A big proportion of the respondents have either a diploma or a Bachelor's degree representing 32.7% and 46.9% respectively. In terms of length of service, 44.4% have worked in the organization for less than 4 years, 24.7% for a period between 5 and 9 years. Only 14.2% have worked for over 15 years. The highest number of respondents, that is, 38.9% work in human resource department, 33.3% in food and beverage department and 27.3% in accommodation and conferencing.

4.4 Level of Work Engagement

A nine-item scale was used to examine the level of work engagement in the firms. Using a five-point Likert scale from 1 "strongly disagree" to 5 "strongly agree," respondents were required to indicate their extent of agreement with item statements. Table 4.2 below shows the results of the descriptive statistics. It is evident that there is a high level of work engagement in the classified hospitality firms with most items recording a mean above 3.500. On items measuring physical engagement, the results indicate that employees who work with intensity record better performance (Mean 4.125, Std dev 0.677), those that strive to excel in their work have higher quality output (Mean 4.068, Std dev 0.762) and those that who devote a lot of energy in their work have higher quantity of output (Mean 3.942, Std dev 0.906). These results are consistent with empirical studies (Anitha, 2014) which opine that the level of employees' behaviour and output is influenced by work engagement.

In terms of emotional engagement, the findings reveal that an employee's enthusiasm, passion attitude influence their work. It is evident that employees who are enthusiastic about their work are more willing to take up additional responsibilities (Mean 3.764, Std dev 0.888), those who are proud of their work are more loyal to the organization (Mean 3.539,Std dev 1.075) and those who take their work as a positive challenge are able to solve work related problems (Mean 3.758, Std dev 0.971). These results echo Rich, *et al*. (2010) view that work engagement influences job performance dimensions of task performance and citizenship behaviour.

Table 4.2: Level of Work Engagement

Statement	Descriptive Statistics				
	N	Min	Max	Mean	Std. dev
Employees who work with intensity record better performance	162	1	5	4.125	0.677
Employees who strive to excel in their work record a higher quality output	162	1	5	4.068	0.762
Employee who devote a lot of energy in their work have a higher quantity of output	162	1	5	3.942	0.906
Employees who are enthusiastic about their work are more willing to take up additional responsibilities	162	1	5	3.764	0.888
Employees who are proud of their work are more loyal	162	1	5	3.539	1.075
Employees who take their work as positive challenge are able to solve work related problems	162	1	5	3.758	0.971
Employees who are focused on their work are able to meet performance standards	162	1	5	4.299	0.581
Employees who pay a lot of attention to their work make fewer mistakes	162	1	5	3.972	0.857
Employees who are absorbed in their work have lower intentions to leave the organization	162	1	5	3.715	1.004

Likert scale (1 -5): $\leq$ 2.49 = Low; $\geq$ 2.50 $\leq$ 3.49 = Moderate; $\geq$ 3.50 = High.

Source: Njoroge, Bula and Wanyoike (2020)

Cognitive engagement measures including focus, attention and absorption recorded high means in terms of their influence on employees' behaviour. The results show that employees who are focused often meet their performance standards (Mean 4.299, Std dev 0.581), those who pay attention to their work make fewer mistakes (Mean 3.972, Std dev 0,857) and those who are absorbed in their work have lower intentions to leave the organization (Mean 3.715, Std dev 1.004). These findings are consistent with Christian, *et al.* (2011) argument that engaged workers have more propensity to be persistent, intense, vigilant and focused in their performance of tasks and are more likely to be aligned to organizational values and goals.

4.5 Influence of Work Engagement Factors on Employees' Performance Indicators

The study sought to establish the extent to which physical engagement, emotional engagement and cognitive engagement influence employees' performance indicators of service delivery, efficiency, teamwork and citizenship behaviour. The results are presented table 4.3.

Table 4.3: Influence of Work Engagement on Employees' Performance Indicators

Employees' Performance	**Level of Influence**	**Physical Engagement**		**Emotional Engagement**		**Cognitive Engagement**	
		Frequency	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
Service Delivery	Very Low	1	1	4	2	9	6
	Low	3	2	9	6	16	10
	Moderate	19	12	24	15	23	14
	High	96	59	88	54	71	44
	Very High	43	26	37	23	43	26
	Total	**162**	**100**	**162**	**100**	**162**	**100**
Efficiency	Very Low	2	1	1	1	5	3
	Low	2	1	3	2	14	9
	Moderate	32	20	18	11	41	25
	High	69	43	74	45	58	36
	Very High	57	35	66	41	44	27
	Total	**162**	**100**	**162**	**100**	**162**	**100**
Teamwork	Very Low	3	2	1	1	11	7
	Low	4	2	2	1	26	16
	Moderate	27	17	39	24	45	28
	High	77	48	67	41	54	33
	Very High	51	31	53	33	26	16
	Total	**162**	**100**	**162**	**100**	**162**	**100**
Citizenship	Very Low	12	7	14	9	17	10

Behaviour	Low	16	10	22	13	29	18
	Moderate	39	24	37	23	49	30
	High	52	32	58	36	58	36
	Very High	43	27	31	19	9	6
	Total	**162**	**100**	**162**	**100**	**162**	**100**

Source: Njoroge, Bula and Wanyoike (2020)

The findings presented in table 4.3 show that physical engagement, in terms of vigour, effort and energy exerted in task performance, has a lot of influence on employees' performance indicators, service delivery, efficiency, team work and citizenship behaviour. The highest level of influence is on service delivery with 84% of the respondents rating the level as either high or very high. Influence on efficiency is considered at 78% (43% high and 35% very high). Physical engagement also has influence on team work (48% high and 31% very high influence) and citizenship behaviour (32% high and 27% very high). It is notable that work has least influence on citizenship behaviour a total of 41% of respondents considering the influence as either, moderate, low or very low.

The results reveal that emotional engagement, in terms of dedication, enthusiasm and passion, influence employees' performance aspects including service delivery, efficiency, teamwork and citizenship behaviour. The highest level of influence of emotional engagement is on efficiency (41% high and 45% very high) followed by service delivery (54% high and 23% very high), teamwork (41% high and 33% very high) and citizenship behaviour (36% high and 19% very high).

It is evident from the findings that cognitive engagement, that is focus and absorption, has influence on employees' performance. In particular, cognitive engagement has more influence on service delivery which has a high level influence of 44% and very high level 26%. On efficiency, the influence is relatively high (36% high and 27% very high).The influence on team work and citizenship behaviour is moderate, 33% and 36% high respectively. These results imply that for there to be improved service delivery and efficiency at employees' level of performance, the organization must improve the cognitive engagement elements, focus and absorption. Although the influence on teamwork and citizenship is only moderate, it remains significant. These findings are consistent with empirical literature which draw a relation between work engagement and employees' performance (Rich, *et al*, 2010; Anitha, 2014; Banihani & Syed, 2017).

4.6 Correlation between Work Engagement and Employees' Performance

A correlation analysis to determine the relationship between work engagement and employees' performance was conducted. The test aimed to ascertain whether the relationship was statistically significant at 95% level of confidence using a two tailed test. The results are presented in table 4.4.

Table 4.4: Correlation between Work Engagement and Employees' Performance

Dimension		Physical Engagement	Emotional Engagement	Cognitive Engagement
Employees' Performance	Pearson Correlation	.788**	.754**	.712**
	Sig. (2-tailed)	0.000	0.001	0.003
	N	162	162	162

**Correlation is significant at the 0.01 level (2-tailed)

Source: Njoroge, Bula and Wanyoike (2020)

The results shown in table 4.4 reveal that there is a strong positive correlation between work engagement and employees' performance. Correlation between physical engagement and employees performance is statistically significant, r = 0.788**, p (0.000) < 005, emotional engagement and employees' performance is statistically significant, r = 0.754**, p (0.001) < 0.05, and cognitive engagement and employees' performance is also statistically significant, r = 0.712**, p (0.003) < 0.05. These results are in consonance with empirical literature that has found correlation between work engagement and employees' performance (Christian, *et al*. 2011; Banihani & Syed (2017).

4.7 Regression Analysis

In order to test hypotheses, linear regression analysis was performed. The regression analysis used to examine how changes in the independent variables (Physical engagement, emotional engagement and cognitive engagement) influenced changes in the dependent variable (employees' performance). The results are presented in table 4.5.

Table 4.5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the estimate
1	.774	.599	.562	.684

Predictors: (Constant), physical engagement, emotional engagement, cognitive engagement

Source: Njoroge, Bula and Wanyoike (2020)

The results presented in table 4.5 show a significant proportion of variance in performance ($R^2 = 0.562$). The results indicate that the independent variables collectively explain 56.2% of the variation in employees' performance. This implies a significant influence of work engagement on employees' performance in classified hospitality firms.

Table 4.6: ANOVA

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	89.63	3	29.88	63.57	.000
	Residual	74.26	158	0.47		
	Total	163.89	161			

Predictors: (Constant), physical engagement, emotional engagement, cognitive engagement

Dependent variable: employees' performance

Source: Njoroge, Bula and Wanyoike (2020)

The study tested the overall significance of the model using ANOVA (F) test at 95% confidence level. The results indicate that the regression model predicts the dependent variable significantly. The sig. $p < 0.00$ is less than 0.05 which means that the regression model statistically significantly predicts the outcome variable. That is, the independent variables physical engagement, emotional engagement and cognitive engagement can be used to reliably predict employees' performance (dependent variable). The results in table 4.6 implies that the relationship between work engagement and employees' performance is statistically significant at 0.05 significance level.

Table 4.7: Regression Coefficients for Independent Variables

		Unstandardized coefficients		Standardized coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.652	.552		2.993	.000
	Physical engagement	.469	.356	.177	1.318	.000
	Emotional engagement	.586	.361	.269	1.622	.000
	Cognitive engagement	.814	.549	.181	1.483	.000

Dependent Variable: employees' performance

Source: Njoroge, Bula and Wanyoike (2020)

The results of multiple regression analysis presented on table 4.7 were used to test research hypotheses and draw conclusions.

H_{01}: Physical engagement has no significant effect on employees' performance in classified hospitality firms in Kenya

As indicated in table 4.7, the null hypothesis was rejected since physical engagement significantly predicted employees' performance: $\beta = 0.469$, p (0.000) < 0.05 at 95% confidence level. This finding imply that physical engagement has significant effect on employees' performance.

H_{02}: Emotional engagement has no significant effect on employees' performance in classified hospitality firms in Kenya

The null hypothesis was rejected since emotional engagement significantly predicted employees' performance: $\beta = 0.586$, p (0.000) < 0.05 at 95% confidence level. This results reveal that emotional engagement has significant effect on employees' performance.

H_{03}: Cognitive engagement has no significant effect on employees' performance in classified hospitality firms in Kenya

The null hypothesis was rejected since cognitive engagement significantly predicted employees' performance: $\beta = 0.814$, p (0.004) < 0.05 at 95% confidence level. This findings imply that cognitive engagement has a significant effect on employees' performance. The results of the multiple regressional analysis show that organizational learning variables of physical engagement are predictors of employees' performance. These finding are consistent with past studies that have established drawn similar conclusion (Anitha, 2014 ; Kim & Park, 2017).

5. Conclusions

The findings provide evidence that work engagement influence employees' performance, in which case employees who are physically, emotionally and cognitively engaged have higher positive outcomes. Work engagement a strong statistically significant positive correlation with employees' performance. In addition. Further, the results reveal that employees who put more effort in their work, are more dedicated and focused, are more efficient and are more likely to achieve their performance targets. In addition, they make fewer mistakes, have less disciplinary issues, are more willing to take extra duties and responsibilities, are able to solve problems related to their jobs, and have higher chances for promotion. These findings are consistent with empirical literature (Christian, *et al*., 2011, Anitha, 2014; Park, *et al.*, 2014; Lin & Lee, 2017).

Work engagement is connected to employees' motivation, morale and job satisfaction. Organizations should manage the elements of motivation such as compensation and leadership support and job level elements such as decision making, scope of responsibility and supervision in order to create a climate for engaged workers. Work arrangement and job autonomy are crucial in improving an employee's devotion and commitment in his role. Employees want to have some level of control of their jobs and are demoralized by over-supervision and micromanagement. Workers are more likely to put more effort,

dedicate more time and remain focused in activities for which they have some level of control and accountability. This is consistent with past studies that have found similar results (Kim & Park, 2017).

Recommendations

6.1 Practical Implications

It is the desire of every organization to have employees who work with vigour and energy, who are devoted and attached to their work, and have job focus and absorption. Such a high level of engagement is positively correlated with high level of positive performance outcomes. However, to achieve such a level of engagement, it is incumbent upon the organization to create a climate that creates, supports and sustains such optimal level of work engagement. Since work engagement is connected to employees' motivation, morale and job satisfaction, the factors that drive it must have motivational influence. Such elements include compensation, management support, participative decision making, job autonomy and capacity development. A learning environment provides a conducive environment for work engagement. Organizations should allow employees to have more control over their jobs as workers are more likely to put more effort, dedicate more time and remain focused in activities for which they have some level of control and accountability.

6.2 Suggestions for Future Research

The respondents of this study were managers in the human resource, food and beverage and conferencing and accommodation sections of the firm. The respondents were ideal for this study to the extent that they had the relevant information relating to study variables. However, depending on the indicators of and measures used for work engagement and employees' performance, shopfloor employees could provide vital information. Therefore, a future could use multi-level sample categories, management and shopfloor level employees. The management level respondents could respond to firm level questions and shopfloor could be targeted with general employees' questions using a questionnaire.

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17. Influence of Employee Competencies Management on Employee Performance in Public Universities in **Kenya**

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Abstract

Globalization, the proliferations of technology, workforce diversity, and the knowledge society have sparked a wave of learning, training and workplace education in organizations from all sectors. Universities as 'knowledge intensive' organizations thrive on the production and dissemination of knowledge and rely heavily on the human resource component to facilitate and continually generate and disseminate it. The management of knowledge has become important to the institutions in view of its abundance and this has led to the development of several emerging issues which include focus on individual competencies among other factors. Review of literature reveals that employee competencies management is one of the factors that is increasingly receiving attention as organizations strive to improve the performance of employees. Employee competencies management is considered as the knowledge, skills and abilities possessed by an employee necessary for them to carry out their roles effectively. Further review of literature shows that there are limited numbers of empirical researches that have been done to study the relationships between employee competencies management and employee performance which has hindered a deeper understanding of how this practice can influence overall individual performance. This paper sought to contribute to this growing body of knowledge by determining the influence of employee competencies management as a knowledge management practice on employee performance in public universities in Kenya. The study was anchored on the intellectual capital theory. Descriptive survey design was applied and descriptive and inferential statistics used to analyze the data. The target population consisted of 495 employees from 10 public universities in Kenya selected on the basis of their age. The study reported a significant and positive relationship between employee competencies management and employee performance when moderated with organizational structure in public universities in Kenya.

Key words: *Knowledge, Knowledge management, competencies, employee competencies management, employee performance*

Introduction

Globalization, the proliferations of technology, workforce diversity, and the knowledge society have sparked a wave of learning, training and workplace education in organizations from all sectors. Complex workplace interactions now typically "…require people to regularly deal with ambiguity and solve problems based on experience or tacit knowledge" (Sauve, 2007: 1). The consequence of this trend is the emergence of knowledge-based economies where importance is placed on effective management of human capital to ensure that workers continue to create the right value for the economy, (Omotayo, 2015). Around the world the workforce is rapidly changing, and dynamics are altering how organizations perceive the acquisition, use and generation of knowledge. Workplaces now tend to be large scale, specialized, and segmented organizations, with defined employee roles and responsibilities, (Ibua, 2014).

Since independence, university education in Kenya has witnessed a rapid growth (Oanda, Chege & Wesonga, 2008) and according to the Commission of University Education (CUE) website, Kenya currently has 31 public and 18 private chartered universities (cue.or.ke). Universities as both labor and

knowledge intensive organizations thrive on the production and dissemination of knowledge and rely heavily on the human resource component to facilitate and continually generate and disseminate it. (Kilika et al, 2012). Public universities in Kenya employ different types of professionals who possess expertise in various fields which should be managed so as to develop and retain the employees.

According to Boyatzis (2008), competency can be defined as an underlying characteristic of a person which results in superior and/or effective performance in a job. According to (Kodwani, 2009), performance is the mantra of today's business organization and it is only the people with right abilities who are able to perform better. Competencies are an important element determining the current professional potential of employees and its impact on intellectual capital, (Prusak, 2013). Employee competencies are those traits, skills or attributes that employees need to perform their jobs most effectively. Employee competencies management therefore focuses on the value of human capital which largely depends on the level of involvement of employees, the extent to which they want and can use their own potential to achieve the objectives of the company, (Alessandria & Secundo, 2009).

The key factor in this context is to provide an adequate level of motivation and job satisfaction of employees that may follow a synergistic impact of organizational culture, management style, conditions and content of work, relationships and incentives as part of the incentive system, (Lukasiewicz 2009). This entails a process that begins with identification and assessment of employee competencies, then mapping out is deemed as important, and ends with monitoring and developing the competencies to maintain the relevancy in line with the strategic goals of an organization, (Kodwani, 2009). There are intervening steps in the process but the above mentioned two key steps were the focus of this study.

Theoretical and Empirical Literature

2.1 Intellectual Capital Theory

Knowledge is the main asset of the new economy hence its management and protection have become part of the competitive strategies of organizations in the recent past (Passi, Luoma & Valkokari, 2010). This legal concept embodies a theory that emphasizes the value of knowledge within the organization. The physical capital of an organization, particularly in the service sector, is of less relative importance for competitive advantage than intangible assets like know-how and personal sales networks. Intellectual capital has been defined as the difference between the book value of the company and the amount of money someone is prepared to pay for it, (Wiig, 1997).

Intellectual capital theory is about assets: assets like patents and copyrights that give the company property rights 'of the mind'; assets like corporate culture, structure, and information technology style that give the company internal strength; and assets like employees' knowledge and personal networks that enable company processes (Brooking, 1997). Organizational knowledge is viewed as a capital asset. The most widely used definition of intellectual capital is "knowledge that is of value to an organization" (Bassi, 1997). That definition suggests that the management of knowledge (the sum of what is known) creates intellectual capital. Components of intellectual capital consist of human capital, structural capital and external (customer) capital, Ulrich, (1998). Human capital is defined as the knowledge, skills, experience, intuition and attitudes of the workforce. Intellectual capital can be increased by increasing the capacity of each worker, Tapsell, (1998). Human capital is the knowledge, skill and capability of individual employees providing solutions to customers. It is the firm's collective capability to extract the

best solutions from the knowledge of its people. It is important because it is a source of new ideas and competitiveness.

According to Sveiby, (1999), individual competence translates to employees' ability to react to changes as they occur and includes skill, education, experience, values and social skills. People create knowledge, new ideas, and new products, and they establish relationships that make processes function. It is important to manage the knowledge that the employees possess because when they leave, they take along their knowledge, including internal, external, formal, and informal relationships, (Brenner, 1999). The commitment and competence is embedded in their perceptions and actual performance of their work and the manner in which organizations create polices and systems that work, determines the success of knowledge management (Ulrich, 1998).

Human capital then becomes important because: first, intellectual capital is a firm's only appreciable asset. Most other assets (building, plant, equipment, machinery, and so on) begin to depreciate the day they are acquired. Intellectual capital must grow if a firm is to prosper. Second, knowledge work is increasing, not decreasing. Third, employees with the most intellectual capital have essentially become volunteers, because the best employees are likely to find work opportunities in a number of firms. This does not mean that employees work for free, but that they have choices regarding where they work and, therefore, it important to effectively manage the knowledge they possess by building their commitment and loyalty.

2.2 Employee Competencies management and Employee Performance

Competencies are the measurable or observable knowledge, skills, abilities and behaviors (KSABs) critical to successful job performance (Stockley, 2007). It is the ability of an individual to do a job properly. Competency can also be viewed as a set of defined behaviors that provide a structured guide enabling the identification, evaluation and development of the behaviors in individual employees, (Eicker, Kochbeck & Schuler, 2014).

A study by Zaim, Yasai & Unal, (2013) investigated the effects of individual competencies on performance in the services industries in Turkey. Findings revealed that there is a positive relationship between competencies and individual performance. The study further revealed that management of competencies are a significant factor towards individual performance since it provides job satisfaction and commitment and intention to remain with the organization.

A study by Prusak (2013) investigated the impact of employee competencies management as part of the intellectual capital implementing process in 70 companies. The study concluded that competencies are an important element determining the current professional and potential of employees and its impact on intellectual capacity. The study further revealed that the activation of competence requires the existence of certain environmental stimuli and internal mental processes of the holder. The activities of the company such as the design of effective motivation schemes and proper organization of work patterns have a huge impact on the utilization level of competence and efficiency of workers. The results presented in the study apply only to a few selected aspects of the relationship between competence

management and employee performance, and can therefore be applied to make broader conclusions and generalizations about the relationship.

A study by Ngesa et al. (2014) on the influence of performance management practices on employee engagement in public universities in Kenya indicated that there is a positive correlation between performance management review and employee engagement in these institutions. Management of employee competencies starts with identification competencies currently available and matching them to what is required. The build-up of these skills and competencies must often be managed according to long-term strategic goals and coordinated across the organization, so as to influence employee performance (Cranefield & Taylor, 2011). Knowledge assets must be built, enhanced, combined, and coordinated in an environment that supports experimentation and improvement. This may be done through re-training, restructuring, creating new knowledge flows, external knowledge acquisition, outright removal of irrelevant or outdated knowledge and others, (Zook, 2007).

Research Methodology

3.1 Research Design

Research design is the conceptual structure within which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data, (Kothari 2013). Cooper and Schindler (2011), further indicates that a descriptive study is concerned with finding out the what, where and how of a phenomenon. The study used descriptive research design since it will enable the researcher generalize the findings to a larger population to obtain information concerning the current status of the phenomena and to describe "what exists".

3.2 Target Population

The complete enumeration of all the elements under consideration in a study is known as target population, (Polit & Beck, 2004). According to Commission for University Education (CUE) website (www.cue.or.ke), Kenya has 31 public chartered Universities. The target population was drawn from employees working in the 10 chartered public universities in Kenya which is estimated at 495 based on information obtained from the university websites. The unit of analysis was 10 selected public universities using the criteria of those which have been in existence for more than 10 years.

3.3 Sampling Frame and Techniques

A sampling frame is a complete list of all the members of the population that we wish to study. Sample is a subset of the total population which is selected to be the true representative of the target population. A sample is selected through sampling process (Oso & Onen, 2009). Sampling technique can be either probabilistic or non-probabilistic, in the former there are equal chances of being selected while in the latter the respondent is selected through subjective criteria (Kothari, 2013). The study used stratified sampling method that uses a stratum which is a subset of the population that shares at least one common characteristic, (Kothari, 2013). This technique allows the researcher to perform a sound study on a small sample selected to provide information which is rich in qualitative context in order to answer research questions and meet objectives. Additionally, the method has a higher statistical precision compared to

simple random sampling because the variability within the subgroups is lower compared to the variations when dealing with the entire population. This also means that it requires a small sample size which can save a lot of time, money and effort of the researchers. The sample size for employees was calculated based on Yamane's formula (Yamane, 1967).

$n= N/ (1 + N*e^2)$; where, n= the sample size, N = the size of population, e = the error of 5 percentage points; $n= 495/ (1+495*0.05^2)$ n = 221. By using Yamane formula with sampling error of 5% and 95% confidence intervals yielded a sample of 221 from a target population of 495. Resultant sample from each stratum was distributed as shown in Table 3.1.

Table 3.1 Sample Size Public Universities - 10 years old and above

University	**Deans/Directors**	**Senior Management**	**Total**
University of Nairobi	33	22	55
Moi University	27	16	42
Kenyatta University	20	11	31
Masinde Muliro	19	5	24
Egerton University	15	4	19
Maseno University	13	3	15
Kisii University	6	2	8
Technical University of Mombasa	4	2	6
Technical University of Kenya	11	2	13
Dedan Kimathi University	5	2	7
Total	**153**	**68**	**221**

3.4 Data Processing and Analysis

After the data collection the questionnaire were coded, entered and analyzed using Statistical Packages for Social Scientists (SPSS) version 22. The social demographic characteristics of the respondents were analyzed using descriptive statistics. According to Brace, Kamp & Snelgar (2003) descriptive statistics are statistical tools used to summarize large volumes of data with very few figures. Simple regression analysis was carried out to show the nature of the relationship between employee core competencies and employee performance, (Kothari, 2011). The level of significance was tested at 5% whereby if the p value

was less than 0.05 then there was enough evidence to reject the null hypothesis and accept the alternative hypothesis. Regression model was of the form;

$Y = \beta_0 + \beta_1 X_1 + \varepsilon$

Where; Y = Employee Performance, X_1 = Employee competencies Management.

Findings and Discussions

4.1 Descriptive Statistics of Employee Competencies Management

Employee competencies are those traits, skills or attributes that employees need to perform their jobs most effectively. Concerning respective universities employee competencies as shown in Table 4.1 majority agreed or strongly agreed 42.1 percent that their universities had vision and mission statements that were clearly and easily understood by employees. Secondly, majority 51.5 percent strongly agreed and 39.1 percent agreed that their universities recognized their knowledge as asset base. Majority 48 percent strongly agreed and 45.5% agreed that their university encouraged team work, discussions and collaboration to improve communication between colleagues. Further, majority 52.5 percent strongly agreed and 42.1 percent agreed that their universities discussed individual performance and evaluated areas which needed improvements. These findings agreed with Stockley (2007) who argued that there is need to consistently audit critical competencies which are major determinants of their performance. Through it, individual skills gap can be easily identified and corrective measures adopted to enhance individual performance. Also, Eicker et al., (2014) supported on the idea to anchor employee competencies with organizational needs and this will enhance association with respective institution.

At the respective universities majority strongly agreed mean = 4.5 and standard deviation of 0.8 that there are open to new ideas. Secondly, majority agreed mean = 3.7 and standard deviation of 1.1 that their universities keep abreast on new developments in their areas. Thirdly, majority agreed mean = 3.9 and standard deviation 1.1 that they effectively build networks and build alliances with key individual groups. On average employees agreed mean = 4.1 competencies management in public universities had influence on their performance.

These findings mirrored Prusak (2013) who reported the need for organizations to patent intellectual capacities so as to protect their talents. This was only achieved through continued knowledge sharing approaches, skills tracking and development of measures on how to acquire them. In contrast, the study refuted Yusuf and Wanjau 2014) who reported that employees in state corporations have deficit skills which hampered their performance at the National Treasury in Kenya.

Table 4.1 Descriptive Statistics of Employee Competencies Management

	n=202						
My university	**SD**	**D**	**NS**	**A**	**SA**	**Mean**	**Std. Dev**

Has mission and vision statements that are clear and easily understood by employees	5	5	5.9	42.1	42.1	4.1	1.1
Recognizes my knowledge as part of their asset base	3	3	3	39.6	51.5	4.3	0.9
Encourages teamwork, discussions and collaboration to improve communication between colleagues	1	1.5	4	45.5	48	4.4	0.7
Assesses my individual work performance regularly and discuss improvement areas	1.5	2.5	1.5	42.1	52.5	4.4	0.8
Provides opportunities for continuous growth and development of employees	2.5	4	2.5	42.6	48.5	4.3	0.9
Encourages active employee participation in the process of decision making	1.5	1.5	1.5	38.6	56.9	4.5	0.7
Employees improve task efficiency by sharing knowledge through intranets and electronic bulletins'		2	1.5	39.1	57.4	4.5	0.6
At my university							
Am open to new ideas and approaches	1.5	3.5	0	39.1	55.9	4.5	0.8
I keep abreast of new developments in my discipline area	5	11.9	16.3	40.6	26.2	3.7	1.1
I effectively develop networks and build alliances with key individuals and groups	6.4	7.9	8.9	48	28.7	3.9	1.1
Employees are encouraged to help and respect each other	1.5	3.5	11.4	51	32.7	4.1	0.8
There is a common mission and feeling of belonging to a team	2	5.4	13.4	35.1	44.1	4.1	1.0
Individual team members are helped to reach their potential through personal development	1	5.9	18.3	36.1	38.6	4.1	0.9
Different methods are used for encouraging employees to share knowledge like training, mentoring, coaching etc.	3.5	11.4	16.8	36.6	31.7	3.8	1.1

There are processes to determine gaps in individual skills	3.5	11.9	11.9	41.6	31.2	3.9	1.1
There are processes to track on employee's progress in skills acquisition	11.4	15.8	26.7	27.2	18.8	3.3	1.3
Employee skills, inventory and skill gap analysis are regularly updated	4	6.9	20.3	40.1	28.7	3.8	1.0
Internal employees are given priority when a vacancy occurs	8.4	21.3	13.9	27.7	28.7	3.5	1.3
Overall Average						**4.1**	**1.0**

SD- Strongly disagree. D- Disagree, NS-Not sure, A-Agree, SA- Strongly agree

4.2 Agreement on Employee Performance in Public Universities

As shown in Table 4.2 majority 41.1 percent of respondents strongly agreed and 31.2 percent agreed that they are able to meet their targets in Kenyan public universities. Secondly, majority mean = 3.8 and standard deviation = 1.2 agreed that they are able to fulfill their responsibilities. Thirdly, majority 47.5 percent agreed and 32.7 percent that there are collaborate well with their respective employees. Further, majority 36.1 percent agreed and 25.2 percent strongly agreed that employees in public universities understand each other well.

At their respective work places majority agreed mean = 4.4 agreed that in public universities in Kenya they continuously update their job knowledge. Also, majority mean = 4.3 agreed that they work at keeping their job skills up to date. Further, majority strongly agreed mean = 4.6 and 4.5 that they come up with creative solutions to new problems and they are able to cope with unpredictable situations at work respectively. Finally, majority mean = 4.4 either agreed that they easily adjust to changes in their work place or recover fast after difficult work situations in their places of work. On overall majority agreed on current state of their job performance (mean = 4.3; standard deviation= 0.9).

Table 4.2 Agreement on Status of Employee Performance

	n=202						
	SD	**D**	**N**	**A**	**SA**	**Mean**	**Std. Dev**
I am able to meet my targets	4	6.9	16.8	31.2	41.1	4.0	1.1
I am able to fulfill my responsibilities	5	15.3	13.4	27.7	38.6	3.8	1.2
Collaborations with others goes well	3	4.5	12.4	47.5	32.7	4.0	0.9
Other employees understand me well when	7.9	13.9	16.8	36.1	25.2	3.6	1.2

I tell them something							
I understand others well when they tell me something	1.5	2.5	5	40.1	51	4.4	0.8
Communication with others leads to desired results	1	3.5	6.9	28.7	59.9	4.4	0.8
I come up with creative ideas at work			3.5	39.6	56.9	4.5	0.6
I take initiative when there is a problem to be solved	4.5	1.5	2.5	39.6	52	4.3	0.9
I start new tasks myself when new ones are finished	0.5	1	3.5	38.1	56.9	4.5	0.7
I ask for help when needed	0		5	42.6	52.5	4.5	0.6
I am open to criticism of my work	2.5	1	6.9	31.2	58.4	4.4	0.9
I try to learn from the feedback I get from others on my work	2	4.5	5	31.2	57.4	4.4	0.9
I take on challenging work tasks, when available	3.5	0	5.9	34.2	56.4	4.4	0.9
I work at keep my job knowledge up-to-date	1	4	2.5	38.6	54	4.4	0.8
I work at keeping my job skills up-to-date	3.5	3	5.4	34.7	53.5	4.3	1.0
I come up with creative solutions to new problems	0	0	5.9	32.2	61.9	4.6	0.6
I am able to cope with uncertain and unpredictable situations at work	0	3	6.9	25.2	64.9	4.5	0.8
I easily adjust to changes in my work	1	2.5	4.5	37.1	55	4.4	0.8
I recover fast, after difficult situations or setbacks at work	1	3.5	4	39.1	52.5	4.4	0.8
Overall average						**4.3**	**0.9**

SD- Strongly Disagree, D- Disagree, NS- Not sure, A-Agree, SA- Strongly agree

4.3 Employees Competencies Management has no Significant Influence on Employee Performance in Public Universities in Kenya

The hypothesis stated that employees' competencies management had no significant influence on employee performance in public universities in Kenya. Simple linear regression analysis was adopted and the study findings with an R squared of 0.592 revealed that 59.2 percent of changes in employee performance in public universities in Kenya was explained by employees' competencies management while the remaining percentage can be explained by other factors unaccounted for in the model.

Table 4.3 Model Summary on Test for Significant Influence of Employees Competencies Management on Employees Performance in Public Universities in Kenya

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.770a	0.592	0.59	0.594

a Predictors: (Constant), ECM

As shown in Table 4.4 on analysis of variance on influence of employees' competencies management on employee performance in public universities in Kenya. There was significant influence of employees' competencies management on employee performance in public universities in Kenya ($F = 290.716$, p value <0.05).

Table 4.4 Analysis of Variance on Test for Significant Influence of Employees Competencies Management on Employees Performance in Public Universities in Kenya

Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	102.532	1	102.532	290.716	.000b
	Residual	70.537	200	0.353		
	Total	**173.069**	**201**			

a Dependent Variable: EMP

b Predictors: (Constant), ECM

As shown in Table 4.5 there was positive and significant influence of employees' competencies management on employees' performance in public universities in Kenya ($\beta = 0.082$, p value <0.05). Since p value was less than 5 percent then at 5 percent level of significance, we reject the null hypothesis and accept an alternative that there was positive and significant influence between employees' competencies management and performance in public universities in Kenya. Hence an increase in employees' competencies increases employee performance by 0.082 units. These findings agreed with Stockley (2007) who reported positive and significant relationship between critical competencies and employee performance. Also, Eicker et al., (2014) reported positive and significant influence of employee competencies on employee satisfaction. Similarly, Zaim et al., (2013) reported positive influence of employee competencies on organization output.

These findings agreed with (Zaim et al., 2013; Sparl & Znidarsic, 2009; Prusak, 2013; Murtaza, 2015; Ngesa et al., 2014) who reported positive and significant effect of employee competencies management on employee performance. They contrasted Ramirez, et al., (2007) who reported inverse and significant influence of employee competencies management on employee performance. These findings are in line with knowledge economy theory which perceive knowledge creation is an asset base which leads to competitive advantage in an organization.

$$EMP = -0.027 + 0.802\ ECM \quad \text{.....4.1}$$

Table 4.5 Regression Coefficient on Test for Significant Influence of Employees Competencies Management on Employees Performance in Public Universities in Kenya

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	-0.027	0.042		-.649	0.517
	ECM	0.802	0.047	0.77	17.05	0.000

a Dependent Variable: EMP

Conclusion and Recommendations

Research findings indicated that majority of employees were conversant with their universities mission and vision statements, universities perceived knowledge management as an asset base, team work and coherent communication guidelines were laid down by respective universities. Also, public universities continuously discussed and evaluated individual employees' performance, universities employees shared information through inter and intranet mechanisms. Universities created sense of belongingness, had knowledge inventory management systems which eased skills gaps identification and internal promotions were availed to employees periodically. It can be concluded that an increase in employee competencies increased employee performance in Kenyan public universities. This calls for creation of harmonious team groups in respective university departments and creation of information sharing platforms through intra and internet facilities. Further, employees ought to be encouraged to be open to new approaches and ideas and adoption of alternative mentoring methods.

From the study findings the following conclusions can be drawn. Given the positive relationship, there is need for Kenyan public universities to enhance their competencies mapping strategies and competencies monitoring and evaluation processes. This can be achieved through creation of growth opportunities for employees and adoption of participatory decision-making strategies amongst employees. Additionally, knowledge sharing platforms should be enhanced to encourage team work and collaboration. Further, public universities in Kenya should implement effective and automated competency management systems

to create rea-time and productive inventory of the capability of all its workforce to harness employee potential.

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18. Crowdsourcing: towards competitive innovations and global sustainable development.

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Abstract

The term crowdsourcing first appeared in an article written by Jeff Howe in 2006 in the wired magazine. Over time, crowdsourcing was broadly defined as any human aided web-based problem-solving activity achieved by engaging an equal capacity resource pool. This paper introduces crowdsourcing as well as discussing the foremost characteristics i.e.: scope; task; [problem approach; and reward mechanism. The paper finally gives a thematic perspective via application examples of crowdsourcing in business and management whilst underscoring competitive innovations and global sustainable development. The thematic areas are: (1) technological innovations, disruptive technologies and industrialization; (2) strategic capabilities, industrial responsiveness and socio-economic development; (3) emerging marketing trends, blue economy and entrepreneurship; (4) changing landscape in human resource management; (5) data analytics, forensic and cyber security; and (6) collaborative project management and agribusiness value chain. As crowdsourcing is fast becoming a desired problem-solving tool, this paper demonstrates how widespread crowdsourcing is applied and importantly advances literature on application examples of crowdsourcing through the selected thematic perspectives above in government, industry and academia.

Keywords: *Crowdsourcing; Crowdsourcing Characteristics; Crowdsourcing Applications, Business and Management*

Introduction

A little over a decade crowdsourcing came to the forefront via (Howe, 2006) as a way for organisations to reduce overheads and increase profit margins by attracting hobbyists, part- timers, and dabblers in completing tasks. As crowdsourcing is less than 20 years into its existence many scholars, researchers and practitioners have yet to conclusively agree on a definition. Publications like (Helander, Kärkkäinen, & Jussila, 2014; Papadopoulou & Giaoutzi, 2017) agree that all crowdsourcing activities are carried out over the internet and have a worker, requestor and platform provider as the three crucial actors (Moilanen, Niemi, Kuru, & Näppilä, 2012). Also (Jorda, Sawaya, & Yeates, 2014) agrees that human interaction is mandatory and participation is irreplaceable due by still perform more accurately and efficiently (Lukyanenko, Parsons, & Wiersma, 2014). We cannot play down the influence of the internet manifested itself as an avenue for connective and collaborative technological environment that enables individuals to get involved in internet-mediated social participation, communication, and collaboration(Zhao & Zhu, 2014). Further (Saxton, Oh, & Kishore, 2013) explains how current manifestations of web 2.0 are used to find and control the potential "crowd" of workers, negotiate contracts, and monitor work progress in real time. Lastly the labour is treated as work-on-demand work force and just-in-time work force with no traditional power dynamics of engagement between the three major players in the crowdsourcing economy (De Stefano, 2016; Wood, Graham, Lehdonvirta, & Hjorth, 2019).

Thus, a comprehensive definition of crowdsourcing is any human-aided transaction facilitated over the internet (via a website, mobile applications etc.) managed and coordinated by a dedicated platform provider connecting a requestor(individual/organisation) to a pool of workers who have relative equal ability to fulfil a defined task (measurable activity) for a monetary or an otherwise non-monetary reward.

The main reasons for individuals and organisations to crowdsource includes minimising transaction costs, enables strong network effects, scalability, enabling problem-solving by diverse solvers while managing knowledge, to cut down on time, spar innovation and creativity and provide "out-of-the-box" solutions (Farshchian & Thomassen, 2019; Ketokivi, 2016; Marjanovic, Fry, & Chataway, 2012; McLaren, 2011; Mcphee et al., 2014).

Despite crowdsourcing being a new and exciting frontier in business and management, the summary by (Zogaj & Bretschneider, 2014) outlines the research already captured by the comments below;

> *"Emerging articles about preliminary taxonomies, typologies and categorizations of crowdsourcing (Brabham, 2012; Geiger et al., 2012; Rouse, 2010; Yuen et al., 2011) , about basic characteristics of crowdsourcing initiatives (Schenk and Guittard, 2011; Vukovic and Bartolini, 2008) or about the definition of crowdsourcing (Estellés-Arolas and González-Ladrón-de-Guevara, 2012; Oliveira et al., 2010) highlight the novelty-character of this concept."*

On the other hand, companies face realities of remaining competitive by developing new capabilities in a dynamically changing environment. Competitive innovation speaks to firms being able to apply innovation to remain ahead by changing approaches to marketing, change management, corporate entrepreneurship, coopetition and cooperation (Wójcik, 2015). As firms continue to maximise profits a lot of emphasis has been put towards sustainability as a firm grows globally (Keupp, Palmié, & Gassmann, 2012; Teece, 2014). Crowdsourcing offers a systematic avenue to operationalise competitive innovation (Ketokivi, 2016) it is the author believe that crowdsourcing can an contribute to creating global sustainable development (Farshchian & Thomassen, 2019; Guth & Brabham, 2017) as defined in (Adams, Jeanrenaud, Bessant, Denyer, & Overy, 2016) as development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

In this paper the author focuses on how crowdsourcing is applied in with a thematic bias in (1) technological innovations, disruptive technologies and industrialization; (2) strategic capabilities, industrial responsiveness and socio-economic development; (3) corporate governance, financial markets and global convergence; (4) emerging marketing trends, blue economy and entrepreneurship; (5) changing landscape in human resource management; (6) data analytics, forensic and cyber security; and (7) collaborative project management and agribusiness value chain with cases and impact on competitive innovation and global sustainable development.

Overview of crowdsourcing

This paper looks at crowdsourcing in terms of unified general concepts and components although the applications may vary(Younis, 2018). There are three key players of crowdsourcing as derived in previous discussions within this paper and beyond (Gummidi, Xie, & Pedersen, 2019; Kucherbaev et al., 2016; Vuković, 2009), namely the requestor, the worker and the platform. On one and the requestor is simply the people who want to crowdsource their work, the entity that submits a task request while on the other hand the worker is the individual or organization that completes the tasks(Mcphee et al., 2014) otherwise referred to as the crowd (Thuan, Antunes, & Johnstone, 2016), moving forward in this paper will use the term worker.

The platform has further been discussed in other literature (Mawhinney & Self, 2013; Rougès & Montreuil, 2014) and take up various names for example algorithms, software, program, game, underlying technology among other (Frey, Lüthje, & Haag, 2011). This paper considers any technological interphase that is used to direct, manage, control, coordinate, facilitate and/or process task and resources as the platform. In the crowdsourcing model task fulfilment is strictly wholly or partially transacted over

the internet with the platform playing a crucial role in the process; among the roles played by the platform include quality control, task evaluation, maintaining ethics, privacy policy management, governance management while ensuring compliance etc. (Guth & Brabham, 2017; McLaren, 2011).

Characteristics of crowdsourcing

As discussed by (Zogaj & Bretschneider, 2014) crowdsourcing research is still in its early stages and in this paper the author considers previous research influence. Consequently this paper is designed primarily combines and reviews crowdsourcing via characteristics proposed typology proposed by scope (Hammon & Hippner, 2012), task (G. Li, Wang, Zheng, & Franklin, 2017), nature of crowd(Barnes, Green, & de Hoyos, 2015), incentive (Mustafa & Mohd Adnan, 2017). This paper proposes the above characteristics as the building blocks for any crowdsourcing venture. The discussion below is an introduction and overview of research as well as laying the groundwork for how crowdsourcing has been applied in the thematic areas.

Typology by scope

The ultimate goal of crowdsourcing is to complete tasks and activities. These tasks and activities may further classified by the general scope as follows:

Firstly, Crowdfunding is the general term used for any crowdsourcing venture whose main agenda is to acquire capital and/or financial support to scale up (Agrawal, Catalini, & Goldfarb, 2015; Simperl, 2015), some of the sub categories within crowdfunding include donation-based crowdfunding, equity-based crowdfunding, lending based crowdfunding, reward-based crowdfunding, and royalty-based crowd-funding (Hossain, 2015).

Secondly, Crowd voting is a blanket term used for any crowdsourcing venture whose major scope involves employing mechanisms to acquires opinion through voting, criticism, rating, matching, describing and giving feedback of any given topic by tapping into the crowd's or public's desire (Chittilappilly, Chen, & Amer-Yahia, 2016; Sabou, Scharl, & Föls, 2013).

Thirdly, crowdsolving and competition is a facet of crowdsourcing whose mandate is to provide solutions while overcoming constraints to both mundane and complex problems in diverse fields (e.g. engineering, academia, science, business etc.) by unlocking opportunities aligned towards active contribution and development of products or services offered by a requestor(D. C. Brabham, 2008; Hoffman, 2012; Hossain & Kauranen, 2015). Typical problems fit to broad categories like creativity, design, research, development, innovation among others (Chittilappilly et al., 2016; Digout, Azouri, Decaudin, & Rochard, 2013).

Typology by tasks

Furthermore, after defining the players, we can move on to the activities within crowdsourcing usually defined into quantifiable and billable tasks. Defining by typology through the types of problems seeking resolve, these is as follows:

The first type of crowdsourcing to be discussed is microtasks, this involves a large activity being organised and assigned as small pieces of work to many workers (Chiu, Liang, & Turban, 2014) this usually takes a short time to complete, only seconds to minutes in each case. Typically, microtasks involve projects that are highly divisible menial, monotonous, tightly bounded and apportioned (Howcroft & Bergvall-Kåreborn, 2019) for example translation of documents, labelling photos, and participating in surveys.

Second is macrotasks, macrotasks are tasks that cannot be broken down or decomposed usually complex tasks whose resolution requires a great share of contextual information or dependencies to intermediary results provided by assembling all the contributions (Chittilappilly et al., 2016; Ghezzi, Gabelloni, Martini, & Natalicchio, 2017) for example web development, design work or mapping of fields like galaxy, species or encyclopaedia (Ranard et al., 2013).

Third, to achieve funding goals, probably this is the most conspicuous scope and for being among the most researched scope. This task purely involved raising capital or achieving finances for specified venture(Elkhidir, 2017; Harrison, 2013). Some the configuration for this task include Equity-based, Lending-based, Reward-based, Donation-based funding or ultimately mixed configurations. (Alegre & Moleskis, 2019; Wessel, Thies, & Benlian, 2017).

Fourthly, contests in crowdsourcing are focused on the maximization the most elegant solution to the problem at hand from the maximization of diverse contributions by only valuing the winning submission and not giving value to lesser submissions (Fuger, Schimpf, Füller, & Hutter, 2017; Zogaj & Bretschneider, 2014). This is achieved from a matrix of co-operation and competition behaviour to simultaneously provide the best solutions (Franzoni & Sauermann, 2014).

Typology by problem approach

Literature on problem-based approach though applications of crowdsourcing can lead to a suitable framework for the best fit as per the specific problem type hand.

Knowledge discovery and management problem approach requires the workers to find, collect, and report spread-out information and knowledge to a common location in an agreed format (Albors, Ramos, & Hervas, 2008).

Broadcast search problem approach is mostly applied to tasks that require the workers to organise and synthesis specific information or unique insight that lies outside the organization and bringing it to bear on a specific problem (Marjanovic et al., 2012)

The peer-vetted creative production problem approach insists on tasks that workers submit unlimited potential solutions followed by a voting and commenting mechanism that helps sort through the proposed solution to finally determine the best (Guth & Brabham, 2017).

Distributed human intelligence tasking problem approach is for tasks that are challenging for computers but easy for human to complete, usually workers analyse vast amounts of data that computers are incapable of doing so efficiently (M. Li et al., 2019).

Typology by Reward Mechanisms

Reward is an integral part of ensuring crowdsourcing is an efficient and effective problem submission and solving tool. To provide great outcome of crowdsourcing, platforms must incentivise both requesters and workers with the right skills as well as motivate them to participate (Alegre & Moleskis, 2019; Wenger & Secher, 2015). Ultimately reward mechanism is a matrix of incentives and motivation.

Incentives that attract the right skill set workers have been classified in to two main groups which are: monetary and non-monetary. Monetary incentives that is financial factors including money and other quantifiable forms like cryptocurrencies and capital share, whereas, non-monetary incentives on the other hand come in several forms including but not limited to: Natural Incentives which are fun & entertaining, contributing to personal development though personal satisfaction or improvement of skills, and for competition purposes amongst fellow workers; Solidary incentives that usually include increased

reputation and improved identity as a solver; Moral incentives where workers incentivised by the appeal to humanity to provide solutions; Purposive incentives where the incentive is for achievement of a specific task; Material incentives that include a point and level based system; and finally, any other incentive that may be provided e.g. t-shirts, autographs, card, tickets, etc. (Alhabash, Park, Kononova, Chiang, & Wise, 2012; Pinto & dos Santos, 2018).

Motivation in crowdsourcing has been identified as a factor that maintain workers participation in problem solving, two major categories rise based on the source of the motivation namely intrinsic motivations and extrinsic motivation. Intrinsic motivations are driven by the fun or challenge involved in the task and no apparent external reinforcement. Some of the contributing factors include entrepreneurial mindset, opportunity to express individual creativity, sense of membership, ideology, sense of efficacy, social influence and social identity, exchange of information, sense of cooperation social search and learning. Extrinsic motivations are driven by a valued outcome in accomplishing the task, usually contributing factors include monetary rewards, reputation recognition of the company, growth of professional status career, benefits reciprocity accountability and social capital, self-marketing and social motives (Satsiou et al., 2017)

Applications of crowd solving and case study

Whereas the article has already captured the players and characteristics, this section focuses on the various applications within the identified thematic areas below:

Technological innovations

Innovation is the use of new technical and administrative knowledge to offer a new product or service to customers whereas technological innovation refers to adoption of an idea that directly influences the basic output processes towards production of New technologies, New products and New services.

InnoCentive is a crowdsourcing platform which promotes the development of innovative solutions by inviting companies to externalize some of the problems they are facing in order to present them to an unknown set of experts and users that may have the solution to the problem. NASA also has used InnoCentive with some success, asking the online community at InnoCentive to "devise a formula for predicting solar flares," which was subsequently solved by a retired radio frequency engineer (Dawson, Ross; Bynghall, 2011). Also, when Colgate-Palmolive, needed to develop a way to inject fluoride powder into a toothpaste tube without it dispersing into the surrounding air, they turned to InnoCentive where within minutes one of the crowd members discovered a way to solve the chemistry challenge by using an electromechanical process he was familiar with. This earned him $25,000 which is a fraction resource-wise of what Colgate-Palmolive's R&D staff would have used to produce the same solution if they even have solved it at all (Sommen, 2014).

Disruptive technologies

Disruptive technologies give impetus to firm's innovations and global sustainable development via significant change in the cost of, or access to, products or services, or dramatically change how we gather information, make products, or interact.

Istockphoto is a crowdsourcing platform that sells and licences stock images provided by contributing individuals for use in which firms can then incorporate into their promotional materials for a set fee. Initially whenever organisations would have to commission professional stock photographers who required hundreds or thousands of dollars for each copy of their photos whereas Istockphoto photographers earn only $5 to $10 for each photo each time someone downloads their photos. The

platform has changed the image industry business by improving access, reducing cost and expanding the offering evidenced by the millions of licenced individual and bulk photographs to large as well as small companies. The firm has since expanded to the entire multimedia forms, moreover, it became very disruptive that Getty Images, the largest agency by far with more than 30 percent of the global market, purchased iStockphoto with Getty CEO Jonathan Klein quoted as saying "If someone's going to cannibalize your business, better it be one of your other businesses". (Barbier et al., 2012; Digout et al., 2013).

Industrialization

The continual expanding application of sophisticated technology designed to efficiently draw energy and raw materials out of the environment and fashion them for human use.

Goldcorp, a Canadian gold mining group other the years was frustrated with the inability of its own geologists to locate any gold relied on crowdsourcing, which was something that it was unheard of at the time. It made its geographical databases available to the public and offered $500,000 to anyone who could find and map the location of the company's own gold in its own mines. An independent software company and a geological consulting firm were used to assist the selection of the expert judging panel, and an independent panel evaluated and ranked submissions(Graham & Mehmood, 2014). Of the twenty-five semi-finalists received a minimum $10,000 each, while the finalist receiving $95,000 in prize money. The gamification of this process eliminated the certain risk of investing too much in the process and for the crowd and worker, they had a manageable number of full proposals. Of the more than 1,400 individuals and teams from 50 countries registered to enter the competition over 110 targets were produced, half of which the company had not previously identified, over 80% of which proved productive, yielding gold worth more than $3 billion. Ultimately, this enabled GoldCorp to increase its gold production from as low as 1500 to over 14000 kilograms a year while cutting its overall production cost thereafter, the value of GoldCorp increased from $100 million to $9 billion(Blohm, Leimeister, & Krcmar, 2013; Marjanovic et al., 2012).

Strategic capabilities

Usually for most organisations to run as a business they have basic capabilities, however when the organisations identify factors affecting the remote and industry environments thereafter improving its performance it is said to have strategic capabilities. The three main characteristics of strategic capability are: they are of value to the customer; they are better than that of the majority of other competitors; and they are difficult to imitate or replicate.

As computer use became more mainstreamed, it was soon recognised that some tasks be it simple or miniscule cannot be achieved, Amazon Mechanical Turk (MTurk) is a pioneer platform where workers signup to find duplicates among its web pages describing products. Soon, other small tasks that computers could not perform were listed on the site, such as merging massive product libraries from different vendors. Due to nuances, computer algorithms could not always discern which products were identical and thus "human computation" was necessary(Almishari, Oguz, & Tsudik, 2014; Olsen, 2018). It soon became increasingly popular tool for scholars, particularly for those seeking to conduct survey experiments. In the USA it have been said to often more representative of the U.S. population than in-person convenience samples while noting that sample does not perfectly match the demographic and attitudinal characteristics of the U.S. population but does not present a wildly distorted view of the U.S. population either (Williamson, 2014).

Industrial Responsiveness

Industrials responsiveness is the ability of an enterprise to respond and manage its response to the ever-changing external pressures in a timely fashion in a competitive global market.

As social media, gets further integrated in our lives and as it reaches as many consumers as possible, they have turned to crowdsourcing to localise while making their sites as multilingual as possible. Facebook, in particular, has developed an efficient strategy to get the site translated, they have developed a specific page where everybody can register and propose translations or revisions of the entries they choose. A forum for discussion is also provided where the various solutions are discussed, compared and voted upon by the participants. This is to improve these translations and guarantee a high quality standard through peer reviewing. Facebook launched the request for the French translation of its site and it was done in 24 hours, thereafter, it translated to Spanish in two weeks and has had 60 linguistic versions in less than two years. These included less-spoken languages, which would not be feasible through machine translation due to lack of adequate corpora, moreover, this was an opportunity to strengthen the link with their users and increased their loyalty, involvement and pride for something they had contributed to, something they were not mere users of, but partners(Union, 2012).

Socio-economic development

Development is defined as the state in which things keep improving, in the socio-economic context then it refers to the process of improvement in variety of ways and has influence in every facet of life.

One of this ways to improve is by ensuring service delivery, and crowdsourcing has been instrumental via a 311 service requests system which is the non-emergency versions of 911 implemented by local governments in the USA to meet citizens request for services. This requests may range from reports a pothole, trash pickup, abandoned cars, street sign damage, light outages, animal removal, and blighted properties etc. Through these system citizens, reports may identifying, needs assessed and prioritised then provided to government administrators. This kind of crowdsourcing coupled with web-based services provide highly accurate information decreasing the barriers to citizens to report problems, thereby facilitating more citizen participation(Clark, 2016; Clark, Brudney, Jang, & Davy, 2020).

Emerging marketing trends

As firms grow and the competitive landscape, applications of crowdsourcing as an emerging trend has been a key success factor to competitive innovation in through product development, marketing research as well as advertising and promotion.

Initially the customer power dynamic was Demand-based ,after that came Information-based power, followed by Network-based power, and currently Crowd-based power where consumers affect the firms business model such as Content creation, idea Generating, product development, customer insight, customer engagement, customer advocacy and pricing (Dawson, Ross; Bynghall, 2011; Labrecque, vor dem Esche, Mathwick, Novak, & Hofacker, 2013). Considering the above dynamics, we can appreciate the leaps marketing has achieved over such a short period. One of the first applications of crowdsourcing was when a potato chip company Dorito who run the 'Crash the Super Bowl' contest which was a user-generated advertising contest where the top three videos as voted by users were aired during the multi-million-dollar commercial spots during the game. In addition, a competitor brand Lay's launched its "Create your flavour of potato chips" where the company invited its consumers to come up with a new potato chip flavour, the brand received 245,825 flavour proposals 108,729 being unique. Two winning flavours were chosen by the jury and the winner received €25,000 and 1% of the product's sales for a year (Djelassi & Decoopman, 2013).

Blue economy

The world is moving away from looking at our oceans solely for protein and waterways; we have steadily started to use the oceans for activities like creation of islands for human habitation and industrialisation, which were typically reserved for land.

Among the foremost crowdsourcing approaches in the forefront is citizen science is a crowdsourcing method in which collaborators who may lack credentials and formal institutional affiliation can contribute to the work, for example, rather than requiring a specialised degree in oceanography. A citizen science project might ask a candidate now called a citizen scientist to learn how safely identify a particular species of fish, how to safely collect samples or identify debris. While attracting hobbyists and part-timers this approach effectively multiplies the potential sources of data while tremendously reducing costs. Some important information that is collected may include biological samples, basic physical parameters, surface weather conditions and debris sightings among others(Ghermandi & Sinclair, 2019; Lauro et al., 2014). Over time this data will be valueless and its implications limitless.

Entrepreneurship

Competitiveness involves exploitation of opportunities using the resources available. On the other hand, entrepreneurship is defined recognizing and pursuing opportunities and ultimately without opportunity, there is no entrepreneurship.

Kiva is a not-for-profit platform operating in 80 countries where crowds can lend money directly to aspiring entrepreneurs in developing countries after it gathers personal stories and publishes them online for interested funder to contribute towards. Currently Kiva via its field partners loans as little as $ 25 and has reached over 1 million crowd members with over one billion dollars in funds. Interestingly, Kiva's projects follow the ''keep it all'' principle, where the loan recipients keep every amount donated irrespective whether the project funding goal is realized. (Cai, Gippel, Zhu, & Singh, 2019; Jenik, Timothy, & Nava, 2017)

Sellaband is a crowdsourcing platform geared towards raising funds for musical projects by acting as an intermediary between musicians and their fans, who can invest in musical projects like albums, tours, promotions etc. Musicians set up a profile page with project details on the platform for free where funders search the web site and learn about these ventures. In exchange, Once they have achieved their financial goal and acquired the respective budget, investors obtain rewards, like free downloads, CDs, t-shirts, or benefits from its sales (Agrawal et al., 2015; Schwienbacher & Larralde, 2012).

Changing landscape in human resource management

Crowdsourcing has created new areas of knowledge on human capital's features of knowledge, skills, abilities, and other characteristics such as personality. Moreover, systematic shifts have occurred in organizational structures, policies and practices that influence organizational effectiveness through the management of people and their attributes including recruitment including selection, training and development, performance management, leadership, compensation as well as legal and ethical issues.

TopCoder is a computer-programming platform with over half a million skilled software engineers where requesters pay a monthly fee to propose tournament-based software design and development projects. The best solution wins the top prize while other participants walk away with smaller rewards and garner skill ratings that can be included on their resume´s on the other hand besides the requester getting the best solution they get is for Inexpensive labour as well as from an always available pool of reliable Coders (Howcroft & Bergvall-Kåreborn, 2019; Satsiou et al., 2017).

The internet brought about ‘on-demand economy’ or ‘sharing economy’ and A new business model called ‘gig economy’ has emerged via crowdsourcing platform owning companies claiming to be just database where clients and worker can find each other and thus they can classify workers as self-employed for example the taxi hailing service industry. Due to the Nonstandard working arrangements are new challenges have emerged around the following topics; legal concept of an ‘employee’, contractual agreements and works instructions, schedules and working hours, ability to work on more than one platform, employees’ liability for damages, issues affecting minimum wage, reimbursement of expenses, organisation of labour, collective agreements as well as application of subsidiary labour law. This challenges have definitely forced a rethink of human capital and human resource management and might even lead to a new knowledge area (De Stefano, 2016; Todolí-Signes, 2017).

Data analytics

Data analytics is the practice of deriving significant information from huge amounts of data helping firms and individuals make sense to show profile of all the data, show trends, anomalies, and outliers of the vast data. Data also in this context “Big data” refers to datasets whose size is beyond the ability of typical database software tools to capture, store, manage, and analyse.

Smart city also ‘intelligent city’, ‘knowledge city’, ‘digital city’, and ‘eco- city’ are terms used to refer to future of urban places, new technologies, and infrastructures – as a solution to offer clean, livable, technologically advanced, economically robust cities (Alizadeh, 2018). Crowdsourcing has been applied to smart cities via “Living labs” model to enhance citizen participation to innovate through a methodology with two fundamental pillars, ‘technology’ and ‘human capital’ in the following steps: (1). Problem detection phase; (2). Definition of goals and objectives; (3). Crowdsourcing phase; (4). Living lab first stage – Evaluation phase; (5). Living lab second stage – Implementation phase / Innovation production. A typical example is the city of Ghent, Belgium via the crowdsourcing platform UserVoice (www.uservoice.com) where participants submit ideas then comment on the ideas of the others. Both the ideas and the comments can be rated using a voting system. Each IP address is allowed to vote on three ideas or comments. This way, users need to think carefully about what is really important to them. The more votes an idea gets, the higher the idea is positioned in the list. Living labs assist to produce enormous amounts of big data produced by the citizens who interact in the smart city and through data analytics significant knowledge and intelligence discovery (Paola & Rosenthal-Sabroux, 2014; Papadopoulou & Giaoutzi, 2017).

Forensic

Forensics is the application of investigation and analysis techniques to gather, exploit and preserve evidence, whilst, crowdsourcing has applications through the use of citizens to simply report and map crime to complex activities like solve simulated crime scenes while providing both technical and perceptual benefits to the society.

In the aftermath of the April 2013 twin bombs explosion during the Boston Marathon, the Federal Bureau of Investigations (FBI) called upon citizens to voluntarily submit original media (video, photos or images) around the finish line where the bomb went off, this was in addition to the leads and tips usually requested by law enforcement. This effort assisted the investigators to identify the perpetrators within three days which otherwise would have taken a longer amount of time. Ultimately the FBI did only apply crowdsourcing to gather media however on the other hand crowds through other social media platforms (Anonymous, 4chan and Reddit) conducted their parallel investigations where citizens to upload their photos and videos as well as a place for volunteer citizens to comb through these data looking for clues. Although the latter investigations were unofficial and crowd driven the authorities encouraged

participants to report any tips as they naturally interacted on the platforms when upvoting, tagging and looking for clues (Açar, 2018; Nhan, Huey, & Broll, 2017; Suri, 2013).

Murder Hunt a crowdsourcing platform that aims to provide information about homicides and the tools necessary to record, report and then go about capturing the individual suspected of murder. the platform interrogates the imagined possibilities as presented in a fictional setting to discover new innovative paths and investigate possibilities of murder (Graham & Mehmood, 2014).

Cyber security

Since its creation, the internet it has contributed positively to humanity, for continued confidentiality, integrity and availability of any digital and information technologies it is paramount that cybersecurity which concerns with the understanding of surrounding issues of diverse cyber-attacks and devising defence strategies be at the forefront of any discussion.

One of the emerging aspects is security-as-a-service, which involves providing security to requesters, remotely. It provides security by protecting the requesters from security attacks (prevention), detection of security attacks or security breach (analysis), or taking countermeasures to minimize security attacks (cure)(Verma & Ruj, 2014). Cyber-attacks on cyberspace keep evolving as they capitalise on new approaches, these include social media, cloud computing, smartphones, critical infrastructure, embedded systems among other concerns(Jang-Jaccard & Nepal, 2014). Crowdsourcing has been used in fault-tree and attack-tree analysis where technology companies have bounty projects where rewards are given to individuals who find bugs and malware within their software, hardware and infrastructure(Tentilucci et al., 2015).

Collaborative project management

Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements and crowdsourcing has led to better methods of collaboration by enhancing citizen science.

Some of the applications in the medical field include the application where in two applications in malaria diagnosis research: i) MalariaSpot was designed using malaria-positive blood films. The members were asked to tag as many malarial parasites as possible in 1 minute and given continuous feedback, in this case the nonexpert crowd diagnoses had an accuracy of 99%, sensitivity of 95.1% and specificity of 99.4%; ii) BioGames a crowdsourcing platform was used to diagnose malaria parasites. Members were given a tutorial, and must achieve accuracy of >99% in training game before playing real game. Gamers asked to label cell as infected vs healthy resulting in 99% accuracy in identification of malarial parasites (Ranard et al., 2013; Wazny, 2018)

GalaxyZoo project seeks volunteers with a latent desire to help with scientific research for classifying Hubble Space Telescope galaxy images since using a software as an alternative would have taken months and substantial investment. The project attracted over 250,000 contributors who were required to take a tutorial and pass a test before they are allowed to classify galaxies. The project successfully classified over 900,000 galaxies.(Lukyanenko et al., 2014; Ranard et al., 2013)

Agribusiness value chain

Agriculture cannot be a more relevant topic for sustainability as emphasised by the second 2015 Sustainable Development Goals to “End hunger, achieve food security and improved nutrition and

promote sustainable agriculture." . There is wide areas of applications in agribusiness value chain and this include: farmer funding, Agricultural land-use /land cover data; Soil data; Weather data; Crop phenology and calendar information; Pests and diseases; Yield and vegetation status; Prices; and General agricultural knowledge.

Esoko is one of the most successful agriculture based crowdsourcing application with over one million users and operates in over a dozen countries in Africa by providing market linkage and supply chain services through uses a combination of mobile and web services and advisory call centres. Its key services include giving real time market feeds by providing alerts on market prices and offers are delivered automatically to subscribers, providing direct marketing and extension services, polling to track inventories and crop activities among other things while monitoring and reporting crop cycles and yields. Lastly Esoko does provide profiling and marketing for goods and services within the agricultural sphere as well as co-opt businesses to generate content for the platform and pays on an incentive basis to acquire information, using targets and bonuses. Most noteworthy outcomes are Improved market access, stability of prices, versatile climate change early warning and adaptability and improved food safety, traceability and certification (Food and Agricuture Organisation (FAO), 2017; Qiang, Kuek, Dymond, & Esselaar, 2011).

Conclusions and future directions

This paper establishes a linkage of crowd solving and competition as one of the modes of crowdsourcing and its applications business and management though thematic areas by discussing four key elements namely task, scope, platforms, incentives as they interact with to solve real life problems.

As crowdsourcing enters in to its teenage years, its research and application are yet to be fully studied and tested. Some of its subfield, models, theories and frameworks including interactions with are still in their infancy and many topics and issues remain for future consideration. We need to explore crowdsourcing in different fields, aggregate knowledge and index the data also spin crowdsourcing stand-alone field.

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19. Reshaping the Future of Human Resources Management Strategies and the County Governments in Kenya

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Human resources management has been undergoing paradigm shift in its theory and has long been concerned with how people management can enhance performance outcomes. Change and partnering are some of the core areas of HR which has undergone drastic change. This study brings out the new facet of Human resource management strategies and performance of the county governments. This is in view of the changes in global business scenario through the link between employee/ citizen engagement and performance, bringing the two together to suggest that engagement may constitute the mechanism through which HRM strategies impact individual and organisational performance. Citizen engagement or participation and government responsiveness are responsible for monitoring and serving as a precondition for the new mode of e-governance. The study was anchored on Resource based view theory and Institutional theory. The study engaged descriptive survey design. The target population was 8 County Government. Simple random sampling technique was used in this study. Through random sampling 4 counties were selected for the study. Primary figures for the study were collected using structured questionnaires that were given to the respondents by the researcher. The data put together was edited, coded and analyzed using SPSS. Findings were tabulated for presentation. The results of the study showed that citizen participation, Engagement, and governance do influence performance of county governments. It was also concluded that the citizen engagement and participation were factors which influenced performance in the County Governments. The study recommends enhancement of citizen participation and engagement coupled with involvement in the affairs of the county governments.

Keywords: *Human Resources Management Strategies, County Governments, Performance*

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20. Information system infrastructure management influence on Cyber-Terrorism in Kenya police Service

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The study commences by elaborating Cyber-Terrorism scourge, analysing the cyber terror philosophy and fundamentally determining its scope, presenting the challenges that this creates in a global and interconnected world. Briefly, cyber terrorism combining two concepts of “cyber” and “terrorism” referring to cyber space being the medium of orchestrating terrorist acts to wit; spread of online propaganda, alteration or destruction of

information, planning and carrying out of terrorist's attacks via the use of computer networks reigns respectively. Its therefore a complex contemporary matter. Information system infrastructure management is the collation of all interrelated elements for information flow within the organization on how it is planned, organized, staffed, directed and controlled to avert leakage to unauthorised persons. In regard to National police service, the flow should be timely and secure. In furtherance, the study intents to examine how information system infrastructure of Kenya police service is managed in averting cyber terrorism attacks. Kenya police as an organization has gradually advanced its Information Technology traversing from the Radio calls alias "over-over", UHF and VHF pocket phones, signal communication to the modern world of computer networks where information is dispatched via emails, WhatsApp, twitter, face book and establishment of integrated command and control centre within Nairobi and Mombasa cities. Based on above advancements, organization information infrastructure security is critical to combat the eminent danger of cyber-terrorism. Strategical and operational information within police service is key and should be accorded security and confidentiality of the highest order. The general objective of the study being to examine how Kenya police service information system infrastructure is managed to avert cyber-terror. In so doing its geared specifically to find out the planned measures for secure system, forecast on the need of staffing for better management, determine coordination efforts of police units and lastly establish controlling mechanism of police information infrastructure. The study digs in on the entire police organization information system management in guaranteeing its security against the looming threat cyber-terrorism. Highlighting the responses to cyber security by continental and regional organization, the study will specifically aim to, through descriptive survey design examine the social space and police institutional environment in which crimes like cyber theft thrive. Basically, modernization has exerted both positive and negative influence on many countries in Sub-Sahara Africa. These include extreme intra and interstate conflict, increasing cyberterrorism, lack of state capacity, competing national priorities and political sensitivity surrounding the notion of cyber democracy. On orchestrature mode and being a crime of the elites, post-modern theories namely Technological Determinism and Actor Network Theory (ANT) will be fundamental in discussing the phenomenon. Descriptive research design marked with credentials of highlighting conditions that exists, practices that prevail, beliefs and attitudes that are held, processes that are on-going and trends that are developing (Lowell and Lawson 1971) thereby picked for the study. The study intents to target population of 50 respondents majority from National police service domiciled at DCI headquarters Kiambu and ten key informants; random sampling techniques will be applied. Consequently, both figurative and non-figurative data collection methods will be utilized through filling questionnaires and key informants interview schedules where reliability and validity will be tested. Finally, data will be organised and analysed deploying statistical programs for social sciences (SPSS) and in adherence to research ethical values. Hence geared at offering quality output that will immensely and positively impact on the relevant agencies in addressing the emerging organizational security challenge for a better society.

Keywords: *Hacker, Phreaker,Phishing, Cyber-crime, Cyber-Security, Cyber-Terrorism, information system, Police information infrastructure, police information system infrastructure management.*

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21. Credit Risk Management and Performance of Mortgage Lending Commercial banks in Kenya

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Abstract

In spite of Kenya's mortgage market having grown substantially, it is dominated by large mortgage lending commercial banks pointing to possible restrictions to entry or a likelihood of high risk for tier II and III commercial banks in Kenya. In 2017, Kenyan mortgage lending commercial banks recorded an average gross non-performing loan ratio of 10.3 percent against the industry recommended Central Bank of Kenya average of 4 percent. In 2018, Kenyan mortgage industry assets was approximated to be 2.5 percent relative to the country's gross domestic product with about 24,458 mortgage accounts in the industry. The sector has also recently experienced increased non-performing loans. Thus, the study sought to evaluate the influence of credit risk management on performance of Kenya's mortgage lending commercial banks with the objective of establishing influence of delinquency rates and value at risk on credit risk management of Kenya's mortgage lending commercial banks. Credit history score acted as moderating variable. Merton's Default Theory, Portfolio Theory and Theory of Information Asymmetry guided this study. A census survey of Kenya's 34 mortgage lending commercial banks was utilized. Explanatory and descriptive research designs were adopted. The researcher used secondary panel data covering the period 2012 to 2018 with a record survey sheet as the data collection tool. Data was collected from published audited reports of mortgage lending commercial banks submitted to Central Bank and analyzed using STATA subject to various diagnostic tests. Panel regression of coefficients findings indicated there was positive and significant relationship between delinquency rate and performance of mortgage lending commercial banks, negative and significant relationship between value at risk and performance of mortgage lending commercial banks, positive .Credit history score had significant moderating effect on relationship between credit risk management and performance of mortgage lending commercial banks in Kenya since coefficient of determination rose after moderation.

Key Words

Credit Risk Management, Delinquency rate, Value at Risk, Credit History Score, Mortgage

Introduction

1.1.1 Credit Risk Management

Basel Accord III defines credit risk as the risk of loss of principal and advocates for commercial banks to make use of both financial and operating ratios in order to better evaluate and assess the financial performance of commercial banks to mitigate against the risk (Sinkey, 1975). Several researches such as Sinkey, (1975) and Altman, (1977) have since interrogated the usage of the financial and operational ratios in measuring performance.

Sinkey, (1975) in one of the studies in which discriminant analysis was used established that the ratios are better utilized in distinguishing commercial banks with sound credit risk management tools from those which are problematic. On the other hand, Altman, (1977) who analyzed assets and liabilities in commercial banks asserted that the ratios could be used to caution banks from a possible financial distress and aid them is formulation of strategies to counter it.

1.1.2 Delinquency Rates

Delinquency in the mortgage market is explained by an inability of the households to pay and thus defaulting on their payments (Stanga, Vlahu & Haan, 2018). In some instances, borrowers may default on a mortgage owing to a decline in the cost of housing and on weighing, the client perceives the gains of defaulting being higher than the related costs (Chatterjee et al. 2007). In developing counties such as Kenya, high default rate is related to issues of loss of unemployment and also the shocks that come with

related costs that clients may not have been aware when they took the mortgage (Stanga, Vlahu & Haan, 2018).

In 2017, Kenya's mortgage market recorded highest, the level of growth in under performing loans rising from Kes 220 million in December 2016 compared to Kes 273 million in December 2017. Such high delinquency rates led to two financial institutions leaving the mortgage market owing to high losses (Muchira & Anyanzwa, 2018). Stanga, Vlahu and Haan (2018) indicate that high levels of delinquency were experienced in the United States owing by liquidity crisis which turned into a Global Crisis in 2008. The National treasury of Kenya in 2018 indicated that out of the Kes. 17.5 billion Mortgage assets held by Chase Bank, Kes. 4.5 Billion were non performing which was triggered by the period when the bank went through financial crisis (Guguyu, 2018).

1.1.3 Value at Risk

In the mortgage industry, value at risk is a parameter that entails quantifying the monetary risk for a given portfolio in a given period of time (Castagna & Fede, 2013). Risk could be in the form of liquidity risk, credit risk and market risk. Focus on housing and mortgage market was drawn because of the high default rates leading to very high loan to value ratios. Further, the market had been subjected to high interest rates that have led to risk of default being high. Value at risk was proposed as a mechanism which provides an analysis of various risk positions. It is a tool which provides the ability to assess risk for traders, managers and employees and thereby discouraging organizations from taking excess risk. It provides an avenue for entities to hedge against possible risk (Jin & Ziobrowski, 2011).

1.1.4 Distance to Default

Distance to default refers to the likelihood that there will be failure to meet loan requirements detailed in a loan agreement and is normally measured by the debt service coverage ratio (Saunders & Allen, 2002). Understanding the likelihood that a loan may be defaulted is an important tool in credit risk analysis. Prediction of default in an organization can only be done within a certain level of probability. Distance to default explains the frequency which standard deviations of the price of the asset should change in order for default to be triggered future (Akbar &La, 2014).

1.1.5 Bank Size

Bank size is the cumulative assets a bank has and indicates a financial strength and economic capability of the said financial institution. Bank size could be measured based on market capitalization, cumulative bank assets held, revenues generated from commercial activities of the bank, and the equity held in the books of the bank (Schildbach, 2017).

Statistics by the Central Bank of Kenya, (2017) indicate that 75.5% of the mortgages in Kenya have previously been advanced by six commercial banks with one being categorized as medium while five others are from the tier one. Mwendwa (2015) indicates that the firm size is statistically significant in explaining how mortgage financing effects the profitability of financial firms. Kenya's banks are seen to have the ability and capacity to issue mortgages in Kenya owing to financial stability available as measured by the asset base.

1.1.6 Credit History Score

Credit history score of an individual refers to the history of a borrower with regard to the credit worthiness of the individual in meeting their financial obligations (Gopal, 2008). Credit score is

computed based on mathematical models that are based on an individual's credit history based on outstanding balances, late payments and the age of credit of an individual. Credit score according to Metropol in Kenya ranges between 200 to 900. A score of less than 400 indicates that customers are in default (Metropol, 2018).

1.1.8 Mortgage Lending Commercial Banks Performance in Kenya

The value of total nonperforming mortgage loans outstanding increased from Ksh. 10.8 billion in 2017 to Ksh. 11.7 billion in December 2018. The ratio of nonperforming loans to total mortgage loans increased from 8.7 percent in 2017 to 9.1 percent in 2018.This was above the central bank of Kenya recommended ratio of 7 percent, associated with cashflow constraints for the mortgagors attributed mainly to failure by both the county and national governments to owner payments for suppliers (Central Bank of Kenya, 2018).

Kenya had 24,458 mortgage loans accounts as at 2017 an upward shift from 22,013 held 2016, representing an increase of 2,445 or 11.11 percent due to increased demand from the ballooning middle class. The mortgage loan size increased from Ksh 7.5 million to Ksh 8.3 million attributed to high property prices. The number of commercial banks reduced from 37 to 34 in 2016 due to the collapse of Dubai and Imperial banks. Chase bank slumped into receivership under the guidance of the Central Bank of Kenya (Central Bank of Kenya,2017)

In terms of the gross NPL, the value increased from Ksh.81.4 billion in 2017 to Kshs 108 billion, representing an upward rise of 32.7 percent. Asset quality worsened of from 2.3 percent recorded in 2017 to 2.7 percent registered in 2018 a clear signal that credit risk in Kenya's mortgage sector was on the rise. Gross NPL ratio was 12.3 percent with an overall of 10.3 percent against the Central bank of Kenya recommended ratio of 4 percent.

1.2 Statement of the Problem

The mortgage sector in Kenya despite having recorded a significant growth, it still remains dominated by large mortgage lending commercial banks which could indicate probable restrictions with regard to entry or high levels of credit risk for both medium and small commercial banks. Kenya's total mortgage loans held as at 2017 was equal to 2.5 percent of Kenya's GDP with about 24,458 mortgage accounts in the whole industry. The mortgage sector has in the recent past experienced poor performance and increased cases of mortgage delinquencies and defaults. In the financial period ending December 2017, the Kenya mortgage lending commercial banks recorded an average gross NPL ratio of 10.3 percent relative to CBK's recommended average of 4 percent (Central Bank of Kenya, 2017).

A few studies that have been done in attempt to address concerns in Kenya's mortgage industry comprise; Oyedokun, *et al* (2013) conducted a study to evaluate the effect of lending practices with regard to residential mortgage default. Mkukwana (2012) did a study to establish impact of macroeconomic factors on risk default through a case study of residential mortgages. Specifically, in Kenya, Osero *et al* (2013) did a study to examine how effective management strategies among the mortgage lending banks in Kenya loan default. Further, Nanyuki and Omar (2016) examined factors that influence the performance of the mortgage lending commercial banks in Mombasa and finally, Abdulrehman and Nyamute (2018) did a study on effect of mortgage financing on the financial performance of mortgage firms.

The studies above, however, did not adequately address how credit risk management impact performance of the mortgage institutions which is an existing gap in the field. The study thus seeks to fill the gap by specifically evaluating how credit risk management influence performance of mortgage lending commercial banks in Kenya. Size of bank which was not factored in the aforementioned studies was included as a variable to factor in different risk appetites and capabilities for the commercial banks involved in mortgage lending in Kenya. Credit history score which was also not included in the aforementioned studies was incorporated in this study as a moderating variable having been emphasized on by CBK for all commercial banks monthly net debt position returns (Central Bank of Kenya, 2017). The credit history score is used for all loans classification to either normal, watch, substandard or loss (CBK, Prudential Guidelines, 2013)

1.3. Research Hypotheses

The study sought to resolve the below research hypothesis:

H_{01}: Delinquency rate does not have significant influence on the performance of mortgag lending commercial banks in Kenya.

H_{02}: Value at risk does not have significant influence on the performance of mortgag lending commercial banks in Kenya.

H_{03}: Distance to default does not have significant influence on the performance o mortgage lending commercial banks in Kenya.

H_{04}: Bank size does not have significant influence on the performance of mortgage lendin commercial banks in Kenya.

H_{05}: Credit history score does not have significant moderating effect on the relationshi between credit risk management and performance of mortgage lending commercia banks in Kenya.

Theoretical Review

2.1.1 Merton's Default Risk Theory

Merton's default theory was conceived by Merton, (1970). The theory has extensively been utilized in the assessment of defaults in cooperatives and mortgage lending firms. Merton's model postulates that credit analysts should better appraise financial institutions, while also checking on the firms' ability to remain liquid throughout the period under analysis and debt expiry (Jorion, 2014). It has been used to determine the ability of debt owners to pay their debt obligations and can thus help credit analysts to determine an organization's credit default risk.

Merton's theory was based on some basic assumptions about the capital structure of the firm (Merton, 1970). In the event of default occurring, the firm's market value of the assets owned by the company in relation to the liabilities of the company fall below the set certain threshold and thus, the firm is considered to have defaulted. One of the reasons for the default in the banks is the credit risk which is part of the risks experienced by commercial banks (Jorion, 2014).

2.1.2 Portfolio Theory

Portfolio theory was conceived and advanced by Markowitz (1952). The theory asserts that four basic steps are involved in portfolio construction as: security valuation, asset allocation, portfolio optimization and the performance management (Seibel, 2012). According to the theory, many companies use models for value at risk to manage market risk and interest rate risk exposures.

According to Margrabe, (2007), in spite of credit risk remaining the largest risk facing most commercial banks, the habit of utilizing modern portfolio theory to credit risk management is yet to be fully embraced.

2.1.3 Theory of Information Asymmetry

Stiglitz *et al* (1970) established the theory which asserts that both mortgagees and mortgagors experience information asymmetry in their interactions. The phenomenon emanates from a mortgagor who borrows a mortgage and has information with regard to the probable risks related to the investment ventures for which the loan is intended. The mortgagee, however, is unaware of the information (Edward & Turnbull, 2013). The concealed details generate adverse selection and moral hazard problems (Horne, 2012).

2.1.4 Credit Risk Theory

The theory was advanced by Melton, (1974) and is also referred to as structural theory. It postulates that default occurrences stems from the development of the assets of the firm displayed by a dilution trajectory with fixed notable parameters like arrears rate, portfolio at risk and loan loss rate. According to the theory, loss provisional on default is recommended for all securitized loans since failure to pay debts could happen in the course of the entire life of a mortgage and not only at maturity (Crosbie *et al*, 2003).

Research Methods

3.1 Research Design

Explanatory and descriptive research designs were used for the study. Saunders *et al.* (2009), explains that explanatory research design establishes root association between variables. Researchers should be knowledgeable of the phenomenon in order to infer or detect pertinent root associations (Zikmund *et al.*, 2012).

3.2.1 Empirical Model

According to Bard *et al*, (2014), several financial aspects that influence mortgagee's determination of the amount of mortgage advanced, for instance, financial market structure, mortgagor behavior, mortgage facility and bank characteristics. The borrower's features and behavior indicate the credit risk and hence affects amount of mortgage advanced. On the other hand, bank characteristic like credit policy, credit limits, reserve cash reserve ratio, and availability of money to lend are all supply-side factors that could affect the availability of credit. This study used panel regression model. The model was adopted since it has been used extensively in literature and for its simplicity (Maddala, 2013).

Mortgage performance is hypothesized to be influenced by the below factors and can best be simplistically written as:

$$Y = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \varepsilon_{it} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (3.1)$$

Where;

Y=Performance of Kenya 's mortgage lending commercial banks as determined through ratio of gross nonperforming loans to total mortgage advances

X_1= Delinquency rate as measured by arrears rate which is measured by total installments past due divided by gross portfolio outstanding

X_2 = Value at risk as evaluated through ratio of loans to assets

X_3 = Distance to default as assessed by debt service coverage ratio

X_4 = Bank size as determined by log transformation of the cumulative assets of commercial banks under study

$\beta_{0=}$ Intercept
$\beta_1, \beta_2, \beta_3, \beta_4$ = parameters of independent variables under study

β_5= parameter of moderating variable under study

$\varepsilon_=$ Error term

i= Banks under study
t=Period in years (2012-2018)

3.2.2 Moderating model

$$RGNPL = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 M + \beta_6 X_{1it} M + \beta_7 X_{2it} M + \beta_8 X_{3it} M + \beta_9 X_{4it} M + \varepsilon_{it} \quad \ldots\ldots (3.2)$$

Where;
M=Moderating variable (Credit History Score)
All the variables have to be standardized using the moderating variable (M). The interaction terms (X_{1it} M, X_{2it} M, X_{3it} M and X_{4it} M) have to be calculated using the compute function as expressed in model (3.2). If β_6, β_7, β_8 andβ_9 are significant, moderation effects exist in the four relationships. If only one is significant, moderation effect only exists in one of the relationship and if both β_6, β_7, β_8 and β_9 are insignificant, no moderation effect exists and M becomes just another independent variable (MacKinnon, 2011).

3.2 Data Collection

Secondary panel data of the 34 mortgage lending banks in operating in Kenya for the period between 2012 and 2018 were collected using a record survey sheet. However, data for 3 mortgage lending banks were missing or incomplete and were excluded in the study. The choice of the period was guided by the availability of data and increased number of mortgage portfolio at risk culminating to increased mortgage delinquency rates and also defaults. The data were based on the published audited accounts of mortgage lending commercial banks submitted to the CBK. Annual CBK publications such as Banking Supervision Report and Economic Review Reports.

3.3 Data analysis

STATA was employed for the data analyses. Data which was quantitative in nature was analyzed in form of inferential statistics involved measurement and relationship which include: correlation, panel regression and analysis of variance. The output of data analysis was presented in form of tables.

Findings

4.1.1 Panel Regression Results

The panel model output is shown in Table 4.1.

1.1.1.1 Table 4.1: Panel Regression Results

NPL	**Coef.**	**Std. Err.**	**z**	**P>z**	**[95% Conf.**	**Interval]**
Delinquency rate	2.533986	0.228219	11.10	0.002	-3.79321	8.86118
Value at risk	-0.84222	0.315452	-2.67	0.036	-4.79244	3.107992
Distance to default	0.103365	0.0239567	4.31	0.027	-0.44618	0.492907
Bank size	-7.6355	2.86961	-2.66	0.041	-70.4992	15.22812
_cons	5.6739	3.9529	1.43	0.193	-160.465	795.8128
R-squared:	within = 0.4917					
	between = 0.5309					
	overall = 0.4836					
Wald chi2(4)	=48.89					
Prob > chi2	=0.0000					

The R squared checked the explanatory power of the variable. The study was supported by R square of 0.4836 as shown in Table 4.9. This means that delinquency rate, value at risk, bank size, distance to default explains 48.36% of performance of mortgage lending commercial banks.

4.1.2 Delinquency rate and performance of mortgage lending commercial banks

The output in Table 4.1 revealed that delinquency rate and performance of mortgage lending commercial banks are positively and significantly related (β =2.533986, p=0.002). The model is also justified by z-statistic of 11.10>1.96. This implies that a rise in delinquency rate results to a subsequent increase in the performance of mortgage lending commercial banks measured using non-performing loans. $Ho_1$was not rejected since p-value is 0.002<0.05.

4.1.3 Value at risk and performance of mortgage lending commercial banks

Results in Table 4.1 also showed that value at risk negatively and significantly related to performance of mortgage lending commercial banks (β =-0.84222, p=0.036). The model is also justified by z-statistic of 2.67 >1.96. This implies that a rise in delinquency rate results to a subsequent increase in the performance of mortgage lending commercial banks measured using non-performing loans. Ho_2 was not rejected since p-value is 0.002<0.05. Value at risk is employed by banks to measure the risks.

4.1.4 Distance to default and performance of mortgage lending commercial banks

Panel model in Table 4.1 revealed that distance to default is positively and significantly related to performance of mortgage lending commercial banks (β =0.103365, p=0.027). The model is also justified by z-statistic of 4.31>1.96. This implies that a rise in delinquency rate results to a subsequent increase in the performance of mortgage lending commercial banks measured using non-performing loans. $Ho_3$was not rejected since p-value is 0.027<0.05.

4.1.5 Bank size and performance of mortgage lending commercial banks

It was also found as illustrated in Table 4.1 that bank size is negatively and statistically related to performance of mortgage lending commercial banks (β =-7.6355, p=0.041). The model is also justified by z-statistic of 2.66 >1.96. This implies that a rise in delinquency rate results to a subsequent increase in the

performance of mortgage lending commercial banks measured using non-performing loans. $Ho_3$was not rejected since p-value is 0.041<0.05.

4.2 Moderating effect of Credit History Score

The study assessed the moderating of credit history score on linkage between credit risk management and performance of mortgage lending commercial banks in Kenya. Table 4.9 shows model the fitness for a regression model after moderation.

Table 4.2: Moderating effect of **Credit history score**

NPL	Coef.	Std. Err.	Z	P>z	[95% Conf.	Interval]
Delinquency rate	2.597786	0.537148	4.84	0.021**	-4.3349	9.53047
Value at risk	0.77609	2.85678	0.27	0.786	-6.37528	4.823094
Distance to default	-0.01044	0.00429	-2.433	0.042**	-0.58724	0.566367
Bank size	28.7777	22.28923	1.29	0.197	-72.4638	14.90836
Delinquency rate*M	0.17619	0.018468	9.54	0.003**	-0.53815	0.185771
value at risk*M	-0.12021	0.017879	-6.72	0.017**	-0.37064	0.33022
Distance to default*M	0.021349	0.006104	3.50	0.025**	-0.01061	0.013312
Bank size*M	-0.011609	0.099244	0.12	0.907	-0.18291	0.206124
_cons	352.9227	248.2164	1.42	0.155	-133.572	839.4178
R-sq:	within = 0.5669					
	between = 0.5373					
	overall = 0.5185					
Wald chi2(4) =	43.93					
Prob > chi2 =	0.0034					

M=Moderator/ credit risk score

Output results pinpoints that R^2 rose from 0.4836 before moderation (Table 4.2) to 0.5185 after moderation. Delinquency rate, value at risk and distance to default were significantly related performance of mortgage lending commercial banks in Kenya post introducing the moderator. The hypothesis that credit history score does not have significant moderating effect on the relationship between credit risk management and performance of mortgage lending was rejected. The study accepted the alternative hypothesis that credit history score has a significant moderating effect on the relationship between credit risk management and performance of mortgage lending.

Summary, Conclusion And Recommendation

5.1 Summary of the Study

The findings indicated that delinquency rate is positively and significantly related to performance of mortgage lending commercial banks. Value at risk is negatively and significantly related to performance of mortgage lending commercial banks while distance to default is positively and significantly related to performance of mortgage lending commercial banks. It was further noted that bank size is negatively and significantly related performance of mortgage lending commercial banks. The findings also indicate that coefficient of determination improved after moderation using credit history score hence having a significant moderating effect.

5.2 Conclusion

The study concludes that delinquency rate positively influences performance of mortgage lending commercial banks in Kenya. A high delinquency rates may result to financial institutions leaving the mortgage market owing to high losses. Value at risk negatively influences performance of mortgage lending commercial banks in Kenya. Value at risk is a mechanism that provides an analysis of various risk positions. It provides an avenue for commercial banks dealing with mortgage funds to hedge against possible risk.

Distance to default positively influences performance of mortgage lending commercial banks in Kenya. Understanding the likelihood that a loan may be defaulted is an important tool in credit risk analysis since prediction of default in an organization can only be done within a certain level of probability. Bank size negatively impacts performance of mortgage lending commercial banks. Bank size describes the economies of scale of the bank. A large bank reduces cost because of economies of scale and scope.

The study also concluded that credit history score moderates linkage between credit risk management and performance of mortgage lending commercial banks. Financial institutions including mortgage banks use the credit score in making an analysis of whether one will pay back their loans or they will default.

5.3 Recommendations

Mortgage lending commercial banks management may need to carefully draft credit policies with clear implementation procedures to enhance performance of mortgage lending to ensure maximum returns while minimizing default rates. Credit guidelines of the commercial banks may be integrated with the mortgage lending guidelines to form sound credit management procedures.

The use of credit-scoring models to screen loan applicants should be emphasized. However, this method may not be very precise and so commercial banks offering mortgages may be willing to absorb expenses of higher expected default rates in exchange for ancillary benefits related to high-volume credit-scored loans attached to securities.

5.4 Areas for Further Research

Further research may be conducted on demographic factors that result to mortgage loan default and also macroeconomic elements that impacts growth of mortgage lending in commercial banks. The macroeconomic factors include inflation, interest rate and money supply.

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22. Effect of Entrepreneur's Managerial Competency on Access to Venture Capital by SMEs in Nairobi County, Kenya

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Abstract

Small and medium Enterprises are critical for economic growth particularly in the developing nations. However, empirical evidence shows that most of these enterprises fail due to poor/lack of access to finance. Access to venture capital by these firms could be a plausible alternative but unfortunately researches have pointed out that majority of the enterprises do not access venture capital financing. This study therefore sought to investigate the effect of entrepreneur's managerial competency on access to venture capital by selected SMEs in Nairobi Kenya. Agency theory underpinned the study. The study adopted the explanatory non-experimental research design and positivism philosophy guided the study. Target population of the study was 334 Small and medium size enterprises ranked by KPMG between

2008 and 2017 in their annual survey. Proportionate random sampling technique was used to select the firms. Primary data was collected by use of questionnaire. Both descriptive statistics and inferential statistics were used to analyze the data. Nested multinomial logit model was used to establish the effect of entrepreneur's managerial competency on access to venture capital financing. The results reveal that; the influence of the highest level of education and professional qualification on access to venture capital financing is statistically significant. Secondly, the number of seminars/job training and the number of years of experience of managers/owners had positive influence and statistically significant to access to venture capital financing among SMEs. Given that managerial competency positively affects SMEs access of venture capital financing, firms should invest in human capital of their management through various strategies. For instance, investing in training gives employees the opportunity to develop new skills and accumulate the knowledge they need in order to achieve specific organizational and personal goals with the priority being to train managers so that they can be able to cope with the challenges which hinder business success.

Key words: *Managerial competency, Venture capital, SMEs*.

1.1 Background of the Study

Small and Medium Enterprises (SMEs) are important in any economy for they have potential to develop into larger productive units, they can adopt new technologies, and they have ability to adapt to new economic conditions(Katua, 2014). Financial constraints can however ruin a good SMEs business idea, lead to the business failure, or hinder its growth and development (Ayyagari, Demirguc-Kunt, & Maksimovic, 2011).

According to Abdullah, Khadijah, and Manan (2010), inaccessibility and insufficiency of funds is the major barrier to the growth and performance of SMEs in both developed and developing countries. The SME sector effectively responds to challenges of creating sustainable employment opportunities, promoting economic growth and poverty reduction in a country(Abdullah *et al*., 2010).

In many countries, SME sector is a major source of employment, and also important to national growth. For instance, in 2011 the SMEs sector in Poland generated almost fifty percent of the Gross Domestic Product. Additionally, the sector in 2011 employed 6.3 million people out of the total of 9.0 million of the labor employed in private sector (United Nation, 2011). Nyang'ori, (2010) points out that in European economy, SMEs represent 99 percent of enterprises and they are major source of entrepreneurial skills, innovation and employment. Okafor (2011) affirms that SMEs are the main source of employment in developed and developing countries alike, comprising over ninety percent of African business operations and contributing to over fifty percent of African employment and GDP. In Kenya, for instance, SMEs output was estimated at Kes.3369.1billion against a national output of Kes.9971.4 representing a contribution of 33.79% in 2015 (Kenya National Bureau of Statistics, 2016). Despite SMEs significance, statistics indicate that 29.6 percent of the 2.2 million enterprises closed in the past 5years, the year 2016 included, and most were as the result of shortage of operating funds. More financial institutions often see SMEs as a risk-prone sector because of poor guarantees and lack of information about their ability to repay loans (Olando, Mbewa, & Jagongo, 2012). It is also argued that many SMEs have little access to many sources of finance due to legal and regulatory framework that do not recognize innovative strategies

for lending to the SMEs (Sigara & Memba, 2011). This lack of sufficient capital and credit is often a major handicap to the development of SMEs particularly in their early stages (Lemuel, 2009).

Venture capital is risk finance in form of equity which gives the business funds based on their potential and their interest as perceived by the investor (Mckaskill, 2009). Venture capitalists bridge the financing gap caused by information asymmetry for new and innovative firms (Burżacka & Gąsiorowska 2016). However, venture capital firms have reputations for being highly selective in funding SMEs, so the receipt of venture capital funding often strengthens a startup's reputation among stakeholders (Graham & Sichelman, 2010). At least one of the members of a venture capitalist does sit on the board of directors, or in a similar position of control, which provides structure and management to the fledgling company (Gompers & Lerner, 2001). This shows how important entrepreneur skills or expertise is to venture capital financiers (Hickey, 2013). Venture capital finance is risk finance in form of equity that is available to a borrower with no obligation to repay (Smolarski & Kut, 2011). It is a financial investment for start-ups or established SMEs that are perceived to have unique ideas and excellent growth ability (Kumar & Siddharthan, 2013). Venture capitalists mainly focus on: market attractiveness, product/service, the entrepreneur, the management team and financial considerations (Deloitte, 2009). Once the VCs are comfortable with the screening, they negotiate the terms and condition of the investment with the entrepreneur, with the aim of controlling the corporate decisions and minimizing the potential cost and risk (Ndabeni, 2014).

VC, which is quite prevalent in developed countries, has played a big role in enhancing growth of SMEs by providing equity capital. Some of the world's largest companies, including Home Depot, Starbucks, Whole Foods, Microsoft, Apple, Google, JetBlue, eBay, and Staples were originally backed by Venture capital (Kavanaugh *et al.*, 2014). In essence, access to VC has played an important role in the economic development of the United States (Dolencic, 2010). In 2012, it was estimated that venture-backed companies which publicly traded their share accounted for 10.4 million jobs and $2.3 trillion in revenues, which represents a share of 17.6 percent in the total U.S. Gross Domestic Product (GDP) (Kavanaugh et al., 2014). Accordingly, in 2014, the value of investments in Poland accounted for 19.1percent of the total value of investments in Central and Eastern Europe (RBC Wealth Management, 2017). In Africa unlike in developed countries, VCs are few and hence they have created little impact to the SMEs. In the year 2013 for instance, there were only 176 venture capitalists in South Africa and only 26 active VC firms dedicated to East Africa (AEAVC, 2015). Kenya has continued to dominate the private equity industry in Eastern Africa, accounting for more than 60 per cent of private equity deals recorded in the East African region (KPMG, 2015). Kenya received investment deals worth Keya shillings 49.7 billion out of the Kes78.9 billion, accounting for 63 per cent of the deals for East Africa (KPMG & EAVCA 2015).

VCs consider the following before funding an enterprise; the quality of the business plan, basic concept of the project, track record of entrepreneur, the management team, the characteristics of the product, market or technology among others (Memba, 2011). According to KNBS (2016), of all the sources of capital utilized by SMEs, equity financing accounts for only4.1 percent. With the availability of VC funds in Kenya, it is not clear why SMEs uptake to VC is very low yet they are still struggling to raise capital. Like managerial competencies, entrepreneurial competencies can be defined as underlying characteristics such as generic and specific knowledge, motives, traits, self-images, social roles, and skills which result

in venture birth, survival, and/or growth (Zarefard & Cho, 2018). Entrepreneurial competencies have been identified as a higher (vs. standard) level ability that can be promoted through education and encompasses the necessary skills, knowledge and abilities to perform an innovative role successfully. As indicated by Lara and Salas-Vallina (2017), managerial competencies are characteristics that relate to effective job performance. In view of the knowledge-based nature of competitive business environments, entrepreneurs need an adequate range of managerial competencies and highly differentiated knowledge to manage change and uncertainty, to survive in an organization.

1.2 Statement of the Problem

Small and Medium Enterprises are drivers of economic expansion in both developed and emerging economies, whose success is largely dependent on access to adequate financing (Njama, 2013). According to Clark and Juma, (2013), the fundamental reasons behind SMEs' poor access to finance can be found in their unique characteristics. Various types of assistance such as; financial assistance, training and extension services, have been provided to SMEs to boost their performance (IEA&SED 2001). However, 2.2 million SMEs on average 3.8 years old closed down in the last 5 years, 2016 inclusive. Of the 2.2 million, 29.6% attributed their closure to poor access to finance (KNBS, 2016). This is one of the scenarios that have led to loss of confidence in lending to SME by financial institutions. This therefore called for SMEs to identify alternative method of financing their business and VC becomes the best option (Musani, 2014).

Venture capital has been in existence in Kenya since 1970s, yet it has had little impact on growth of SMEs. According to Olando *et al.,* (2012), only 2% of Micro, small and medium enterprises, have had access to VC. The East Africa Venture Capital Association (2015) confirms that VCs in Kenya had raised Kes172.8 billion by 2015, but only managed to invest Kes49.7 billion (28.8%) in Kenya; this means that the VCs still have a lot of funds to invest. According to KNBS (2016), equity financing account for only 4.1 percent of all the sources of capital utilized by SMEs. With the availability of these funds in Kenya, it is not clear why SMEs uptake to VC is very low yet they are still struggling to raise capital. Studies conducted in Kenya to explore the managerial competency on access to VC have not been exhaustive as there is limited information on access to venture capital. For instance, Ochieng, Masoud, and Mwirigi, (2013) studied determinant of uptake of credit product by SMEs in Nairobi and found out that managerial competency correlate positively to uptake of credit product. Memba, Gakure and karanja (2012) studied the impact of VC on growth of SMEs in Kenya and found out that VC financing has an impact on growth of SMEs. Jagongo,(2012) studied VC financing; the all-important Micro Small and Medium Enterprises (MSMEs) financing Strategy under neglect in Kenya and found out that all entrepreneurships stakeholders were largely ignorant of the potentials for VCs to bridge the MSMEs financing gap. The findings from these studies therefore imply that VC may not have been exhaustively explored for financing businesses in Kenya.

1.3 Research Objective

To establish the effect of entrepreneur's managerial competency on access to venture capital by SMEs in Nairobi County, Kenya

1.4 Research Hypothesis

H_0: Entrepreneur's managerial competency does not have significant effect on access to venture capital by SMEs in Nairobi County, Kenya.

2.0 Literature Review

2.1 Theoretical Review

2.1.1 Pecking Order Theory

According to the pecking order theory hypothesized by Myers (1984), firms finance their needs in a hierarchical order, first by using internally available funds, followed by debt and finally, external equity. Pecking order theory points out that there is no properly-defined optimal capital structure; instead the debt ratio is the result of hierarchical financing over time. Firm management has a preference to choose internal financing before external financing and when a firm is forced to use external financing, managers first select the least risky and demanding source (Torugsa, O'Donohue & Hecker, 2012). The theory is a framework for examining firm financing that states that firms attempt to reduce information asymmetries and maintain ownership by first using internal financing, followed by external debt and equity (Berger, Goulding & Rice 2014).

In most cases SMES prioritize the source of financing from internal cash flow or entrepreneur's own capital to external sources according to relative availability and opportunity cost (Ogujiuba & Abiola, 2012). In the case of the small firm or entrepreneur, personal sources are used first, external debt next, followed by outside equity. Equity is acquired last because the entrepreneur presumably has more information than the investor. The presence of significant information asymmetries causes the investor to charge a higher rate of return on equity than on debt (Frank & Goyal, 2013). Since most SMEs in their start up stages have no or have limited access to formal bank credit and in most cases no retained earnings, venture capital financing which is equity finance could be the best option.

Pecking order theory helped the study to understand the SMEs because they are opaque and carry high information costs especially those with a relatively short history in the market (Mac an Bhaird & Lucey, 2011). This particularly helped this study to scrutinize the approach of SMEs owners to external equity which in the case of this study is the VC finance. The hierarchical order, using internally available funds, followed by debt and finally, external equity leads to the desire of the owner-manager of SMEs to maintain independence and retain control of the firm hence making the firms opaque. In this sense, venture capitalist lacks enough information that would help in financing the SMEs. The theory therefore helped the study describe the characteristics of SMEs and that of entrepreneurs (Independent variables) and hence lead to in-depth understanding on how the predicate variables related with the criterion variables in the study.

The first limitation of the Pecking Order Theory is that it fails to incorporate the effect of taxes, cost of issuing new securities, agency cost, and financial distress of the investment opportunities. It considers the impact of financial slack on the firm and the impact of availability of positive NPV's of projects. Tests of the pecking order theory have not been able to show that it is of first-order importance in determining a

firm's capital structure. However, several authors have found that there are instances where it is a good approximation of reality. Zeidan, Galil and Shapir (2018) document that owners of private firms in Brazil follow the pecking order theory and also Myers and Shyam-Sunder (2017) find that some features of the data are better explained by the pecking order than by the trade-off theory. Frank and Goyal show, among other things, that pecking order theory fails where it should hold, namely for small firms where information asymmetry is presumably an important problem.

2.2 Empirical Review

2.2.1 Entrepreneur's Managerial Competency and Access to Venture Capital

Wang (2013) studied the impact of microfinance on the development of small and medium enterprises in Ghana. The study found out that SME characteristics are very important in determining the likelihood of getting micro financing funds. The study concentrated on product innovation efforts, managerial and entrepreneurial attitudes as the main characteristics of an entrepreneur. The results indicated that the factors are key in determining the likelihood of receiving micro financing. Whereas the study concentrated on microfinance as the main source of finance in Ghana, this study considered VC as the source of finance in Kenya, and determined how both entrepreneurial and firm characteristics affect access to VC in Kenya.

In their study Fatoki and Odeyemi (2010) investigated the determinants of access to trade credit by SMEs in the Eastern Cape Province of South Africa. Managerial competency, Networking, Business information, Location, age and size were the main study variables. They used the quantitative research design and probability sampling method was used for sampling. Data analysis was through descriptive statistics and logistic regression. Managerial competency(especially higher education and related experience),business plan, relationships with banks and the location of the business were found to be the most important determinants of access to trade credit by new SMEs. Networking, Business information and age did not affect access to trade credit. Unlike this study, the current study is concerned with venture capital as a possible source of finance and firm characteristics as one of the factor that can affect access to trade credit. The current research considered both firm and entrepreneurial characteristic and access to venture capital in Kenya.

In their study Garwe and Fatoki (2012) analysed the impact of gender as an SME characteristics and access to debt finance in South Africa. Descriptive statistics and a logistic regression were used. The empirical findings of the study were that the female-owned SMEs were significantly smaller than the male-owned SMEs in terms of number of employees. Female owners were also likely to be less educated and also less likely to have collateral. The results indicated that there were gender differences in some but not all of the entrepreneurial factors. Whereas this research focused on of one characteristic of an entrepreneur; gender, and access to debt finance, the current study considered more than one entrepreneurial characteristic as well as firm characteristics on the access to VC in Kenya.

Ochieng, Masoud, and Mwirigi (2013) explored the determinants of uptake of credit Products by SMEs in the manufacturing industry in Kariobangi Nairobi-Kenya. They analyzed the relationship between borrower's and firm characteristics and uptake of credit products by SMEs. Descriptive research design

was used and analysis of the data was with the aid of the Statistical Package for Social Sciences (SPSS). The study found out that business characteristics that correlate positively with uptake of credit among SMEs were business size and age of business. Owners' characteristics have a negative correlation with the uptake of credit products. The study concentrated on the manufacturing industry. Unlike this study, the current study considered effect of entrepreneurial and firm characteristics on access to venture capital across all SMEs sectors in Kenya.

Fatoki and Asah (2011) investigated the Impact of Firm and Entrepreneurial Characteristics on Access to Debt Finance by SMEs in South Africa. Data was collected through questionnaire in a survey. Age of the firm, the size of the firm and the availability of collateral, location and insurance, industry and business information were the main firm characteristics. Data was statistically analyzed using descriptive statistics, Pearson correlation and logistic regression. The results indicate that firm and entrepreneurial characteristics impact on access to debt finance by SMEs. The study concentrated on access to debt finance. The current study extends this study by investigating if the same characteristics affect access to venture capital by SMEs in Kenya.

Brush, Patricia and Greene (2014) in their study, bridging the Gender Gap in Venture Capital examined possible reasons why fewer than 5percent of all SMEs receiving venture capital had women on their executive teams. They found out that, many fundable women entrepreneurs had the skills and experience to lead high-growth ventures. Nonetheless, women were consistently left out of the networks of growth capital finance and appeared to lack the contacts needed to break through. Whereas only one characteristic; gender of entrepreneur that could affect access to venture capital financing was considered, the current study will extend this study by incorporating other entrepreneurial characteristics and the firm characteristics.

Ngugi, Mcorege and Muiru (2013) investigated the Influence of Innovativeness on the Growth of SMEs in Kenya using descriptive survey and exploratory design. Descriptive statistics and inferential data analysis method was to analyze the data. The study found out that innovativeness influences the growth of SMEs in Kenya. The tendency of owner/manager to engage in and support new ideas, novelty, experimentation and creative processes results in new products, services or technological processes which has a great influence on the performance of SMEs. Whereas the study considered only one entrepreneurial characteristic (innovativeness) on growth of SMEs, the current study will address two entrepreneurial characteristics (innovativeness and managerial competency) together with those of a firm on access to venture capital.

Harvie, Narjoko, and Oum, (2013) investigated on the Small and Medium Enterprises' Access to Finance in eight Asian countries. The study collected data on firm and entrepreneurial characteristics and sources of finance. Information on the following characteristics was collected: firm's size, firm's age, firm's ownership type and firm's performance, entrepreneur's capability to innovate, and managerial/entrepreneur background. Entrepreneur's ability to innovate, firm's age, firm's ownership, and firm's performance were found to have a significant impact on access to finance. Unlike this study, the current study narrowed down to only one source of finance; Venture capital, in Kenya.

2.3 Conceptual Framework

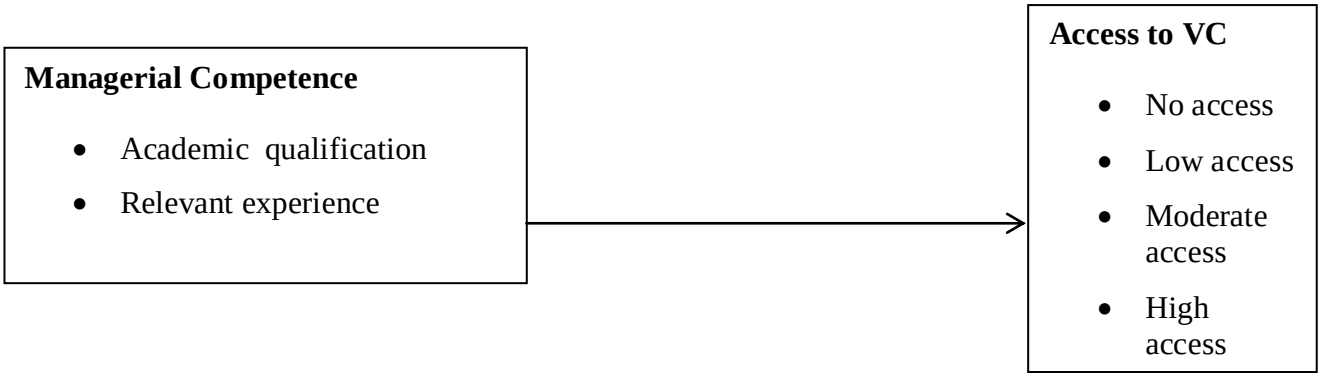

Figure 1: Conceptual Framework

3.0 Research Methodology

Explanatory non-experimental research design was used to establish the effect of highest level of education and qualification of manager/owner and to establish the effect of number of seminar/job training and number of years of experience of manager/owner of SME. The target population of the study comprised of 334 SMEs who appeared in the category of top 100 SMEs lists from 2008-2016 according to KPMG in Kenya. Dillman, (2011) formula of sample calculation guided the calculation of the desired sample size of 178SMEs. The study used semi-structured questionnaires with both open and closed-ended questions. The data was analyzed using both descriptive and inferential statistics.

4.0 Results and Discussion

4.1 Descriptive Statistics

Table1: Firm Managers/owner Length of Operation

Duration	**Percent (%)**
0-4 years	6.9
5-9 years	42.4
10-14 years	33.3
15-19 years	15.3
20 years +	2.1
Total	100

Results in Table 1 show that 6.9% of the respondents had served for 0-4 years, 42.4% for 5-9 years, 33.3% for 10-14 year, and 15.3% for 15-19 years while only 2.1 had served for more than 20 years. This

implies that majority of the firm managers of Small and Medium Enterprises in Nairobi had a wide experience since they had worked for a longer period of time and thus were able to understand the business environment

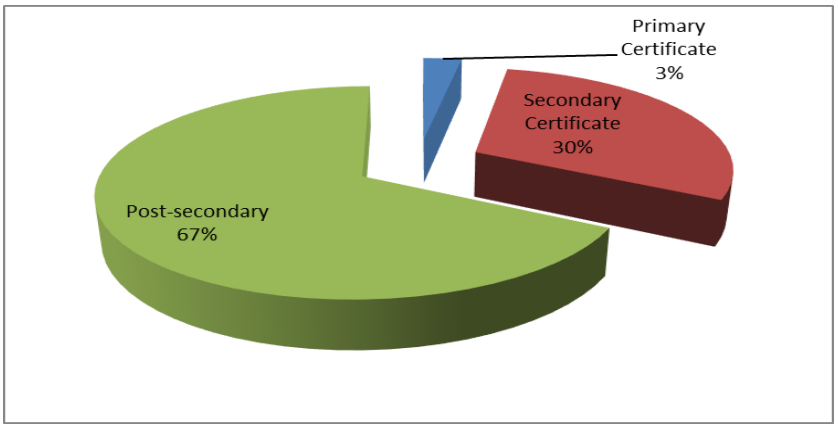

Figure 2: Highest Level of Education

Results in Figure 2, shows that (67%) of the respondents had post-secondary training, 30% had secondary education while only 3% had primary education. This implies that majority of the respondents were able to read and understand the questionnaire. According to the study conducted by Fatoki and Odeyemi (2010), managerial competency(especially high education and related experience),business plan, relationships with banks and the location of the business were found to be the most important determinants of access to trade credit by new SMEs.

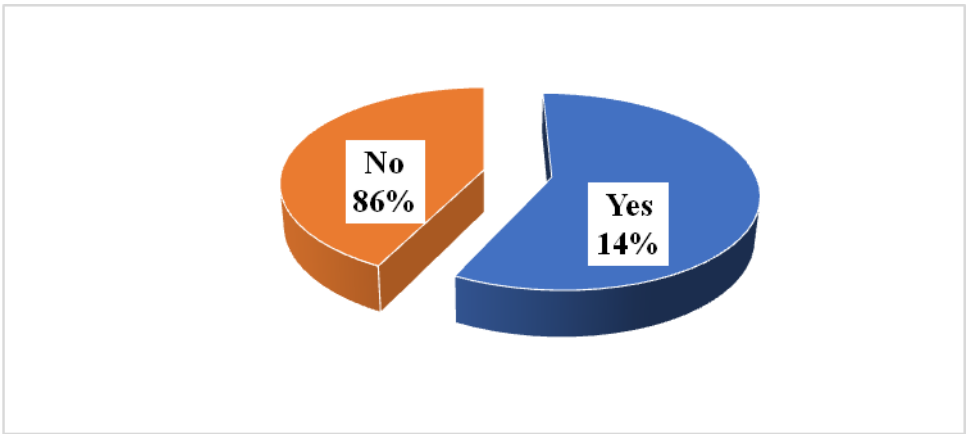

Figure 3: Membership of Professional Body

The respondents were asked to indicate if they were members of any professional body which are relevant to their firms. Results show that 86% were not members of any professional body while only 14% were members of a professional body.

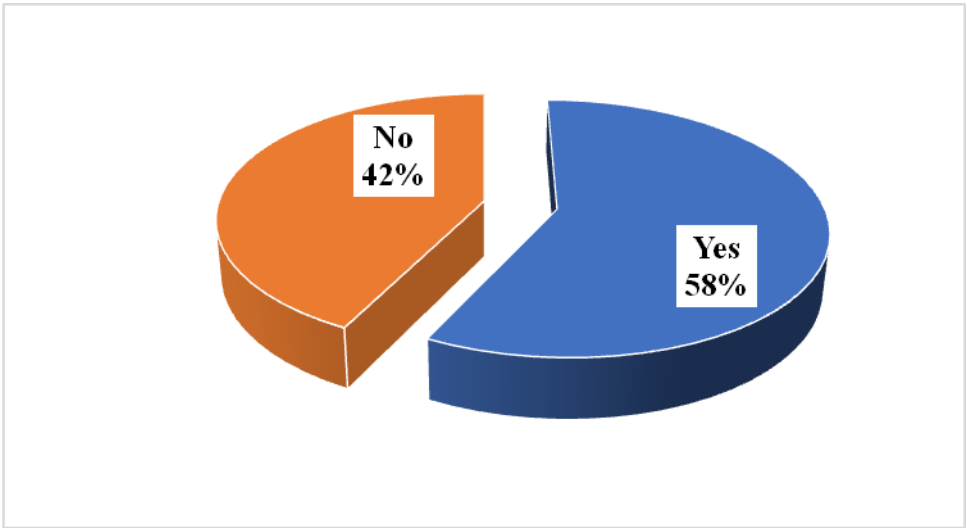

Figure 4: Venture Capital Funding in Future

Figure 4 show that 58% indicated that they hoped to be funded in future while 42% indicated that they did not see this happening in the future. This implies that majority of the SMEs in Nairobi do not have adequate capital. Small and Medium Enterprises are drivers of economic expansion in both developed and emerging economies, whose success is largely dependent on access to adequate financing (Njama, 2013). According to Clark and Juma, (2013), the fundamental reasons behind SMEs poor access to finance can be found in their unique characteristics.

Table 2: Venture Capital Access

Proportion of Venture Capital	**Percent**
Between 1% - 33%	19
Between 34% - 66%	57
Between 67% - 100 %	24

Total	100

Table 2 shows that 19% of the respondents received 1-33% of the venture capital applied, 57% of the respondents received 34-66% while 24% received 67-100%. According to Deloitte (2009), venture capitalists mainly focus on; market attractiveness, product/service, the entrepreneur, the management team and financial considerations. Once the VCs are comfortable with the screening, they negotiate the terms and condition of the investment with the entrepreneur, with the aim of controlling the corporate decisions and minimize the potential cost and risk (Ndabeni, 2014).

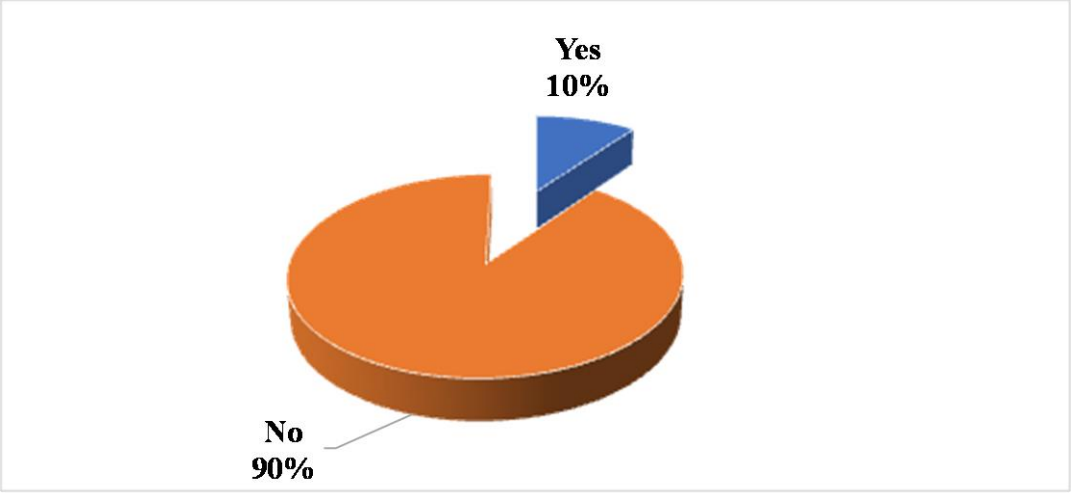

Figure 1: Satisfaction with the Venture Capital Received

Figure 5 shows that 90% of the respondents indicated that they were not satisfied while only 10% indicated that they were satisfied. According to KNBS (2016), equity financing account for only 4.1 percent of all the sources of capital utilized by SMEs. With the availability of the funds in Kenya, it is not clear why SMEs uptake to VC is very low yet they are still struggling to raise capital. According to Nour, (2009), the key aspect of interest to VC when funding a firm include the product/service offered by the firm, the market served by the firm, the management team of the firm and the financial projection of the firm.

4.1 Inferential Statistics

Table 3: Access to Venture Capital and Managerial Competency

Access to venture capital (1=Yes, otherwise 0)	**Coefficients**
Constant	-0.0899
	(-0.16)

Level of education/experience	0.138**
	(3.13)
pseudo R^2	0. 43

t statistics in parentheses

** p< 0.1, ** p < 0.05, *** p < 0.01*

Table 3, establishes that level of education/year of experience is a significant predictor on access to venture capital, explaining 43% of the variations which is higher given a univariate regression framework under investigation. The study establishes that managerial competency as assessed by the level of education that managers possess has a positive effect ($\beta = 0.138$) which is significant at 5% level of significance. The positive effect on education can be assumed to be associated with good management practices and those SMEs with good management have a higher likelihood of access venture capital. This conforms to the literature that supports the proposition that difference in managerial competencies, i.e. level of education and managerial experience to a great extent explains the variances in access to investment funds.

The results presented in Table 1.4.7 infer that, the higher the management competency of the SMEs owner/manager, the more likely are the SMEs they run to receive venture capital. Management competency is therefore a must have for firms seeking capital through venture capital as it trades offs opacity of the firm. As such managerial competency addresses informational asymmetries between the seekers and financiers of capital. In addition to mitigating the informational asymmetries, a competent management enables venture capitalists to identify and select them for having specialist knowledge in running enterprises.

Table 4: Managerial Competency and the Ease of Access to Venture Capital

Dependent Variable: Access to venture capital	**Not accessible**	**rarely accessible**	**fairly accessible**	**Easily accessible**
Constant	23.46	5.769***	4.478***	-6.931***
	(0.02)	(3.91)	(4.28)	(-3.64)
Managerial competency(Level of education)	-19.29	2.490***	1.439***	1.425***
	(0.02)	(4.63)	(4.57)	(3.18)
pseudo R^2	0.267			

t statistics in parentheses

** p< 0.1, ** p < 0.05, *** p < 0.01*

The results in Table 4 show that the coefficients on managerial competency are positive and significant at 5% level of significance. From these results we infer two things. Possession of managerial competencies more than simply skills and abilities in the face of increased competition among SMEs is a pre-requisite for accessing the scarce and much needed venture capital.

The positive and significant effect of managerial competency on access and ease of access of venture capital is well placed in the context of existing studies especially those conducted by Wang (2013) in China where they showed that managerial and entrepreneurial attitudes are most important is influencing the access to micro funding funds by Chinese SMEs. Similar assertion is also made by Fatoki and Odeyemi (2010) in South Africa while investigating the determinants of access to trade credit by SMEs where they established that besides an SME's characteristics, managerial competency explained SMEs access to trade Credit. In Kenya, Ngugi, Mcorege and Muiru (2013) also documents the central role of management competency in explaining growth and access to credit by SMEs.

Results revealed that level of education and the professional qualification of firm manger/owner had positive influence on access to venture capital financing among SMEs in Kenya which is supported by the coefficient of determination which shows that managerial competency influences access to venture capital financing. The test for significance also showed that the influence was statistically significant and hence the hypothesis put forth in chapter one that an entrepreneur's managerial competency does not have significant effect on access to venture capital is refuted.

5.0 Conclusion

The objective of the study was to determine effect of entrepreneur's managerial competency on access to venture capital by selected SMEs in Nairobi Kenya. From this objective, it was hypothesized that an entrepreneur's managerial competency does not have significant effect on access to venture capital and based on the results the hypothesis is not supported and thus conclude that managerial competency is a significant predictor on access to venture capital.

6.0 Recommendation

Given that level of education and professional qualification of SME owner/manager positively affects SMEs access of venture capital financing, firms should invest in human capital of their management through various strategies. For instance, investing in training gives employees the opportunity to develop new skills and accumulate the knowledge they need in order to achieve specific organizational and personal goals with the priority being to train managers so that they can be able to cope with the challenges which hinder business success.

Owners of the SME's should strive hard to make use of the policies concerning the SME's development by collaborating with the government and other stake holders whenever possible especially in education and training which are essential for success of any business. From this study, it is evident that managerial competencies will have a major impact to SME's in Kenya. Therefore, it is crucial for the government of

Kenya to take note of the challenges hampering SME's calling for the need to enhance education and training for SME's.

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23. Influence of Strategic Staff Training on Performance of Public Water Companies in Kenya

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Abstract

Staff development is formal and systematic modification of employees' behaviors through instructions. The process equips workforce with requisite knowledge, skills and attitude that would in pursuance of organization goals and objectives. These skills would aid in response in environmental demand and skills adaptability. Skills deficiency in an organization may lead to inappropriate utilization of resources and injure organization performance. The main objective of the study was to evaluate the influence of strategic training on performance of public water companies in Kenya. The study applied descriptive research design and stratified was used to select 150 respondents who include finance manager, procurement managers and chief executive officers of water companies in Kenya. Data was analyzed through descriptive and inferential statistics. The former had mean, standard deviation, frequency and percentages and the later had correlation and regression analysis. Study findings indicated that there was positive and significant influence of strategic staff training on performance of public water companies in Kenya. It can be concluded that training clarifies procurement policies and guidelines in an organization, it enhances employee's professional development, creates a culture of innovation and creativity and aids in preparation of annual training programs. There is need for embracement of culture of employees' skills development through strategic training.

Introduction

Human capital should be adopted by organization as tools for competitive advantage by profitable and non-profitable institutions (Banda, 2009). Through this approach organization capabilities can be changed through pursuance of perception, job satisfaction, motivation and commitment. Through this approach resources spillage and wastage can be mitigated through organization and application of human resources planning. Berger and Humphrey (2007) assert that it's not economical to allocate professional human skills while undertaking specific tasks.

There are alternative strategies which have been developed by institutions to impact requisite skills. Sultana (2012) argued that organization respond to internal and external changes depending on prevailing skills gaps. Those organizations which are malnourished on procurement professional skills incurs huge costs in acquisition of their respective raw materials. Formal and informal skills development can be adopted by State Corporation to bridge any skill gap amongst its heterogeneous employment work force (Appiah, 2010). Through these training an institution would manage procurement life cycle, improve on client relationship management and mitigate against conflict which may arise during procurement life cycle (Seleim, 2007).

Staff development is formal and systematic modification of employees' behaviors through instructions. The process equips workforce with requisite knowledge, skills and attitude that would in pursuance of organization goals and objectives. These skills would aid in response in environmental demand and skills adaptability. Furthermore, human capital development has capacity in optimizing organization needs being met. Staff development successful contribution in an organization is anchored on organization capacity to develop employees in line with their needs. This would deter organization capacity to resist changes emanating from development. Staff development should meet both short term and long-term goals. Though, it is anticipated to be beneficial there is need to align employee needs with organization plan. Work place competencies improvement creates competitive advantage in an organization since it meets employee's needs with minimal delays (Sultana, 2012; Ndumbi & Okello, 2014). Hence, the objective of the study was to examine the influence of staff skills on performance of public water companies in Kenya.

Literature Review

The Resource-based View Theory

Resources based view theory (RBV) was documented by Peteraf and Barney (1991). The theory argues that there is need for an organization to understand its resources capabilities and constraints that may contract its capacity to achieve competitive advantage. According to Wolf (2013) although an organization should optimize its resources gathering strategies so as to minimize odds of resources spillage and pilferage of their capacity and capabilities. Organization productivity capacity will be dependent on its capacity to covert internal and external resources into sources of competitive advantage (Hooley & Greenley, 2005). Moreover, firms should accumulate rare resources that may be sourced from human skills and non-depleting resources that may guide an organization while operating in a volatile environment.

RBV model postulates that firms operating in a certain industry have capacity to pursue resources that may lead to competitive advantages. This will be possible through resources heterogeneity that may differ across different sectors. The heterogeneity of resources is considered as main tool for creation of competitive advantage. RBV creates interdependence on internal resources, strategy and organization performance. To sustain competitive advantage within an organization there is need for alignment of organization goals in line with firm's capacity to generate and deploy resources. The assertion that corporation may achieve competitive advantage is a contradiction that competitive advantage is only achievable to corporations that have their focus on customers and competitors. The theory is appropriate for the study since there is need for water companies to evaluate their staff skills capacity and plan for development needs so as to optimize performance of respective water companies.

Empirical Literature Review

Ndumbi and Okello (2014) investigated the role of staff training on procurement performance in state corporations in Kenya. Cross sectional research design was adopted and simple random sampling was used to select respondents. Univariate and bivariate analysis was used to analyze the data. Positive relationship between staff training and procurement performance was reported. The study should have

incorporated qualitative data and analyzed the data through exploratory factors analysis to examine interrelationship of study variable attributes adopted as measurement of the research instrument.

Seleim, Ashour and Bontis (2007) examined the effect of human capital on organization competitive advantage. Descriptive research design was adopted. Questionnaires gathered primary data. Cross sectional research design was adopted. Inferential and descriptive statistics were adopted to analyze data collected using questionnaires. Positive relationship between human capital and competitive advantage was reported. There was need to carry data diagnostic tests prior to fitting regression models. Further, reliance on only quantitative data may have created biased response especially because the research instrument had closed ended responses. Alternative analysis approach ought to have been adopted to confirm or contradict regression analysis findings.

A study conducted by Barsemoi, Mwangagi & Asienyo (2014) to assess the factors influencing procurement performance in private sector in Kenya focused on the procurement practices in Henkel Chemicals (E.A). Cross sectional research design was adopted and primary data was gathered through use of questionnaires. Bivariate and Univariate approaches were used to analyze the data. It was found that staff training and development positively contributed towards procurement performance.

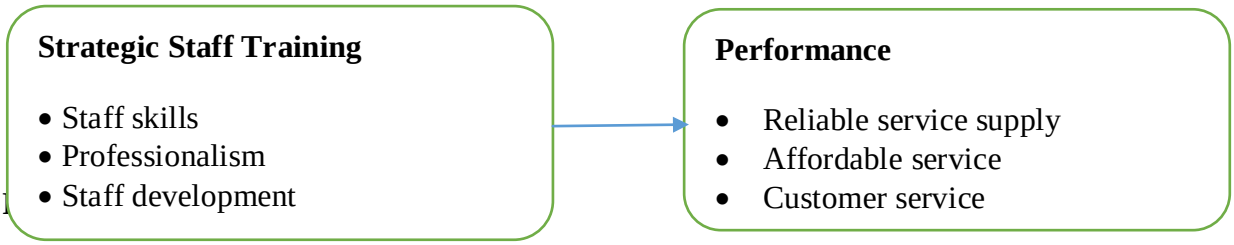
Ajisafe, Orifa and Balogun (2015) investigated the influence of human capital on organization performance. Descriptive research design was adopted and primary data collected from 62 respondents of five commercial banks. Correlation and descriptive statistics were used to analyze the data. Positive and significant influence of human capital on organization performance was reported. It was recommended that organization which are geared towards superior performance should devout resources on training and development of its human capital. This will not only enhance performance but also create job security which will motivate and create commitment amongst employees. These findings cannot be generalized in Kenya owing to different state of economic growth with Malaysia. Further the study deployed quantitative data only.

Tessema (2015) investigated the impact of human capital development on firm performance amongst foot wear companies in Ethiopia. Cross sectional research design was adopted. Semi structured questionnaires were used to collect primary data. Inferential and descriptive statistics were used to analyze the data. Positive and significant impact of human capital on firm performance was documented. Although, the study adopted inferential statistics to analyze the data it failed to test for normality which is an assumption for correlation and regression analysis. This would have created likelihood of drawing biased conclusions. Further, the study was in manufacturing sector thus it was not easy to generalize the findings in Kenya economic characteristics are different and also in different social and political environment.

Chigoize, Aga and Onyia (2018) investigated the influence of human capital development on organization performance of manufacturing companies in Nigeria. Survey research design was adopted. Primary data was collected using semi structured questionnaires. Univariate and bivariate statistics was used to analyze the data. Positive effect of human capital on organization performance was reported. It was concluded that in order to enhance employee motivation and commitment there was need to continuously allocate resources geared toward human capital development this will not only motivate and commit them but also

enhance organization performance. These findings may contrast state corporations' situations since they are driven by profitability while state bodies are geared by social economic support.

The conceptual framework of the study hypothesized that staff skills have influence on performance of public water companies. Strategic staff training was operationalized staff skills, professionalism and staff development. Performance was operationalized as reliable service supply, affordable services and customer service.



Research Methodology

The study applied descriptive research design which according to Sekaran and Bougie (2013) should be applied when the researcher seeks to respond to questions on what, when and why the current situation is. The design has been applied by past studies such as Tesema (2015) and Selemi et al., (2007).

The target population was chief executive officers, procurement managers and finance managers of 79 public water companies in Kenya.

Table 3.1 Target Population

Position	Number of Employees	Percentage
Procurement management	79	33.3
Finance Manager	79	33.3
Chief Executive Officer	79	33.3
Total	**237**	**100**

Stratified sampling technique was applied while selecting respondents from water companies. Oso and Onen (2009) argues that stratified sampling is adopted when researcher seeks to select respondents in proportionate sizes. Simple random sampling was applied to allow all respondents to have equal chances of being selected in the study.

Simple random sampling was adopted to give all respondents from the target population equal likelihood of participating in the study. Yamane (1968) sample size formula was adopted to determine the sample.

$$n = {}^{N}/_{1 + N_{e^2}}$$

Where, n=sample size, N= population size, e= the error of sampling. This formula was used to calculate the sample size.

Thus n= $237/1+ 237_{(0.05)}^{2} = 150$.

A sample of 150 respondents was distributed as follows.

Table 3.2 Sample Size

Position	**Number of Employees**	**Percentage**
Procurement management	50	33.3
Finance Manager	50	33.3
Chief Executive Officer	50	33.3
Total	**150**	**100**

Findings and Discussions

Descriptive Statistics on Strategic Staff Training

The third objective of the study analyzed the effect of strategic staff training on performance of public water companies in Kenya. Results in Table 4.1 indicates that majority agreed (mean = 4) that training has clarified procurement policies in public water companies, their staffs have professional development targets per annum, through training employees' roles and responsibilities are clarified and courtesy of strategic staff training they have called for achievement of certain procurement professional qualification skills. Majority 54% strongly agreed and 40.3% agreed that coaching programs improves staff skills.

Majority 49.6% strongly agreed and 37.4% agreed that training creates an opportunity for creativity and innovation in public water companies. Further, majority 54% strongly agreed and 38.1% agreed that public water companies have succession plans amongst their employees. Employees in public water companies are grouped as per their specialties as indicated by 53.2% who strongly agreed and 30.9% agreed. Majority 51.8% agreed and 27.3% strongly agreed that through staff trainings there are able to develop annul procurement training program. On overall majority agreed that strategic staff skills had influence on performance of public water companies in Kenya (mean = 4, standard deviation = 1).

Human capital development is one interpreted as sense of concern for the employees and their growth and two as sign of commitment to what employee can offer and hence a change of attitude towards management and the company as a whole. A reiteration by Ethiopian study of foot ware producing companies by Tessema (2015) discovered that human capital development will always yield positive performance. In line to this, Chigoize et al., (2018) in Nigeria says that firms need to allocate resources for their staff development for increased motivation and great performance emanating from learning to do things in different ways.

Training is not in vain for any firm that chooses to sharpen their skills and techniques of handling and processing services and products (Khakayi, 2016). Many organizations may perceive training as insignificance even leading to a cut in budget for it in their book account especially when finances are limited. Ultimately, this would wound quality of services rendered. Khakayi (2016) noted that training feedback are significant when it comes to staff operating in public university. It also emerges that staff training give an edge in this era of competition where placements have gone down. Osoro (2016) joins by advocating for value of training which goes further to strengthen the motivation of employees working in Narok County.

Table 1 Descriptive Statistics on Strategic Staff Training

	n=139						
	SD	**D**	**N**	**A**	**SA**	**Mean**	**Std. Dev**
Training has clarified procurement policies and guidelines in our organization	3.6	7.2	24.5	36	28.8	4	1
Our staffs have professional development targets per annum	0.7	3.6	10.8	48.2	36.7	4	1
Staff training has clarified employees' roles and responsibilities	0.7	3.6	13.7	38.1	43.9	4	1
There is a call for achievement of certain procurement professional qualifications skills	0	2.9	15.8	44.6	36.7	4	1
Coaching programs improves staff skills	2.2	0	3.6	40.3	54	4	1
Training creates opportunity for creativity and innovation in our organization	1.4	2.2	9.4	37.4	49.6	4	1
Our organization has succession plan amongst procurement staffs	0.7	2.9	4.3	38.1	54	4	1
Our employees are grouped according to their specialties	0	4.3	11.5	30.9	53.2	4	1
Staffs training aids in preparation of annual procurement training program	2.2	9.4	9.4	51.8	27.3	4	1
Overall average						**4**	**1**

Regression Analysis

The hypothesis of the study stated strategic staff skills had no significant influence on performance of public water companies in Kenya. Results in Table 4.2, has an R squared of 0.453, which indicates that 45.3% of changes in performance of public water companies can be explained by strategic staff skills while the remaining percentage can be accounted by other factors excluded from the model.

ANOVA results has an F statistic of 113.298, p value <0.05, that indicates significant influence of strategic staff skills and performance of public water companies in Kenya. Strategic staff skills have positive and significant influence on performance of public water companies in Kenya ($\beta = 0.818$, $t= 10.644$, p value < 0.05). This implies that unit increase in strategic staff skills increases performance of water companies by 0.818 units.

An analysis of the influence of strategic staff training on performance of public water companies in Kenya was sought via the third objectives. Staff training was metricized by checking the skills, professionalism and staff development. Both regression and correlation analysis indicated a positive and significant influence of strategic staff training on water companies' performance. The null hypothesis of no significance was thus reject implying the latter. Similarly, Ndumbi and Okello (2014) exploratory study established that staff training has great positive impact on the procurement performance of state corporations in Kenya.

Barsemoi et al., (2014) echoes the same, in study of Henkel Chemicals in Kenya where staff training and development are found to positively affect procurement performance. Barsemoi add that training serves as sharpener to the skills and knowledge already at hand and therefore for career and work growth staff need to be trained not only to equip them but to remind them the basic which forms the fundamental in procurement processes. Alisafe et al., (2015) too avers that improvement in human capital always yields positivity in how employees see things and thus helping they pay keen attention ultimately improving the organization performance. Training further, create a form of job security that encourage and motivates staff to be more commitment in their duties.

Performance = 0.009 + 0.818*Strategic Staff Skills …….... (4.3)

Table 4.2 Regression Analysis on Influence of Strategic Staff Training and Performance of Public Water Companies in Kenya

Model Summary					
R	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**		
0.673	0.453	0.449	0.742525		
ANOVA					
	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**

Regression	62.466	1	62.466	113.298	0.000
Residual	75.534	137	0.551		
Total	**138**	**138**			

Coefficients

	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	0.009	0.063		0.145	0.885
Strategic Staff Training	0.818	0.077	0.673	10.644	0.000

Conclusion and Recommendations

Strategic staff training has positive and significant influence of performance of public water companies in Kenya. Consequently, it can be concluded that training clarifies procurement policies and guidelines in an organization, it enhances employee's professional development, creates a culture of innovation and creativity and aids in preparation of annual training programs. Moreover, staffs can be credited with improved quality of customer service, enhanced response time and minimization of likelihood of water and sewerage spillage.

There is need for embracement of culture of employees' skills development through strategic training. Strategic training can be achieved through setting of training targets and mentorship programs. Moreover, public water companies should clarify its procurement policies and guidelines, ensure compliance with procurement ethics and standards and promotes creativity amongst its staffs.

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24. Moderating Effect of Top Management Support on the Relationship between Macro Environment and Performance of Donor Funded Health Projects in Kenya

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Abstract

This study provides an empirical investigation on the effect of top management support: involvement, policies and strategies, and provision of resources on the relationship between the macro environment and the performance of donor funded health projects in Kenya. Empirical evidence indicates that most donor funded health projects in Kenya experience time and cost overruns as well as quality issues. The study adopted explanatory and descriptive research designs. A census of all the sixty nine donor funded health projects initiated between 2008 and 2018, and were ongoing was conducted. A semi-structured questionnaire was administered to managers of the donor funded health projects and the heads of donor funded projects at the ministry of health. Regression results indicate that top management support had a positive significant effect on the relationship between the macro environment and the performance of donor funded health projects in Kenya. The study recommends that top management should get involved in the donor funded health projects from the onset, besides developing appropriate policies and strategies for the projects, and providing resources to the projects to ensure thy perform well.

Key words; Social-cultural, Environment, Performance, Donor, Funded, Projects

1.1 Introduction

Governments just like business organizations are increasingly using projects in their work to provide services to their citizens (Hyvari, 2016).The projects cover a wide range of areas which include health, water, and sanitation, agriculture, education, security, energy, infrastructure, and tourism. The Kenya Vision 2030 categorizes the government projects into economic, social and political projects which it calls the pillars of Vision 2030. Vision 2030 in Sessional paper 10 of 2012 identified flagship projects which will directly address priorities in key sectors such as agriculture, education, health, water, and the environment. According to Vision 2030, health projects are critical to the attainment of all the other pillars of Vision 2030 because they ensure the availability of healthy and sufficient manpower.

Many high cost projects undertaken world over tend to have performance and sustainability challenges which is a concern for key donors including the Asian Development Bank, the World Bank, as well as bilateral aid agencies (Mugambi, 2014). According to Kiprop, Nzulwa and Kwena (2017), little development has taken place in Sub-Sahara Africa despite donor funding for over a half a century. High levels of unemployment, indebtedness, poverty, poor health and poor economic performance are still prevalent in most of the sub-Saharan countries.

According to The Project Management body of Knowledge (PMBOK) guide, project performance is measured in terms of budget or cost, time and quality which are the three constraints of project performance (PMI, 2013, p. 1). According to Gaturu and Muturi (2014) time is a critical factor and measure of project performance. The Bostock Marketing Group (BMG) Research (2015) also observed that budget and quality standards are critical measures of project performance.

The performance of a project is good if it is completed within the planned timelines. World over, many projects are experiencing time overruns. According to Memon (2012), 79.5 percent of public projects and 66.25 percent of private projects experience time overruns in Malaysia. The 2017 edition of Deloitte Africa Construction report indicated that 87 percent of projects in Kenya experienced time overruns. Solis-Carcano, Corona-Suarez and Garcia- Ibarra (2015) observed that prolonging the project execution time will result in cost overruns due to the extra expenses on materials, personnel,financial costs and contract penalties.

Cost is a measure of the total of what has been spent on the project to the current level. It is dynamic and not static (Adeojo, 2012). According to PMI (2013), cost is one of the measures of the performance of projects alongside time and quality. Memon (2012) concurs that cost is a critical measure of the performance of a project. In Malaysia, 53.2 percent of public projects and 62.8 percent of private projects experience cost overruns with an overrun of between 5 – 10 percent of project cost (Memon). In Kenya, 48 percent of the projects experience cost overruns (Labuschagne, 2017). Cost overruns are caused by inflation on materials (Olawale & Sun, 2018), time overruns (Solis-Carcano *et al*.,2015) and rework (Hwang, Thomas & Haas, 2009). This study investigated the effect of the social-cultural environment on the cost measure of performance.

Every project has an anticipated level of quality based on the details and specifications set out by the users (Stojcetovic, Lazarevic, Prlincevic, Stajcic & Miletic, 2013). According to Ng and Anuar (2011),

quality performance is concerned with the quality of the project's final outcome and the quality objectives of the project. Mortaheb *et al*., (2012) observed that a project outcome has quality if it satisfies the client's overall expectations and if it achieves the technical specifications. Quality is a key measure of the performance of a project.

Akanni et al (2014), observed that the social-cultural environment consists of customs, lifestyles, and values that characterize a society. Further , the reserachers opined that population demographics, rising educational levels, norms and values, language and attitudes toward social responsibilities are examples of socio-cultural variables. Musa, Amirudin, Sofield & Musa (2015), observed that social factors concern culture, health consideration and the general lifestyle of people. According to Gudiené *et al*. (2013), social factors include cultural issues, health consideration and the general lifestyle of people. These variables have the potential to affect organizations that operate within the society. Community hostilities towards a medical initiative will, for example, hinder the uptake and success of the project.

Endemic corruption and poor reporting structures in the public sector in Kenya are causes of delays in donor funded health projects (Department of International Development (DFID), 2012). Gaturu and Muturi (2014), observed that delays plague the delivery of donor funded projects in many developing countries. The consistent delays in the completion of projects and cost overruns in Kenya just like in most parts of the developing world calls for research to determine the factors that are causing poor project performance.

1.1.2 Top Management Support

For project managers to successfully complete their projects, the top management must be actively involved (Zwikael, 2008). Top Management should determine the various involvement processes which will affect the performance of the projects. Zwikael identified the six main involvement processes; develop project procedures, involve the project manager during the initiation stage, support ongoing project management training programmes, establish a project management office, develop a supportive project organizational structure, define clear project performance measures and support projects in quality management.

Top Management support is an essential factor in project performance (Khan,Long & Iqbal, 2014). For some projects, it is a critical performance factor. Kandelousi, Ooi and Abdollahi (2011), indicated that top management support in projects includes; helping teams in dealing with hurdles, encouraging workers and creating a sense of commitment to work. Khan et al also opined that top management support takes the form of providing timely financial resources, allocation of human and physical resources and delegation of power and authority to project leaders necessary for the successful completion of projects.

The performance of projects is affected by top management support both directly and indirectly (Intakhan, 2014). Direct effects include; top management playing a vital role in enabling projects to achieve their objectives, directing and motivating workers, providing projects with materials, equipment and enhancing commitment to work. Intakhan identified the indirect involvement of top management in projects in planning, controlling, checking, evaluating and making decisions about training, performance evaluation and determining policy.

According to Iqbal, Long, Fei and Bukhari (2015), top management support is a key factor in attaining project performance. Top management is the joining glue between the project manager's transformational leadership behaviours and project performance factors in construction projects in Pakistan. According to Iqbal et al, top management should enable the project managers to execute their roles by providing them with the required power and authority. Project managers may fail to deliver successful projects even with excellent skills due to the lack of top management support (Meredith & Mantel, 2010).

1.2 Statement of the problem

Kenya's vision 2030 has identified health as a key factor in the attainment of the vision objectives. This explains the many donor funded projects implemented in the country's health sector. However, the Wolfensohn Center for Development working paper 8 of 2009 observed that donor funding has not produced the desired results in Kenya (Mwega, 2009). The poor performance of health projects dates back to the 1950s (Ika et al., 2011). According to Muchungu (2011), 58 percent of donor funded projects in Kenya show poor performance as measured by time, budget, scope and client satisfaction. According to the 2017 edition of Deloitte Africa report, approximately 48 percent of all projects report cost overrun and 87 percent of the projects have a time overrun in Kenya. Furthermore, many health projects initiated in Bomet County have stalled (Kirui & Moronge, 2016).

According to the Independent Commission for Aid Impact (ICAI, 2014), DFID programmes underperformed as compared to the global and regional averages since the level of child mortality in Kenya is still high. ICAI, (2014) further observed that the Global Fund's monitoring system judged the performance of the main grant for malaria to Kenya during the period 2013 – 14 as below expectations. An independent donor review concluded that the delays for implementation of Global Fund grants in Kenya typically ranged between 6 and 24 months (ICAI, 2014) implying that the projects fail.

A study by Kirui and Moronge (2016) recommends that further studies should be carried out to determine the effects of corruption and politics on the performance of health projects in Kenya. Due to the empirical evidence on the poor performance of donor funded health projects, and the existing gaps in research, this study aimed at determining the effect of the social-cultural environment on the performance of the donor funded health projects in Kenya.

2.0 Literature Review

2.1 Theoretical Review

The study was underpinned on the theory of constraints. The theory of constraints was developed by Dr. Eliyahu M. Goldratt in his 1984 book "The Goal". According to the theory, a very small number of constraints limit any manageable system in achieving more of its goals (Chowdhary, 2009). The attainment of project goals is affected by both internal and external constraints. If these constraints are not managed well, projects are bound to fail (Kisilu *et al.,* 2016). The theory provides for ways of identifying the key factors that limit (constrain) the achievement of goals. It also provides for ways of ensuring that the constraint is not a limiting factor by improving it in a well-organized manner. This is by introducing top management support as a moderating variable. Kiprop, *et al.* (2017), and Maina & Gathenya (2014),

suggested that the overall performance of a project could be improved by focusing on fixing the main problem (constraint).The theory of constraint provides a good base for determining the most limiting constraint to the attainment of project goals. This base was applied in this study to determine the effect of the top management support on the performance of donor funded health projects in Kenya.

2.2 Top Management Support and Project Performance

Moderating variables determine how strongly the dependent and independent variables relate. This study analyzed the effect of the top management support on the macro environment factors and the performance of donor funded health projects in Kenya. Khan et al, (2014) in their study on top management support, a potential moderator between project leadership and project success; a theoretical framework found out that, top management support is a glue between project leadership behaviours and project success that can strengthen or weaken the proposed relations. Khan et al, conceptualized top management support as a potential moderator. In their study Iqbal et al.(2015) concluded that a project's top management support had a link in the moderating effect between the transformational leadership and the success of construction projects in Pakistan. Top management support can lead a project towards success or failure.

In their study on the effect of the senior management's support on the relationship between factors affecting employees and performance in the Al-Zawiya University of Libya, Dukhan,Mohamad and Ali (2017) found out that top management plays a vital role in achieving synergy between the activities and operations of an organization. Dukhan et al. further revealed that top management ensures that workers understand the organizational goals and provides the necessary conditions for achieving them. The top management also meets the employee's needs, empowers them and motivates them to be initiative and creative (Dukhan et al, 2017).

3.0 Research methodology

This study applied explanatory and descriptive research designs. The combined designs have the potential to offer a more robust research (Caruth, 2013). A combination of explanatory and descriptive research designs will provide more insights into the subject of investigation and capture information that could have been left out when using only one study design. While the descriptive research seeks to answer the question "what is going on?" explanatory research will answer the question "why is it going on? This will enable the researcher to simultaneously understand mechanisms, explore associations and document risks (Morse & Niehaus, 2016). Explanatory research will not just describe, but explain the phenomena being studied (Given, 2008).

3.1 The Moderating Effect Model

The moderating effect of top management support on the relationship between the macro environment factors and the performance of donor funded health projects in Kenya, was determined by using the regression model below as recommended by Fairchild and Mackinnon (2010).

Project Performance = $\beta_0 + \beta_1 X_i + \beta_2 Z + \beta_3 X.Z + \mu_i$

Where

Per = Performance of donor funded health projects

β_0 = The constant term

Z = Top management support

X_i = Composite index representing the macro environment factors

β_1 = Coefficient of the macro environment factors

β_2 = Coefficient of the effect of top management support on the performance of donor funded health projects

β_3 = Coefficient measuring the moderating effect of top management support on the relationship between macro environment factors and the performance of donor funded health projects.

If β_3 is statistically different from zero, a significant moderation effect of top management support on the relationship between macro environment and performance of donor funded projects in Kenya is concluded.

4.0 Research findings and discussions

4.1 Descriptive statistics

This study investigated the top management support variable to determine if it moderated the relationship between the macro environment and the performance of donor funded health projects. The findings were as presented in the table below

Top management support

	Frequency	Percent
Yes	42	100
Total	42	100

Source: (Survey data, 2019)

All the respondents acknowledged that top management support had an effect on the relationship between the macro environment factors and the performance of projects as shown in Table 4.9.

4.2 Top Management Support Involvement

The study further investigated the top management support in the initiation, planning, implementation and support and the findings were as in the table below.

Rating Top Management Support

	N	Mean	Std. Deviation
Involvement	42	4.02	.924
Policies and strategies	42	4.00	1.012
Provision of resources	42	3.74	.989
Overall	3.92		0.975

Source: (Survey data, 2019)

The study found out that the donor funded health project's top management were involved in project planning and implementation with an average of 4.02 and a standard deviation of 0.924. They developed appropriate policies and strategies with an average of 4.00 and a standard deviation of 1.012, and they provided adequate resources for the project with an average of 3.74 and a standard deviation of .989. The means of all the three variables used in rating top management involvement in the donor funded health projects approximate 4 on the likert scale which indicates that the top management involvement in the projects was very good. The top management support had a mean rating of 3.92 by the respondents which approximated to 4 on the likert scale, which implies the top management support to the donor funded health projects was very good. This suggests that top management support had a high effect on the relationship between the macro environment and the performance of donor funded health projects in Kenya.

Moreover, the study revealed that a proportion of 78.5 percent agreed or strongly agreed that the project top management were involved in project initiation. Only 11.9 percent were neutral, while 9.5 percent disagreed or strongly disagreed. On whether top management were involved in project planning and implementation 71.5 percent agreed or strongly agreed, 19 percent were neutral, while 9.5 percent either disagreed or strongly disagreed. Of the 42 respondents, 76.2 percent held that project top management provided adequate human resources to the project, while 9.6 percent disagreed and 14.3 percent were neutral. This means that project top management supported the implementation of projects. On whether project top management provided adequate support in the execution of project plans, 35.37 percent strongly agreed, 33.3 percent agreed, 16.7 percent were neutral while 9.5 percent disagreed as 4.8 percent strongly disagreed. Further, 76.2 percent held that project top management policies adequately supported project implementation, 16.7 percent were neutral and 10.2 percent disagreed.

The statement on whether project top management develops workable project strategies was highly supported with 66.7 percent of the responses either agreeing or strongly agreeing with the statement. A proportion of 21.4 percent were neutral on this statement while 7.1 percent and 4.8 percent either disagreed or strongly disagreed respectively. Regarding whether project top management plays their liaison roles well with donors, 45.2 percent agreed while 31 percent strongly agreed. A proportion of 11.9 percent gave a neutral rating, while 11.9 percent disagreed. Three quarters of the responses received

indicated that top management fully supported monitoring and evaluation activities, while 66.6 percent confirmed that top management adequately motivated project team members.

4.3 Regression Analysis

This study further investigated project top management support as a moderating variable. The researcher sought to establish how project top management support affected the strength of the relationship between the macro environment and the performance of donor funded health projects in Kenya. The findings are as shown in the table below

Moderating Effect

	Unstandardized Coefficients		Standardized Coefficients			Correlations		
Model	B	Std. Error	Beta	T	Sig.	Zero-order	Partial	Part
1 (Constant)	2.848	1.431		1.991	.001			
Macro Environment Factors (X)	.130	.503	.213	.258	.03	.020	.042	.039
XZ	.022	.117	.196	.190	.00	.185	.031	.029
Top Management (Z)	.196	.342	.285	.575	.00	.362	.093	.087

a. Dependent Variable: Performance of Donor Funded Health Projects

Source: (Survey data 2019)

The effect of top management support moderation on the relationship between the macro environment factors and the performance of donor funded health projects in Kenya was determined using a regression model as recommended by Fairchild and Mackinnon (2010). According to Andersson, Cuervo-Cazurra and Nielsen (2014), moderation variables modify the theoretical mechanisms between the independent and the dependent variables. Moderation is confirmed when the influence of a predictor variable (X) on a predicted variable (Y) changes across levels of a moderating variable (Z) (Andersson et al, 2014).

The coefficients of all the variables based on the moderating model were found positive and significant at 5 percent significance level as summarized in Table 4.28. From the table, the direct effect of the macro environment on the performance of donor funded health projects had a coefficient of 0.130, while the combined effect of the macro environment and top management support on the performance of donor funded health projects had a reduced coefficient of 0.022. This was found significant at 5 percent significance level (p value = 0.00<0.050). According to Andersson et al. (2014), a moderator variable changes the nature or strength of the relationship between a predictor variable and a predicted variable. Thus, the impact of the macro environment on the performance of donor funded health projects is weakened when top management support is introduced (Andersson et al., 2014).

The fitted model after the moderating effect was;

$$Per = 2.848 + 0.13X + 0.196Z + 0.022XZ$$

Per = Performance of donor funded health projects

Z = Top management support

X = Composite index representing the macro environment factors

From the research results, the null hypothesis that top management support has no significant effect on the relationship between the macro environment and the performance of donor funded health projects was not accepted. Instead, the alternate hypothesis that top management support has a significant effect on the performance of donor funded health projects was accepted. This is in line with the suggestions by Ahmed, Mohamed and Ahmed, (2014) and Ahmed (2016) that top management support is a key success factor that adversely affects the performance of projects in organizations.

5.0 Summary, conclusions, and Recommendations

5.1 Summary

The top management support was found to have a moderating effect on the relationship between the macro environment and the performance of donor funded health projects. Majority of the respondents acknowledged that the project top management were involved in project initiation. A small portion of the respondents were neutral, disagreed or strongly disagreed that the project top management were involved in the project initiation. The study further established that project top management were involved in project planning and implementation to a great degree. It was also revealed that, project top management provided adequate human resources, support in the execution of project plans as well as adequate support in the implementation of donor funded health projects.

5.2 Conclusions

Top management involvement in project initiation, planning and implementation has an influence on the relationship between the macro environment and the performance of donor funded health projects in Kenya. From this study, all respondents held that top management support has an effect on the performance of donor funded health projects in Kenya. Majority of the respondents indicated that the top management was committed to ensure the projects were completed as scheduled. The study findings confirmed that top management support is a significant moderating variable when it is rated very good and excellent. Thus, this study concludes that top management support is a significant moderator of the relationship between the macro environment and the performance of the donor funded health projects.

5.3 Recommendations

The findings from this study indicated that top management support had a significant effect on the performance of donor funded health projects. This will motivate the top management of the health

agencies in Kenya and the implementing agencies of the donor funded health projects to enhance their support to further improve on the performance of the donor funded health projects. The study revealed areas in the top management support that requires improvement. With this in view, the top management of the health agencies are better guided and, thus will be guided in seeking for ways of improving on those particular areas so as to enhance their level of support.

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25. Effects of Participatory Management on Employees' Performance in Water Service Providers in Muranga County, Kenya

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Abstract

The focus of this study was to investigate the influence of participatory management on employees' performance in water service providers in Murang'a County, Kenya. The study was inspired by worries on employees' performance in water service providers in Kenya.Despite the various participatory management initiatives adopted by the institutions to enhance employees' performance remained unsatisfactory. The study embraced both exploratory and explanatory research design. A sample of 206 employees was selected from five water service providers namely :Murang'a Water and Sanitation Company Limited, Murang'a South Water and Sanitation Company Limited, Gatanga Water and Sanitation Company Limited, Gatamathi Water and Sanitation Company Limited and Kahuti Water and Sanitation Company Limited. Random sampling was applied in picking the respondents for the study. Self-administered questionnaires aided in collecting primary data and analyzed using both descriptive and inferential statistics. A pilot study was steered on data collection tool to pre-test it's validity prior to the

main survey. Data reliability was measured using Cronbach's alpha coefficient. Statistical Package for Social Sciences (SPSS) version 21.0 was used to aid in coding, entry and analysis of data. conclusions and recommendations based on the findings were finally outlined. **The study** concludes that participatory management through consultative management, quality circles, representative participation and delegation is vital and significantly affects performance of employees in water service providers in Murang'a County, Kenya. The *study recommends water service providers* in Murang'a County to engage more in participatory management as it positively and significantly affects employees' performance.

Keywords: Participatory Management**,** Employees' Performance

Introduction

Globally, performance of employees remains as treasured advantage to achieve output, efficiency and value in giving taste to performance (Gabcanova, 2011). In describing employees' performance indicators, Lee and Sukoco (2007) propose that performance of employees is a dynamic concept and separately every performance degree is important regardless of the parameters used to measure it. According to Hitt, Ireland, Camp and Sexton (2011) employees' performance is the building block of an association irrespective of it's scope and the lone element converting resources into goods and services to offer a competitive advantage.

David (2014) asserts that employees' performance when accepted by others in a firm is regularly compensated by monetary plus other paybacks. As numerous organizations cope with encounters to entice, holding and control the greatest faculty, composed of developing issues as regards to participatory management, it's important that directors and executives use a variety of participatory approaches to realize employees' performance (Kombo & Oloko, 2014). Greenfield (2004) asserts that employees' performance is important in developing or developed countries as they depend on performance of public institutions which thrive from employees' performance.

Employees' Performance

According to Hitt (2011) insubstantial assets are further likely than noticeable resources to yield a competitive advantage to promote employees' performance. This was supported by David (2014) that a firms' employees' performance is influenced by its capacity to protect and use the intangible resources it generates which could be productivity, effectiveness and timeliness of output. Companies are forced to compete and act professionally to have capable employees to help them create competitive advantage in service delivery (Mwita, 2012). Jena and Rautaray (2010) argues that performance of employees is about the results obtained from employees after being allocated a certain task within the organizations. Frese(2011) contends that employees' performance indicators involve effective service provision, high output, service value, and aptness of output. Yang (2008) on individual performance proclaims success by accomplishing the prospects of the shareholders.

In line with Memari (2013) employees' performance is greatly felt where reward of performance is practiced through participation. Productivity of employees is highly influenced by attendance, which is significant to guarantee justifiable performance to complete the obligatory responsibilities and evade

administration conflict and reduced performance value of employees participation in the system (Ruokalanien, 2011).

According to Cardy (2014) performance is essentially the result of how input is well and timely transformed into output to demonstrate the ultimate efficiency in front of superiors, consumers, proprietors and co-workers. Tohidi (2010) argues that service effectiveness is the capacity of workforce to meet the estimated intentions or target. Timeliness of output is the characteristic of services with aptitude to gratify the quantified or inferred needs (Armstrong, 2010). Employees remain a central reserve therefore imperative to augment the involvement of employees to the business and to understand determinants of employees' performance (Elnaga & Imran 2013). According to Wall (2009) a human resource management relationship classic capturing functional concert processes such as effectiveness, output and timeliness is key. The study main focus was on non-financial measures of performance.

According to (Mutai, 2015) fiscal measures demonstrate biased opinions when scrutinizing employees' performance. Again, monetary dealings lead to a diminutive tenure positioning on the firm in regards to respect to the managing of human capital. This study adopted non fiscal measures; service effectiveness, productivity and timeliness of output as measures of employees' performance.

Statement of the Problem

To clearly articulate vision twenty thirty(2030) GoK has acknowledged employees to be key in fast tracking the realization of the vision by improving access to clean and reliable water. To achieve this, the GoK through WASREB (Water Services Regulatory Board) has implemented several reforms. They include the Water Act (2002) and the Water Act (2016). Despite these initiatives by the government water service providers in Murang'a County have faced employees' performance related challenges (Njanja & Njagi, 2013).

Mawia(2017) report on water service providers employees' performance indicated unsatisfactory performance with some almost failing to realize their mandate. Water services regulatory impact report (2018) specified that the administration might be excluding employees as associates of the firms in the decision building practice affecting their performance. The WSP_S employees' performance indicates a downward trajectory an indication exposed by presence of ineffectiveness in revenue collection, poor quality service delivery indicated by less hours of water supply, low employees productivity indicated by low metering ratio, slow response rate exposed by unattended leaks and bursts (WASREB, 2017). Consequently, it was important for the research to appreciate the relationship between participatory management and employees' performance. Mutai (2015) and Orwar (2016) reveal that participatory management partake an affirmative and statistically substantial association with performance but have put little consideration to the role of participatory management on employees' performance. Most of these studies focused on cross- country and sector level. None of them focused on the water sector hence creating a contextual gap.

The above studies, attention have been given on participatory management through direct participation levels and less attention on indirect participation levels for example unions, joint committees and work councils in relation to employees' performance. This has created a knowledge gap dilemma in terms of

knowledge advancement. The poor performance of employees of the water services providers had been mostly associated to misapplication participatory approaches by the management of the water service providers. To address the gaps found in previous empirical analyses, this study investigated the effect of participatory management on employees' performance in selected water service providers in Murang'a County, Kenya.

Purpose of the Study

The purpose of the study was to investigate the effect of participatory management on employees' performance in selected water service providers in Murang'a County, Kenya.

Objectives of the study

To investigate the effect of consultative management on employees' performance in selected water service providers in Murang'a County, Kenya.

To find out the influence of quality circles on employees' performance in selected water service providers in Murang'a County, Kenya.

To determine the effect of representative participation on employees' performance in selected water service providers in Murang'a County, Kenya.

To determine the impact of delegation on employees' performance in selected water service providers in Murang'a County, Kenya.

Research Hypotheses

The study proposed the following null hypotheses:

Ho_1: Consultative management has no significant effect on employees' performance in selected water service providers in Murang'a County, Kenya.

Ho_2: Quality circles have no significant influence on employees' performance in selected water service providers in Murang'a County, Kenya .

$H0_3$: Representative participation has no significant effect on Employees' performance in selected water service providers in Murang'a County, Kenya.

$H0_4$: Delegation has no significant impact on employees' performance performance in selected water service providers in Murang'a County, Kenya.

Literature Review /Theoretical Literature

The study was anchored on the following theories: Role theory and Resource-Based View supported by two other models which include: Servqual Model and Collegial Model.

The Role Theory

Katz and Kahn (1966) are credited in articulating this theory which positions and indicate that the part personalities inhabit at work and in different place occurs relatively to additional individuals. Consequently, society partake prospects about the individuals' duty ones they honor these projections have capably performed the role. According to Hopkins (2011) the role theory is often used to scrutinize numerous characteristics of employees' performance. In any enactment of a role, performance becomes the creation of the form individuals for instance the operational framework or influence applied from high to low level or elsewhere in the organization and their own services, competencies and assertiveness (Devaro, 2008).

Resource -Based View

The perspective is initiated and primed through (Penrose, 1959) work. Barney (2007) postulates by arguing about institution improving reasonable plus by not solitary obtaining but likewise mounting, tapping together, and excellently positioning its bodily, social, and organizational possessions. In practice this always put in exceptional worth and challenges the opponents to imitate. Wernerfelt (2004) asserts that the perspective conditions create modest benefit originates within inward possessions a corporate preserve. Resource based view perspective speculates that corporations accomplish justifiable competitive benefit if by holding vital resources by commendably position these possessions in their selected arcades (Barney, 2007). The theory hypothesizes that an organizations' performance hang on its precise capitals and competences (Fotopoulos,Kafetzopoulos & Psomas, 2012).

Servqual Model

This model remain the work of Zeithml, Valarie and Berry (1985) a team of academic researchers to measure quality of service and productivity in the service sector. The Servqual model assumes that an unswerving affiliation occurs between service aptness, service delivery and service effectiveness According to Kumar (2009) the model is tagged and anchored on the following scopes: Tangibility which is physical facilities; apparatus, and attendance of personnel. Reliability encompassing capacity to realize service consistently and precisely. Responsiveness which involves the willingness towards assisting customers and staff in rendering timely services. Assurance which stands for employees courtesy plus the talent to motivate self-assurance and empathy comprising of considerate personalized attention the establishment delivers.

The Collegial Model

The theory is initiated through the work of (Davis, 1967). The term 'collegial' refers to a decision-making framework with structures designed to achieve specific goals in a predictable manner with working together cooperatively (Newsrom, 2011). This model comprises all those supports emphasizing that influence and policymaking ought to be collective or among all members of an organization. The autonomous component of official representation rests on the commitment shown by members to their population (Bush, 2007). This model symbolizes a crew notion. Additionally, its valuable in participatory situation, imaginative effort and substantial work liberty. It involves the organization shaping a sensation of partnership with workers.

Empirical Literature

Participatory management is outlined as a human right in the United Nations 1986 affirmation of right to progress which is based on a number of principles including consultative management, delegated power and its implication on job execution and the process of representation (Hamm, 2011). Employees participation is categorized as direct and indirect. Direct participation may take place through goal-setting plans by individuals, consultations, forming employees into quality circles, and delegating to others. Indirect involvement includes use of employee's selected agents or shop stewards (Noah, 2008). In this journal the participatory management initiatives are outlined and the results shown as captured by the study are: consultative management, quality circles, representative participation and delegation.

Research Methodology

The research design adopted was a mixture of explanatory and exploratory designs. The combination is key since it delivers a precise and binding illustration of the variables pertaining or applicable providing the answers to the main research questions. According to Cooper and Schindler (2011) explanatory research focuses on why questions. In answering the why questions, the study involved developing causal effect explanations. The target population included 357 employees in the water service providers in Murang'a County, Kenya. The study focused on the management and non-management employees. These employees included top management, middle level staff and lower cadre staff. The distribution of target population of the study is shown in Table 1.

Table 1: Target Population

No	Cadre	Murang'a	Gatamathi	Gatanga	Murang'a S.	Kahuti	Total
1	Top Management	9	7	8	9	8	41
2	Middle Management	30	25	23	34	24	114
3	Lower level	50	32	33	52	35	202
	Total						**357**

Source: Murang'a County Human Resource Matrix Database (2019)

Sample Design and Size

The research used randomly *selected sample size* since it's easy in application and taken as the accurate representation of the larger population. According to Kasomo (2006) a sample holds features existing in the target population and have independent possibilities of selection. Based on the random sampling formula, the study, picked a sample size of 206 as shown in Table 2 below.

Table 2: Sample Size

Cadre	Total population	Sample size	Percentage
Top level- Management employees	41	23	11.6
Middle- level management employees	114	65	32.1
Lower - level management employees	202	114	56.3
Total	**357**	**206**	**100**

Source: Researcher (2019)

Instruments for Data Collection

A combination of both primary and secondary data was employed in gathering data. A Semi-structured questionnaire aided in primary data collection. A documents evaluation list aided in collecting secondary data.

Validity and Reliability of Data Collection Instruments.

Sekaran (2013) urgues that validity denotes exactness and significance of interpretations made founded on results obtained. Suggestions were made and likened to the prevailing theories. Developed instruments was presented to the supervisors and the research specialists in the relevant school to assess the usability and aptness of the content, precision and tolerability of development of the instrument from a research perspective. The study terms operationalization was used to ensure construct validity.

Orodho (2009) argues that the level of the degree an instrument yields similar outcome repeatedly constitutes reliability. Reliability testing involved presenting to the employees of Thika Water and Sanitation Company limited with twenty (20) selected respondents not included in the final sample size for piloting. to determine the internal consistency of the research instruments reliability computed using the versally accepted Cronbach Alpha coefficient beyond 0.7.

Data Collection Procedures

Data was collected through the process of obtaining consent letter from the National Commission for Science, Technology and Innovation *(*NACOSTI). The questionnaires distribution to respondents was done by the human resource management department.

Data Analysis and Presentation

Questionnaires codding then feeding them to the SPSS computer software which summarizes data about a single variable was done as argued and analyzed. Frequencies, mean, standard deviation were used to analyze descriptive data. The inferential pointers aided on how to analyze qualitative figures with regression scrutiny being applied. The presentation of the findings was largely done using tables and figures to indicate frequency and percentage spread.

Research Findings and Discussions

The subsequent extents covered under elementary data: response rate, respondents' gender, age, highest level of education qualification, current position held in the company and number of years in the current position.

Response Rate

This study considered 357 employees being targeted population with 206 employees captured as the sampled size grouped into the following strata**:** top management, middle management and lower level employees of the five (5) Murang'a County Water Service Providers. The total number of questionnaires which were administered to respondents in the three strata was 206. Overall, 163 respondents duly filled and returned the questionnaire representing a response rate of 79.13% deemed acceptable to conduct statistical analysis (Mugenda *et al.,* 2008). On the other hand, 43 questionnaires that were incomplete or not responded to were rejected. The busy schedules of the respondents accounted for the unreturned questionnaires. According to Saunders, Lewis and Thornhill (2007), a response rate of above 50% is justifiable for conducting statistical analysis while Ghauri (2005) asserts that return rates of above 50% are satisfactory. Based on the recommendations of the various scholars, the 79.13% was appropriate to conduct statistical analysis and draw inferences of the study objectives. Figure 4.1 indicates the outcomes.

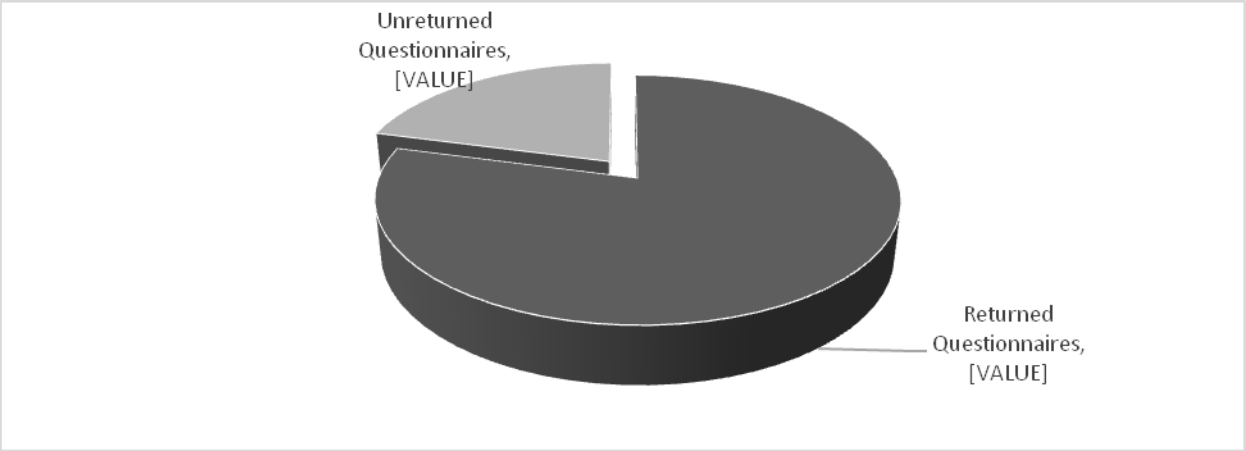

Figure 1. Response Rate

Source: Research Data (2019)

Age of the Respondents

The study sought to determine the age bracket of the respondents and therefore requested them to indicate their age category. From the findings as indicated in Figure 2, the largest proportion of the respondents represented by 44.2% were aged between 31 to 40 years followed by 22.7% who were aged between 25 to 30 years and further 20.2% who were aged between 41 to 50 years. Only 3.1% of the respondents were aged above 50 years.

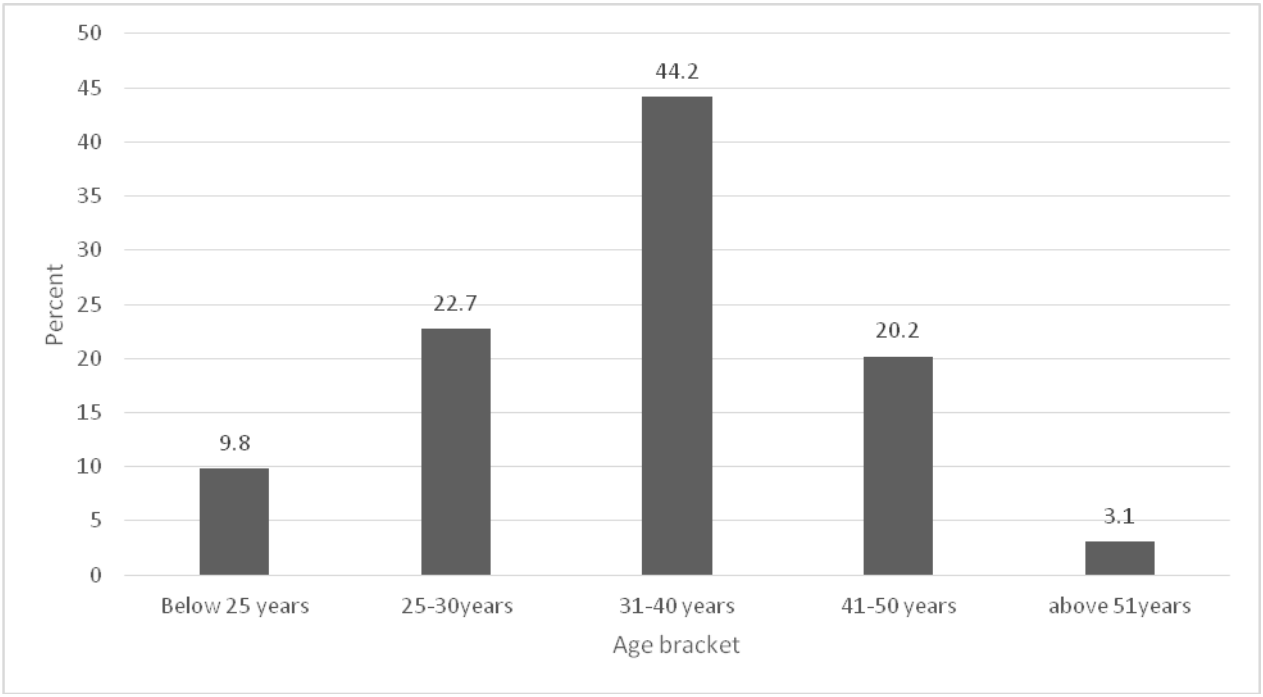

Figure 2. Age of the Respondents

Source: Research Data (2019)

Current Position of the Respondents and Years of Service

To further confirm the results, the study cross tabulated the current position of the respondents and years of service against their age and as shown in Table 3, the largest proportion of respondents (11) who occupied top level of management were aged above 40 years while the largest proportion of respondents (14) who had worked in the current position for more than 9 years were also above 40 years.

Table 3:Cross Tabulation of Age and Current position; Years of service

Current position	**Age bracket**					**Total**
	Below 25 years	**25 -30years**	**31-40 years**	**41-50 years**	**Above 51years**	
Top level management	2	1	7	8	3	21
Middle level	9	10	35	17	0	71
Lower level cadre	5	26	30	8	2	71
Total	**16**	**37**	**72**	**33**	**5**	**163**
Years of service						
3 or less	12	18	1	2	1	34

4-6	2	19	20	12	0	53
7-8	1	0	45	9	0	55
9-11	1	0	6	9	3	19
More than 12	0	0	0	1	1	2
Total	**16**	**37**	**72**	**33**	**5**	**163**

Source: Research Data (2019)

Respondent Years of Service

In this regard, the results showed that the largest proportion of the sample, 33.7%, had worked in the company for a period of 7 to 8 years while 32.5% indicated that they had worked for a period of 4 to 6 years with a further 20.9% indicating that they had worked in the company for 3 years or less. Only 12.9% of the respondents indicated that they had worked in the company for a period of more than 9 years. The results imply that majority of the respondents had worked in the company long enough to understand it's management dynamics. that most of the interviewees were experts who had managed for long therefore provided correct data management dynamics in the company. According to Aosa (2011) long tenured employees are likely to participate in the management arrangement of a firm. The findings imply that most of the interviewees were experts. The findings are presented in Figure 3.

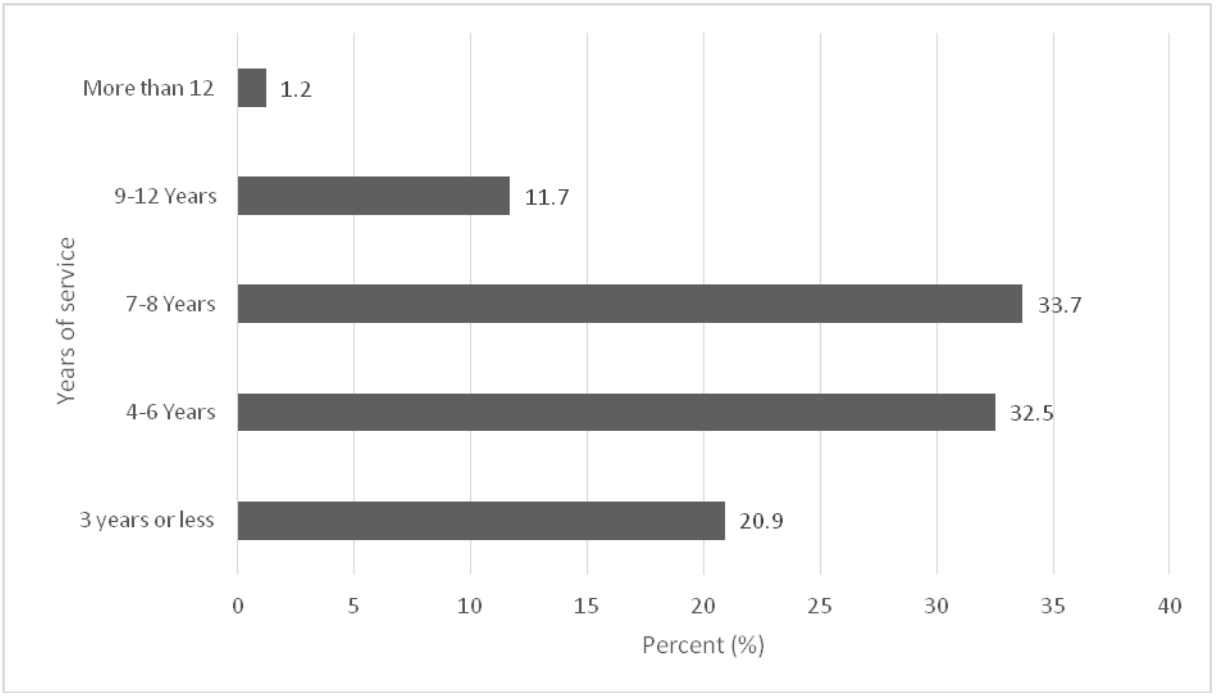

Figure 3. Respondent Years of Service

Source: Research Data (2019)

Educational Level of the Respondents

From the findings in Figure 4 it was established that the largest proportion of the sample, 38.7%, indicated college Diploma as the utmost educational achievement with a further 23.9% holders of University Degrees while 4.9% had post graduate education qualification. However, 31.9% of the respondents indicated that they had high school level of academic qualification. The findings imply suitability of the respondents for the study as they had adequate level of education to read and understand the contents of the research instrument.

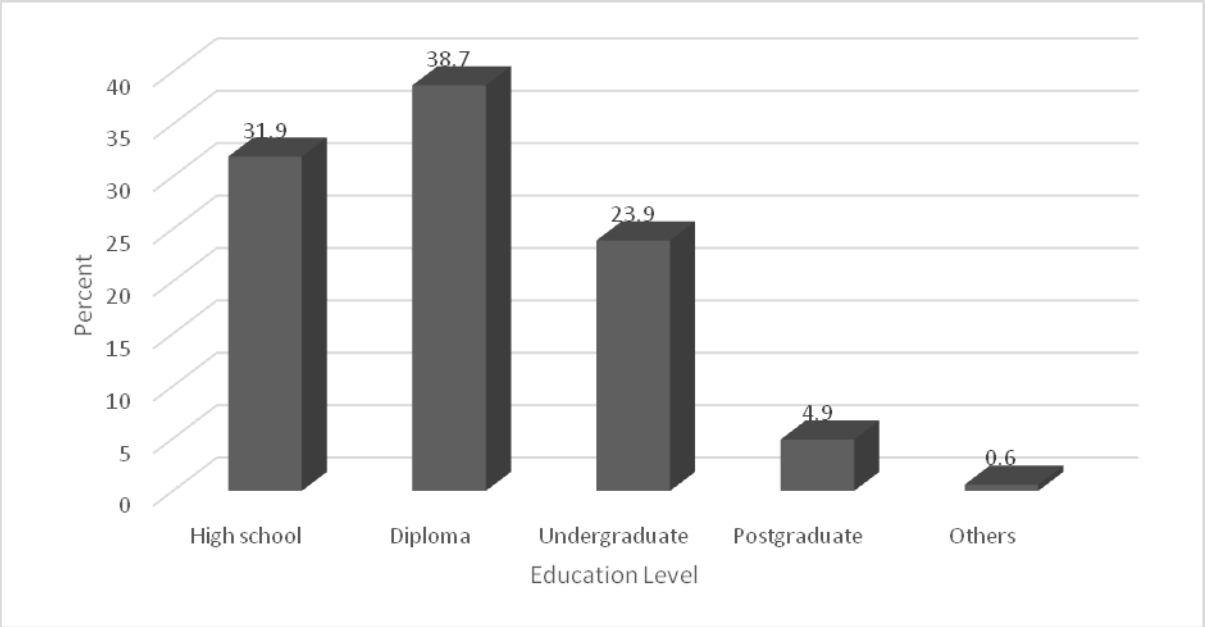

Figure 4 **.** *Educational Level of the Respondents*

Source: Research Data (2019)

Gender of the Respondents

From the findings as indicated in Table 4 male respondents made up 46% of the sample while 54% were female. This is an indication that both genders were involved in this study and thus the findings of the study did not suffer from gender bias.

Table 4**: Gender of Respondents**

Gender	**Frequency**	**Percent**
Female	88	54
Male	75	46
Total	**163**	**100**

Source: Research Data (2019)

Consultative Management on Employees' Performance

Respondents were requested to specify the *level* of their *agreement* with various *statements* regarding consultative management in *the* company with *the* aim of establishing whether the embraced consultative management. The findings indicate that the largest proportion of the sample, 36.4% and mean value 3.91 agreed that their supervisor considers attitude surveys outcome always while a further 33.3% strongly agreed. On whether there exists information sharing during meetings with the supervisor and employees regularly use suggestion plans, the outcomes revealed that the largest fraction of the sample, 45.7% (mean=3.95) and 39.8% (mean=3.75) respectively, agreed to the statements.

The results also indicated that a larger proportion of the sample represented by 29.2% and a mean of 3.61 agreed that employee attitude surveys in the organization are regarded highly whereas 41.9% agreed that supervisor are always ready to listen to the juniors' views and proposals confirmed by a mean of 3.73. It was further established that respondents agreed that immediate supervisor suggests methods to advance group's production, 38.9% and mean value 3.7, and that seniors encourage work team participants to solve problems jointly as represented by 37.7% and mean of 3.83.

A mean of 3.73 also confirmed that the largest proportion of the sampled respondents agreed that managers openly discusses employee career development in meetings. Regarding the statement whether top management inspires work team members to interchange material information with one another, the largest percentage of the sample, 41.1 and a mean of 3.92 agreed. It was also established that the largest proportion of the sample as represented by 39.8%, 34.2% and 37.7% respectively agreed that outcomes completed in the joint consultative gatherings are communicated in good interval to workers, employees always know when changes that affect their job are conducted and that staffs are briefed with response once they give suggestions. The findings in this section generally imply that water service providers in Murang'a County practice consultative management by sharing pieces of information with employees with an aim of improving employees' performance.

Quality Circles on employees' performance

The findings demonstrate that the major percentage *of* the *sample* represented by 34.8% and 33.5% strongly agreed and agreed respectively that they would join alternative circle in case they were moved to another section or area of work responsibility. The findings are confirmed by a mean of 3.88. Similarly, the largest percentage, 38.50% and 37.50% respectively, agreed that they shared responsibilities with colleagues who are quality circle members in one's department and that the top management has laid down supportive policies to promote quality circles.

Regarding the statement that opportunities given through circles increase material information distribution between employees, 43.5% of the respondents who represented the largest proportion agreed as confirmed by a mean of 3.68. Moreover, respondents averagely agreed that their relationship with work group was better than it had been in the past, 34.40%, whereas 42.5% and a mean of 3.68 agreed that quality circles assist development of employees' skills in needs analysis. It was also established that respondents agreed that quality circles have helped employees to be more active which improve their performance, 37.50%, members of the circles meet as a group to foster our circle efforts, 34.20% and that quality circles enhance the productivity of the employees than ever before as indicated by a mean of 3.99.

The findings in this section are an indication that employees in water service providers in Murang'a County, Kenya participate in quality circles to enhance their performance.

Representative Participation on Employees' Performance

Findings further show majority agreed that personnel are represented by a chosen co-worker at the management board as shown by 39.5% and a mean of 4.04. Further, respondents agreed that they remained strong affiliate of a work team in the organization, 54.70%, and a participant of quality administration work squad in their department, 34.80% and mean value 3.89. A mean of 3.74 also showed that respondents agreed that a council of elected workers' representatives exist in the organization while 42.6% and mean 4.07 strongly agreed that there is a trade union representative in the organization. Regarding the statement that workers in the firm feel sufficiently represented at the joint union/management committee, the largest proportion of the sample, 40.7% and mean 3.73 agreed.

It was also indicated that there is a trade union representative on staff matters whereby 39.5% and mean 3.81 agreed. However, respondents averagely agreed that representation in numerous structures rises the self-esteem of employees, 38.30% and mean 3.72, and that a pleasant working association by the work councils and the management in the organization exits as shown by 38.9% and a mean of 3.67. Moreover, the results show that respondents agreed that decisions made in meetings with representatives are shared in good time to employees, 42.00%, and that representation in verdict making structures increases workers obligation to the organization, 40.10% and mean 3.89. The results presented in this section confirm that employees in Water Service Providers in Murang'a County are involved in representative participation and that the companies strive to ensure employee representation at all level of management and structures.

Delegation on Employees' Performance

Respondents were asked to indicate their agreement or otherwise with various statements regarding delegation in the company. The findings presented illustrate that the biggest percentage *of the Sample* represented by 44.7% strongly agreed that their supervisor delegates and assigns duties and responsibilities to capable employees. It was also established that respondents agreed that they are afforded freedom to make decisions and account for results as represented by 50.30% and an average of *3.85*.

This outcomes further show *participants* agreed they regularly design work schedules without waiting for managers to instruct them, they value input from employees mandated by the supervisor to regulate how work is executed and that they acknowledge authority given by responding with actions as shown by respective means of 3.84, 3.99 and 4. Regarding the declaration that delegation accelerates decision making process among employees in this firm, 48.4% of the respondents agreed whereas 26.7% strongly agreed. On the statement delegation help one's colleagues gain exposure and growth, the largest percentage of the sample, 42.9% agreed, similarly, results show that 54.4% agreed that their supervisor inspires them to guide what happens in their division.

The results additionally show that respondents agreed that delegation makes them to adopt with different conditions at this organization, 40.40% and mean 4.11, and that delegation offers them a chance to depend on themselves in attaining work performance, 42.50%. The results generally imply that delegation

is practised in water service providers in Murang'a County to ensure that employees benefit and grow from undertaking specific duties and responsibilities.

Overall Summary of Test of Hypotheses

Hypotheses	Analysis Results	Conclusion
H_{O1}: Consultative Management has no significant effect on Employees' Performance in selected water service providers in Murang'a County, Kenya.	(β_1= 0.313, p =0.000)	Rejected H_{01}
H_{02}: Quality Circles has no significant effect on Employees' Performance in selected water service providers in Murang'a County, Kenya.	(β_2= -0.015, p=0.781)	Failed to reject H_{02}
H_{03}: Representative Participation has no significant effect on Employees' Performance in water service providers in selected Murang'a County, Kenya.	(β_3= 0.224, p =0.000)	Rejected H_{02}
H_{04}: Delegation has no significant effect on Employees' Performance in selected water service providers in Murang'a County, Kenya.	(β_4= 0.324, p =0.000)	Rejected H_{04}

Source: Researcher (2019)

Summary, Conclusion and Recommendations

Summary of the Major Findings

The main purpose of this study was to investigate the effect of participatory management on *employees' performance* in selected water service providers *in* Murang'a County, *Kenya*. Particularly, this study examined the *influence* of consultative management, quality circles, representative participation and delegation *on employees' performance* in selected water service providers in Murang'a County, Kenya. Targeted were 357 employees of the five water service providers in Murang'a County where a sample of 206 participants were selected by random sampling technicque. A self-administered questionnaire aided in data collection. A pilot study preceded the main study and was carried out to ensure reliability of the questionnaire. Both descriptive and inferential statistics were used to analyze the data collected. Multiple linear regression analysis was applied to test the hypotheses of the study.

Conclusion

Based on the results of the study, the following conclusions were made. Firstly, the study concludes that participatory management through consultative management, quality circles, representative participation and delegation is vital and indeed affect employees' performance in selected water service providers in

Murang'a County, Kenya. Secondly, this study provides evidence that consultative management positively and significantly affect employees' performance in selected water service providers in Murang'a County. Improvement in consultative management indicators comprising of employee attitude surveys, information sharing during meetings, joint problem solving, focus on juniors' views and proposals, material information interchange, methods to advance group's production, open discussion of employees career development and staff debriefing results to an increase in employees' performance.

The study concludes that though quality circles insignificantly influenced employees' performance in selected water service providers in Murang'a County, there was evidence that it is necessary to ensure employee participation in management processes. The main reasons for the negative insignificant relationship may be due to the poor manner in which quality circles are established and utilized.

Moreover, the study concludes that representative participation positively and significantly affected employees' performance. An enhancement of representative participation indicators including involving employees in quality administration, having a trade union representative, personnel representation through selection of coworkers to the management board, sufficient representation of employees at management committee, representation in numerous structures among others would result to an increase in employees' performance. Further, evidence was provided that delegation participation had absolutely and with a significant effect influenced employees' performance. The study concludes that any improvement in delegation through assigning duties and responsibilities to capable employees, giving employees freedom to make decisions and account for results, according workers the chance to gain exposure and growth escalates employees' performance.

Recommendations

The study made several recommendations based on the conclusions derived that if properly applied by the management greatly enhances employees' performance. The study established that consultative management, quality circles, representative participation and delegation are important participatory management practices and indeed affects performance of employees in water service providers in Murang'a County. The study recommends water service providers in Murang'a County to engage more in these practices as participatory management positively and significantly affects performance of employees. The investigations recommended that water service providers in Murang'a County should pay attention to representative participation of employees in management processes. This can be achieved through involving employees in quality administration, personnel representation through selection of coworkers to the management board, having a trade union representative, sufficient representation of employees at management committee and representation in numerous structures. Moreover, employees' performance in water service providers in Murang'a County can be improved by delegation of duties and responsibilities to capable employees, giving employees freedom to make decisions and account for results, according workers the chance to gain exposure and growth would result to an increase in employees' performance. There is need for the management of the companies to focus on these indicators of delegation.

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26. Academic Paper on Maritime Security and Business Performance

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ABSTRACT

The general objective of this study was to examine the relationship between maritime security and business performance. Specific objectives of the study were to evaluate the relationship between maritime security risks and business performance, to explore the relationship between maritime security measures and business performance, to examine the relationship between maritime security policies and business performance, to determine the mediating effect of technology on maritime security and business performance and to examine the moderating effect of policing on maritime security and business performance. The study adopted desktop literature research design, developing document review guide

and summary of areas of interest. The desktop literature review focused on previously published journals, articles and books that looked at maritime security and business performance nationally and internationally. To identify the right journals, articles and books to collect information for the study several keywords such as maritime security, business performance, economic growth, policing and technology were searched online by use of google and chrome among others. From the reviews done by the researcher, there is a positive relationship between maritime security and business performance. Majority of the findings from the studies conducted by various researchers draws conclusion that technological advancement and policing have a far reaching influence on implementation of maritime security which greatly influences performance of businesses around the globe.

Key words: Maritime Security, Business Performance, Economic Growth, Policing, Technology

1.0 INTRODUCTION

Security is a key element in the manifesto of any government around the globe. Business organizations thrive well in areas dominated with null or minimal security threats. Maritime security is an umbrella term informed by security agendas to classify issues in the maritime domain that are often related to national security, marine environment, economic development and human security (Bueger & Edmunds, 2017). Maritime security has evolved to be a concept comprising of many interrelated sub fields. The concept of maritime security is transformative and has evolved from a narrow perspective of national naval power projection towards a buzzword that incorporates many interconnected sub-fields. The buzzword character enables international actors to discuss new maritime security challenges without the need to define every potentially contested aspect of it. The sea is a central space for maritime security and has been widely understood as a "stage for geopolitical power projection, interstate warfare or militarized disputes, as a source of specific threats such as piracy, or as a connector between states that enables various phenomena from colonialism to globalization" (Bueger & Edmunds, 2017). Maritime Security as a concept is also related to the sea and often associated with four domains according to maritime security experts. First, national security involving the traditional use of naval military power to defend commercial shipping lanes and the national territory. Secondly, marine environment which is concerned with environmental and safety regulation regarding marine pollution and health protection. Thirdly, economic development which includes trade by sea, the exploitation of oil and other non-living resources, as well as fisheries and lastly, human Security concerned with the absence of security of individuals, people in communities, or citizens of states. Maritime sectors such as shipping and port industries depend entirely on maritime security for their operations. Blue economy concept seeks to promote economic growth, social inclusion, and preservation or improvement of livelihoods while at the same time ensuring environmental sustainability (World Bank and United Nations Department of Economic and Social Affairs, 2017).

Blue economy entirely depend on maritime security since sustainable management strategies not only require the enforcement and monitoring of laws and regulations, but a secure maritime environment provides the precondition for managing marine resources (Gunther, 2010). Maritime transportation is the most economical mode for mobilizing raw and finished products in bulk (Kothari, 2008). Shipping has been one of the most liberal form of transportation with a high degree of flexibility in its movement. It is one of the international industries that have made globalization possible. In order to boost the liberalization, growth in global trade and meet the energy demands of growing economies and expanding populations it is important to secure shipping which is the life line of the world economy,(Council, 2007). The only way out is by effective utilization of technology and achieving higher degree of maritime

security (Abhyankar, 2006). However, due to the fast evolving nature of the industry it is prone to various maritime crimes such as ship and crew hijacking, terrorism, human trafficking, piracy among others (Bueger, 2015). There is need for local as well as international bodies such as International Maritime Organization (IMO) to formulate measures and policies to secure maritime domain and ensure compliance since this is key to economic growth as many business organizations depend on maritime transportation.

1.1 STATEMENT OF THE PROBLEM

For business organizations around the globe to achieve considerable performance, there is need for governmental, non-governmental, continental and intercontinental unions to put more emphasis on security at maritime domain. Technological advancement, globalization and increasingly diverse workforces have made the business environment to become very dynamic, placing increasing pressure on organizations to develop and implement strategies that will help maintain their competitive advantages (Kinyajui, 2019). Due to the evolving nature of risks associated with maritime security, formulation and implementation of productive measures and policies are of paramount importance. Blue economy has been highly affected by threats exhibited by maritime insecurity. The maritime industry faces varying levels of threats from different maritime crimes such as piracy, armed robbery, high jacking, stowaways, illegal migrants, narcotics, arms smuggling, fraud and others (Kanev, 2005). Many researchers have conducted studies on how best to improve business performance in the current dynamic business world. Bueger (2015), in his article in marine policy entitled 'What is maritime security?' noted that national, human and marine environmental security are sources of sustainable economic growth. However many researchers have looked into business performance in terms of market share and profitability ignoring other indirect factors such as security and environmental factors which have great impact on business growth. The researcher therefore purposes to do an in depth study on maritime security and its effects on performance of businesses.

1.2.1 GENERAL OBJECTIVE

The general objective of the study was to examine the relationship between maritime security and business performance.

1.2.2 SPECIFIC OBJECTIVES

- **i.** To evaluate the relationship between maritime security risks and business performance
- **ii.** To explore the relationship between maritime security measures and business performance
- **iii.** To examine the relationship between maritime security policies and business performance
- **iv.** To determine the mediating effect of technology in maritime security and business performance
- **v.** To determine the moderating effect of policing in maritime security and business performance

1.3 SIGNIFICANCE OF THE STUDY

The study will be of great help to governmental, non - governmental organizations, continental and intercontinental unions in determining and evaluating how maritime security threats affect performance of business organizations both locally and internationally. The research would also provide preventive measures and policies on how to deal with challenges facing maritime industry around the globe. This would in turn help in formulating and implementing policies that are of great help in controlling and improving maritime security. The study will also help future researchers in identifying new areas of research and provision of literature that form basis for further studies.

2.0 CONCEPTUAL OVERVIEW

2.1 Maritime security

Maritime security is one of the latest term of buzzwords of international relations. According to Steven M. Jones (2006), maritime security is the state of a shipping company/vessel/crew/port, being or feeling secure or the safety of a shipping company/vessel/crew/port against such threats as terrorism, piracy and other criminal activities. Mejia (2007) defined maritime security as the state of being free from the threat of unlawful acts such as piracy, armed robbery, terrorism, or any other form of violence against ships, crews, passengers, port facilities, offshore installations, and other targets at sea or in coastal areas. Maritime Security has been viewed by many scholars as an umbrella term informed by security agendas to classify issues in the maritime domain that are often related to national security, marine environment, economic development and human security (Bueger & Edmunds, 2017). Therefore, maritime security is a large task involving many entities from international, public and private sectors aiming at preserving the freedom of the seas, facilitating and defending commerce and maintaining good governance at sea. Crimes associated with maritime domain have great impact on the industry which in turn affect blue economy around the globe. However, maritime industry faces varying levels of threats from different maritime crimes such as piracy, armed robbery, high jacking, stowaways, illegal migrants, narcotics, arms smuggling, fraud among others (Kanev, 2005). Maritime industry security risks range from terrorizing of crew, hijacking of ships and attacks on ships and port facilities to disrupt the supply chain so as to cause economic losses (Banlaoi, 2005; Mbiah, 2007; Timlen, 2005; Weeks, 2005). It's the mandate of International Maritime Organization (IMO) to formulate policies and ensure their proper implementation for the safety of maritime operations.

2.2 Business performance

Business performance is an inseparable management part of a company without which it would be difficult to define the impact of business management decisions, the direction of its activity results and the decisions that must be taken to improve the results (Narkunienė & Ulbinaitė 2018). A business organization that wants to be successful in today's dynamic and complex environment must measure its performance (Rylkova, 2015). According to Suraj and Bontis (2014), performing organizations prioritizes on knowledge management which helps in identification of processes geared towards achievement of synergy between data processing capacity of information technologies and human capacity meant for creativity and innovation. Organizational Performance is the ability of a firm to fulfill its mission via strong governance, a persistent, rededication to fulfill set goals, and sound management (Parasuraman, 2012). According to Cater & Pucko (2010), organizational performance entails recurring activities to establish set organizational goals, monitor progress towards achieving the goals, and making adjustments in order to achieve the goals efficiently and effectively. Ondari and Smith (2014), noted that performance in government institutions is measured by growth in market share and profitability, customer satisfaction, decreased annual employee turnover, and enhanced continuous organizational learning. It is generally accepted that the growth and development of Small and Medium Enterprise (SME) sector is critical in the promotion of a sustainable economic development of nations, wealth creation, employment and poverty alleviation (Baptista, Escaria, & Madruga 2005; Beck & Levin 2005). The Small and Medium Enterprises (SMEs) are considered as training grounds for entrepreneurship and act as channels for mobilizing local savings and ensuring a more equitable distribution of income (Kongmanila & Kimbara 2011). With their active industrial initiatives, the SMEs constitute a dynamic and critical part of the private sector whose entrepreneurial viability is essential in inducing responsiveness to fluctuations in the economic conditions of various countries. Business performance, innovativeness, pro activeness, risk-taking, competitive

aggressiveness and autonomy are the crucial factors to consider in ensuring the success of a business (Arshad et al., 2013).

2.3 Stages and historic evolution of maritime security and business performance

As a concept and agenda maritime security has evolved since the late 1990s and early 2000s. Notable events influencing the maritime security paradigm are the ramming of 'USS Cole' by an explosives laden boat in 2000, the September 11 terrorist attacks on twin tower in 2001 and the attacks on port facilities and the French tanker 'Limburg' off the coast of Yemen in October 2002 were the key events that triggered the International Maritime Organization (IMO) to consider a review of measures and procedures to prevent acts of terrorism, which threaten the security of passengers and crews and the safety of ships (Burmester, 2005). Many best practices and standards regarding physical maritime security like the International Ship and Port Facility Security Code (ISPS-Code) from 2002, were published by regulating authorities or the maritime industry. In the light of the perceived terrorist threat, the scope of the maritime security concept began to broaden from the narrow focus on interstate military confrontation to include other issues.

The surge of piracy during the early 2000s in Southeast Asia, off the coast of Somalia and in West Africa triggered recognition for the detrimental effects of maritime insecurities (Onuoha, 2009). As a result of the economic costs for world trade and the physical threats to seafarers, maritime security gained a significant increase of attention by the shipping industry, insurers and policy makers around the world (Bueger, 2015). Piracy was also the starting point of many International Relations scholars for approaching maritime security as a concept (Onuoha, 2009). One of the effects of piracy has been the development of regional cooperation initiatives. In Southeast Asia, the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCaap) was initiated in 2004 and includes Information Sharing Centre (ISC). Besides Maritime Domain Awareness (MDA) more cooperation initiatives were adopted including Djibouti Code of Conduct (DCoC) in 2009, to counter piracy. DCoC was later revised in the year 2017 to include other illicit maritime activities such as human trafficking or illegal, unreported and unregulated fishing (IUU).

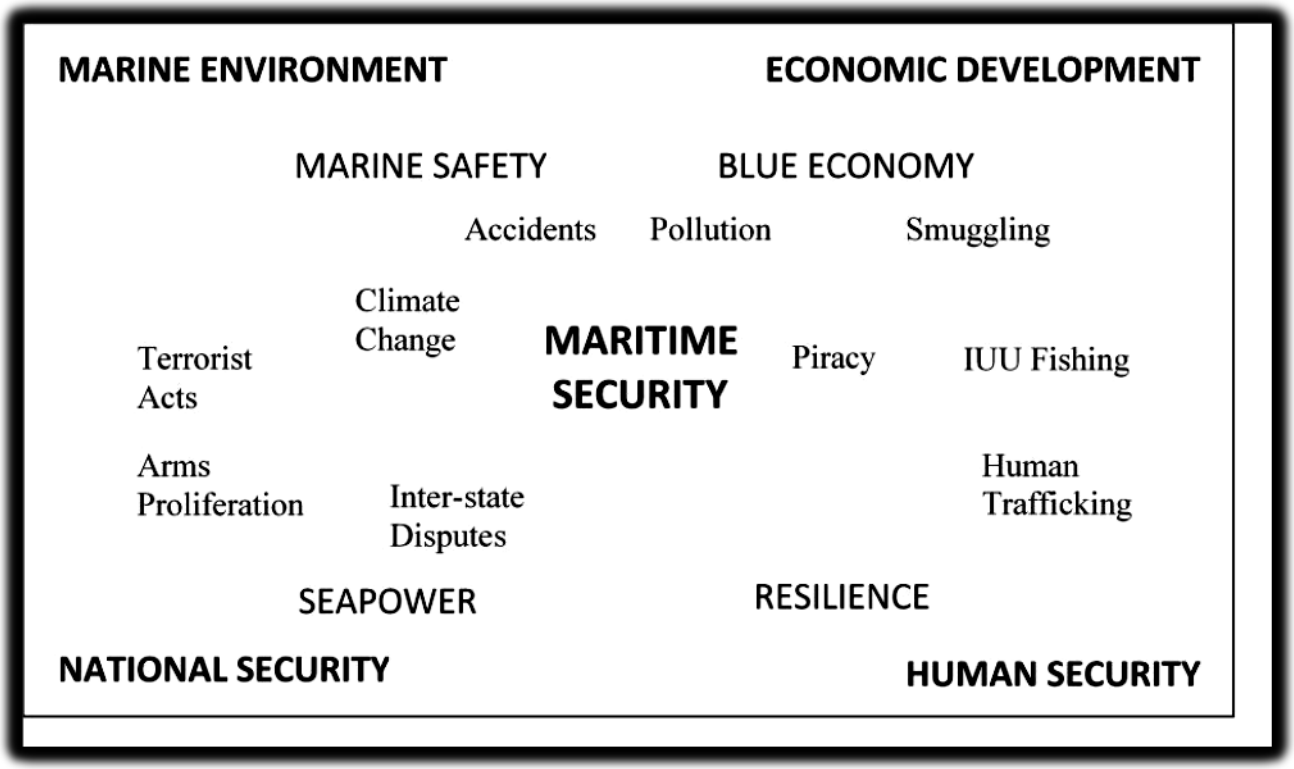
Today, maritime sector is facing various challenges or vulnerable to various threats which calls for intervention of both local and international bodies. Policies and measures have to be put in place to counter such possible threats to save the economy by preventing businesses from incurring unnecessary losses through terrorism, passenger and cargo ship high jacking, illegal fishing, and human trafficking among others.

3.0 THEORETICAL AND EMPIRICAL REVIEW

3.1 Maritime security matrix

Maritime security matrix framework was proposed by Christian Buegar in the year 2015 and looks at the relationship between maritime security and other maritime concepts. In this framework four dimensions namely marine environment, economic development, national security and human security relate directly to maritime security. Marine environment is connected to issues of marine safety, economic development is connected to blue economy, national security is connected to naval military command of the sea while human security concerned with human trafficking issues.

Figure 1: Maritime security matrix



3.1.2 Securitization framework

Securitization is a framework of international relations originally developed by Ole Weaver and Barry Buzan in the year 1998 that posits that there is a genuine construction of security threats by a series of claims that draw a specific grammar. It looks at who is making claims in the name of security to carry out measures that would otherwise be not easily justified or accepted (Barry, Ole & Jaap, 1998). For maritime security, Bueger (2015) suggested two central questions for analysis. First, by which means does maritime become securitized? And secondly how are issues securitized become part of security agenda? Securitization framework allows to study how maritime threats are made and which divergent political claims entail in order to uncover political interests and divergent ideologies

3.1.3 Practice theory

This theory enables to analyze what kind of activities are actually conducted in the name of security. Practice in this theory is seen as patterns of doing and saying things that lead to the implementation of maritime security measures (Bueger, 2016). According to Bueger, five practices fit within the conventional spectrum of maritime security; maritime domain awareness (information sharing center), activities at the sea (patrols, inspections, exercises), law enforcement activities (arrests, trials and prosecutions), coordination activities (forums, conferences, harmonizing legal frameworks) and naval diplomacy (capacity building, warfare among others). Security practice theory enables the study of what actors actually do when they claim to enhance maritime security. These practices can be looked through two different perspectives; what activities belong to everyday routine or measures that are done in exceptional circumstances on maritime security (Bueger, 2015)

3.2 Empirical Review

3.2.1 Maritime security risks and business performance

Organizations and industries are created to achieve specific desired goals. In performance of all businesses, risks of all types are inevitable which should be controlled. Maritime industry security risks ranges from varying levels of maritime crimes such as piracy, armed robbery, high jacking, stowaways, illegal migrants, narcotics, arms smuggling, fraud and others (Kanev, 2005). Maritime security risks to the shipping industry range from terrorizing of crew, hijacking of ships and attacks on ships and port facilities to disrupt the supply chain causing economic losses (Banlaoi, 2005; Mbiah, 2007; Timlen, 2005; Weeks, 2005). According to Howland (2004), Ransom money involved for release of hijacked merchant ships and their crews ranged from $350,000 to $500,000 and some experts estimated that the value of cargo lost per hijacked ship was between $8 million and $200 million. Intelligence analysts, law enforcement officials, and policymakers have expressed concerns over the likelihood of increased terrorist attacks in future on the maritime industry (Glass, 2003), since the maritime environment possesses unique characteristics such as extra territoriality of the high seas and poor or inconsistent security measures that apply in coastal areas and port facilities in many parts of the world. These make the industry vulnerable and attractive to terrorist operations (Richardson, 2004).

3.2.2 Maritime security measures and business performance

For trade to flow effectively, the connections between ships, ports and people must also be secure. International Maritime Organization (IMO) facilitates this by helping member States enhance their maritime security, focusing on what the civil maritime stakeholders, which includes both the shipping and port sectors, can do to protect themselves and to assist governments to protect global maritime trade. International Maritime Organization (IMO) responds to maritime security threats in two ways: by developing appropriate regulations and guidance through its Maritime Safety Committee and Facilitation Committee and through capacity-building work. Maritime security has been an important agenda of International Maritime Organization meetings. IMO's multi-donor International Maritime Security Trust Fund supports global, regional and national projects around the world which enhances the capacity of countries to deal with security threats, while specific trust funds support work in the Gulf of Guinea and in the western Indian Ocean.

The International Maritime Organization was formed to facilitate technical assistance for safety and protecting the maritime environment through its instruments. During the 1980s and 1990s, maritime security was included in its day to day working (Hesse, 2003). The growing impendeo from piracy and armed robbery and terrorism paved the path for new initiatives at IMO such as establishing an anti-piracy program, development of guidelines for the ship security and security of port facilities (Kothari, 2008). More measures and guidelines have been put in place by IMO to deal with emerging trends of maritime security threats which might have adverse effects on performance of businesses around the globe.

3.2.3 Maritime security policies and business performance

Policies are enacted to control and give directions to operations of organizations. Stephens and Armstrong (2005) asserts that policies are designed to give guidelines on action and helps in decision making by setting limits. A policy document entails coming up with broad management objectives for interests that are mutual. Business organizations have elaborate policies for performance effectiveness and efficiency. The International Maritime Organization (IMO) is responsible for facilitating technical assistance for safety and protecting the maritime environment through its instruments. Being at the helm of maritime affairs, the IMO has actively responded to historic disasters involving safety of life and the marine

environment through drafting and implementing various policies (Kothari, 2008). IMO adopted new measures and regularly updated International Convention for the Safety of Life at Sea (SOLAS 74), and International Convention for the Prevention of Pollution from Ships, (MARPOL 73/78) depicting the volume of its initiatives taken in its mandate. In the field of maritime security too some progress was made in the 1980's through the Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation, 1988 (SUA 88). IMO's continual efforts have made the shipping industry one of the most regulated in the world (Mortensen & Rasmussen, 2003). There are nearly fifty IMO instruments, reinforced by a number of protocols, codes, guidelines, recommended practices and a plethora of circulars, covering different aspects of the maritime industry, namely ship operation, ship design, construction, equipment, maintenance, manning and eventual disposal, literally, from the drawing board to the scrap yard (Kothari, 2008).

Maritime security has been an important agenda of International Maritime Organization meetings. The importance of maritime security took deeper roots in the maritime industry when IMO adopted the new motto 'Safe, Secure and Efficient Shipping on Clean Oceans' in the 89th session of the IMO council meeting (International Maritime Organization, 2002, December 5). However, the biggest challenge facing the IMO in its endeavor to enhance maritime security is the commercial interest of the maritime industry. Breach of maritime security may not affect only the individual owners of the industry but also affect the global economy and may have grave impact on humanity. More policies have been put in place to deal with emerging trends of maritime security threats which might have adverse effects on performance of businesses around the globe.

3.2.4 Maritime security technology and business performance

Technology in different walks of life has revolutionized and made a herculean task within the human capability (Kothari, 2008). Many business organizations around the globe have invested heavily on innovation and exploitation of new technologies in service delivery. Technological advancement, globalization and increasingly diverse workforces have made the business environment become very dynamic, placing increasing pressure on organizations to develop and implement strategies that will help maintain their competitive advantages (Kinyajui, 2019). In order to boost liberalization, growth in global trade and meet the energy demands of growing economies and expanding populations (Council, 2007), it is important to secure shipping industry which is the life line of the world economy. The only way out is by effective utilization of technology and achieving higher degree of maritime security (Abhyankar, 2006). To enhance safety and security in maritime industry, technology has to be adopted and well utilized. Ngumbi & Wambua (2018) conducted a research on organizational resources and implementation of strategic plans in administration police service in Kenya and found out that there was significant influence of technology on implementation of strategic plans in the organization. However, technology alone cannot achieve full implantation of laid down strategies in an organization without combination of other factors such as human capital, finances, infrastructure among others.

4.0 RESEARCH METHODOLOGY

The study adopted a desktop literature research design, document review guide was developed and summary of all areas of interest done. The research undertaking was done through reviewing what previous researchers have done in the concerned areas of interest and also by thoroughly studying books written and United Nations international reports made on maritime security and business performance. To identify the right journals, articles and books online, keywords namely maritime security, business performance, economic growth, blue economy, technology among others were used.

5.0 CONCLUSION

A positive correlation between maritime security and business performance was evident from the various reviews done by the researcher. Policies made and measures taken by International Maritime Organization (IMO) in maritime security have an impact on performance of businesses both locally and internationally. Technological advancement has a far reaching influence on implementation of maritime security and business performance. Most of the studies done on maritime security have been on definitions, measures, policies and evaluations giving limited attention to relation with other sectors of economy. The researcher concludes that many studies have been done on maritime security but a few have been done primarily on its relationship with other economic sectors such as blue economy locally and globally. The researcher hopes that this paper will be an eye opener to various scholars and academia to find interests in studying effects of safety of seas to blue economy and performance of business organizations worldwide.

6.0 RECOMMENDATIONS

The research recommends involvement of local organizations at national levels in formulating and implementing maritime security measures and policies without entirely relying on International Maritime Organization (IMO). This is due to varying marine laws and Acts of parliament guiding maritime industry in various countries and continents. The researcher recommends future studies conducted on maritime security and business performance to consider including mediators and moderators. The researcher also recommends inclusion of conceptual frameworks in all future research studies as most of the papers reviewed lacked conceptual framework to illustrate the influence of independent variables on dependent variables. For a more conclusive analysis, the researcher recommends each study done to be guided by conceptual framework incorporating moderating and mediating variables.

7.0 SUGGESTIONS FOR FURTHER STUDIES

The researcher suggests that a study be done on influence of maritime security on economic growth for better understanding of how business performance can be improved. Specifically the researcher suggests a study to be done on impact of maritime security on blue economy as there is more direct relationship compared to other economies. The researcher further suggests incorporating mediating and moderating variables for a more comprehensive understanding of research studies on maritime security and business performance.

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27. An Empirical Analysis of The Relationship Between Leadership And Firm Performance: A Perspective Of Tours And Travel Companies In Kenya

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Abstract

All companies exist in an evolving environment that affects their performance. As a result, an adaptive strategy is necessary for the execution of result-oriented excellence. Due to the unanticipated changes in the environment, firms should be agile and not hesitate to pursue emerging opportunities and continuous improvement. The sustainable growth of the tourism industry is anchored in a constant and competitive supply of tours and travel services. The emerging markets require the tour firms to embrace innovation to pursue opportunities even in the event of market dynamics. The current study was aimed at establishing the relationship between leadership and firm performance of tours and travel companies in Kenya. The literature review examined the effect of leadership styles on organizational performance and established

that leadership speed has a significant effect on firm performance. The current study focused on the use of non-financial indicators and its impact on firm performance. This study will be of great value to the management of tours and travel companies in Kenya, policymakers, and researchers, and academicians. The theoretical review focused on three major theories that include; Resource-based theory, Dynamic Capabilities and Organizational Culture Model. A descriptive research design was adopted in the study. The target population for the study was the management staff of the four management levels of tours and travel companies in Kenya which included; senior management, middle level, functional level, and technical level. A proportionate stratified sampling technique was used to select the sample size of 176 from a target population of 586 units. A questionnaire was utilized to gather the required data and the data was analyzed by the use of simple linear regression models. The study concluded that there is no statistically significant relationship between leadership and firm performance amongst tours and travel firms in Kenya. . The study, therefore, recommends that the companies implement a decentralized decision-making structure. The structure ensures that the authority to make decisions is spread throughout the firms and not concentrated in a group of people in the organizations.

Keywords: *Leadership, Non-financial indicators, Decision Making, Decentralized Structures and Firm Performance.*

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28. Awareness Level and Social Economic Impacts of Aflatoxin contamination in Meru and Tharaka Nithi Counties

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Abstract

Aflatoxin resulting from consumption of contaminated cereals has always been a concern in Kenya. The eastern part of Kenya has been singled out as reporting more cases of aflatoxin contamination, which at times turn out to be fatal. The purpose of this study was to determine the awareness level and social economic impacts of aflatoxin contamination in Meru and Tharaka Nithi counties. The study setting was in the eastern, western, central ecological zones in the two counties. A multi-stage cluster sampling using Kenya National Bureau of Statistics (KNBS) design was used to select clusters and households. Once clusters were identified, households were selected from each cluster using stratified random sampling method. Questionnaires were developed and pretested to determine the validity and reliability. Some of the key findings from the study includes; a total of 718 households took part in the survey; 488 from Meru and 230 from Tharaka Nithi. Majority (68%) of the respondents had primary level education in the two counties. Self-employment was leading status with 43% followed by home maker 28% and casual workers with 21%. Living room is the common food storage facility in the two counties with 59% choosing it. This was followed by kitchen which was chosen by 22% of the respondents. Maize was the most grown crop in the two counties with over 96% indicating they grow the crop. Fairly small number 37% of the household know what aflatoxin is, with a staggering 67% indicating that they don't know how to identify aflatoxin infections in their crops. A big number use affected crops wrongly as exemplified by a total of 404 households who indicated that they feed them to animals and 324 who through them away. Sun-drying is the common method for drying respondent harvest and only 4% and 2 % in Meru and Tharaka Nithi who uses the recommended hermetic bags packaging. Majority of the surveyed households

71%, associated aflatoxin contamination with increased cost of farming. Lack of market for the produce was associated with aflatoxin contamination by 85%, similarly 82% cited rejection of their produce by the market and brokers being due to contamination. Finally, increased need for veterinary intervention was also associated with contamination with 54% in agreement. It was therefore concluded that aflatoxin awareness is still low in the two counties and there will be serious need to enhance its knowledge if the fight against this contamination is to be worn. Secondly, current post harvest practices among farmers in the two counties are not in line with the standards and thus worsening the phenomenon. Thirdly, access to market remains a challenge to most farmers and this can only be corrected if aflatoxin is managed. Finally, farmers need to be educated about the vicious cycle of how disposal of contaminated crops either by feeding the animal or throwing them away affects the dairy products they end up consuming.

Key Words: Aflatoxin, Socio economic, Awareness level

Introduction

Aflatoxin (AF) are poisonous substance produced by certain kinds of fungi (moulds) such as *Aspergillus flavus* and *Aspergillus parasiticus* that occur naturally all over the world; they can contaminate food crops and poses a serious health threat to both human and livestock (WHO, 2018). Besides health impact, Aflatoxin pose a significant economic burden with approximately 25% of the world's food being destroyed annually. Worldwide, food worth $750 billion is wasted or lost throughout the entire supply chain (FAO). In Sub-Saharan Africa, one of the world's poorest and most food-insecure regions, a World Bank report (Report Number 60371-AFR April 2011) estimates that just a 1 percent reduction in post-harvest losses could lead to economic gains of $40 million each year. Out of that $40 million, most of the benefits would go directly to those upstream the food supply chain. These are the small-scale farmers growing the food. Thus, reducing food loss and waste through empowerment of farmers and consumers through provision of information and training could help to recover these economic losses and reduce financial burdens on the world's most vulnerable people in the rural areas and economies such as Kenya. Aflatoxin affects many of Africa dietary staples such as maize, rice and cassava therefore it continues to be a big burden to many countries which are anchored on agriculture.

Kenya through its vision 2030 aims to make the country a globally competitive and prosperous by transforming it into an industrialized middle-income nation providing a high quality of life for all its citizens in a clean and secure environment. Simultaneously, the Kenya Vision 2030 also aims at achieving the sustainable development goals (SDGs). The presence of aflatoxin in parts of Kenya has not been in question as revealed by Njeru, Midega, Muthomi, Wagacha, Khan (2019). Similarly, the cost of contamination has never been contentious, it is large in both economic and health standpoints (Wu, 2015). Aflatoxin contamination affect food security by reducing availability, access, utilization and stability (Partnership for Aflatoxin Control in Africa, 2012). As challenging as aflatoxin is, proper intervention can reduce the risk. Njeru *et al.* (2019) concluded that proper postharvest management practices such enhanced drying, transportation, proper storage to reduce moisture, detoxification, sorting among others can help counter aflatoxin contamination. However, Wu (2015) had questioned sustainability and efficacy of these strategies. This study sought to identify the awareness level and socio-economic impacts of aflatoxin in Meru and Tharaka Nithi counties.

Background and Literature Review

Implementation of inter-sector programs and performance monitoring of child growth and development are closely linked to tenets of food availability, access, utilization and stability which closely fit in the definition of food security (FAO, 2004). Within the concept of stability is safety of food and its utilization in the human body. While FAO provides regular data on food production and per capita consumption, it is

necessary to examine regional trends and information on types of foods consumed. Such data show that in Kenya it is estimated that among available foods, Kenya's major staple food is maize and that consumption of this staple food and its products was 82 kg/per person per year (FAOSTA, 2014). Maize is only one among other staple foods, as the government has been keen to diversify the variety of foods consumed. The over dependence on maize has several challenges. One is the emergence of aflatoxin contamination at different points of food value chain and associated economic, health and nutrition impacts (Sirma, Senerwa, Makita, *et al*. 2016; Mutiga, Hoffman, Harvey, *et al*. 2015; Cardwell, 2000). In the determination of foods fed to young children popularly described as complementary foods, the Kenya Demographic and Health Survey (2014) reported that diets for children 6 to 23 months of age was maize and other grains. The consumption of staple foods is the economical way to feed households, and therefore not likely to go away. It cuts associated food costs of feeding households not only especially in rural areas, but also the nation. Therefore, consumption of maize in Kenya as a local staple food will continue.

Aflatoxin contamination of maize and other foods consumed by humans and animals is a major threat to food security and health in the country. As reported in recent studies (IPRI, 2011), aflatoxin contamination of staple foods in Kenya is a threat to health and food security sectors in the country (Gurdian article, 2004, Wagacha and Muthomi, 2008). Given that majority of maize production in Africa is used for own consumption by the households, continued low awareness level of the dangers that aflatoxin poses present a great health threat to households in Kenya. Consequently, this has impact in derailing not only the current government initiative but also making the hunger goal of Sustainable Development Goal unattainable.

Social Economic Impacts of Aflatoxin

Aflatoxin (AF) is a developmental challenge to Africa, posing a triple menace in public health, food and nutrition security, and trade and economy (Partnership for Aflatoxin Control in Africa [PACA], 2015). The partnership noted several factors contributing to the challenge of Aflatoxin in Africa which make intervention cumbersome, among them: conducive climatic conditions, traditional crop production and post-harvest practices, food insecurity, weak institutional capacity, and complexity of the problem. Agreeing with this sentiment, N'dede, Jolly, Vodouhe and Jolly (2012) noted that aflatoxin is not only a risk to human health, but also to nutritional and financial health. N'dede, *et al*. (2012) noted that AF is a potent carcinogenic toxin that causes millions of dollars of financial losses to the African continent. Aflatoxin contamination can affect the agricultural sector output generally and specifically the major pillars of food security: availability, access, utilization and stability (PACA, 2013)

When agricultural produce is contaminated, directly the availability of the product is reduced. Further the farmer earns less from the same due to product rejection and the low price they are likely to fetch in the market (PACA, 2013). The produce is also likely to be denied access to the international markets which is very sensitive to agricultural products. The result of this to the farmers is that their income is reduced and their purchasing power eroded. Hence, they are unable to buy food for the family, pay for better health services, or education. The direct impact of Aflatoxin to the economy is as a result of reduction in marketable volume, loss in value in the national market, losses incurred from livestock disease, consequential morbidity and mortality. In the international arena, produce that does not meet Aflatoxin standards is either rejected at the point of entry, rejected in channels of distribution, assigned a reduced price, or diverted to non-human or worse taken to uses that do not generate any money (PACA, 2013).

N'dede *et al*. (2012), in their study of economic risks of AF in marketing of peanuts in Benin found that 31.7% of the respondents sell spoiled nuts at a lower price while 68% just discard them. In Kenya, a similar predicament always faces the farmers and retailers whenever there is an Aflatoxin outbreak.

During an AF alert in 2009, for instance, the prices of maize dropped by half from 1800 Kenyan shillings to 900 Kenyan shillings in Kitui County (Marechera and Ndwiga, 2015). Further, at least 2.3 million bags of maize were found unfit for human and livestock consumption or trade during AF outbreak in the period between 2004 and 2006 (Marechera and Ndwiga, 2015). This is a clear indication of possible reduced income as a result of AF contamination of agricultural produce. Total economic loss due to AF exposure in Tanzania has a median of 332,500,000 USD in the year 2014/2015 according to PACA (2015). The case was similar for Malawi which due to AF the domestic market had net loss of 1.85% and 0.01% of informal regional market (PACA, 2013).

According to Agriculture Trade (2016), the economic impact of AF on livestock production includes mortality and reductions in productivity, weight gain, feed efficiency, poor fertility and reduction of the ability of livestock to resist disease. Further, there is the financial losses that may result due to poor quality of meat, milk, and egg produced due to livestock consumption of contaminated feed (Agriculture Trade, 2016). To exemplify this, 5 % of the maize and peanuts produced in the Philippines and Thailand is discarded and the cost that are associated with contamination in these countries is in excess of 367 million USD (Agriculture Trade, 2016). In United States (US) alone, it is estimated that the loss due to Aflatoxin contamination may exceed 500 million USD (Grubisha and Cotty, 2015).

Wu, Narrod, Tiongco and Liu (2011) noted that it has been estimated that more than 5 billion people from developing countries are at risk of chronic exposure to AF. The problem of AF in Kenya is not new. The first case was reported in 1961 when 16,000 turkeys died from ingesting contaminated feeds (Marechera, Ndwiga, 2015). An outbreak in human beings in Kenya was reported in 1981, the most hit areas in Kenya were Machakos, Makueni and Kitui counties (Marechera, Ndwiga, 2015). Kenya witnessed a devastating Aflatoxin outbreak in 2004 where it claimed 127 lives (Marechera and Ndwiga, 2015). In 2005, 23 out of 63 reported cases in Eastern province were fatal. In 2006, in the same province, 28 out of 78 reported cases were fatal (Ministry of Agriculture). In 2007, 21 out of 84 cases in Eastern province were fatal. Sixteen of these cases occurred in Igembe District in Meru (Ministry of Agriculture). In 2009, though there were no fatal cases, 31,000 bags of maize were condemned in Mbeere and 1,213 bags in the Bura irrigation scheme (Ministry of Agriculture). In 2010, 2.3 million bags of maize grown in Eastern and Coastal regions of Kenya were declared unfit for consumption due to Aflatoxin contamination (FAO, 2011).

Purpose of the Study

The purpose of this study was to establish aflatoxin awareness level among the households in the of Meru and Tharaka Nithi. Further, the study identified the socio-economic impacts of the contamination. The findings are crucial for stakeholders to be able to proactively respond to reduction and gradual control of aflatoxin in foods for human and animals

Specific Objectives of the Study

The study was anchored on two main objectives;

1. Investigate the communities' knowledge of dangers associated with consumption of aflatoxin contaminated staple foods.
2. Examine the socio-economic impact of aflatoxin contamination on staple and market crops at household.

Methodology

Study Design. This was a cross-sectional, descriptive and correlational study. It utilized the Kenya National Bureau of Statistics cluster design. The KNBS sampling design is based on household level surveys. This utilized the national sampling frame where clusters were drawn through a stratified sampling probability proportionate methodology. The 30 by 30 cluster sampling procedure was followed. This study purposively selected two counties based on empirical evidence of aflatoxin contamination of staple foods in these counties. Each county will be stratified into rural and urban strata.

County Selection: For purposes of objective data collection two counties were purposively selected because of high levels of aflatoxin contamination in staple foods. The counties of Tharaka-Nithi, and Meru were identified for the above reason. For each county cluster sampling was done independently using a two-stage sample design. Households were then sampled systematically from the listing as the sampling for second stage selection. A household level questionnaire was administered in all sampled households. Field assistants were trained, through demonstrations and other means, to be familiar with the questionnaire. The study and target populations comprised household representative. It included all adults (above 18 years of age) who are household heads or their representatives within the study area.

Results

The study had a total of 718 households out of which 488 were from Meru County while 230 were from Tharaka Nithi county. Majority of the respondents were self-employed (73%), while home makers came second with 27% and third was causal workers with 20%. In the two counties of study male lead as being the head of the household with 78% while female recorded 22%. Majority, (68%) of the respondents had primary education across the two counties while only 1.6% had bachelor's level and above.

Common foods that are consumed in Meru were found to be staple (66%) and legumes (69%). The two are mainly sourced from the farm with only 23% and 21% respectively coming from the market. A slightly different pattern was noted in Tharaka Nithi, in terms of regularly consumed food, where dairy food and staple group came first with 34% followed by legumes with 30%. Again, the main source for these food in Tharaka Nithi was identified as households' farms. It was noted from this study that most of fruits consumed by the households were coming from the markets in the two counties. Maize was identified as the common grown crop in the two counties with 96% of the respondents.

The post-harvest practices such as drying, storage facilities, packaging are all important in controlling the contamination, the study sought to identify post-harvest practices that could be prevalent in the two counties. After harvesting, the study established that sun drying was the most prevalent method used to dry the harvest with a frequency of 63% and 32% in Meru and Tharaka Nithi counties respectively. The study identified only 1 % of the respondents were using drying machine, this is a low number given the efficacy of the machines. Drying was the single most used preparation that households in the two counties use with a frequency of 65% and 30% in Meru and Tharaka Nithi respectively. The packaging of the harvest is important as is the storage place, the study sought to identify the common packaging used by the households in the two counties. It was established that sisal and nylon bags were the most used form of packaging with a frequency of 32% and 28% in Meru and 11% and 20% in Tharaka Nithi. Only 4% in Meru and 2% in Tharaka Nithi were using the recommended hermetic bags. Living room was the most common food storage facility in the two counties as represented by 59% of the households, this was followed by kitchen with 22%. Use of pesticides during storage was noted to be low with only 22% in Meru and 3% in Tharaka Nithi. The study established that 63% of the households consume their own crops in Meru and 32% in Tharaka Nithi.

The study also sought to gauge the awareness level of the households about aflatoxin contaminations and its dangers as captured by disposal practices of contaminated crops. When respondents were asked whether they knew what aflatoxin was, only 37% of respondents responded affirmatively to the question. Further, the respondents were asked whether they know how to identify aflatoxin contamination and 67% responded they didn't know. This low awareness level was confirmed by disposal practices that households reported. Four hundred and four households feed the suspected crops to their animals while 324 households through away the crops without care of repercussion. A small though worrying percent (2%) reported to consume suspect crop in Meru. Only 273 households mentioned burying as one of the ways they dispose of the affected crops.

Finally, the study sought to identify the economic impacts of aflatoxin contamination in the region. Majority (71%) of the surveyed households associated aflatoxin contamination with increased cost of farming. Lack of market for the produce was associated with aflatoxin contamination by 85%, similarly 82% cited rejection of their produce by the market and brokers being due to contamination. Finally, increased need for veterinary intervention was also associated with contamination with 54% in agreement.

Discussion

The focus of the study was in three major areas; Awareness level, post-harvest practices and disposal practices of the households. The study revealed that most of the households were headed by male across the two counties, this is in line with patriarchal arrangements that is common in Kenya. Though the results suggest that the majority of the households have attained primary education, and therefore can be considered literate, they have no knowledge about aflatoxin and are not able to identify its contamination. This was contrary to other research that has been done in other counties, where awareness level was very high (Malusha, Karama and Makokha, 2015). This is a big gap that need to be filled. The post-harvest practices identified in this study such as storage facility, packaging of the harvest have been noted by previous research as important mitigation level and strategies (Njeru *at el*. 2019). Unfortunately, this study revealed that very few farmers are using practices that would lower or control the contamination. The study revealed that living room and Kitchen as the main storage facility, the ventilation of these two areas are definitely wanting and could not be hoped to stop the spread. Equally, the choice of packaging materials used by the households were found to be inappropriate as majority used sisal and nylon bags and only a handful (4% in Meru and 2% in Tharaka Nithi) were using the recommended hermetic bags. This could be related to the high cost of hermetic bags compared to other packaging options, this is what Wu (2015) was pointing out that unless the practices are sustainable adoption of the same is not likely.

While it is applaudable that some households sort out the affected crops, this was found not to be accompanied by proper disposal practices since most of these crops were used as animal feeds while others were thrown away with likelihood of contaminating the soil. This very practice was found out in Western part of Kenya by Njeru *et al* (2019), their study further identified that rotten maize were being used to brew local liquor, this pose a health hazard to residents. When affected crops are fed to the animals, households end up consuming milk, meat and eggs from the very animals with high chances of them being contaminated. This is the same case when contaminated crops are thrown away, they affect the soil and the cycle continues.

Conclusion

From the study it can be concluded that aflatoxin awareness level is very low in the two counties and this should be a concern for stakeholders if the effect of this phenomenon is to be dealt with seriously. Knowledge on post-harvest practices need to be enhanced in the two counties as the study found the

current practices to be wanting, this will go a long way in reducing the aflatoxin contamination after harvest. Education on proper storage facility and packaging would also need to be instituted in the two counties of aflatoxin fight is to be won. Further, education and outreach across relevant stakeholders such as agriculture extension officers and county officials is needed to champion some of the practices that have been documented to reduce contamination. It is important that any of the strategies sold to households be cost-effective, this will increase its adoption. Finally, households need to be informed on the proper methods of disposing crop suspected of being contaminated, as the current practices are only enhancing vicious cycle from crops to animal to human being.

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29. Fund Size Effect on Performance of Unit Trust Funds in Kenya

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Abstract:
When investors take part in any investment, the main objective is to increase their wealth. This is achieved when share prices increase. The performance of unit trusts in Kenya has however been poor compared to the counterparts in the rest of the world. The poor performance is a discouragement to individual and corporate investors in addition to affecting the realisation of financial stability according to the Kenya vision 2030. Empirical literature from developed and emerging markets posits that fund size explain the performance of unit trust funds. This study therefore investigated the effects of fund size on the performance of unit trust funds in Kenya. The study adopted an explanatory research design and positivism philosophy. The target population was 16 unit trust firms in Kenya as at the end of the year 2017. The study used a census approach. Secondary data was collected from the audited financial statement of respective unit trusts for the period 2005 to 2017 using a data collection schedule. The study established that fund size has significant positive effect on performance in all funds. The study concluded that increase in fund size increases performance. The study recommends that capital market authority should monitor performance of unit trusts constantly and in addition develop merger policies to encourage small unit trust to merge in order to take advantage of economies of scale.

Keywords: Fund Size, Unit Trust Funds, Performance, Unit Trust Funds Performance

1. Introduction

The investment canon put forward by Goetzmann posits the earning of returns as the reason for investments by any investor [16]. The desire for earnings in the future backs the motivation to invest and

that the earning anticipated should be able to meet future cash needs [28]. Further, investors' motivation in investing anchors on the desire to increasing wealth and growing over time the initial investment. Investment returns compensate for the investment period, the inflation rate and the repayment uncertainty [37].

An investment in unit trusts funds is as common as investing in shares and is prevalent amongst stockholders universally since it grants them a chance to receive earnings [17]. Unit trusts offer investors a chance of earning yearly proceeds in the form of bonuses/dividends. It also serves as a basis for the long term and short term build-up of wealth resembling a savings account [43], [30]. The objective of making investments in unit trust funds is earning dividend income or obtaining capital gains. Capital gains are realized when there is an increase in the price of a unit trust fund, or returns of a unit trust fund are positive during the holding period [17].

Empirical literature on performance of unit trust funds in developing, emerging and developed capital markets presents mixed results. Some reported underperformance while others reported over performance. Bonolo, Beatrice and John; Praven, Das and Uma; and William reported weak performance or underperformance [50]; [49]; [44]. Mohamed; Halil; and See and Jusoh reported positive performance or outperformance of unit trust funds [30]; [20]; [41].

For enhanced decisions, investors should be well versed with individual unit trusts fund share returns as well as the fund characteristics that influence returns in unit trust funds [51]. This study examined the effect of fund size on the performance of unit trust funds in Kenya.

1.1. Fund Size

Fund size plays an essential part in clarifying variances across unit trust funds performance [15]. This study investigated the effect of fund size on the performance of unit trust funds, which is among the most common and significant variables amongst the literature. Investors inject more money to better performing funds and withdraw or avoid injecting more funds to poorly performing funds [4]. Fund size is calculated as the Net Asset Value (NAV) for each unit trust fund based on the method of measurement by Carhart [9].

Brennan and Hughes argued that, large funds present a wide spread for fixed expenses, more resources for research, better opportunities of investment that are not available to smaller funds in addition to negotiating improved ranges due to more prominent positions and trading capacities[5]. However, large funds experience particular difficulties in administration and persistence performance [2]. Funds with massive amounts experience deteriorating performance since investment avenues diminish [2]. Yin-Ching and Hung (2003) held a position that small funds outdo in performance their corresponding in the category of bond fund. Smaller funds focus on a small number of investment options, but when they become large, administrators need to continue finding better opportunities for investment; in effect, diseconomies of scale end up diluting the managerial skills [2].

Empirical studies across the various markets in the world do not agree on the effect of fund size on the performance of unit trust funds. Chen, Hong, Huang and Kubick argued of shrinking of returns with respect to scale for funds invested in the USA and a contrary position for funds located outside the USA [10]. Cremers and Petajisto showed smaller funds to be more active [11]. Grinblatt and Titman held evidence of a mixed relationship between fund size and fund returns [19]. Besides, once a fund obtains inflows, there is a tendency of increasing its positions as opposed to diversification into newer assets [36].

Yan; Edelen, Evans, and Kadlec pointed out the primary sources of diseconomies of scale in USA funds to be costs of trading and liquefication [47]; [13]. Compared to smaller equity funds, more substantial equity funds are inclined to performing more poorly outside the USA [12]. Generally, size-performance evidence isn't undivided. Current studies appear to be in support of the presence of diseconomies of scale. The reviews are, to a great extent obtained from developed markets, and it is paramount to make findings of fund size-performance effect in emerging markets as well as Kenya in

particular. The size of unit trust industry has been increasing in the world across. In 2012, the total net assets in the sector amounted to United States Dollar (USD) 32 trillion and by 2017 had grown to USD 49 trillion with the USA and Europe, contributing the highest share [22]. In Kenya, the net asset value of the industry grew over the period to USD 558 million in 2017[8].

1.2. Performance of Unit Trust Funds

Typically, investors select funds based on partial performance, although sensitivity may be due to variances of past performance. Many studies suggest that conventional investors react by directing more cash to better performing funds and not the same way to inadequately performing funds [4]. Performance in the market solely determines the survival of the fund, that is, a persistent increase in capital gains for growth funds and constant returns for value funds. [15]. Maina asserts evaluation of unit trust funds performance in terms of capital growth, periodical returns in the form of dividends, interest received, capital gains and Net Asset Value [26].

In Kenya, like other countries, many investors are dependent on unit trust funds as vehicles of investment [26]. The unit trust market is greatly unexploited in Kenya and research on their performance is significantly deficient [15]. Assortment measures of performance have been used all through the literature to assess the performance of the funds. The commonly used measures are; Jensen Alpha, Treynor ratio and Sharpe ratio, [52]; [30]; [39]. Non-risk-adjusted measures such as fund return formulas, portfolio return formulas and Lower Partial Moment Capital Asset Pricing Model have also been used [30]; [39]. This study measured the performance of unit trust funds using Jensen Alpha. The ratio is the most used across literature in assessing risk-adjusted returns of unit trusts funds.

Examination on some of the unit trust funds, show a trend of deteriorating performance. For example, Old Mutual equity fund generated a loss in 2015 and 2016 of Kenya shillings (Kshs) 74,982,000 and 227,225,000, respectively. Equity fund had a decrease in profits in the year 2016 of 16.3 per cent from the previous year 2015. The balanced fund had a loss of Kshs 27,552,000 in 2015. East African fund had losses dipping further in 2016. The Britam, equity fund had deteriorating profits from 2013 culminating into losses of Kshs 140,288,000 and 386,942,000 in the years 2016 and 2015 respectively. Cooperative insurance company funds, among others, exhibit a similar trend which indicates a gap for investigation.

1.3. Unit Trust Funds in Kenya

Unit trust funds are a set of financial securities carefully chosen to meet the specified group of potential investors' objectives [52]. The potential investors, in addition to lacking enough financial resources to construct a portfolio they also lack expertise, knowledge and time necessary in managing the portfolio [30]. Participants are shareholders who take up equity securities of the unit trust [45]. Unit trusts accord investors opportunities of investing in a well-diversified portfolio without them assuming the risk of managing the portfolio [3].

In developed markets, for example, United States of America (USA), the growth of mutual fund has been noteworthy over the past several years with the global Gross Domestic Product (GDP) growing to 36 per cent by the year 2014 [22]. Plantier asserts that the USA market established total cumulative capital inflows of approximately USD 10 trillion over the period 2000 – 2014 [35]. The largest mutual fund industry in the world with over USD17.8 trillion in assets and accounting for more than half of the $33.4 trillion of assets value is USA [21]; [14]

Africa, when combined with Asia pacific, accounts for 13percent of total world assets and is among the lowest in the world [21]. The unit trust industry in Kenya accounts for 0.80 per cent of Kenyans GDP [46] and USD 558 million [8]. Since its inception, there are a total of 20 unit trusts firms registered [8]. Central to the stock market performance of any country is the listed firms' financial performance in the

economy at large [25]. Nairobi Securities Exchange (NSE) listed firms performance has been meager [32]. Makori posits that, some of the listed firms at the NSE are not only in unhealthy financial position but in addition, they have suffered financial decline and Capital Markets Authority (CMA) has delisted them. The fall, in return, affects the performance of unit trusts funds since NSE provides an investment platform for unit trust funds [27].

According to the Republic of Kenya, the vision 2030 financial services aims to raise savings and investment rates from 17 per cent to 30 per cent of Kenya's GDP and raise stock market capitalization from 50 per cent to 90 per cent of GDP [38]. However, nine years later, the unit trust industry contributes 0.80 per cent of the Kenyans GDP [46]. The unit trusts market in Kenya is mainly dominated by four core funds which include; money market, equity, bond and balanced funds [8].

1.4. Statement of the Problem

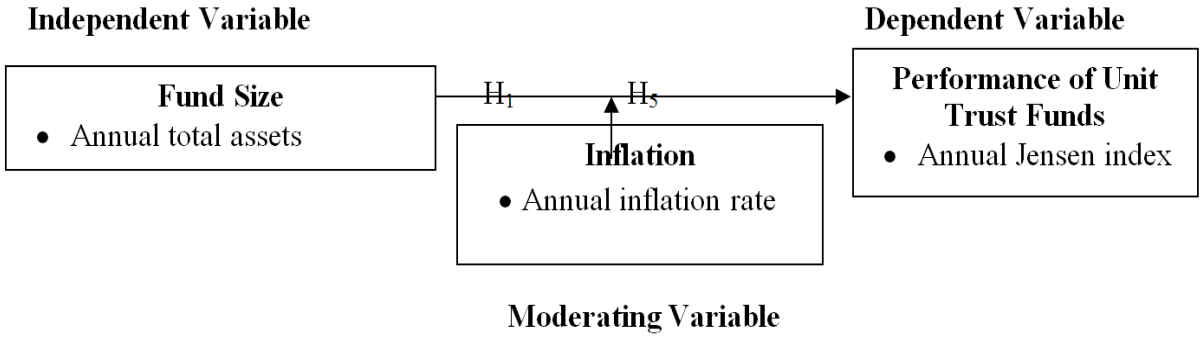
The unit trust markets in many countries are driving their economies in an upward trajectory. The Kenyan unit trust market on the other hand has continued to experience the poor performance with some reporting a stream of losses from year to year. Weak performance trends of unit trusts in Kenya are a discouragement to individual and corporate investors in addition to hindering the realization of vision 2030. Kenya's unit trust industry contributes an equivalent of 0.80 per cent of the country's GDP [46].

Countries that started unit trusts the same time with Kenya in early 2000 have grown substantially in terms of the amount invested. Such countries include Morocco, whose total value is USD 26.65 billion, Peru with an overall net worth of over USD 6.1 billion and Turkey, valued at more than USD 16 billion. Kenya, on the other hand, has a total value of USD 275.3 million [46]. The Kenyan case shows low growth in the sector and concern to the country, investors and other stakeholders. In addition, it reflects lack of understanding of the market by the investors or the fund managers are not doing enough to woo investors [1]. The dismal performance also leads to loss of confidence and erosion of investor's wealth in the unit trust [28].

On the relationship of fund size and performance of unit trusts, studies have shown mixed results. There is no clear documentation in the studies on a particular link between the performance of unit trust funds and fund size. Studies carried out in Kenya have not extensively addressed the connection amongst performance of unit trusts funds and the fund size. Discrepancies in findings on the same subject, in consequence, stirred the present study. The purpose of this study was to explore the effect of fund size on performance of unit trust funds using panel data for thirteen years and, also investigated the moderation effect of inflation on the relationship between fund size and performance of unit trusts funds in Kenya.

1.5. Conceptual Frame Work

The framework defines the researcher's conceptualization and interactions concerning the study variables. The conceptual framework graphical representation for this study is as in Figure 1



Source: Researcher (2020)

Figure 1 *Conceptual Framework.*

2. Research Methodology

2.1. Research Philosophy and Design

This research considers positivism philosophy to be the most appropriate because the study looks at the connection between fund characteristic and performance of unit trusts funds in Kenya. The event and environment of interest are objective, independent, and external of the researcher [6]. Subjective interpretations of results based on numbers have the minimal possibility [7]. Non-experimental explanatory research design was adopted to analyse the effect of fund size on the performance of unit trust funds in Kenya. Explanatory research establishes a causal association amongst variables [40]. Explanatory design is ideal where a study is endeavoring to clarify how phenomena function by finding the fundamental elements that bring change and in which case there is no manipulation of the independent variable [23]. Non-experimental design is an orderly practical enquiry where there is no express authority over the explanatory variables by investigators since symptoms happened in the past [23].

2.2. Empirical Model

Analysis of the effects of fund size on the performance of unit trust funds employed a panel regression model since the data had both cross-sectional and time-series dimensions as put forward by Greene (2008). The empirical model used in the study is as below:
for equity fund, money market fund, bond fund and balanced fund respectfully.

$$\text{Fund Performance} = \beta_0 + \beta_2 FS_{it} + \mu_i + u_{it} \quad (1)$$

$$\text{Fund Performance} = \beta_0 + \beta_2 FS_{it} + \mu_i + u_{it} \quad (2)$$

$$\text{Fund Performance} = \beta_0 + \beta_2 FS_{it} + \mu_i + u_{it} \quad (3)$$

$$\text{Fund Performance} = \beta_0 + \beta_2 FS_{it} + \mu_i + u_{it} \quad (4)$$

Where,
Fund Performance is the performance of each unit trust fund measured by Jensen Alpha model.
FS is the size of the unit trust fund.
OE is the unit trust fund operating expense.
SR is unit trust fund systematic risk (measured with Beta).
USR is unit trust fund Unsystematic risk
β_0 is the constant term
$\beta_1 \ldots . \beta_5$ represents coefficients of the explanatory variables
i = represents firms (cross-sectional dimension) ranging from1 to 20
t = represents years (time series dimension) ranging from 2005 to 2017
μ_i = is Individual fund effect
u_{it} = Is idiosyncratic error term

2.3. Moderating Effect of Inflation on the Relationship Between Fund size and Performance of Unit Trust Funds in Kenya

The Whisman and McClelland test for the moderation effect of inflation on the relationship between fund characteristics and performance of unit trusts funds in Kenya was adopted in this research [42]. The model proposes two main stages. First, inflation in a particular year is introduced in model 2a to 2d as a variable as shown in equation 3a to 3d below:

$$\text{Fund Performance} = \beta_0 + \beta_2 FS_{it} + \beta_5 1nIR_t + \mu_i + u_{it} \quad (5)$$

$$\text{Fund Performance} = \beta_0 + \beta_2 FS_{it} + \beta_5 1nIR_t + \mu_i + u_{it} \quad (6)$$

$$\text{Fund Performance} = \beta_0 + \beta_2 FS_{it} + \beta_5 1nIR_t + \mu_i + u_{it} \quad (7)$$

Fund Performance $=\beta_0 + \beta_2 FS_{it} + \beta_5 1nIR_t + \mu_i + u_{it}$ (8)

Where IR_t in the inflation rate in year t.

Secondly, inflation is introduced as a moderator as shown in equation 3.8a to 3.8d below:

Fund Performance $= \beta_0 + \beta_2 FS_{it} + \beta_5 1nIR_t + \beta_7 [FS_{it} * InIR_t] + \mu_i + u_{it}$ (9)

Fund Performance $= \beta_0 + \beta_2 FS_{it} + \beta_5 1nIR_t + \beta_7 [FS_{it} * InIR_t] + \mu_i + u_{it.}$ (10)

Fund Performance $= \beta_0 + \beta_2 FS_{it} + \beta_5 1nIR_t + \beta_7 [FS_{it} * InIR_t] + \mu_i + u_{it}$ (11)

Fund Performance $= \beta_0 + \beta_2 FS_{it} + \beta_5 1nIR_t + \beta_7 [FS_{it} * InIR_t] + \mu_i + u_{it}$ *(12)*

2.4. Target Population and Data Collection

The target population for this study was the 16 unit trusts firms in Kenya. These are the unit trust firms that are registered by CMA by this period and data was available. Data was collected using data extraction tool.

3. Research Findings and Discussion

Table 1. *Descriptive Statistics.*

Fund	Variables	Mean	Std. Dev.	Minimum	Maximum
Equity	performance	-15.9348	4.576758	-22.05	-4.28
	Fund Size	8.20101	0.92488	5.01	9.79
	Inflation Rate	8.160109	3.233511	3.971667	16.23083
Money market	performance	-23.69112	11.79204	-39.12	2.69
	Fund Size	8.911495	0.6549662	6.52	10.16
	Inflation Rate	8.271214	3.293276	3.971667	16.23083
Bond	performance	-19.63447	4.804927	-27.1	-6.29
	Fund Size	7.652941	0.6777393	4.6	8.69
	Inflation Rate	8.091342	3.066169	3.971667	16.23083
Balanced	performance	-10.21065	10.98119	-37.92000	-1.229000
	Fund Size	8.171414	0.7301426	5.7	9.3
	Inflation Rate	8.115689	3.124007	3.971667	16.23083

Source: Study data (2020)

As indicated in Table 1, the mean performance of equity fund is -15.93475 below what is predicted by CAPM with a standard deviation of 4.576758 and minimum and maximum values of -22.05000 and –4.280000, respectively. The standard deviation indicates that the data is highly variable as depicted by minimum and maximum values since it includes both small and large unit trust funds over the period. The negative value of the Jensen alpha indicates that equity funds, on average, underperform the market. The negative values for minimum and maximum indicate that all equity funds were underperforming the market in the period of study. Table 1 further indicates that each unit trust firm operates an average equity fund of 8.201010. The fund size has a standard deviation of 0.924880, a minimum value of 5.010000, and a maximum of 9.790000, which explains the high variation.

On the money market fund, Table 1 shows the mean performance as -23.69112 below what is predicted by CAPM. The standard deviation is 11.79204, which shows data to be highly variable as depicted by minimum and maximum values of -39.12000 and 2.690000, respectively. The negative value of the Jensen alpha indicates that the money market fund, on average, is underperforming the market. The

positive value indicates that some of the funds were over performing the market in the period of study. On fund size, Table 1 further indicates, on average, the firm size in the money market fund to be 8.911495. The firm size has a standard deviation of 0.654966, which means high variation, as illustrated by the minimum and maximum values of 6.520000 and 10.16000 respectfully.

Furthermore, the summary statistics in Table 1 indicate that, on average, during the period of analysis, the rate of inflation was 8.271214 per cent. The standard deviation was 3.293276 per cent, while the minimum and maximum values were 3.971667 and 16.23083 per cent, respectively. Therefore, during the period of analysis, the funds experienced mild to rapid levels of inflation. This situation is in harmony with the economic cycles during the study period. Further, guaranteeing the representative nature of data.

Also, Table 1 shows a mean performance of -19.63447 below what is predicted by CAPM on the bond fund. The standard deviation is 4.804927 showing that the performance is highly variable with minimum and maximum values of -27.10000 and -6.290000, respectively. The negative value of the Jensen alpha indicates that the bond fund, on average, underperforms the market. The negative values for minimum and maximum indicate that all bond funds were underperforming the market in the period of study. The average amount of operating expense, as shown in Table 1, is 6.21221 for any of the bond funds. The fund size standard deviation is 0.677739, with minimum values of 4.600000 and a maximum of 8.690000, which shows the small funds and the large funds over the study period. Furthermore, the summary statistics in Table 1 suggest that, on average, during the period of analysis, the rate of inflation was 8.091342 per cent. The standard deviation was 3.066169 per cent, while the minimum and maximum values were 3.971667 and 16.23083 per cent, respectively. Therefore, during the period of analysis, the funds experienced mild to rapid levels of inflation. This scenario is in harmony with the economic cycles during the study period. Further, guaranteeing the representative nature of data.

The balanced fund, on the other hand, as depicted by Table 1, has a mean performance of -10.21065 below what is predicted by CAPM. The minimum and maximum values are -37.92000 and -1.229000, respectively. The negative value of the Jensen alpha indicates that the balanced fund has, on average, been underperforming the market. The negative values for minimum and maximum show that all balanced funds were underperforming the market in the period of study. The standard deviation of 10.98119 indicates a high variation in the performance of balanced funds within the period of study. On fund size, Table 1 further indicates, on average, the fund size of the balanced fund to be 8.171414. The fund size has a standard deviation of 0.730143, with minimum values of 5.700000 and a maximum of 9.300000. The standard deviation is highly variable over the period based on the size of the fund.

On the inflation rate, the summary statistics in Table 1 indicate that, on average, during the period of analysis, the inflation rate was 8.115689 per cent. The standard deviation was 3.124007 per cent, while the minimum and maximum values were 3.971667 and 16.23083 per cent, respectively. Therefore, during the period of analysis, the funds experienced mild to rapid levels of inflation. This inflation rate is in harmony with the economic cycles during the study period. Further, guaranteeing the representative nature of data.

3.1. Hypothesis Testing

This section presents the study findings thematically based on the study objectives. It shows the effect of operating expenses, fund size, systematic risk, and unsystematic risk on fund performance in Kenya. The model results were interpreted and discussed at a 95% significance level (α=0.05).

Table 2. *Effect of fund size on fund performance.*

Fund	Variable	Coefficient	Std. Error	t-Statistic	Prob.
Equity	Constant	-1.41E+16	4.26E+16	-0.330191	0.7421
	Fund size	2.51E+08	25129369	10.00694	0.0000
Money market	Constant	51851601	14981681	3.461000	0.0008
	Fund size	0.085234	0.004061	20.98723	0.0000
Bond	Constant	5020687.	4061819.	1.236069	0.2208
	Fund size	0.035612	0.010773	3.305717	0.0015
Balanced	Constant	-3534459.	20990778	-0.168382	0.8667
	Fund size	0.025146	0.019091	1.317167	0.0191

Source: Study Data (2020)

The findings in Table 2 indicate that the p-values are less than the significance level of 0.05. Fund size has a significant positive connection with performance in all funds.

3.2. Fund Size and Performance of Unit Trust Funds

In light of the objective, the study sought to establish the effect of fund size on the performance of unit trust funds in Kenya. Testing done on the null hypothesis (H_{01}) is that; fund size has no significant effect on the performance of unit trust funds in Kenya. Table 2 shows that the coefficient of fund size in the equity fund is 2.51E+08, with corresponding p-values of 0.0000 and t-statistic of 10.00694. The p-value is less than 0.05, and hence the null hypothesis is rejected, meaning that fund size affects the performance of equity fund. In the money market fund, the coefficient is 0.085234, with a p-value of 0.0000 and a t-statistic of 20.98723. The p-value is less than 0.05, and hence the null hypothesis is rejected. Fund size, therefore, affects the performance of money market funds.

On bond fund, the coefficient is 0.035612, with a corresponding value of p-value of 0. 0.0015 and t-statistic of 3.305717. The p-value is less than 0.05, hence rejecting the null hypothesis. Fund size, therefore, affects the performance of the bond fund. For the balanced fund, the coefficient is 0.025146, with a p-value of 0.0191 and a t-statistic of 1.317167. The p-value is less than 0.05, and hence the null hypothesis is rejected, meaning that fund size affects the performance of balanced funds in Kenya. The coefficients of fund size in all funds are positive, meaning that fund size and performance have a positive relationship in that an increase in fund size increases the performance of unit trust fund in Kenya. These findings do not agree with the results by [34], [29], 41, and [33], who observed no effect of fund size on the performance of unit trust funds. Ainulashikin and Andrew saw a significantly negative effect [4] while Samira and Slaheddine; and Maina found a significant positive effect of fund size and performance of unit trust funds, which agree with the findings in this study [39]; [26].

3.3. Moderating Effect of Inflation on the Relationship Between Fund Size and Performance of Unit Trust Funds

The testing of the second hypothesis was tested through the estimation of model 2a – 2d and 3a - 3d. Table 3 below reports model 2a – 2d estimates, and Table 4 illustrates the estimates of model 3a – 3d. The results in Table 3 were interpreted simultaneously with those of Table 4.

Table 3. *Inflation as an independent variable.*

Fund	Variable	Coefficient	Standard Errors	t-Statistic	P-value
Equity	Constant	-7.26E+16	6.16E+16	-1.178493	0.2416
	Fund size	2.50E+08	23368196	10.70613	0.0000

	Inflation rate	6.74E+15	5.73E+15	1.176464	0.2424
Money market	Constant	34809098	23445998	1.484650	0.1408
	Fund size	0.084472	0.003862	21.87034	0.0000
	Inflation rate	-580205.5	1993357.	-0.291070	0.7716
	Constant	7932359.	3388655.	2.340858	0.0218
Bond	Fund size	0.035253	0.008265	4.265348	0.0001
	Inflation rate	-473258.3	179692.3	-2.633715	0.1002
	Constant	63626836	26668174	2.385872	0.0191
Balanced	Fund size	0.017187	0.018059	0.951714	0.0343
	Inflation rate	-6778164.	1809088.	-3.746730	0.1603

Source: Study data (2020)

Table 3 above indicates that the coefficient of inflation, which is of interest under model 2a -2d in the equity fund, is 6.74E+15 with a corresponding p-value of 0.2424, which is higher than the level of significance of 0.05 hence insignificant. In the money market fund, the coefficient is -580205.5, with a corresponding p-value of 0. 7716. The p-value is greater than 0.05 hence insignificant. The bond fund has a coefficient of -473258.3, with a p-value of 0.1002. The p-value is greater than 0.05; hence the coefficient is insignificant. On the other hand, the balanced fund has a coefficient of -6778164, with a p-value of 0.1603. The p-value is greater than 0.05; hence the coefficient is insignificant.

Table 4. *Inflation as a Moderator on the relationship between fund size and performance.*

Fund	**Variable**	**Coefficient**	**Standard Errors**	**t-Statistic**	**P-value**
	Constant	-1.59E+16	1.14E+17	-0.140278	0.8888
	Fund size	2.76E+08	79163504	3.487174	0.0008
Equity	Inflation rate	-5.13E+13	1.28E+16	-0.004001	0.0368
	Fund size * Inflation rate	-3927205.	10124781	-0.387881	0.0340
	Constant	30262369	42043321	0.719790	0.4734
	Fund size	0.045882	0.021592	2.124988	0.0362
Money market	Inflation rate	243866.9	5002663.	0.048747	0.0162
	Fund size * Inflation rate	0.005595	0.003125	1.790444	0.0365
	Constant	-3512189.	7365573.	-0.476839	0.6349
	Fund size	0.035443	0.023182	1.528931	0.0130
Bond	Inflation rate	875316.5	796057.4	1.099564	0.0275
	Fund size * Inflation rate	7.11E-05	0.002529	0.028098	0.0197
	Constant	-32501217	61125236	-0.531715	0.5963
	Fund size	0.144451	0.047497	3.041281	0.0031
Balanced	Inflation rate	5154691.	7625258.	0.676002	0.0500
	Fund size * Inflation rate	-0.016211	0.005547	-2.922260	0.0044

Source: Study data (2020)

Table 4 above illustrates the introduction of inflation as a moderator. The coefficient of interest is that of the interaction term. The coefficients of the interaction term for fund size in equity fund is significant. In Table 3, the coefficient of inflation for the equity fund is insignificant. The null hypothesis that inflation has

no moderating effect in the relationship between fund size and the performance of unit trust funds in Kenya is rejected at the significance levels of 0.05 for the equity, money market,bond and balanced funds. For this reason, inflation has a moderating effect on the relationship between fund size and performance of all funds in Kenya. These findings are consistent with lemantile who observed a negative effect on performance [24] and contradicts Mohammadreza and Esmaeel who observed a positive effect of inflation on performance [31].

4. Summary, Conclusion and Recommendations

4.1. Summary

The background presented in the study culminated to the statement of the problem. The study formulated research objectives to address the Research problem. A conceptual framework was developed to show the relationship between the variables. The research methodology of the study is given and explanation for choosing it. Non-experimental explanatory research design and a census of sixteen unit trust firms were taken. Panel data for the period 2005 to 2017 was used for analysis. The study found performance averages on all funds to be negative, indicating their performance to be below that which is predicted by CAPM. Additionally, their standard deviations were higher than the mean, an indication that the data was highly spread.

The study sought to establish the effect of fund size on the performance of unit trust funds. The findings were that there is a significant positive relationship with performance in all funds. Therefore as the size of fund increases, performance increases. Further, the study sought to investigate the moderating effect of inflation on the relationship between fund size and the performance of unit trust funds. The study findings revealed that inflation significantly moderates the relationship between fund size and the performance of unit trust funds.

4.2. Conclusion

The study makes several conclusions based on the empirical findings in relation to the study objectives and hypotheses. Most unit trust funds' performance is below the CAPM predicted performance. In light of the test of H_{01}, the study found out that fund size has a positive and significant effect on the performance of all unit trust funds. This finding is supported by several empirical studies but also contradicts other studies. Hence the study concludes that increased fund size increases the amounts of investments and helps funds enjoy the economies of scale, leading to improved performance.

Finally, the result of H_{02}, points out that inflation has a moderating effect on the relationship between fund characteristics and performance of unit trust funds. Hence the study concludes that inflation moderates the relationship between fund size and performance of unit trust funds.

4.3. Recommendations

In light of the findings of the study and conclusions thereof, some recommendations to policy and practice are noteworthy. Firstly, the management of unit trust funds ought to be more careful in handling and better usage of resources to improve the performance of the unit trusts. Secondly, the management of unit trust funds ought to work closely with the regulator (CMA) to create a supportive environment for the unit trust firms to increase their fund size and managerial capacity. There ought to be constant monitoring and supervision, designing an in-service course in management of unit trust funds to improve administrative ability, and offering technical support. The academicians can use the contribution of fund size on performance to identify the knowledge gaps and pursue further research in the area. Finally, the fiscal and monetary policy implementers should seek to maintain desirable levels of inflation based on the performance of the economy.

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30. Internal Audit and Performance of International Non-Governmental Humanitarian Organizations in Nairobi, Kenya

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Abstract

Accountability for most of the international humanitarian non-governmental organizations has been a major concern where most of the organizations fail to account for the funds allocated by the donors. This has resulted to a gradual decline in the performance of most of international humanitarian non-governmental organizations making a lot of donors to drive away their funds to other organizations. The research aimed primarily at assessing the effects of internal audit and the performance of international NGOs in Nairobi, Kenya. The research assessed the impact of internal controls, on international humanitarian performance. The study objective was to examine the effects of internal controls on the performance of International Humanitarian Non-Governmental Organization the research question was how internal controls affects the performance of International Humanitarian Non-Governmental Organization .This research was supported by the contingency theory of organizational performance. The research employed a descriptive research design, 76 respondents were selected as a sample size. Self-administered questionnaires were utilized for primary data collection while secondary data was collected via the data collection sheet. The results were evaluated using SPSS Version 25.0. All numerical variables were measured with descriptive statistics .Qualitative data from the open-ended questions were analyzed and summarized in prose using conceptual content analysis. The relationship between the independent variables and dependent variables was done using regression analysis. To present the information, frequency tables were utilized. According to the results of the established regression model, a unit change in internal controls would significantly lead to 0.638 increases in the score of performance of international humanitarian non-governmental organizations in Nairobi. The study therefore concluded that internal control systems are a major determinant of the performance of International Humanitarian Non-Governmental Organizations in Nairobi, Kenya. Internal control practices are crucial to the success of international humanitarian non-governmental organizations since it acts as a powerful brake on the possible deviations from the predetermined objectives and policies.

Key Words: Performance, Corporate,Auditing Accountability and Responsibility

Introduction

1.1 Background of the Study

The introduction of the Corporate and Auditing Accountability and Responsibility Act in 2002 was brought about by global scandals in America like world.com and Enron, where investors lost more than $180bn(Sarbanes & Oxley 2015). The financial scandals were due to a failure by the Sarbanes Oxley Act of 2002 to fix internal control structures, including bad corporate governance. As Hayes (2015) states, internal reviews demonstrate to a company management and the management committee, that the goals of the organization, are achieved. The chances of achievement are determined by limitations that are central to all internal controls. Institutions establish certain processes to guarantee their priorities and targets are accomplished efficiently, helping them achieve their implementation and organizational goals, prevent resource loss, allow timely reports to be generated, and ensure coherence with legislation and guidance. Dunjia (2013) suggests that the entire system of structures developed into an enterprise requires internal control procedures to provide a sensible assurance that hierarchic goals will be achieved..

In Kenya, NGOs have taken a two-pronged approach to transparency. On the one hand, external pressure has been exerted by bodies such as the 1990 NGO Coordinating Board, which aims to control all NGO operations in accordance with the principles of transparency. The board is responsible for tracking, organizing and promoting the activities of all NGOs operating in Kenya, whether national or foreign. For example, in the recent de-registrations, the Board disregards the laws of more than 1252 out of 4,000 registered Kenyan NGOs (Mutinda, 2010). The NGO Council, on the other hand, also plays the umbrella organization role for all NGOs (Poverty Eradication Network, 2010). The aim of the council is to promote self-regulation among Kenya-based local NGOs.

1.1.1 Internal Audit

Internal audit is a mission and an Independent Evaluation of the Risk Management, Control and Governance Benefit by assessing its feasibility to achieve the accepted objectives of the company (Chiggai 2016). The Board of Directors and Line Management in the regulated units are also subject to internal audit outcomes. In order to ensure the achievement of its goals and through implementation proposals, management exerts its master capacity to analyze accurately and control the methods, approaches and operations developed by management (Dumitrescu, 2014).

The internal audit is a self-monitoring, objective and advisory activity, according to the Institute of Internal Auditors (2016) which aims at adding value to and improving organizational operations. Internal audit activities help companies meet their goals by creating a well-defined and directed way to monitor and manage risk management and, in

turn, organizational processes. In this way, internal auditing by experts with an accurate understanding of company cultures, systems and processes is to be carried out (Ford & Eisner, 2016).

1.1.2 Performance of International Humanitarian Non-Governmental Organizations

Performance assess the degree to which the company has accomplished its objectives (financial and non-financial goals). Therefore, performance is usually linked to anticipated results (Penrose, 1959). In this study the performance of INGHOs is assessed by timely completion of projects & reporting, reduced management comments, realization of value for money, increased funding and change in the living standards of beneficiaries. The findings are significant because they rely on the research methodology used to create the link between KM and corporate functioning (Carr, 2006). Organizational quality assessment approaches include the viewpoints of economic, consumer, internal processes and development, training, and suppliers.

INGHO's organizational performance is measured on their potential to mobilize funds to achieve their strategic targets and priorities. The concept of organizational success is very complicated for NGOs because of the varied organizational goals and objectives and the fact that there are a variety of stakeholders with different interests (Castanias & Helfat, 2014).

There are approximately over 4000 registered International Humanitarian Organisations operating in Kenya since 2002 to date, the annual revenues of INGHOs are projected at $1 billion, about three percent of GDP. The government now considers INGHOs as real development partners. Several INGHOs operate nationwide, while others operate in one or more jurisdictions, with Community-based organisations being listed as the latter (Wambugu, 2012). Through their program, INGHOs were engaged with multi-sectoral projects and monsector / themes. The majority of INGHOs currently work in health services activities (HIV / AIDS); education (especially informal activities); micro-credit and income generation activities; farming (especially agriculture and fisheries extension); environmental activities; water and sanitation; capacity building and formation; peace building and the transformation of conflicts, social development and Community empowerment (Uganda National NGO policy, 2008).

1.1.3 International Humanitarian Non-Governmental Organizations

International humanitarian NGOs are not for profit International humanitarian organisations and provide relief assistance in Kenya to alleviate immediate and after-disaster misery and save lives (GHA, 2012). If people's lives are endangered, a situation is catastrophic and is usually beyond the capacity of the local government to react or deal with it. Many INGHOs in Kenya respond to international calls or requests from their county governments. INGHOs such as the Kenya Red Cross Society have played an important role in the past decade in

responding primarily to drought, conflict, disease and entrenched suffering, in Kenya's natural and man-made disaster.

INGHO's organizational conditions in Kenya are quite diverse and typically face challenges from over-dependence of donors to hard working environments and factors like poverty, difficult climate zones, and episode of low funding, poor policy preparation and a shortage of staffing (Omondi, Ombui, and Mungatu 2013. Kenya has several humanitarian catastrophes: drought, hunger floods, disease outbreaks, food shortages, war and strife. The world's largest population of refugees, as per Feeny & Ives, 2014 is about 450,000 in Daadab, almost 100,000 in Kakuma, and over 50,000 in Nairobi (DAAA). These numbers represents the size and scale of the humanitarian work of the country.

1.2 Statement of the Problem

The performance of any organization depends on the management of its finances as this lays the foundation on its going concern. Accountability for most of the international humanitarian non-governmental organizations has been a major concern where most of the organizations fail to account for the funds allocated by the donors (Ford & Eisner, 2016). This has resulted to a gradual decline in the performance of most of international humanitarian organizations making a lot of donors to drive away their funds to other organizations. Mismanagement of funds cuts across all organizations, where else Non-Governmental organizations are viewed as less corrupt perhaps because of their nature (that most of them if not all are established for the betterment of the society) (Ford & Eisner, 2016) ,there are cases of corruption in some of these NGO's .

Several researches have been undertaken concerning internal audit and organizational performance. Othiambo (2013) examined the donor funding accountability in Kisumu County by NGOs, Kinyua (2016) has examined the impact of the Nairobi Securities Exchange enterprises financial performance on their internal control systems and Mbungua (2013) focused on the financial accountability effects on the non-governmental organizations performance in Kenya. Nonetheless, none of the studies analyzed directly demonstrated how internal audits affect the international NGOs performance. This research aimed to bridge this divide by assessing the impact of internal auditing on international humanitarian NGO performance in Nairobi, Kenya.

1.3 Objectives of the Study

1.3.1 General Objective of the Study

The research aimed primarily at assessing the effects of internal audits and the performance of international NGOs in Nairobi, Kenya.

1.3.2 Specific Objective of the Study

The research was intended to achieve the following specific objectives;

To examine the effect of internal controls/control environment on performance of international humanitarian non-governmental organizations in Nairobi, Kenya.

1.4 Research Questions

The research looked for answers to the following questions;

How does internal controls/control environment affect performance of international humanitarian non-governmental organizations in Nairobi, Kenya?

Literature Review

2.1 Introduction

This chapter discusses extensive literature on the Internal Audit of the Performance of International Humanitarian NGOs. The chapter starts by discussing some related theories. Theories include: Contingency Theory, Stakeholder Theory, Institutional Theory, The Agency Theory and Legitimacy Theory. There is also a conceptual framework focused on the goals of the research. A summary is updated in order to help recognize the current gaps in the literature.

2.2 Theoretical Review

Theoretical literature focuses mainly on ideas or hypotheses and not on reality. The quality of international humanitarian NGOs could be defined using several theoretical approaches. Such methods are grouped into the following categories in this review; Contingency Theory, Stakeholder Theory, Institutional Theory, the Agency Theory and Legitimacy Theory.

2.2.3 Contingency Theory

Austrian psychologist Fred Edward Fiedler proposed the contingency leadership concept in 1964. The theory makes a restrictive relation to and subject to observative approval between at least two free factors and a needy parameter. This survey therefore indicates that the efficacy of an internal audit depends on a company's performance. According to Cadez and Guilding (2008), contingency theory demonstrates the relationships between the unique situation, internal control and hierarchical performance systems and in particular unwavering financial revelation value.

The experimental inquiry suggests that the internal auditors who have an internal potential that is broad and higher should conduct a feasibility evaluation of internal controls and that

the company will benefit from organisational adequacy through the internal control function skills. The audit team may use structure and contingency to achieve results. Task to review and to determine company standards and production processes is a matter of inspection of company accounts and their compliance with requirements. The quality of their work guarantees the confidence of an organisation by ensuring that assets are well used in accordance with expertise and experience.

2.3.3 Internal Audit Structure and Performance of INGHOs

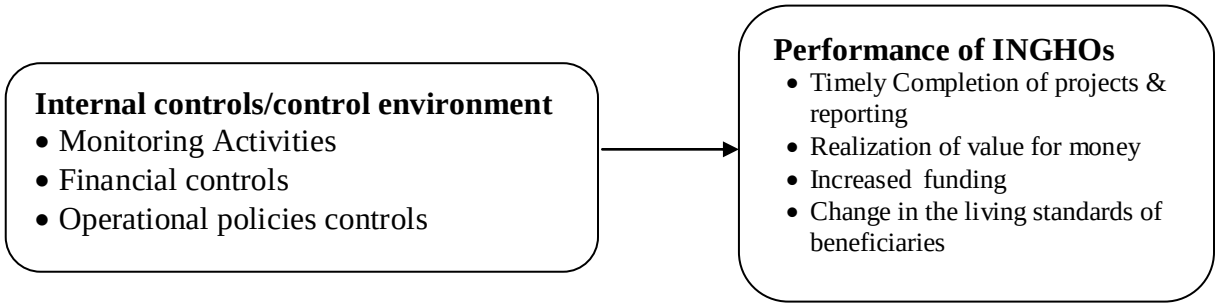
Ogega, Kibati and Koima (2017) conducted a study on the influence of risk based internal audit on financial sustain ability of non-governmental organization. The study specifically looked into the influence of Internal Auditors Competency on financial sustainability. A sample frame of 79 NGOs was used. A sample of 115 officials was selected. Data was collected using questionnaires constructed on a Likert scale and analyzed using statistical package for social sciences (SPSS) IBM software. Data was analyzed using descriptive statistics and inferential statistics presented in tables. The study established that auditor competency had significant relationships with financial sustainability. Regression analysis showed that auditors' competence and financial sustainability had a significant relationship. The research deduced that auditor competency had significant influence on financial sustainability of non-governmental organization in Nakuru County. The research is conducted in Nakuru whereas my study is conducted in Nairobi, additionally the study focused primarily on risk based audit and sustainability whereas my study will focus on internal audit as a whole.

2.3.4 Performance of INGHOs

Mkutano and Sang (2018) researched the activities and quality of NGO projects in the County of Nairobi, Kenya. Impacts of communication, project planning, involvement of stakeholders, monitoring and project results evaluation are carried out by NGOs. This study employed descriptive research design. The target population of the study was 201 NGOs operating in the County of Nairobi. Stratified, simple random sampling of 50% of the target population was used in the Nairobi County, making 100 NGOs available for selection. The results showed that increased project performance has been achieved through the successful implementation of projects management practices such as interaction, scheduling, stakeholder engagement and tracking and assessment of project operation. Therefore, it must be on the agenda of team leaders and management before every project starts to clearly identify and maintain the project communication mechanisms. The study found that interaction with the project has significant effects on project efficiency.

2.5 Conceptual Framework

This refers to a diagrammatic research tool designed to help the researcher build and convey knowledge and understanding of the situation under study. For research, a conceptual model is used to describe alternative action paths or to pose an ideal or thinking approach. It refers to a set of specific values and beliefs extracted and used in the construction of a further presentation from applicable areas of research. For certain expected results, the relation between these frames completes the framework.



Dependent Variable

Independent Variables

Figure 2: Conceptual Framework

Source: Author 201 9

Research Methodology

3.1 Introduction

The research techniques that the researcher used to find answers to the research questions is discussed in this chapter. The research design and target population, the sampling process, data collection techniques, data collection instruments and the pilot test are discussed in the following order. The section also discusses how data is analyzed in order to generate the necessary information for the analysis. The last element discussed is the ethical issues.

3.2 Research Design

This applies to data collection and evaluation criteria that are important for the purpose of study (Lewis, 2015). Additionally, it is a blueprint that makes it possible to sail smoothly through the different research activities, thus making the most successful research so that maximum information can be obtained with minimal effort, time and money. The research incorporated a descriptive research design because it represented the current state of affairs in the report. This design was utilized to establish the impact of an internal audit on performance of international NGOs in Nairobi, Kenya. This was an excellent design for the analysis of interrelationships between the variables. It is analytical and often defines and explains a variable factor or individual subject (Creswell & Creswell, 2017).

3.3 Target Population

The target population applies to the entire group of people or items for the generalization of the results. The study targeted all the 161 international humanitarian NGOs in Nairobi County. One respondent from each organization who was conversant with the internal audit were selected. Based on Flick (2015) guidelines for identifying a research unit for a report, 76 respondents from finance, programme, or management were considered to be the target population of this study.

3.4 Sampling Frame and Technique

The sample process, the sample frame, the sample method and the sample size for analysis are defined in the sample plan. The sampling summary contains a list of all population units from which the sample is obtained (Gorard, 2013). The sample size was a demographic subdivision composed of the entire population. Using purposive sampling methodology, a sample was selected. A purposive sample was an unexpected sample based on population features and the goal of the analysis. Random sampling techniques were thus used to select the funding managers, project managers and country managers from each organization, since they are most familiar with the subject.

A sample is a reflective part of the target population selected randomly (Wang, 2015). The sample size was determined at 95% confidence level and an error of 0.05 using the Nassiuma (2000) formula using a target population of 161 as displayed

$$n = \frac{N(cv^2)}{Cv^2 + (N-1)e^2}$$

Where n= sample size

N = population (161)

CV= Coefficient of variation (take 0.6)

e= tolerance of desired level of confidence (take 0.05) at 95% confidence level)

$$n = \frac{161\ (0.6^2)}{0.6^2 + (161-1)\ 0.05^2} = 76.26 \text{(Rounded off to 76)}$$

The sample size was 76.

Data Analysis, Presentation And Interpretation Of Findings

4.1.1 Response Rate

The researcher administered 76 questionnaires to management staff from international humanitarian NGOs in Nairobi. From these only 60 respondents were able to return fully filled questionnaires which represented a response rate of 78.9 percent. This response rate was good and representative and conforms to Flick (2015) stipulation that a response rate of 50 percent is adequate for analysis which meant that 78.9 percent was even better.

4.1.2 Reliability Analysis

Reliability analysis was subsequently done using Cronbach's Alpha which measures the internal consistency by establishing if certain items within a scale measure the same construct. Silverman (2016) established the Alpha value threshold at 0.7, thus forming the study's benchmark.

Table 4. 1: Reliability Analysis

Cronbach Alpha was established for every objective which formed a scale. The findings indicated that internal controls/control environment had a coefficient of 0.709, independence of auditors had a coefficient of 0.816, internal audit structure had a coefficient of 0.702 and Performance of international humanitarian non-governmental organizations had a coefficient of 0.773. All constructs depicted that the value of Cronbach's alpha is above the suggested value of 0.7, therefore, depicts that the research instrument was reliable and therefore required no amendments.

4.1.3 Validity Analysis

The validity analysis was conducted to establish whether the questionnaire is truly measuring what the researcher intended it to measure.

4.2 Bio data Analysis

The study sought to enquire on the respondents' background information that included gender, how long they had worked with international humanitarian non-governmental organizations in Nairobi, highest level of education and age bracket. This information was presented in tables with frequencies and percentages.

4.2.1 Distribution of Respondents by Gender

The researcher asked the respondents questions concerning their gender. Their answers were tabulated in Table 4.4.

Table 4. 2: Distribution of Respondents by Gender

	Frequency	**Percent**
Female	23	38.3
Male	37	61.7
Total	**60**	**100.0**

Table 4. 3: Distribution of Respondents by How Long They Had Been Working With International Humanitarian Non-Governmental Organizations in Nairobi

	Frequency	**Percent**
Less than 3 years	10	16.7
3 to 9 years	18	30.0
9 to 12 years	19	31.7
Above 12 years	13	21.7
Total	**60**	**100.0**

4.2.3 Distribution of Respondents by Highest Level of Education

Table 4. 4: Distribution of Respondents by Highest Level of Education

	Frequency	**Percent**
Certificate	2	3.3
Diploma	3	5.0

Degree	34	56.7
Masters	17	28.3
PhD	4	6.7
Total	**60**	**100.0**

Table 4. 5: Distribution of Respondents by Age Bracket

	Frequency	**Percent**
20-30 yrs.	7	11.7
31-40 yrs.	23	38.3
41-50 yrs.	13	21.7
51 – 60 yrs	17	28.3
Total	**60**	**100.0**

Table 4. 6: Effect of Internal Controls/Control Environment on the Performance of International Humanitarian Non-Governmental Organizations in Nairobi

	Frequency	**Percent**
Not at all	4	6.7
Low extent	7	11.7
Moderate extent	10	16.7
Great extent	25	41.7
Very great extent	14	23.3
Total	**60**	**100.0**

From the results in table 4.8, 41.7% of the respondents indicated that internal controls affected the performance of organizations to a great extent.

Table 4. 7: Effect of Aspects of Internal Controls/Control Environment on the Performance of International Humanitarian Non-Governmental Organizations in Nairobi

	Mean	**Std. Dev.**

Policies as laid down are followed to the latter	3.483	0.770
Approval procedures are adhered to	3.917	0.779
Projects audits are carried out as laid down	2.750	0.810
Bank reconciliations are carried out monthly	4.883	0.824
Issues raised by External auditors are addressed promptly	4.167	0.876
Punitive measures in place for persons involved in malpractices	3.233	0.740
Petty cash surprise counts done	3.850	0.685
The laid out procurement process is followed	3.400	0.975
Reports to managers are free of errors and issued on time	3.167	0.916

The findings in table 4.9 revealed that the respondents indicated that bank reconciliations are carried out monthly as illustrated by a mean score of 4.883 to a very great extent. They also indicated that issues raised by external auditors are addressed promptly as illustrated by a mean score of 4.167; approval procedures are adhered to as illustrated by a mean score of 3.917; and petty cash surprise counts done as illustrated by a mean score of 3.850 to a great extent. Further, policies as laid down are followed to the latter as illustrated by a mean score of 3.483; the laid out procurement process is followed as illustrated by a mean score of 3.400; punitive measures in place for persons involved in malpractices as illustrated by a mean score of 3.233; reports to managers are free of errors and issued on time as illustrated by a mean score of 3.167; and projects audits are carried out as laid down as illustrated by a mean score of 2.750 were indicated to a moderate extent.

The results are in conformity with Ngubia (2010) who stated that the internal controls help the organization minimize risks that can affect its ability to achieve goals appropriately. He also stated that preventive internal controls prevent predicted malicious acts or omissions from occurring; detective controls detect and report unwanted actions or omissions while corrective controls rectify detected problems and ensure their non-recurrence. Another objective of internal control mentioned was that it ensures that entity's operations are efficient and effective. This guarantees financial soundness and proper safeguarding of business property against theft or misuse. If this objective is attained then the entity will be able to improve in its financial performance and attain financial success.

4.6 Performance in International Humanitarian Non-Governmental Organizations

The research also required to know the trend of the aspects of performance in International humanitarian non-governmental organizations in Nairobi, Kenya for the last 5 years. The findings are as shown in Table 4.14.

Table 4. 8: Trend of Aspects of Performance in International Humanitarian Non-Governmental Organizations in Nairobi

	Mean	Std. Deviation
Timely Completion of projects	2.917	1.418
Level of funding	3.150	1.516
Realization of Value for money	4.000	1.365
External auditors management comments	3.750	1.457
Change in beneficiaries living standards	3.917	1.381

The results in table 4.14 reveal that the respondents indicated that realization of value for money completion as expressed by a mean of 4.000; change in beneficiaries' living standards completion as expressed by a mean of 3.917; and external auditors' management comments completion as expressed by a mean of 3.750 had improved. Further, the level of funding completion as expressed by a mean of 3.150; and timely completion of projects completion as expressed by a mean of 2.917 had been constant. The findings were different from Onyango (2016) who showed that students believed that the effectiveness of their organisations was focused on the promotion of expertise. He also suggested that reading, training and growth are best appreciated and promoted. The study finds that the capacity of KM in Kenya affects the international humanitarian organisations performance.

Table 4. 9: Factors of Internal Audit that Have the Most Influence in the Performance of International Humanitarian Non-Governmental Organizations

	Frequency	Percent
Auditors were not objective	7	11.7
Controls were not in place	14	23.3
Project managers were not proactive	22	36.7
Managers did not implement IA recommendations	17	28.3

Total	**60**	**100.0**

The findings in table 4.15 show that 36.7% of the respondents indicated that project managers were not proactive, 28.3% indicated managers did not implement the recommendations, 23.3% indicated that controls were not in place while 11.7% indicated that auditors were not objective. The findings correlate with Musyula (2014) who found that there is a strong positive relationship between strategic plans, management and managerial leadership, financial stability and the success of NGOs was found. This was shown by the linkages among strategic plans and other NGO success factors, including successful boards, efficient management of staff and financial stability..

Table 4. 10: Regression Coefficients

Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	0.839	0.182		4.610	.000
Internal controls/control environment	0.638	0.208	0.568	3.067	.004

The established model for the study was:

$Y= 0.839 + 0.638X_1$

Where: -

Y= Performance of international humanitarian non-governmental organizations in Nairobi

β_0=constant

X_1= Internal controls/control environment

The study revealed that a unit change in internal controls/control environment would significantly lead to 0.638 increase in the score of performance of international humanitarian non-governmental organizations in Nairobi. Since the $p=0.004<0.05$, the null hypothesis that stated that internal controls/control environment does not have an effect on performance of international humanitarian non-governmental organizations in Nairobi, was rejected. The results were similar to those of Lagat (2018) who stated that there was a positive impact on the financial performance of state-owned sugar companies in Kenya on the process of internal control.

Summary, Conclusions And Recommendations

5.1 Introduction

This chapter covers a summary, conclusion and recommendations of the findings on effects of internal audits and the performance of international NGOs in Nairobi. This chapter presents the summary of the findings, conclusions of the study, recommendations of the study and suggestions for further studies.

5.2.1: Internal Controls/Control Environment

The first objective aimed to examine the effect of internal controls/control environment on performance of international humanitarian non-governmental organizations in Nairobi, Kenya. Three aspects of internal control were examined, these were; monitoring activities, financial controls, and operational policies controls. The research found that internal controls/control environment affected the performance of International humanitarian non-governmental organizations in Nairobi greatly.

5.2.4: Performance of international humanitarian non-governmental organizations in Nairobi, Kenya.

The research also sought the trend of the aspects of performance in International humanitarian non-governmental organizations in Nairobi, Kenya for the last 5 years. The study found that realization of value for money, change in beneficiaries' living standards, and external auditors' management comments had improved. Further, the study found that the level of funding and timely completion of projects had been constant. The research found that project managers not being proactive had the most influence on the performance of International humanitarian non-governmental organizations in Nairobi.

5.3 Conclusions of the Study

The study therefore concluded that internal control systems are a major determinant of the performance of INGHOs in Nairobi, Kenya. INGHOs in Nairobi have been having strong internal controls systems and thus these strong internal control systems have led to a better organizational performance, this is evidenced by reduced management comments and a higher number of projects implemented in 2017.

.5.4 Recommendations of the Study

The study concluded that a company's internal control practices is crucial to the success of international humanitarian non-governmental organizations since it acts as a powerful brake on the possible deviations from the predetermined objectives and policies. Therefore, the study recommends that internal controls to be put in place in any INGHOs thus, every

decision taken in the organization has to be within the confines of the laid down controls, a wide range of business firms have utilized internal controls through the development of strategies to guarantee a shielding resources and beneficial business environment particularly bookkeeping arrangement, administration approach, and operational strategy. Subsequently, inner control ought to be all the time survey in all parts of their organization and controls that will reinforce the organization and increment benefit. An effective internal control system requires that an appropriate control structure is set up, with control activities defined at every business level. These should include: top level reviews; appropriate activity controls for different departments or divisions; physical controls; checking for compliance with exposure limits and follow-up on non- compliance; a system of approvals and authorizations; and, a system of verification on reconciliation risks identification and mitigating ways to be established as well.

5.5 Recommendations for Future Research

This research recommends that further research should be carried out to establish the effects of internal audits and the performance of international NGOs in other counties in Kenya. Further, the study recommends that a study should be done considering other internal audits attributes. Moreover, some other organisations should be considered.

31. Reciprocity, Switching Cost and Customer Satisfaction among Tier One Supermarkets in Nairobi County

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Abstract

The objectives of the study were to examine the effect of relationship marketing dimension of reciprocity on customer satisfaction and the moderating effect of switching cost on the relationship between reciprocity and customer satisfaction. A positivist paradigm research philosophy guided the study with deductive research approach employed in order to allow for the development of hypotheses by use of existing theories. Quantitative research techniques were employed to analyze data. Data for the study was collected from a sample size of 384 customers from tier one supermarkets within Nairobi county. A response rate of 85.68% was attained translating to 329 valid questionnaires. Descriptive statistics was used to summarize data and show meaningful patterns while inferential statistics (correlation and regression analysis) were employed to test the study hypotheses. The models were deemed fit due to significant F statistics at 0.05 level of significance. From the attained R^2, the results revealed

that reciprocity variable was significant in affecting customer satisfaction among tier one supermarkets in Nairobi if other factors are held constant. Based on the significant beta coefficient attained, the study rejected the null hypothesis H_{01} (reciprocity has no significant effect on customer satisfaction among tier one customers in Nairobi County. The positive change in R^2 for reciprocity variable after incorporating the moderating variable in the model proved that switching cost has a significant positive moderating effect on reciprocity relationship with customer satisfaction, hence rejection of the null hypothesis H_{02} (switching cost has no moderating effect on the relationship between reciprocity and customer satisfaction among tier one supermarkets in Nairobi County). The correlation analysis at 0.01 level of significance revealed reciprocity had a moderate positive correlation with customer satisfaction. The study recommends that supermarket management should focus on enhancing relationship marketing practice of reciprocity through training of staff on the same as a means of sustaining customer satisfaction. The study filled a knowledge gap concerning relationship marketing practices by theorizing relationship marketing practices based on practice theory in addition to contributing to existing literature by including switching cost as a moderating variable in the model. The study findings shall also be used to improve customer management policy decisions by retail organizations and marketing practitioners. The findings and recommendations can be used to form a basis for future research by scholars and researchers even in other sectors of the economy.

KEY WORDS: Reciprocity, Equivalence, immediacy, Relationship marketing, Switching cost, Customer satisfaction

1.0 INTRODUCTION

With increased competition and less product and service differentiation experienced in the retail industries across the world including leading economies like America, India and China, the players are experiencing more challenges of preventing customers from switching. The same trend has been experienced in Africa where foreign companies have been increasing their footprint through foreign direct investments, mergers, and acquisitions (Catherine, Kamau, & Mbithi, 2019). Research firm Deloitte in their African powers of retailing report of 2015 indicate that East Africa's shopping environment is also undergoing an evolution as supermarket firms and private equity firms appear eager to cash in on the region's consumer markets by investing in multibillion malls and centers thereby increasing competition (Muturi, 2018). Consequently, this has necessitated the adoption of relationship marketing strategies like reciprocity for service differentiation.

1.1 RESEARCH OBJECTIVES

i. To establish the effect of reciprocity on customer satisfaction among tier one supermarkets in Nairobi County;

ii. To examine the moderating effect of switching cost on the relationship between reciprocity and customer satisfaction among tier one supermarkets in Nairobi County.

1.2 JUSTIFICATION OF THE STUDY

The study filled a knowledge gap concerning relationship marketing practices by theorizing relationship marketing practices based on practice theory in addition to contributing to existing literature by including switching cost as a moderating variable in the model. The study findings shall also be used to improve customer management policy decisions by retail organizations and marketing practitioners. The findings and recommendations can be used to form a basis for future research by scholars and researchers even in other sectors of the economy.

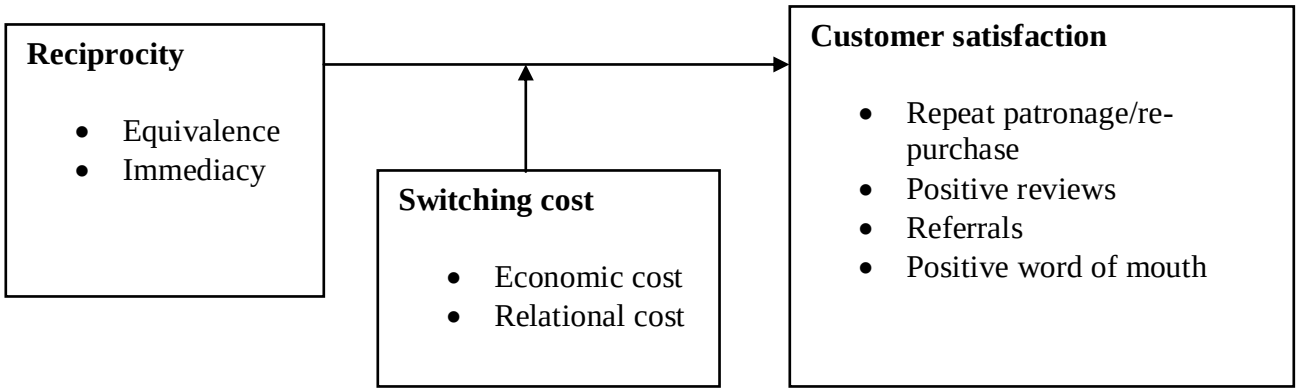
2.0 THEORETICAL FUNDAMENTALS

The choice of reciprocity as an important construct in relationship marketing model is informed by deductions from two theories; practice theory and social exchange theory. In light of this, from practice theory perspective which according to Bourdieu (1977) and Giddens (1984) states that human beings are social beings with diverse motives and intentions which make and transform the world which they live in and in doing so, they develop actions which if linked together form more and less persistent social practices or agglomeration of practices, relationship marketing practice is viewed as an interpretive practice under the marketing field while reciprocity is viewed as a dispersed practice under relationship marketing. Integrative practices are 'the more complex practices found in and constitutive of particular domains of social life (Schatzki, 2016), while dispersed practices, are part of the components of saying and doing which allow the understanding of, say, relationship marketing practice (integrative), along with the ability to follow the rules governing the practice and its particular 'structure' (Ameer & Halinen, 2019; Bueger & Gadinger, 2018).

Social exchange theory on the other hand has also been used to help in understanding of both reciprocity and switching cost concepts under study. Social exchange theory as propagated by Homans (1958), states that human relationships are formed by the use of cost-benefit analysis and comparisons of alternatives (Homans, 1958; Karimi, 2014). According to Karimi (2014) Social exchange theory indicates that individuals are willing to maintain relationships because of the expectation that to do so was rewarding.

The expectancy disconfirmation theory was used to explain the customer satisfaction constructs. The model was developed by Oliver (1977) and explains post purchase or post adoption as a function of expectations, perceived performance, and disconfirmation of beliefs. when customers perceives the performance is worse than what they expected or desired about the quality of specific product or service, the negative disconfirmation will happen (Gillison & Reynolds, 2018). Positive disconfirmation leads to the customer's satisfaction and negative disconfirmation means perceived performance of products or services couldn't attract the customer satisfaction (Sharma & Srivastava, 2018).

2.1 CONCEPTUAL FRAMEWORK



Independent variable Moderating variable Dependent variable

2.2 REVIEW OF VARIABLES

Reciprocity

Reciprocity, is considered a norm of human social behaviour which holds that people owe one another duties because of their prior actions (Hoppner, Griffith, & White, 2015)**.** Very few scholarly papers on reciprocity have been published in recent years. A lot of literature on the subject is attributed to the period (1930-1965) and mostly done by anthropologists like Smith and Malinowski (2018). Reciprocity as found in most of RM literature resides at the general level. Thus, conceptualizing reciprocity as a unidimensional construct (Hoppner et al., 2015). At this level reciprocity can be defined as involving the mutual exchange of favours or the making of allowances for one's exchange partner, in return for similar favours or allowances to be received later. Reciprocity borrows a lot from the relationship marketing research stream that looks at relationship marketing as relational exchange. According to this school of thought, the emphasis is on partnering relationships (Fontenot & Wilson, 1997). The concept of relational exchanges focuses on continuous long-term relationships between various parties (Zhang, Watson IV, Palmatier, & Dant, 2016). Reciprocity can also be understood as the expectation that people will respond favourably to each other by returning benefits for benefits (Hoque, Awang, & Salam, 2017; J.-S. Lee, Kim, & Pan, 2014b; Lou & Koh, 2018). From this general level, it's clear that reciprocity in relationship marketing context has had very little research (Geiger & Germelmann, 2015; Hoppner et al., 2015; Kwan & Carlson, 2017; Pervan, Bove, Johnson, & Lin, 2011). At the heart of reciprocity is also the concept of customer advocacy which has been popularized by scholars like Roy and Chakraborti (2015); Urban (2015) who have discussed the topic and its influence on several marketing relationships. The school of thought emphasizes taking the best interest of the customer at heart. The argument is that if companies advocate for their customers, customers will reciprocate by advocating for the company by not only buying the products but also

referring other prospective customers as well as helping to produce better products and services (Moliner, Monferrer, & Estrada, 2018; Urban, 2015).

As a relationship marketing construct the importance of reciprocity is based on three assumptions. First, that marketing activities exist within the realms of exchange. Secondly that all individuals are fundamentally motivated by self-interest where without a norm of reciprocity no one would exchange. Third, that individuals desire to achieve excellence in moral behaviour and are therefore motivated to develop and maintain exchange where a norm of reciprocity is upheld (Pervan, Bove, & Johnson, 2004; Pervan & Johnson, 2003). Reciprocity as outlined in several literatures should be universally applicable. However scholars like Alejandro, Kowalkowski, Ritter, Marchetti, and Prado (2011); Gouldner (1960) acknowledged that despite of its application in all national cultures, the uniqueness of time and place means that it might function differently across different cultures or by large it will function differently in different regions and organizations.

The study based the assumptions of reciprocity on the work of Cropanzano and Mitchell (2005) who examined reciprocity as an interdependent exchange where something has to be given by one party and in response something returned by the other party. This study focuses on two important dimensions of reciprocity, thus equivalence and immediacy as advocated by (Hoppner et al. 2015). Equivalence which is the first operationalization dimension for reciprocity prescribes what should be exchanged. Reciprocity stipulates that partners should repay any action received and that repayment should be almost equivalent to what has been received (Hoppner et al., 2015; Liu, Deligonul, Cavusgil, & Chiou, 2018). What actions a party considers to be roughly equivalent will determine the form of equivalence dimension one will take (Hoppner et al., 2015; R. P. Lee, Johnson, & Tang, 2012). There is divided opinion on the kind of equivalence that firms and businesses should perform. Some researchers are of the opinion that the reciprocal action should be equal to the action the firm received (homeomorphic equivalence) while other researchers are of the contrary opinion. They posit that a reciprocal action undertaken by a firm can be different in form from the action that was received (heteromorphic equivalence) (Gouldner, 1960; Hoppner & Griffith, 2011). The ability to assess people's agendas improves the efficiency of equivalence reciprocity (Pervan et al., 2004). For example, an industrial customer who receives a sample gift from a prospective retailer could return with a gift of their own. However, through an understanding of the motive or agenda of the retailer, a more appropriate return would be the setting up of a meeting with a senior sales officer. Immediacy is the second dimension of reciprocity for the study and it prescribes when the exchanges should occur or when the return action should occur (Samina, Karim, Jonathan, Ali, & Imran, 2018; Zhiyong, Narayan, Mehdi, & Douglas, 2018). According to Hoppner et al. (2015 "The form that the immediacy dimension takes determines what exchange partners view as the proper time frame in which to alleviate their indebtedness." The repayment may be made in the short term (immediately or after a short period of time) or in the long term (after some time lag) (Hoppner & Griffith, 2011). Technology has helped many companies to solve the crisis of immediacy. For example, Amazon with the help of "mayday" a video chat solution was able to have an average customer care representative response time of 9.75 percent. (Parise, Guinan, & Kafka, 2016).

Switching costs

According to Babu and Sundar (2019) when consumers attempt to change a brand, switching costs arise as specific costs incurred to replace or to reacquire products. Switching cost can also be referred to as the perceived cost customers would bare once they change their service provider (Naderian & Baharun, 2015)**.** This variable is used as a moderating variable for measuring the influence of independent variable (reciprocity) on the dependent variable (customer satisfaction). Switching cost is assumed to be an important factor due to its power to trigger loyalty and maintain the firms' stability during constant changes of service quality especially in short time (Ngo & Pavelková, 2017).

Switching costs can be in different forms among them, physical costs which are defined by Shin et al. (2009) as costs of leaving one brand and moving to another, cognitive costs which are costs of changing purchasing pattern or investing in add-ons, economical and psychological costs. Other scholars indicate that these costs can be financial switching costs and relational switching costs (Bergel & Brock, 2018; Blut, Frennea, Mittal, & Mothersbaugh, 2015; El-Manstrly, 2016; Matzler, Strobl, Thurner, & Füller, 2015). From the work of scholars like Michael porter and Jackson Barbara, it is evident that in addition to the monetary and financial costs one incurs when switching service providers, the effort and time consumers spent in order to secure a better deal also constitute switching costs (Hino & Levy, 2016). Switching costs are both monetary and non-monetary as already observed and also as explained by El-Manstrly (2016) and Czajkowski and Sobolewski (2016). According to an emerging body of theoretical literature, retailers do understand that the customers they have are forward looking, and also face substantial costs of switching loyalty to a different store (Richards & Liaukonyte, 2018). In the study, the variable was operationalized by looking at sub variables; economic switching costs and relational switching costs. In the retail sector, economic switching costs relate to the financial costs like price increase as well as effort and time spent to secure a better retail outlet**.** Relational switching costs are artificial switching costs or programs such as repeat purchase coupons that are meant to reward customers for repeat purchase in the retail store and so penalize brand switchers (Clement & Karthikeyan, 2012; Paul, 2016).

The first sub variable, economic cost is borrowed from Fornell (1992) typology which indicated that switching costs include economic costs and psychological costs. This classification is also supported by Sharma and Patterson (2000); Hellier, Geursen, Carr, and Rickard (2003). Economic costs include, all financial costs which are financial expenses incurred in trying to change supplier or price difference between current supplier and new supplier. Supermarket stores use lower prices compared to competitors as an incentive or a compensatory mechanism to switching consumers (Arie & Grieco, 2014). This also means that shoppers loyal to a home supermarket store for example expect to be charged lower prices for similar product and services in that supermarket store relative to another supermarket store (Richards & Liaukonyte, 2018). Economic costs also include search costs or procedural switching costs. These costs are considerably meaningful in retail sector even though little evidence exists on the extent of consumer search costs in retail settings in which consumers purchase multiple products at once (De los Santos, Hortaçsu, & Wildenbeest, 2013; De los Santos, Hortaçsu, & Wildenbeest, 2012; Richards, Hamilton, & Yonezawa,

2017). Search costs or procedural switching costs are those costs based on the time and energy spent searching for alternative sources of supply that will optimize the benefits of receiving lower prices for the entire basket, or perhaps a preferred mix of items and service attributes (Blut et al., 2015; De los Santos et al., 2012). For example searching through published articles, newspapers and even moving around through estates of Nairobi surveying for an alternative supermarket. Company websites go some way to reducing these costs but can never be seen to be wholly comprehensive. Learning costs are based on the time and energy expended learning how to deal effectively and efficiently with a new supplier for example learning the layout of a supermarket you have never used before or working with a new distribution system (Bergel & Brock, 2018; Richards & Liaukonyte, 2018).

The second sub variable relational costs are the costs a customer faces due to break-up of personal relationships and identification with a certain brand and employees (Blut et al., 2015). This may mean financial penalties, for example the costs of losing rewards or status gained through relationship longevity. Relationships over an extended period can create emotional ties with an organization or the personnel of that organization. Burnham, Frels, and Mahajan (2003) refers to relational costs as the emotional discomfort caused by the loss of individual or brand relationships. Emotional bonds create switching barriers due to their difficulty in emulating and are important in the current customer-centric era where competition is now on emotional aspects of value other than physical attributes (Chuah, Marimuthu, & Ramayah, 2014). One of the relational switching costs which has always been underestimated is called inertial cost which refers to efforts involved in breaking habitual behaviour (Yap & Sweeney, 2007). This is also associated with the concept of the 'zone of tolerance' (ZOT). The ZOT is seen as that range of service performance where small increases or decreases in performance quality do not lead to any (positive or negative) action (Yap & Sweeney, 2007). However, poor performance, price rises or recognition of better value elsewhere can soon break through this inertia. Another cost here can be social cost. The existing supplier may, in some way, contribute to the social life of the customer. An exaggerated example might be the existence of 'singles shopping nights' in some supermarkets. A more commonplace example may be the opportunity to socialize with other customers and staff at a company organized event (e.g. preview evenings). This has become more prevalent with the development of Internet-mediated brand communities where companies such as Saab, Jeep and Davidson organize weekend events for avid fans of the product.

All classes of costs thus, economic, relational costs and functional costs pose a certain degree of risk to the consumer who wants to switch or who is contemplating switching supermarkets. Even where the risk is not immediately apparent there is still a general preference to stay with an existing supplier rather than risk a move to another of whom you have no experience. At times even with poor service delivery or relationship with one's supermarket, people will still decide not to switch to avoid uncertainty. That form of loyalty where unsatisfied customers are also loyal due to attachment and commitment with the supplier is referred to as false loyalty since it also stops a customer from switching or choosing another supplier (Sivanandamoorthy & Achchuthan, 2012). The table below summarizes the switching cost dimensions that guided the study variable.

Customer satisfaction

Satisfaction can be defined as the post purchase evaluation of the overall service or product experience by consumers where the needs and expectations have been met or exceeded (Solate, 2018). Other definitions have also been given. For example, Vesel and Zabkar (2010) define customer satisfaction as an emotional state of mind that a customer attains when his or her expectations are met. It is also a measure of relationship quality (RQ) (Kwan & Carlson, 2017). From the work of Hennig-Thurau and Klee (1997), scholars noted that RQ reflect the degree of appropriateness of a relationship to fulfill the needs of the customers (Pervan et al., 2011). Customer satisfaction is a very important concept that has been analysed extensively in marketing research (Koklic, Kukar-Kinney, & Vegelj, 2017). According to Suhaniya and Thusyanthy (2016) while looking at the work of Hunt (1977) noted that more than 500 studies on the subject were conducted in the 1970s. The EDT theory helps to understand several elements of satisfaction (Au & Tse, 2019; Richard, Felix, Innocent, & Sylvie, 2018). Through the work of Moraru and Duhnea (2018) we observe that some marketing researchers view customer satisfaction as a process while others consider it an outcome. In recent time, customer satisfaction has gained attention within the context of the paradigm shift from transaction marketing to relationship marketing (Hoppner et al., 2015).

Customer satisfaction is also a dimension of multiple items evaluated as satisfaction measurement, which can vary from business to business (Adikaram & Khatibi, 2016). Business success and profitability is also determined by improving customer satisfaction (Luu, 2019; Ryu & Lee, 2017). Satisfied customers will most likely re-purchase the product or service, engage in positive referrals and above all enhance brand loyalty (Lee et al., 2012; Liu et al., 2018). Despite the effort to give constructs that can truly measure customer satisfaction, it should be noted that there is also a problem with how questions are asked. Different results can be achieved with the same satisfaction survey dependent on how it was operationalized (Joan & Joseph, 2000). In retailing, it's believed that the success of an organization or business entity like a supermarket is pegged on customer satisfaction (Al-Ali, Bazin, & Shamsuddin, 2015). There are several indices that are used to measure customer satisfaction (Banwari, 2016). The ones adopted for this study were derived from Lee et al. (2012) and Liu et al. (2018) and reflect a shift from the traditional constructs which scholars like Linda and Judith (2015) criticized for reporting overly positive results. In the study, the researcher operationalized customer satisfaction by looking at its four facets. Thus; repeat patronage or product repurchases, positive reviews, referrals, and positive word of mouth.

3.0 RESEARCH METHODOLOGY

The study follows a Positivists or the scientific paradigm or philosophy which views reality as being objective and knowable (Mack, 2010). It therefore means that the effect of relationship marketing practices on customer satisfaction among tier one supermarkets in Nairobi County is knowable. The influence of switching costs on such a relationship is also knowable. The purpose of research in this paradigm is to prove or disprove a hypothesis (Aliyu, Bello, Kasim, & Martin, 2014; Mack, 2010). The research design adopted by this study was descriptive research design because the design describes things, character and state

of affairs as they exist at a particular point in time (Dawson, 2019). Cooper and Schindler (2014) on their part postulated that descriptive research study is concerned with finding out who, what, where, when, how much or how often is the problem situation. The study also employed a survey research strategy since it supports descriptive research design as it allows the researcher to collect quantitative data, using questionnaires that can then be analysed quantitatively using descriptive and inferential statistics (Saunders, Lewis, Thornhill, & Bristow, 2015).

The target population of the study are tier one supermarket customers in Nairobi county. based on the 2019 Kenya population and housing census results that put the Nairobi County resident population at 4,397,073 million people, we project the target population to be 30% of 4,397,073 million residents of Nairobi County. This gives approximately 1,319,122 presumed supermarket customers. In addition, 2019 market insight reports by Asoko Insight indicates that tier one supermarkets constitute 80% of the market share in Nairobi county led by Tuskys and Naivas. This in terms of customers means that they constitute 80% of total shoppers from formal retail outlets in Nairobi county. This gives approximately (1,319,122*0.8) = 1,055,298 tier one supermarket customers.

Table 0: Nairobi County customer population distribution per tier one supermarkets

Supermarkets (strata)	Number of outlets within Nairobi county (market share)	Estimated total (population) customers based on percentage of market share	Percentage of market share
Tuskeys	29	424,969	40.27%
Naivas	25	366,399	34.72%
Tumaini/Quick Mart	10	146,686	13.90%
Carrefour	8	117,244	11.11%
Total	72	1,055,298	100%

Source: Author, 2020

By applying the formula as proposed by Daniel and Cross (2018) for attaining sample sizes from large population sizes, a sample size of 384 people was attained and proportionately allocated to the tier one supermarkets as shown in table 3.2 below

Table 0: Distribution of sample size to each supermarket

Supermarkets (strata)		Number of outlets within Nairobi county	Customer Sample size based on % of market share	Percentage of total customer sample size
Tuskys	(N1)	29	155	40.27%
Naivas	(N2)	25	133	34.72%
Tumaini/Quickmart	(N4)	10	53	13.90%
Carrefour	(N3)	8	43	11.11%
Total		72	n = 384	100%

Source: Author, 2020

Likert-type scaling was used for all the data that needed to be subjected to statistical processes through content analysis. Krosnick and Presser (2010) posited that when designing a rating scale, a researcher must specify the number of points on the scale.

4.0 TESTING OF RESEARCH HYPOTHESIS

Study models

Model 1 lacks the moderating variable while model 2 has incorporated the moderating variable.

Model 1: $\gamma = \alpha + \beta_1 V_1 + e$

Model 2: $(\gamma = \alpha + \beta_1 V_1 + \beta_2 M + M(\beta_1 V_1) + e)$

Where

γ = Customer satisfaction; α =Constant; βi = variable coefficients; e = Error term; V1= Reciprocity; M = Moderating variable (Switching cost).

H_{01}: Reciprocity has no significant effect on customer satisfaction among tier one supermarkets in Nairobi County.

Table 4.1: Model Summary for Reciprocity Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson statistics
1	.652[a]	.425	.423	.49671	1.827

a. Predictors: (Constant), Reciprocity
Source: Author, 2020

From the model summary table above, the model had a coefficient of determination (R^2) of 0.425 which implied that 42.5% of the variations on customer satisfaction among tier one supermarkets in Nairobi county are explained by reciprocity. The R^2 attained is sufficient as a measure of goodness of fit and hence can be used for future forecasts. The results agree with the findings of Kyei and Narteh (2016) who also attained an appropriate R^2 in addition to other statistical measures concluded that reciprocity directly influences customer satisfaction. In addition, Friedman and Rahman (2011) in their study observed that retail outlets reciprocal actions among them gifts and verbal appreciatory comments proved to increase consumer spending and satisfaction.

Table 4.2: ANOVA table for Reciprocity regression model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	59.523	1	59.523	241.257	.000[b]
	Residual	80.677	327	.247		
	Total	140.200	328			

a. Dependent Variable: Customer satisfaction

b. Predictors: (Constant), Reciprocity
Source: Author, 2020

The study further tested the significance of the model by use of ANOVA technique. The findings are tabulated above. From the ANOVA statistics, the study established the regression model had a significance level of 0.000 a value that was less than the value of significance (p-value) of 5%. This is an indication that the model fit and significant and the data was ideal for making a conclusion on the population parameters. Furthermore, the calculated F value was greater than the critical value 241.257>3.8415) hence we reject the null hypothesis and infer that reciprocity has a statistically significant effect on customer satisfaction among tier one supermarkets in Nairobi county. The results mirror the work of who reported that customer satisfaction in supermarkets is predicted primarily by supermarkets reciprocal actions. Khandabi, rezaee Klidbari, and Fadayi (2014) also observed that reciprocity has a strong effect on customer satisfaction though not as strong as trust which was another construct in his study. They also noted that reciprocity advocates for customers to be treated in a way that they feel special which in turn will lead to a happy customer who shall enhance his/her repurchase intentions. Personalized notes have been used to address selected customers which has also proven to make them happy (Shamsudin, Esa, & Ali, 2019). It should be noted that one of the indicators of customer satisfaction in different industries is when the customer feels happy (Bordalo, Gennaioli, & Shleifer, 2016)

Table 4.3: Coefficients of regression for Reciprocity

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig
1	(Constant)	1.668	.136		12.276	.000
	Reciprocity	.595	.038	.652	15.532	.000

a. Dependent Variable: Customer satisfaction
Source: Author, 2020

The study further used the coefficient table to determine the study model ($\gamma = \alpha + \beta_4 V_4 + e$) and test hypothesis. The findings are presented in the Table above. With the resultant regression model as follows:

$Y = 1.668 + 0.595V_4 + e$

From the coefficients of regression model obtained, a unit increase in reciprocity while holding the other factors constant at zero, customer satisfaction among tier one supermarkets in Nairobi county would be increased by a factor of 0.595. In addition, the results of the t statistics from the coefficient of regression as presented above were compared with the t critical from the t distribution table at $\alpha = 5\%$ in order to test the fourth hypotheses of the study. The calculated t value of 15.532 was greater than the t-critical (1.96) and therefore the study rejected the null hypothesis that reciprocity has no significant effect on customer satisfaction among tier one supermarkets in Nairobi County. In light if this, the study accepts the alternative hypothesis that reciprocity has a significant effect on customer satisfaction

among tier one supermarkets in Nairobi County. The outcome (positive beta) supports Hoppner et al. (2015) observation that reciprocity dimensions of immediacy and equivalence enhance relationship quality which in turn enhances customer satisfaction. The higher beta value is proof enough that reciprocity plays a bigger role in relationships especially since it goes both ways as per the social exchange theory assumption, i.e. the customers and the supermarkets have to create mutual benefits as propagated by the behavioral school of relationship marketing (Ranjan, 2017). In a similar study but in the banking sector, Kyei and Narteh (2016) attained a t value of 2.519 and a p value of 0.012 clearly indicating that reciprocity had a significant effect on customer satisfaction.

H_{02}: Switching cost does not significantly moderate the relationship between reciprocity and customer satisfaction among tier one supermarkets in Nairobi County.

The study adopted moderation models that treat switching cost as a pure moderator in order to test if it has moderating effect. A pure moderator variable is a variable that is assumed to affect the dependent variable through an interaction with the predictor variable as shown in the model below (Kiriinya, 2015).

Table 4.4: Model summary for moderated reciprocity regression

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.661[a]	.436	.431	.49310	.432	83.868	3	325	.000

a. Predictors: (Constant), Reciprocity*Switching cost, reciprocity

Source: Author, 2020

Table 4.5: MANOVA table for moderated reciprocity regression model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	61.177	3	20.392	83.868	.000[b]
	Residual	79.023	325	.243		
	Total	140.200	328			

a. Dependent Variable: Customer Satisfaction

b. Predictors: (Constant), Reciprocity*Switching cost, switching cost, reciprocity

Source: Author, 2020

Table 4.5: Coefficients of regression for moderated reciprocity

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	0.627	.660		.951	.342
	Reciprocity	.796	.194	.873	4.103	.000
	Switching cost	.278	.167	.293	1.668	.096
	Reciprocity*Switching cost	-.055	.049	-.333	-1.137	.256

a. Dependent Variable: Customer Satisfaction

Source: Author, 2020

The model was statistically fit as its respective F statistics was significant in the respective p value. The above model in table 4.4 yielded R^2 of 0.436 which was different from the one obtained in simple linear regression model without moderating variable. i.e., R^2 of 0.425 as presented in table 4.1. Since there were different R^2 values observed between the compared models, the changes in the coefficient of determination (R^2) observed therefore imply that switching cost positively moderate's reciprocity and its effect on customer satisfaction.

Model 2: ($\gamma = 0.627 + 0.796V_1 + 0.278M + M(0.796V_1) + e$)

DISCUSSION OF FINDINGS

The study attained a coefficient of determination of 65.2% indicating that reciprocity highly influences customer satisfaction. The results were statistically significant as represented by the appropriate F statistics. In addition, the appropriate t statistic meant that the study adopts the alternative hypothesis that reciprocity has a statistically significant effect on customer satisfaction among tier one supermarkets in Nairobi County. These results are consistent with the propositions of Mamusung, Kusumawati, Nimran, and Suharyono (2019) who asserted that relationship marketing in retailing involves developing bonds with customers which is done by meeting their needs and honouring commitments. The high effect of reciprocity on customer satisfaction attained as presented by a high R^2 of 65.2% as well as the high beta of 0.595 might be attributed to customer advocacy through immediacy and equivalence constructs. According to Urban (2015), customer advocacy can be seen as a 3-layer pyramid where the bottom layer revolves around total quality management (TQM) and satisfied customers. Based on TQM and satisfied customers, the firm engages in relationship management whereby it gains an in-depth understanding of its customers, leading to customer advocacy as the goal on the top of the pyramid.

Hoppner et al. (2015) in their study, tried to address the universality of reciprocity, with a cross cultural examination of the effect of reciprocity dimensions of equivalence and immediacy on relationship quality and satisfaction with performance, their results indicated that the effect of equivalence on relationship quality is similar across cultures while the effect of immediacy on relationship quality varies across cultures. This might explain why results from different studies in different cultural set ups or regions and industry still report a significant effect of reciprocity on customer satisfaction. The only difference might be the strength of the relationship owing to difference in immediacy and other un explained factors. The fact that reciprocity borrows a lot from business to business relationship marketing research stream which advocates for symbiotic marketing as explained by Arndt (1979) and Atul and Mona (2015) where long term mutual relationships are emphasized not only with the suppliers or other companies but also with the key customers, might also explain the significance of reciprocity in enhancing customer satisfaction.

Despite of overwhelming evidence indicating that reciprocity highly influences customer satisfaction, the inclusion of switching cost in the model had significant effect as observed by reduction in coefficient of determination a clear indication that switching cost moderates the effect of reciprocity. In an industry that has already been confirmed in past literature to have low customer switching costs but with intense competition as explained by Allaway,

Huddleston, Whipple, and Ellinger (2011), reciprocity will definitely enhance customer-based brand equity which is defined as a set of memory based associations of a particular brand existing in the customers mind (Keller, Parameswaran, & Jacob, 2011). However, the low switching cost exhibited by the industry players means that despite the reciprocity strategies currently being experience, customers will still be swayed by incentives offered by competing supermarket brands attributed to among other things convenience, better prices, new product offerings. Supermarkets can therefore not ignore the effect of switching cost despite the high significant relationship between reciprocity and customer satisfaction. Lastly, scholars like Lee, Kim, and Pan (2014a) observed that the causal relationship between satisfaction and reciprocity is only limited thus cannot be 100%. This they attribute to the fact that satisfaction is a wide spectrum or a broad state of construct and hence its role in predicting reciprocal behaviour might not be complete. Therefore, some percentage (coefficient of non-determination) in this case 100%-65.2% = 34.8%, cannot be explained by reciprocity.

4.1 CORRELATION ANALYSIS

Karl Pearson's correlation coefficient (r) of linear association between study variables was employed where the P value was compared to the appropriate level of significance (0.01). The study adopted the work of Mukaka (2012) in interpreting the sizes of correlation attained.

Table 4.6: Correlation coefficients of study variables

		Y	V4	M
Customer Satisfaction (Y)	Pearson Correlation	1		
Reciprocity (V4)	Pearson Correlation	.652**	1	
Switching cost (M)	Pearson Correlation	.202**	.162**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Author, 2020.

The study found a moderate positive correlation between reciprocity and customer satisfaction as shown by correlation factor of 0.652; this positive relationship was found to be statistically significant as the significant value was 0.000 which is less than 0.01. this was consistent with results attained by Kyei and Narteh (2016) in their research on relationship marketing practices and customer satisfaction in the Ghanaian banking sector. In terms of the correlation between switching cost and customer satisfaction, the moderating variable of the study was found to have a negligible correlation with customer satisfaction due to a 0.202 correlation coefficient attained. This was in agreement with Yang and Peterson (2004) who noted that moderating effect of switching costs on customer satisfaction is only significant when the prevised value or customer satisfaction is higher than the average. This therefore implies that in the absence of such condition the correlation will be small even though the results are dependent on the industry under study.

5.0 CONCLUSION

In this study reciprocity demonstrated the highest significant positive effect on customer satisfaction among tier one supermarkets in Nairobi County. Several factors might have contributed to this and from the descriptive statistics it is apparent that a substantive number of respondents confirmed that their respective supermarkets were reciprocating the efforts they make to help the supermarkets. Supermarkets intending to enhance customer satisfaction should invest heavily on reciprocity. According to Hoppner et al. (2015) reciprocity constructs of immediacy (repayment made in the short run or in the long run) and equivalence (identical in form) support the social norms of many cultures, Kenya notwithstanding, where every good gesture is reciprocated with the only question being when and how. Gouldner (1960) asserted that a social unit or group will most likely want to contribute to another that provides it with more benefits than to the one which doesn't. That is a typical reciprocal behaviour that can also be exhibited by supermarket customers in Nairobi County. Measures that supermarkets put in place like the supermarkets working to return any assistance accorded to them in kind, returning any favour customers extend to them as quickly as possible, supermarket making effort to strengthen customer loyalty, supermarket always trying to see things from the customers point of view and constantly trying to fulfill promises go a long way in enhancing relationships that eventually enhance customer satisfaction. The strength of reciprocity in enhancing customer satisfaction has also been experienced in other industries like banking industry. This clearly implies that reciprocity in creating a mutual exchange process enhances a sense of entitlement and if fulfilled customers feel satisfied. The findings also confirm the assumptions of the social exchange theory that human relationships are formed by the use of cost-benefit analysis and comparisons of alternatives (Homans, 1958; Karimi, 2014).

Switching cost increases the sensitivity of customers and therefore supermarkets must consider them when developing relationship marketing strategies. From the study it's also quite clear that the impact of switching cost on different relationship marketing strategies is different. Supermarkets might want to pay more attention on its impact on the reciprocity relationship with customer satisfaction since a unit increase in switching cost would decrease the effect of reciprocity on customer satisfaction by a higher margin that the other variables a shown in the coefficients table (switching cost*reciprocity beta).

5.1 RECOMMENDATIONS

Training staff on reciprocity initiatives like customer recognition and loyalty rewards are highly recommended since they appear to be most effective in enhancing emotional attachment and social exchange which can be translated to more purchases and loyalty.

5.2 AREAS OF FURTHER RESEARCH

This study was limited to the effect of reciprocity and switching cost on customer satisfaction among tier one supermarkets within Nairobi county and its findings have added meaningful contribution to knowledge, practice and theory in management and marketing. However due to the unique nature of supermarkets, the study cannot be generalized to other service-

oriented organizations. Through empirical review it was un earthed that there are very few studies on cottage industry and the manufacturing sector and this should be considered in future.

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32. The Mediating Role of Strategy Execution on the Relationship between TMT Characteristics and Organizational Performance in a Regulatory Setting in Kenya

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Abstract

There is consensus among strategic management scholars and practitioners that strategic management as a practice has a vital role in organizational performance. It has also been argued that the strategic management process can be divided into four broad stages namely, strategy formulation, strategy execution, strategy monitoring and strategy evaluation. Some strategic management scholars have asserted that the strategy execution process can make a sound strategic decision ineffective or a debatable strategic choice successful. The specific objective of the study was to establish the mediating effect of strategy execution on the relationship between top management team characteristics and organizational performance of independent regulatory agencies in Kenya. To achieve the objective, the study adopted descriptive crosssectional research design. The target population of the study was all the twenty-three state regulatory agencies currently existing in Kenya. Due to the uniqueness of each independent regulatory agency and the distinct roles played by each top management team member in their organization, the study adopted a census survey of all the top management team members in all the twenty-three independent regulatory agencies in order to capture the required information. Primary data was gathered using structured questionnaire administered through drop and pick later method. Descriptive statistics was used to summarize the survey data into percentages, frequencies, means and standard deviations. Baron and Kenny model was used to test for the mediation. The findings of the study showed that strategy execution partially mediates the relationship between TMT characteristics and Organizational Performance of the independent regulatory agencies in Kenya. The study recommends that independent regulatory agencies need to develop a reward system for their TMTs who excel in executing their organizational strategies so that they can be motivated and to provide an opportunity for the managers to compete amongst themselves in order to achieve superior organizational performance. Lastly, the study recommends that the independent regulatory agencies should have stable funding mechanism to enable them execute their identified strategies.

Keywords: *Top Management Team Characteristics; Strategy Execution; Independent Regulatory Agencies; Organizational Performance*

33. The Relationship between Corporate Governance, Financial Characteristics, Macroeconomic Factors and Performance of Firms Listed at the Nairobi Securities Exchange

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ABSTRACT

Performance of manufacturing firms listed at the Nairobi securities exchange has been varied since the introduction of the corporate governance policies and practices in the year 2002. This has been blamed to a number of factors including financial characteristics and macroeconomic factors. The specific objectives were to establish the effect of corporate governance on performance of manufacturing firms listed at the Nairobi securities exchange; to determine the intervening effect of financial characteristics on corporate governance and performance of manufacturing firms; to establish the moderating effect of corporate governance and performance of firm; and to determine joint effect of corporate governance, financial characteristics, macroeconomic factors and performance of listed manufacturing firms listed at the Nairobi securities exchange. This study was anchored on, agency theory, stewardship theory, stakeholders' theory and positivism philosophy. The study used census approach and a target population of 10 manufacturing firms listed at the Nairobi Securities Exchange between 2002 and 2016 was incorporated. The study used panel data, corporate governance, financial characteristics and performance of firms' data were extracted from annual reports of the individuals firms from Capital Markets Authority of Kenya and macroeconomic factors data were extracted from Central Bank of Kenya and Kenya National Bureau of Statistics economic reports. This study employed longitudinal descriptive research design to determine relationships amongst independent, intervening, moderating and dependent variables. A panel data regression analysis was conducted using random effects model which allowed the companies to have a common mean value of the intercept to determine whether corporate governance influence performance of manufacturing firms. The study findings revealed that only leverage significantly affected returns on assets of listed manufacturing firms in Kenya. The results showed that corporate governance, investments, liquidity, growth domestic product rate, interest rate and inflation rate insignificantly affect

returns on assets and Tobin's Q of listed manufacturing firms in Kenya. The study concluded that listed firms in Kenya strengthened their corporate governance due to poor performance, further the study concluded that corporate governance practices used by listed firms failed to impact on performance or had negative impact on performance.

Keywords: Firm performance, corporate governance, financial characteristics, macroeconomic factors, manufacturing firms

1.0 INTRODUCTION

Background Information

The relationship between corporate governance and performance of manufacturing firms, which is one of the most appealing and controversial issues, has received a lot of attention from many different countries over the world after great corporate failures (Dang & Nguyen, 2016). Manufacturing firms practicing good corporate governance normally have good firm performance, and this is further influenced by financial characteristics and macroeconomic factors (CMA, 2015). Financial characteristics usually intervene in relationship between corporate governance and performance of firms. Financial characteristics such as investments, leverage and liquidity are expected to have a positive impact on performance of firms. Increase in investment implies that firms have identified lucrative opportunities that they seek to exploit which plays a critical role in the use of leverage (Aivazian, Ge & Qiu, 2005). Macroeconomic factors universally influence performance of firms in an economy and have moderating effect on the relationship between corporate governance and performance of firms (Ghabayen, 2012).

The above conceptualization on the relationship between corporate governance, financial characteristics, macroeconomic factors and performance of firms is explained by agency theory by Jensen and Meckling (1976), stewardship theory by Donaldson and Davis (1981), stakeholders' theory by Freeman (1984). Resource Dependency theory by Preffer and Salanuk (1970). The agency theory is an agreement between principals and agents, in a firm it deals with various relationships between shareholders and various agents. These agents perform various activities on behalf of shareholders (Jensen & Meckling, 1976). The stewardship theory deals with directors as stewards of a business, with interest to protect and enhance shareholders' wealth through superior firm performance (Davis & Donaldson, 1997). The stakeholder theory proposes a network of relationship of all stakeholders of a firm (Freeman, 1999). The Resource Dependency theory focuses on the function of board of directors in providing resources needed by the firm to achieve an improved firm performance (Hillman, Canella & Paetzold, 2000).

According to Tricker (2015) corporate governance can be defined as the way power is exercised over corporate entities. It consists of the board activities of the enterprise and its relationships with shareholders, with the managers as well as with other legitimate stakeholders. Corporate governance is a mixture of policies and best practices used by firms to achieve their goals in relation to their shareholders (Millin, 2007). Corporate governance promotes efficient and transparent management of organizations to meet definite objectives through best practices and structures (Abu-Tapanje, 2005). Corporate governance policies and practices used in this study include board structures and board activities. The board structures include board composition which comprises both executive and non-executive directors, gender and ethnicity (Carter, Simkins, & Simpson, 2003); board skills and experience, are occupational expertise of board members (Kesner,1998); board age, is the average age of board members (Rose, 2007); and board size, is the number of directors instituting the board (Jensen, 1993; Khanchel, 2007). The board activities are responsibilities performed by the board and committees set up by board for specific duties. The board activities include board tenure which is the duration the directors take in a firm (Mathew, Paul, Kamel & Cherif, 2010); board ownership which is the holdings in a firm's stock by board members (Brickley, Lease & Smith, 1988); board tools which are necessary tools and aids in place to enable discharging of responsibilities of the board (CMA, 2015); board meetings including statutory and non-statutory meetings (Lipton & Lorch, 1992) and board committees for deliberations of board activities (Klein, 2002). Board compensation is the remuneration to board members (Murphy, 1984).

Financial characteristics are the internal factors of a firm that are expected to have effect on its efficiency and level of performance (Mwangi, 2014). Finance is the life blood of a firm; it is required to bring a firm into existence, to keep alive and to see it growing and prospering. The financial characteristics used in this study include: investment, leverage and liquidity because of their direct influence to performance of firms. Investment refers to the sacrifice of current cash flows for future cash flows. It involves time, risk and returns since the sacrifice takes place in the present, and is certain, while returns come later, and are uncertain (Sharp *et al*., 2005). Investment measures the increase in capital spending such as buying new machines, building bigger factories. Investment in long term assets makes firms to remain competitive and to survive given constant flow of ideas for new products, making existing products better and reducing the operating cost (Hillie, Jaffe, Jordan, Ross & Westerfield, 2010). Investment in tangible and intangible assets such as property, plant, equipment and securities also ensures a good firm's performance in profitability and value (Mudida & Ngene, 2010).

Macroeconomic factors are general economic factors having universal effect on a nation or a region and affect a large population (Deraso, 2012). Macroeconomic factors impact on performance of all firms in an economy. Macroeconomic factors affect macroeconomic

environment and determines the level of performance of manufacturing firms due to cost of capital benefits arising from favorable interest rates prevailing in the country. The macroeconomic factors used in this study include: Gross Domestic Product (GDP) growth rate, interest rate and inflation rate. GDP is a measure for all finished goods and services produced in a country for a specific fiscal year. GDP is equal to total investment, consumption, government spending, and exports less value of imports (Maclennan & Pryce, 1996). The real GDP portrays economic performance in a country. During periods of economic boom, firms demand more external financing for investment to expand their business portfolios. Economic growth strengthens firms' alteration of their leverages. The growth in GDP affects the cost of finances and hence the future performance of manufacturing firms. Interest rate is the price that a borrower pays in order to be able to consume resources now. It represents the cost of borrowing capital for a given period of time. A high rate of interest significantly affects a firm's earnings and capital base; and increases the operating expenses (Keynes, 1936; Lazonick & O'Sullivan, 2000). Increase in interest rate drives cost of debt capital affecting investment, leverage, liquidity and performance of firms. Interest rate assists in mobilizing financial resources in the promotion of economic growth and development (Koori, 2015). Inflation refers to the change in the general level of prices in the economy over given period of time (Santoni, 1986). Inflation rates have effects on the value of money and it is measured by the changes in the consumer price index (Liow, Ibrahim & Huang, 2005). Pressures of inflation heavily impact on investment, leverage, liquidity and performance of firms. Higher rate of inflation has a negative impact on the cost debt which could increase debt to equity ratio and affect performance of firms (DeAngelo & Masulis, 1980).

Performance of a firm is a measure of overall well-being of a firm in terms of wealth creation over a given period of time. It measures how a firm can use investment in long and short term assets to create revenues (Iraya, 2014). Performance measurement is the process of assessing proficiency with which reporting entity succeeds by economic acquisition of resources and their efficient and effective deployment of resources, in achieving its objectives. Performance measure may be based on financial and non-financial information (Murby & Gould, 2005). Performance measurement refers to the process of measuring the actions, efficiency and effectiveness of a firm (Neely, Gregory and Platts, 2005). There are 10 listed manufacturing firms at the Nairobi securities exchange as at 31st December, 2016. The performance of listed firms have been varied since the introduction of corporate governance policies and practices. B.O.C Kenya Limited had increased operating profit from KES 154,990,000 in 2002 to KES 308,392,000 in 2013 and reduced to KES 190,682,000 in 2016. British America Tobacco Kenya Limited had operating profit of KES 1,310,423,000 in 2002 to KES 7,672,448,000 in 2015 and reduced to KES 5, 911,310,000. East African Breweries Limited had KES 2,300,794,000 in 2002 to KES 15,253,011,000 in 2012 to KES 13,618,504,000 in 2016. Unga Limited, CABAID Limited, Eveready Limited, Mumias Sugar

Company limited, Flame Tree group and Kenyan Orchards Limited among others posted varied fluctuating results over the period.

2.0 LITERATURE REVIEW

2.1.1 Theoretical Review

Agency Theory

Agency theory was developed by Jensen and Meckling (1976). The theory is grounded on the separation of ownership and relationship between principals and agents. It is based on short term gains where principals delegate decision making authority to their agents; who are to use resources given by the principals to enhance principals' benefits. Agents however, may commit moral hazard by substituting principals' interest with their own (Fama & Jensen, 1983). Principals normally monitor the activities of agents to ensure that they act on the interest of the firms. Monitoring costs are normally expensive and adversely affect the principals' income (Agrwal & Knoeber, 1996).Agency theory has been applied to today firms since shareholders have realized that firm performance depends crucially on having the right managers at the helm and incentivizing them properly (Anderson, Bustamante, Guibaud, & Zervos, 2018). Todays' firms have adopted various compensation structures to motivate the managers hence avoiding agency costs and conflicts as a result of principal-agency relationships.

Stewardship Theory

Stewardship theory was developed by Donaldson and Davis (1991). The theory was an innovative view in understanding relationship between ownership and management of a firm from the Agency theory. Directors are stewards making decisions for long term survival of firms as well as maximize shareholders' wealth. Directors normally perceive firms as an extension of them, rather than use their resources for own interest; the executives main interest is ensuring the sustained life and success of the firm. The theory is based on the duties of executives acting as stewards, integrating their goals as part of the firm and recognizes the importance of structures that empower the steward and offers maximum autonomy built on trust (Donaldson & Davis, 1991). The critics of steward theory argue that there is lack of conclusive evidence linking board to firm performance which have turned researchers' attention back to the black box of board process, and emphasized the element of firm context in determining the role and value of the corporate governance (Huse, 2003). This implies that board of directors which are components of corporate governance may act as stewards but they do not have direct impact on firm profitability.

Stakeholder Theory

Stakeholder theory was developed by Freeman (1984). The theory takes into account diverse intrinsic interest of all stakeholders of the firm. Stakeholders are individuals or groups who can affect or are affected by the achievement of the firm's objectives. The theory suggests that directors of a firm have interests of different stakeholders to serve. It is important for directors not to have preference in a group of network they serve in administering the activities of the firm and the moral perspective of the theory is that all stakeholders have a right to be treated fairly as this leads to a better firm performance (Freeman, 1999). The theory has also faced some criticism among corporate governance researchers. Critics of this theory argue that meeting all stakeholders' interest leads to corruption as it gives chances to divert wealth and directors may use stakeholders' reasons to justify poor performance and provide inadequate explanation of the firm's behavior with its environment (Okiro, 2014). Firms today apply the stakeholders' proposition to promote the vision of the company and the role of managers whose objective is mainly to maximize shareholder value in order to be sustainable. Roberts and Mahoney (2004) examined 125 accounting studies that used the stakeholder language and found that nearly 65 percent "use the term stakeholder without reference to any version of stakeholder theory.

Resource Dependency Theory

Resource dependency theory was developed by Pfeffer and Salancik (1978). The theory deals with the study of how external resources affect the behavior of the organization. The procurement of external resources is an important tenet for both the strategic and tactical management of any company. The theory concentrates on the role of board directors in providing access to resources needed by the firm. The theory emphases on the activities that directors play in finding resources required by the firm through connections to its external environment (Hillman, Canella & Paetzold, 2000). The theory further gives direction on recruitment of directors who assist in gaining access to vital resources of the company for survival (Johnson, Daily & Ellstrand, 1996). The critics of this theory have based their arguments concerning the boundary of space; Casciaro and Piskorski (2005) for instance argue that the RDT can be bounded to the boundaries of the organization concerning internal issues. Hillman *et al.,* (2000) on the other hand, posit that the RDT is bounded to the environment of the organization and assumes that the organizational actions are constrained to the events in the organizational environment, leaving the environment as a space boundary.

2.1.2 Empirical Review

Wagana and Karanja (2015) examined the influence of corporate governance mechanisms such as board diversity, board duality, government ownership and management ownership and found significant positive relationship between corporate governance and performance of manufacturing firms in Kenya. The study however is not grounded on a specific research

design. Lekaram (2014) studied corporate governance and performance of listed manufacturing firms in Kenya and found that board size is inversely related to ROA and ROE for listed manufacturing firms at the NSE, on contrary a larger proportion of outside directors led to a higher shareholders' value but does not explain why listed manufacturing firms exhibit a high market price to net assets value. The study concentrated on one sector of the market and used board size and outside directors as the only characteristics of corporate governance. Mbalwa,Kombo,Chepkoech,Koech and Shavulimo (2014) study effect of corporate governance on performance of sugar manufacturing firms in Kenya, a case study of sugar manufacturing firms in western Kenya using correlation survey design and found that corporate governance practices are positively related to the performance of sugar manufacturing firms in western Kenya. The study however used one sector of manufacturing firms in Kenya. Valnampy (2013) studied corporate governance and firm performance of Sri-Lanka manufacturing companies and found that corporate governance has no effect on firm performance as measured by return on equity and return on assets. The however concentrated on sectors of the economy that is the manufacturing firms.

3.0 Research Methodology

This study used a census approach and a target population of the study comprised of manufacturing firms listed at the NSE between years 2002 and 2016. A total of ten manufacturing companies were listed at the NSE as at 31st December 2016. Manufacturing companies listed at NSE were targeted because the NSE acts as a country's financial barometer and the market had received empirical studies and financial data that were used to support this study (Ongore & K'obonyo, 2011). The 10 companies were screened against various factors which included availability of data for the period under review and the integrity of data. Data was extracted from annual reports of listed firms from CMA; published financial statements from NSE; and economic reports from Central Bank of Kenya (CBK) and Kenya National Bureau of Statistics (KNBS). This study used descriptive research design and panel data regression in analyzing the relationship between corporate governance and performance of manufacturing firms listed at the NSE.

Descriptive analysis was carried out to measure dispersion of variables such as standard deviations and coefficient of variation which was used to disclose the volatility in relationships of the variables under study. A panel data regression analysis was conducted using random effects model which allowed the companies to have a common mean value of the intercept to determine whether corporate governance influence performance of manufacturing firms. Coefficient of Determination (R^2) and p-values were used to interpret the regression functions at a level of significance of 0.05 (Bryman & Cramer, 1997). The respective individual regression coefficients were also tested for their statistical significance using the t-test. Simple regression model was used to test hypothesis one: Relationship

between Corporate Governance (CG) and Performance of Firms (FP). Panel data regression model of random effects was used to determine the relationship among Corporate Governance (CG), Financial Characteristics (FC), Macroeconomic Factors (MF) and Performance of Firms (FP). These models were used to test hypothesis four, the joint effect: Panel data regression model of random effects was used to determine the relationship among Corporate Governance (CG), Financial Characteristics (FC), Macroeconomic Factors (MF) and Performance of Firms (FP). These models were used to test hypothesis four, the joint effect:

$FP_{it} = \beta_0+\beta_1 CG_{it} +\beta_2 FC_{it-1} + \beta_3 MF_{it-1}+c_i +\acute{\varepsilon}_{it}$……Equation 1.

Where:

FP_{ij} is Performance of Firms;

CG is Corporate Governance;

FC is Financial Characteristics;

MF is Macroeconomic Factors;

c_i unobserved variable; β_0 is the intercept;

β_1, β_2, and β_3 are regression coefficients for Corporate Governance, Financial Characteristics and Macroeconomic Factors for firm i in time t

$\acute{\varepsilon}$ is error term.

The study's null hypotheses were rejected when calculated p-values exceeded 0.05 significance level adopted by the study

4.0 Results And Discussions

4.1 Descriptive Analysis

The findings presented in this section include findings on descriptive statistics, and correlation test results. Tables and charts were used in presentation of the findings. The results presented in table 1 shows the descriptive statistics of the variables under the study.

Table 1: Descriptive Statistics of Study Variables

Variable	N	Mean	Std. Dev.	Min	Max
Board Independence	107	0.82	0.09	0.60	1.25

Gender Diversity	107	0.15	0.14	0.00	0.63
Occupational Expertise	107	6.12	1.79	2.00	9.00
Board age	107	57.64	5.83	47.60	74.00
Board size	107	8.55	2.44	3.00	12.00
Board tenure	107	2.02	0.93	1.00	3.00
Board ownership	107	0.10	0.13	0.00	0.48
Board tools	107	3.40	0.55	2.00	4.00
Board meetings	107	4.55	1.01	3.00	8.00
Number of board committees	107	2.90	1.00	0.00	6.00
Committees Meetings	105	8.36	4.74	0.00	24.00
Board remuneration	107	0.00	0.58	-5.73	0.99
Investments	107	0.52	0.16	0.15	0.93
Leverage	107	0.36	0.42	0.03	0.19
Liquidity	107	0.19	0.17	-0.37	0.51
GDP growth Rate	135	4.85	2.19	0.20	8.40
Interest Rate	135	15.07	2.26	12.25	9.85
Inflation Rate	135	7.43	3.50	0.90	15.20
ROA	107	0.29	0.27	-0.53	0.76
Tobin's q	107	1.83	1.25	0.11	0.19

4.2 Correlation Analysis

4.2.1 Board Structure and Financial Characteristics in Manufacturing Firms

Table 2 presents the correlation findings of board structure indicators and financial characteristics of manufacturing firms listed on NSE. The results showed that board independence had a negative correlation with investment while had a positive correlation with liquidity and leverage. Gender diversity on the other hand had a negative correlation with both investments and liquidity while it had a positive correlation with Leverage.

Occupational expertise had a negative correlation with leverage and liquidity while it had a positive correlation with investments. The findings showed that Board age had positive correlation with investments and liquidity while it had negative correlation with leverage. Finally, the findings showed that board size had negative correlation with leverage while it had positive correlation with investment and liquidity of manufacturing firms listed on NSE.

Table 2: Board Structure and Financial Characteristics in Manufacturing Listed Firms

		Board independence	Gender Diversity	Occupational Expertise	Board Age	Board Size	Investments	Leverage	Liquidity
Board independence	r	1							
Gender Diversity	r	.225*	1						
Occupational Expertise	r	-0.069	0.093	1					
Board Age	r	0.012	-.508**	-.277**	1				
Board Size	r	0.172	.207*	.499**	-.313**	1			
Investments	r	-0.025	-.208*	0.105	.375**	.235*	1		
Leverage	r	.251**	.359**	-0.124	-.204*	0.17	0.059	1	
Liquidity	r	0.047	-.317**	-0.175	.197*	-.412**	-.59**	-.49**	1
	N	107	107	107	107	107	107	107	107

** Correlation is significant at the 0.01 level (2-tailed).

4.2.2 Board Activities and Financial Characteristics in Manufacturing Firms

Table 3 presents the findings on correlation analysis between board activities indicators and financial characteristics of manufacturing firms listed on NSE. The findings showed that

investments was positively correlated to board ownership, board tools, board meetings, number of board committees, committees meetings and board remuneration while it was negatively correlated with board tenure. The findings further revealed that leverage was positively correlated with board tenure, board ownership, number of board committees and committees meetings while it was negatively correlated with board tools, board meetings and board remuneration of manufacturing firms listed on NSE. Finally, the study findings showed that liquidity was positively correlated with board remuneration while negatively correlated with board tenure, board ownership, board tools, board meetings, number of board committees and committees meetings of manufacturing firms listed on NSE.

Table 3: Board Activities and Financial Characteristics in Manufacturing Firms

		Board Tenure	Board Ownership	Board Tools	Board Meetings	No Board Committees	Committees Meetings	Board Remuneration	Investments	Leverage	Liquidity
Board Tenure	r	1									
Board Ownership	r	.378**	1								
Board Tools	r	-.311**	-.415**	1							
Board Meetings	r	-0.111	-0.106	.363**	1						
Number of Board Committees	r	-0.069	-0.076	.283**	0.113	1					
Committees Meetings	r	0.009	0.119	0.005	0.025	.805**	1				
Board Remunerati	r	-0.059	-0.018	0.043	0.054	-0.06	-0.019	1			

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Investments	r	-0.122	.195*	0.127	.278**	.256**	0.102	0.148	1		
Leverage	r	0.176	0.07	-0.126	-0.14	.307**	0.059	-0.137	0.059	1	
Liquidity	r	-0.146	-0.119	-0.018	-0.153	-.360**	-.228*	0.023	-.592**	-.496**	1
	N	107	107	107	107	107	105	107	107	107	107

* Correlation is significant at the 0.05 level (2-tailed).

4.2.3 Board Structure and Macroeconomic Variables in Manufacturing Firms

Table 4 presents the results for board structure indicators and macroeconomic variables for listed manufacturing firms in Kenya. The findings showed that GDP growth rate had a positive correlation with gender diversity and board age while it was negatively correlated with board independence, occupational expertise and board size. Interest rates were negatively correlated with board independence, occupational expertise, board age and board size while it was positively correlated with gender diversity. Inflation rates on the other hand, had a positive correlation with all the board structures.

Table 4: Board Structures and Macroeconomic Variables in Manufacturing Firms

		Board independence	Gender Diversity	Occupational Expertise	Board Age	Board Size	GDP	Interest Rate	Inflation Rate
Board independence	r	1							
Gender Diversity	r	.225*	1						
Occupational Expertise	r	-0.069	0.093	1					
Board Age	r	0.012	-.508**	-.277**	1				

Board Size	r	0.172	.207*	.499**	-.313**	1			
GDP	r	-0.009	0.153	-0.036	0.042	-0.032	1		
Interest Rate	r	-0.041	.305**	-0.103	-0.113	-0.119	-0.15	1	
Inflation Rate	r	0.059	0.061	0.061	0.056	0.082	-.262**	-0.126	1
	N	107	107	107	107	107	107	107	107

** Correlation is significant at the 0.01 level (2-tailed).

4.2.4 Board Activities and Macroeconomic Variables in Manufacturing Firms

Table 5 presents the findings of correlation analysis between board activities indicators and macroeconomic variables among manufacturing firms listed on NSE. The findings similarly showed that GDP growth rate, interest rate and inflation rate had weak association with board activities indicators for listed manufacturing firms in Kenya.

Table 5: Board Activities and Macroeconomic Variables in Manufacturing Firms

		Board Tenure	Board Ownership	Board Tools	Board Meetings	Number of Board Committees	Board Committees Meetings	Board Remuneration	GDP	Interest	Inflation
Board Tenure	r	1									
Board Ownership	r	.378**	1								
Board Tools	r	-.311**	-.415**	1							
Board Meetings	r	-0.111	-0.106	.363**	1						

No. of Board Committees	r	-0.069	-0.076	.283**	0.113	1					
Committees Meetings	r	0.009	0.119	0.005	0.025	.805**	1				
Board Remuneration	r	-0.059	-0.018	0.043	0.054	-0.06	-0.02	1			
GDP Growth Rate	r	0.047	0.051	0.132	0.044	0.074	0.03	-0.168	1		
Interest Rate	r	0.041	0.058	0.173	0.093	0.104	0.04	0.071	-0.151	1	
Inflation Rate	r	0.034	0.028	0.174	0.069	0.052	0.02	0.15	-.262**	-0.126	1
	N	107	107	107	107	107	107	107	107	107	107

*Correlation is significant at the 0.05 level (2-tailed).

4.2.5 Board Structure and Performance of Firms in Manufacturing Firms

Table 6 shows the correlation between board structure indicators and performance of listed manufacturing firms in Kenya. The results showed that board structure indicators had a weak correlation with performance of listed manufacturing firms in Kenya.

Table 6: Board Structure and Performance of listed Manufacturing Firms

		Board independence	Gender Diversity	Occupational Expertise	Board Age	Board Size	ROA	Tobin's Q
Board independence	r	1						
Gender Diversity	r	.225*	1					
Occupational Expertise	r	-0.069	0.093	1				
Board Age	r	0.012	-.508**	-.277**	1			

Board Size	r	0.172	.207*	.799**	-.313**	1		
ROA	r	-.386**	-.434**	.453**	.192*	0.113	1	
Tobin's Q	r	-.288**	-0.064	.514**	0.014	.286**	.617**	1
	N	107	107	107	107	107	107	107

*Correlation is significant at the 0.05 level (2-tailed).

4.2.6 Board Activities and Performance of Manufacturing Firms

Table 7 presents the findings of correlation analysis of board activities indicators and performance of manufacturing firms listed on NSE. The findings showed that board activities indicators had a weak correlation with both ROA and Tobin's Q of manufacturing firms listed on NSE.

Table 7: Board Activities and Performance of Manufacturing Firms

		Board Tenure	Board Ownership	Board Tools	Board Meetings	No. of Board Committees	Committees Meetings	Board Remuneration	ROA	Tobin's Q
Board Tenure	r	1								
Board Ownership	r	.378**	1							
Board Tools	r	-.311**	-.415**	1						
Board Meetings	r	-0.111	-0.106	.363**	1					
No. of Board Committees	r	-0.069	-0.076	.283**	0.113	1				
Committees Meetings	r	0.009	0.119	0.005	0.025	.805**	1			

Board Remuneration	r	-0.059	-0.018	0.043	0.054	-0.06	-0.019	1		
ROA	r	-.406**	-.318**	.302**	0.163	0.125	0.052	0.09	1	
Tobin's Q	r	-.281**	-0.175	0.184	0.147	.304**	.303**	0.04	.617**	1
	N	107	107	107	107	107	105	107	107	107

**Correlation is significant at the 0.01 level (2-tailed).

4.2.7 Financial Characteristics Variables and Performance of Manufacturing Firms

Table 8 presents the findings of correlation analysis between financial characteristics and performance of manufacturing firms listed on NSE. The findings showed that investments, leverage and liquidity had a weak positive correlation with both ROA and Tobin's Q of listed manufacturing firms on NSE.

Table 8: FC Variables and Performance of Firms in Manufacturing Firms

		Investments	Leverage	Liquidity	ROA	Tobin's Q
Investments	r	1				
Leverage	r	0.059	1			
Liquidity	r	-.592**	-.496**	1		
ROA	r	0.07	-.510**	.267**	1	
Tobin's Q	r	0.117	-.429**	-0.111	.617**	1
	N	107	107	107	107	107

**Correlation is significant at the 0.05 level (2-tailed).

4.2.8 Macroeconomic Variables and Performance in Manufacturing Firms

Table 9 presents the correlation analysis of macroeconomic variables and performance indicators of manufacturing firms listed on NSE. The results presented showed that GDP

growth rates, interest rates and inflation rates had a weak correlation with both ROA and Tobin's Q of listed manufacturing firms in Kenya.

Table 9: Macroeconomic Variables and Performance in Manufacturing Sector

		GDP	Interest Rate	Inflation Rate	ROA	Tobin's Q
GDP	r	1				
Interest Rate	r	-0.151	1			
Inflation Rate	r	-.262**	-0.126	1		
ROA	r	0.043	-0.125	0.044	1	
Tobin's Q	r	0.141	-0.172	0.066	.617**	1
	N	107	107	107	107	107

*Correlation is significant at the 0.05 level (2-tailed).

4.3 Regression Analysis

4.3.1 Corporate Governance Variables and Performance of Manufacturing Firms

Table 10 presents the findings of effect of corporate governance variables on performance of listed firms in manufacturing sector in Kenya. The results revealed that models used to link corporate governance variables to ROA (Prob>Chi2 =0.0000) and Tobin's Q (Prob>Chi2 =0.0000) were statistically significant which also implied that corporate governance variables were significant predictor of performance of listed firms in manufacturing sector in Kenya.

Table 10: Corporate Governance Variables and Performance of Manufacturing Firms

	Model 1	Model 2
	ROA	Tobin's Q
Board Independence	-0.6373656 (P=0.004)	-4.693179 (p=0.000)
Gender Diversity	-0.997819 (p=0.000)	-0.4997657 (p=0.632)
Occupational Expertise	0.1106113 (p=0.000)	0.6096043 (p=0.000)
Board Age	-0.0023771 (p=0.616)	0.0201668 (p=0.471)
Board Size	-0.0596478 (p=0.000)	-0.249053 (p=0.005)

Board Tenure	0.0136688 (p=0.585)	-0.0372089 (p=0.801)
Board Ownership	0.3216916 (p=0.066)	1.977115 (p=0.055)
Board Tools	0.0323337 (p=0.467)	-0.2478888 (p=0.345)
Board Meetings	0.010943 (p=0.534)	0.0707392 (p=0.496)
Number of board committees	0.124365 (p=0.004)	0.1406143 (p=0.582)
Committees Meetings	-0.00291 (p=0.703)	0.0647393 (p=0.150)
Board Remuneration	-0.0029128 (p=0.919)	-0.1251772 (p=0.458)
_cons	0.3812627 (p=0.273)	2.445204 (p=0.234)
	Wald chi2(12)=162.13	Wald chi2(12)= 80.36
	Prob > chi2= 0.0000	Prob>chi2=0.0000
	R-sq: = 0.1488	R-sq:= 0.4662

The study findings revealed that occupational expertise, board tenure, board ownership, board tools, board meetings and number of board committees were positively related to ROA of listed manufacturing firms in Kenya while board independence, gender diversity, board age, board size, committees meetings and board remuneration had a negative effect on ROA of listed manufacturing firms in Kenya. The effect of board independence, gender diversity, occupational expertise, board size and number of board committees on ROA was significant.

The findings also shows that occupational expertise, board age, board ownership, board meetings, number of board committees and committees meetings were positively related to Tobin's Q of listed manufacturing firms while board independence, gender diversity, board size, board tenure, board tools and committees meetings had a negative effect on Tobin's Q of listed manufacturing firms in Kenya. The effect of board independence, occupational expertise and board size on Tobin's Q was significant. Table 11 presents the regression results of the models fitted to test the relationship between CG composite and performance of firms (ROA and Tobin's Q) of listed manufacturing firms in Kenya. The results also revealed that the models fitted were statistically insignificant which implied that CG composite was insignificant predictors of performance of firms on both (ROA and Tobin's Q) of listed manufacturing firms in Kenya.

Table 11: Model CG Composite and Performance of Firms in Manufacturing Sector

	Model 1	Model 2
	ROA	Tobin's Q
CG	0.00000041 (p=0.328)	0.000000763 (p=0.748)
_cons	0.2671508 (p=0.000)	1.759086 (p=0.000)
	Wald chi2(1) = 0.96	Wald chi2(1) = 0.10
	Prob > chi2 = 0.3284	Prob > chi2 = 0.7480
	R-sq:= 0.1792	R-sq: = 0.0011

4.3.2 Summary of the Intervening Effect of Financial Characteristics in Manufacturing Firms

Table 12 presents the summary of the intervening effect of financial characteristics on the relationship between corporate governance and performance of listed manufacturing firms. The results also revealed leverage and liquidity partially intervene the relationship between corporate governance and performance of listed manufacturing firms in Kenya. The results also revealed firm investments did not significantly and fully intervene the relationship between corporate governance and performance of listed manufacturing firms in Kenya.

Table 12: Summary of the Intervening Effect of Financial Characteristics in Manufacturing Firms

Steps	IV	DV	Result	Intervention
1	CG	ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
2	CG	Investment	insignificant	Not Achieved
		Leverage	insignificant	Not Achieved
		Liquidity	insignificant	Not Achieved

3	Investment	ROA	insignificant	Not Achieved
		Tobin's Q	significant	Achieved
	Leverage	ROA	significant	Achieved
		Tobin's Q	significant	Achieved
	Liquidity	ROA	significant	Achieved
		Tobin's Q	significant	Achieved
4	CG	ROA	significant	Achieved
		Tobin's Q	Insignificant	Not Achieved
	Investment	ROA	Insignificant	Not Achieved
		Tobin's Q	significant	Achieved
	Leverage	ROA	significant	Achieved
		Tobin's Q	significant	Achieved
	Liquidity	ROA	significant	Achieved
		Tobin's Q	significant	Achieved

4.3.3 Moderating effect of Macroeconomic Variables in Manufacturing Firms

This section presents for moderating effect of macroeconomic variables on the relationship between corporate governance variables and performance of manufacturing firms listed on NSE in Kenya.

Table 13: Step One: Models Fitting for Moderating effect of Macroeconomic Variables in Manufacturing Firms

	Model 1	Model 2
	ROA	Tobin's Q
CG	0.000000494 (p=0.239)	0.00000162 (p=0.479)

GDP growth rate	0.0150841 (p=0.049)	0.1110762 (p=0.008)
interest rate	-0.0091923 (p=0.188)	-0.0708646 (p=0.063)
inflation rate	0.0074342 (p=0.119)	0.041618 (p=0.110)
_cons	0.2752696 (p=0.070)	1.962707 (p=0.017)
	Wald chi2(4)= 9.26	Wald chi2(4)= 14.07
	Prob > chi2 = 0.0549	Prob > chi2 = 0.0071
	R-sq:= 0.0924	R-sq:= 0.1295

Table 14: Step Two: Models Fitting for Moderating effect of Macroeconomic Variables in Manufacturing Firms

	Model 1	Model 2
	ROA	Tobin's Q
CG	-0.00000861 (p=0.458)	0.00000883 (p=0.896)
GDP growth rate	0.015022 (p=0.055)	0.1092932 (p=0.017)
interest rate	-0.0122666 (p=0.088)	-0.065424 (p=0.119)
inflation rate	0.0078969 (p=0.101)	0.0384522 (p=0.170)
IT1	-0.0000000315 (p=0.976)	0.00000144 (p=0.240)
IT2	0.000000614 (p=0.084)	-0.00000143 (p=0.485)
IT3	0.000000109 (p=0.862)	0.000000801 (p=0.827)
_cons	0.3113936 (p=0.045)	1.947707 (p=0.020)
	Wald chi2(7)= 13.99	Wald chi2(7)= 13.08
	Prob > chi2 = 0.0513	Prob > chi2= 0.0701

	R-sq: = 0.1451	R-sq: = 0.1347

The findings in Table 13 and Table 14 revealed that R-squared increased from 0.0924 to 0.1451 in the first model while increased from 0.1295 to 0.1347 in the second model with the inclusion of the interaction variables. The findings also showed that none of the macroeconomic variables had insignificant moderating effects on the relationship between corporate governance and Tobin's Q of listed manufacturing firms in Kenya since all the interaction variables IT1, IT2 and IT3 were insignificant.

4.3.4 Joint Effect of Corporate Governance, Financial Characteristics, Macroeconomic Factors on Performance of Manufacturing Firms

This section presents findings of effect of corporate governance, financial characteristics, and macroeconomic factors on performance of firms listed in manufacturing sector in Kenya. During the period of the study NSE had listed 10 manufacturing firms hence the data for these firms was adequate in conducting analysis.

Table 15: Joint Effect of Corporate Governance, Financial Characteristics, Macroeconomic Factors on Performance of Manufacturing Firms

	Model 1		Model 2	
	ROA		Tobin's Q	
CG	0.0000002955	(p=0.644)	0.00000364	(p=0.886)
Investments	0.217	(p=0.289)	2.982	(p=0.000)
Leverage	0.353	(p=0.000)	3.384	(p=0.000)
Liquidity	0.185	(p=0.373)	5.130	(p=0.000)
GDP Growth rate	0.007	(p=0.513)	0.068	(p=0.139)
Interest Rate	0.002	(p=0.830)	0.052	(p=0.224)
Inflation Rate	0.003	(p=0.677)	0.017	(p=0.546)

_Cons	0.236 (p=0.376)	5.801 (p=0.000)
	Wald chi2 (7)=4.598	Wald chi2 (7) =13.838
	Prob > chi2= 0.000	Prob > chi2 = 0.000
	R-sq:within = 0.194	R-sq: within = 0.464

The results in Table 15 shows that both model 1 linking CG, FC, macroeconomic variables and ROA (Prob >chi2=0.000), and Model 2 linking CG, FC, macroeconomic variables and Tobin's Q (Prob >chi2=0.000) were statistically significant. These findings implied that CG, FC, macroeconomic variables were good predictors of listed manufacturing sector firms' performance. The study's findings revealed that only leverage significantly (β=0.353, p=0.000) affected ROA of listed manufacturing firms in Kenya. The results showed that CG, investments, liquidity, GDP Growth rate, interest rate and inflation rate insignificantly affected ROA. On the other hand, investments (β=2.982, p=0.000), leverage (β=3.384, p=0.000) and liquidity (β=5.130, p=0.000) significantly affect Tobin's Q of listed manufacturing firms in Kenya. CG, GDP Growth rate, Interest Rate and Inflation Rate insignificantly affected Tobin's Q of listed manufacturing firms in Kenya.

Model 1

FP_{it} (ROA) = 0.236 + 0.353LE_{it-1} +c_i +$\acute{\varepsilon}_{it}$

Model 2

FP_{it} (Tobin's Q) = 5.801 + 2.982IN_{it-1}+ 3.384LE_{it-1} + 5.130LI_{it-1} +c_i +$\acute{\varepsilon}_{it}$

Where;

IN = Firm Investments

LE= Firm Leverage

LI= Firm Liquidity

ε =Error Term

5.0 Conclusion and Recommendations

The study concluded that manufacturing listed firms in Kenya strengthened their corporate governance due to poor performance, further the study concluded that corporate governance practices used by manufacturing listed firms failed to impact on performance. The study also concluded that manufacturing listed firms in Kenya continued to record poor performance despite corporate governance investments. The study further concluded that financial characteristics of the manufacturing firms are important component for better overall performance of firms. However, such characteristics do not provide the necessary environment for corporate governance to affect performance of the firms. Financial characteristics such as investments, leverage and liquidity provide the necessary vehicle to be used by management in combining other factors of production to fuel high performance of firms but do not impact on the activities and structure of the board.

On the moderating effect of macroeconomic factors, the study concluded that unfriendly macroeconomic conditions act as a catalyst that enhances board activities such as frequency of board meetings to approve some of the immediate actions the management may wish to undertake to mitigate the effect of volatility in the macroeconomic environment. The findings of this study revealed that macroeconomic factors enhanced the strength of the relationship between corporate governance and performance of manufacturing firms through enhancing the explanatory power of corporate governance variables on performance of firms. The study therefore concluded that the macroeconomic factors play a critical role in moderating the relationship between corporate governance and performance of firms. The study finally concluded that listed manufacturing firms that focused on enhancing their corporate governance, financial characteristics and operated in favourable macroeconomic environment are likely to increase their performance since jointly corporate governance, financial characteristics and favourable macroeconomic conditions were found to account for the highest variations in both ROA and Tobin's Q of the listed manufacturing firms in Kenya.

Based on the findings, the study recommended that listed manufacturing firms should revisit their corporate governance practices to ensure that they leverage on board structures and board activities that improve performance while obsolete corporate governance practices should be eradicated. The study also recommended that management and stakeholders of listed firms should not only focus on streamlining corporate governance practices, but also further enhance their level of investments, liquidity and use of leverage to significantly improve their firms' performance. The study further recommended that state authorities and policymakers should formulate policies to keep the economy afloat which will provide the necessary environment for operations of firms to enhance profitability

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34. The Role of Human Capital Capability on Organization Performance: A Perspective of Private Universities in Kenya

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Private Universities in Kenya have continuously faced a number of challenges such as declining quality of educational programs, quality of research, authenticity of degrees granted, flexibility of the university programs, innovations created and efficient utilization of resources at their disposal. Despite the increasing number of students seeking higher education, these numbers have not translated to better performance in these Universities. Modern business environment calls for organizations, including private Universities to identify and exploit strategic capabilities for them to effectively compete and boost their performance. These universities need to harness their resources, and exploit their competences in order to gain competitive advantage. There is therefore a need for private universities to exploit human capital capability by continuously training and developing the staff to have the relevant knowledge, skills and competenciences in order to boost their performance. This study sought to establish the effect of human capital capability on performance of private universities in Kenya. The study was anchored on the Resource Based View theory. It was founded on positivist research philosophy and adopted a cross-sectional descriptive survey research design. Primary data collected from faculty deans, registrars' administrations and finance, human resource managers and ICT managers was used in the study. Data analysis was carried out using descriptive statistics; means, frequencies and standard deviations and inferential statistics (correlation and regression analysis). The study established that private universities adopted human capital capability only to a moderate extent (mean=3.33). Overall, the study concluded that human capital capability has a significant positive effect on performance of private universities in Kenya. Based on this conclusion, the study recommended that that private universities in Kenya should prioritize personnel expertise by employing based on qualifications and frequently conducting random assessments to evaluate level expertise. Besides, the level of experience and knowledge and skills possessed by the staff should be highly enriched through trainings and development. The study contributes to the body of knowledge by proposing a strategic capability model for private universities (and to a great extent public universities) for improving their performance by redirecting their focus to human capital capability.

Keywords: *Human Capital Capability, Organization Performance, Private Universities*

35. Utilization of Technology and Sustainability of the Youth Development Fund in the Copperbelt and Lusaka Province in Zambia

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Abstract

In Zambia the access to finance is hard and costly attributable to high lending rates. This has led to most Zambians together with the youths failing to access finances leading to the increase in volumes of youth unemployment and poverty. In turn to act in response to Zambia's youth unemployment crisis, the government of Zambia through the Ministry of Youth Sport and Child Development established the Youth Development Fund in 2006 to reduce poverty by enhanced job creation. In this programme sustainability has been difficult to achieve because of low repayment rate of beneficiaries. The study sought to examine the utilization of technology and sustainability of the youth development fund in Zambia with evidence from Copperbelt and Lusaka province. The specific objective of the study was to assess the effect of technology on sustainability of the youth development fund in Zambia. The study was anchored on the unified theory of acceptance and use of technology and the Institutional and sustainability theory. A descriptive research design and a purposive sampling method were used with a sample size of 207 respondents from both Copperbelt and Lusaka provinces. The study relied on primary data, with the aid of a questionnaire. Data was analysed using SPSS, frequency tables, charts and multiple regression analysis. In line with the objectives of the study, the findings revealed that technology was statistically significant to sustainability of the youth development fund. The study recommended that the ministry of youth sport and child development should provide business and financial coaching for beneficiaries, ensure they install a monitoring business performance system to monitor beneficiaries, as well as adopt the use of technology where an integrated electronic management system for loan assortment will be used track beneficiaries and also keep necessary records pertaining to the fund.

Keywords: technology, sustainability, loan repayment, government revolving funds and Youth Development Fund

Background to the study

According to Lerman (2001) , in modern societies assembling tools to educate the young adults is a very vital undertaking as the governments engage in taking up essential measures to bring development by ensuring that their communal learning system are put in place and also ensuring the schools have curricular activities that are in line with linking the youth to various employment opportunities. After an understanding that formal jobs are not always

available, in the 1960s up until the 1970s, the federal government of the United States determined to find solutions on how to better the lives of underprivileged youth. The 40 percent of black unemployed youth of the 1970s, inspired the assembly to get ahead with the Youth Employment Demonstrations Projects Act (YEDPA). Around the 1980s and 1990s, for two decades the policymakers of the United States were focused towards the finding resolutions of the paramount technique to use to prepare all youths for employment in the insight of the steadiness of the unemployment problem.

In the Sub-Saharan region, according to the YDF evaluation report (2018), Kenya has the Youth Enterprise Development Fund (YEDF) which was established in 2006 to find resolutions to facilitate empowerment of their youth. In 2007 the fund was changed to a state corporation. The Government of Kenya provides 100% financial support through the annual budget allocation. The YEDF provides business improvement and finance services to the youth. The fund renders its services to diverse business entities such as marketing, resource mobilisation etc, it also renders its services by giving out loans and providing training to commendable individual youths, youth groups as well as youth enterprises in both local and global markets. The recipients of the YEDF are required to 18-35 years and to also be registered as self-help groups (SHG) individual youths who own.

The Ministry of Youth Sport and Child Development of Zambia has the Youth Development Department under it which is in charge of the functions agenda of the Youth Development Fund (YDF). The YDF is considered as one of the important avenues to attain the objectives of the National youth policy; even though currently there is no legal manuscript readily available for the establishment of the YDF. In addition, a framework of the Fund structure of both at institutional and operational levels has been presented in the Youth Development Fund (YDF) operational guidelines (YDF policy brief, 2017).

According to the Ministry of Youth and Sports National Youth Policy (2015) the National youth policy first concern is to effectively, efficiently and sustainably appreciate development of the youth with significance to the Zambian context and to make sure that both young women and men become aware of their maximum potential at achieving standards they are capable of to contribute to national development.

According to Frank (2017), Youth unemployment remains a major challenge in Zambia as the country is still considered one of the poorest countries with a larger population of 64 percent living in poverty and an equally high unemployment rate of 50 percent. The Zambian Youth sum up to almost two thirds accounting for 3,200,000 of 4.8 million of the country's working populace and roughly one quarter accounting for 1,200,000 is unemployed. The people who are affected lack proper education, and effective vocational training guidance which would match the industrial environment. Public-sector jobs are only acquired by a small proportion of youth, and to add on, official employment is not easy to acquire.

1.1.1 Use of technology

According to the Policy brief for the Evaluation of the Youth Development Fund (2017) reported that despite the Fund increasing significantly, the administrative capacity in the Ministry of Youth and Sport remained largely unchanged. The Ministry did not have

dedicated department or expert staff to solely oversee the funds, especially the management of the loan portfolio. The YDF remained an added task to existing core responsibilities of staff and the task of managing and administering the YDF is not part of the specific job deliverables of staff, regardless of the amount of money at stake. The YDF does not have a dedicated loan management information system as per standard practice in most lending institutions. This potentially lends the Fund to ineffective record keeping and management and has resulted in the loss of paper trails on applicants and borrowers over the years.

1.1.2 Sustainability of youth development funds

According to ZIPAR *et al*., (2018), Sustainability in respect of the Youth Development Fund (YDF) is the capacity of an institution to exist constantly by maintaining benefits acquired from projects such that it is continually replenished to support its numerous operations. Sustainability is also the extent to which loans disbursed are recovered and utilised further to profit extra people. In addition sustainability is an opportunity to put an end to acquiring money from the Treasury eternally for the Fund to independently enhance growth to be resourceful through appropriate innovations. The YDF's initial plan was to sustain itself effectively as a revolving fund. It was also expected that at a particular stage, the Fund would use the repaid money for continuous lending to other youth. However the YDF has not been a feasible operation in its current form as the notion of a revolving fund is yet to be recognised.

1.1.3 Youth Development Fund in Zambia

The Youth Development Fund is an initiative of the Government of the Republic of Zambia to address high rates of youth unemployment through the Ministry of Youth, Sport and Child Development (MYSCD *et al*., 2017). The Ministry of Youth Sport and Child Development of Zambia has the Youth Development Department under it which is in charge of the functions agenda of the Youth Development Fund (YDF). The YDF is considered as one of the important avenues to attain the objectives of the National youth policy; even though currently there is no legal manuscript readily available for the establishment of the YDF. In addition, a framework of the Fund structure of both at institutional and operational levels has been presented in the Youth Development Fund operational guidelines (YDF policy brief, 2017). The YDF's initial plan was to sustain itself effectively as a revolving fund. It was also expected that at a particular stage, the Fund would use the repaid money for continuous lending to other youth. The national treasury of Zambia had been depositing money into the YDF since it was established in 2006 and since funding began it had established that sustainability was a serious concern.

1.2 Statement of the Problem

The government of Zambia instigated the Youth Development Fund in 2006 through the Ministry of Youth Sport and Child Development (MYSCD) in the direction of generating opportunities for the youth to promote the development of the private enterprise segment and give the youth ability to prosper. The YDF was operational on grant basis until 2011 when its funding profile was changed to loan basis. The fund has been said to be operational by the MYSCD under loan basis from period 2012 to 2014, due to the ministry only disbursing

funds to the youth during that period. The Fund is supposed to be revolving in nature, where the beneficiaries are expected to pay back to the Fund within a stipulated time in order to allow other applicants to benefit from the Fund. According to (Auditor General's report, 2015), beneficiaries who obtained loans between 2012 and 2013 with a loan portfolio of K2,088,851 were not servicing their loans. According to a report on the Youth Development Fund dated 'November 2013', the Ministry only recovered 20% of the expected loan amounts however there was no documentation availed to support the reported recoveries (Auditor General's report, 2015). The delay in disbursement has created a great concern due to the fact that the Fund is a revolving fund strategy to create opportunities for the youth. If the issues affecting the repayment of the revolving fund are not addressed to a great extent, its sustainability will be difficult to achieve. It's on this foundation that this research work was embarked on to ascertain the effect of technology on sustainability of youth development fund.

Empirical studies on sustainability have been done on sustainability of microfinance institutions in Zambia and limited studies have been done on sustainability of the Youth Development Fund in Zambia. Kambole Christopher (2017) in a study on interest rate ceiling and financial sustainability of microfinance institutions in Zambia established that interest rate had a negative impact on sustainability of Microfinance institutions. Siwale and Okoye (2017) in a study on Microfinance Regulation and Social Sustainability of Microfinance Institutions: the Case of Nigeria and Zambia established that regulations set by financial bodies have a significant influence on the social sustainability of microfinance institutions. Sustainability on youth (enterprise) development fund in other Sub-Saharan countries have been well explored. Jassor (2016) in a study investigating the factors influencing sustainability of youth group projects funded by the youth enterprise development fund in Bomet County established that entrepreneurship skills, internal controls and level of education influence sustainability of youth enterprise development funds.

Majority of these studies adopted the descriptive research design which was also used for this study. The study sought to find out the effect of technology and sustainability of the YDF on the Zambian context and also to find an immediate cure for the operations of the youth development fund in Zambia.

1.3 Objectives of the study

To establish the effect of technology on sustainability of youth development fund in Zambia.

1.4 Research Hypothesis of the Study

H_{01}: Utilization of technology has no significant effect on the sustainability of Youth Development Fund in Zambia.

Literature Review

2.1 Theoretical Review

2.1.1 The Unified Theory of Acceptance and Use of Technology

Venkatesh *et al*., (2010) developed a model that puts together different views on user and innovation acceptance. The theory suggests that four core segments namely performance expectancy, effort expectancy, social influence and facilitating conditions are direct determinants of behavioural intention to use a technology and facilitating conditions to determine technology implementation. The unified theory of acceptance and use of technology has four key role moderators namely age, gender, experience and voluntariness. According to Venkatesh et al., (2003) performance expectancy is a level at which an individual believes that using technology will help him or her accomplish gains in job performance and performance expectancy is moderated by gender and age. Effort expectancy is a level of simplicity associated with the use of technology to the user and is moderated by gender, age and experience. Social influence is the level at which the user perceives those who are important to him or her consider they should use the technology and is moderated by gender, age, experience and voluntariness. Facilitating conditions is the level at which an individual believes that an organisational and technical infrastructure exists to support the use of the system and has no significant influence on behavioural intention. This theory on technology has an important role in finding out whether the adoption of technology would enhance loan repayment in the government revolving fund such as the youth development fund in Zambia.

2.1.2 Institutional Theory of Sustainability

According to Bruton et al.,(2010) institutional theory examines influences that promote survival and legitimacy of organisational practices, including factors such as regulation, economic incentives whilst acknowledging that resources are also important. Kessy (2013) emphasizes further that financial sustainability is measured by profitability which should be given precedence by all microfinance institutions. This is because in most circumstances donor dependence is not certain and reason why microfinance institutions should be able to sustain itself financially it will not be able to serve the underprivileged in the long run. According to Schreiner, (2002) in the case of self-sustainability, microfinance institutions seek to reach less poor clients in the early stages of operation with the aim of building a sound financial base prior to targeting the most underprivileged clients. For the self-sustainability approach, government monetary contributions commence funding of experiments meant to find innovations on long term from clientele revenue to cover costs by lessening the price of supply.

2.2 Empirical Review

2.2.1 Technology and Sustainability of the youth development fund

Dhar and Bose, (2016) carried out a research on Smarter banking: Block chain technology in the Indian banking system, the researcher observed that by the use of technology, commercial banks were in a better position to identify and verify loan applicants and that technology was being used to tackle the subject of non-performing accounts in a bank zone. However the aforementioned research is based on the Indian context and the current study is based on the Zambian context. According to Forum, (2014) the review notes that the set up of credit reference bureau agent in 2007 through the Bank of Zambia (BOZ) in 2014 was to present fundamental information about probable borrowers and had to make monetary

institutes extra secure to let small and medium enterprises borrow money. Commercial banks were the only users of credit reference bureaus it was until in the recent year's microfinance institutions began using the credit reference bureau services. However this research work sought to uncover the effect of credit reference bureau on one of the most unpopular government revolving funds in Zambia. According to the CBK, (2013), the consumer identity verification procedures; the use of biometrics is meant to ensure that commercial banks and micro financial institutions are dealing with a person that actually exists. Consumer identity identifies people who are authorized to transact on behalf of others or those who transact for themselves. Consumer identity verification includes a query to the credit reference bureaus to get to know the credit history of a client. Giné et al., (2012) noted that biometrics is used to eradicate extreme fraudulent practices such as multiple identifications. Biometrics are used to verify applicants who are enrolled under dissimilar identities, this avoids culprits involvement in deception as a result of benefiting under multiple identities from government profit programmes. Mungai (2015) carried out a research in Murang'a County, Kenya. The findings were that technology was contrary associated to sustainability and loan repayment, the researcher also stated that countries India, Malawi, Mozambique and South Africa had earlier commenced the use of different forms of technology for identification purposes such as face recognition devices, biometrics, smart cards technology which has enhanced the repayment rate of their revolving funds. However this study sought to clarify whether technology is non-significant to sustainability based on the YDF in Zambia.

2.3 Conceptual Framework

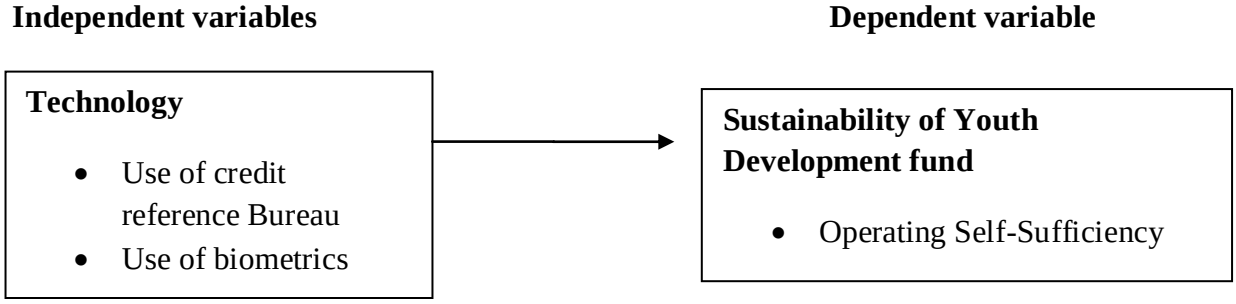

Figure 2.1: Conceptual Framework

Source: Researcher (2020)

The conceptual framework represents a link between loan repayment and sustainability. The effect of technology was measured by the use of credit reference bureau and biometrics. The dependent variable is sustainability was measured by operating self-sufficiency.

3.0 Research Methodology

The study adopted a positivism research philosophy which allows for use of a survey approach to cover a broad population area and also supports the case study approach.

3.1 Research Design

The study adopted a descriptive survey research design, a design that ensures absolute depiction of the case, ensuring that there's minimum bias in the collection of data and allowed data assortment from sizeable population in a cost-effective way (Cooper and Schindler, 2008).

3.2 Empirical Model

The study employed the following multiple regression model to analyse data:

$$\mathbf{Y = \beta 0 + \beta_1 X_1 + \varepsilon \ldots\ldots\ldots\

					Deviation
Credit Reference Bureau should be extended to government revolving fund institutions to reduce multiple borrowing and multiple lending	Strongly Disagree	1	.6		
	Disagree	8	5.2		
	Neutral	24	15.5		
	Agree	52	33.5		
	Strongly Agree	70	45.2		
	Total	**155**	**100**	**4.17**	**.920**
The use of Credit Reference Bureau helps improve repayment rate	Strongly Disagree	3	1.9		
	Disagree	7	4.5		
	Neutral	26	16.8		
	Agree	58	37.4		
	Strongly Agree	61	39.4		
	Total	**155**	**100**	**4.08**	**.957**
The government revolving fund institutions are still in doubt among themselves and Credit Reference Bureau may not work if implemented	Strongly Disagree	8	5.2		
	Disagree	21	13.5		
	Neutral	74	47.7		
	Agree	37	23.9		
	Strongly Agree	15	9.7		
	Total	**155**	**100**	**3.19**	**.968**
The use of biometrics to a revolving fund institute should be introduced for identification of loan beneficiaries	Strongly Disagree	1	.6		
	Disagree	1	.6		
	Neutral	36	23.2		
	Agree	62	40.0		
	Strongly Agree	55	35.5		
	Total	**155**	**100**	**4.09**	**.817**
The use of biometrics is an effective way of recognition of borrowers to avoid fraudulent practices	Strongly Disagree	1	.6		
	Disagree	4	2.6		
	Neutral	26	16.8		
	Agree	63	40.6		
	Strongly Agree	61	39.4		
	Total	**155**	**100**	**4.15**	**.839**
The government should sponsor biometrics to all revolving fund institution	Strongly Disagree	1	.6		
	Disagree	9	5.8		
	Neutral	44	28.4		
	Agree	44	28.4		
	Strongly Agree	57	36.8		
	Total	**155**	**100**	**3.95**	**.972**
Enforcing a biometric system in revolving fund institutions is costly for the government to afford	Strongly Disagree	10	6.5		
	Disagree	31	20.0		
	Neutral	55	35.5		
	Agree	31	20.0		
	Strongly Agree	28	18.1		
	Total	**155**	**100**	**3.23**	**1.156**
The use of innovation techniques	Strongly Disagree	37	23.9		

for government revolving fund institutions is a waste of time and it should not be implemented	Disagree	43	27.7		
	Neutral	58	37.4		
	Agree	10	6.5		
	Strongly Agree	7	4.5		
	Total	**155**	**100**	**2.40**	**1.061**

Source: Survey data (2020)

The findings in table 4.1 show that the mean scores of the subscales Credit Reference Bureau should be extended to government revolving fund institutions to reduce multiple borrowing and multiple lending is 4.17 with the highest mean score with 0.920 std.dev, The use of biometrics to a revolving fund institute should be introduced for identification of loan beneficiaries is 4.09, with the lowest std.dev of 0.817, Enforcing a biometric system in revolving fund institutions is costly for the government to afford is 3.23 with 1.156 the highest value of std.dev and The use of innovation techniques for government revolving fund institutions is a waste of time and it should not be implemented is 2.40 the lowest mean score with 1.061 std.dev. A critical viewing of table 4.1 points out that most subscales have standard deviations less than 1 as this could be that the values are close to the mean and the other subscales had standard deviations greater than 1 as this could be that there was ample variability in responses. The findings reverberate with those of Dhar and Bose (2016); Giné et al., (2012) who suggested that biometrics are an efficient way to enhance loan repayment and to avoid culprits involvement in deception under multiple identities and to ensure the survival of financial institutions.

4.2.1 Incorporating an integrated electronic management information system for loan assortment as reference database to track beneficiaries

The respondents were asked to indicate on whether an integrated electronic management information system for loan assortment is a good initiative to use as reference database to track beneficiaries or not. The results are presented in figure 4.1

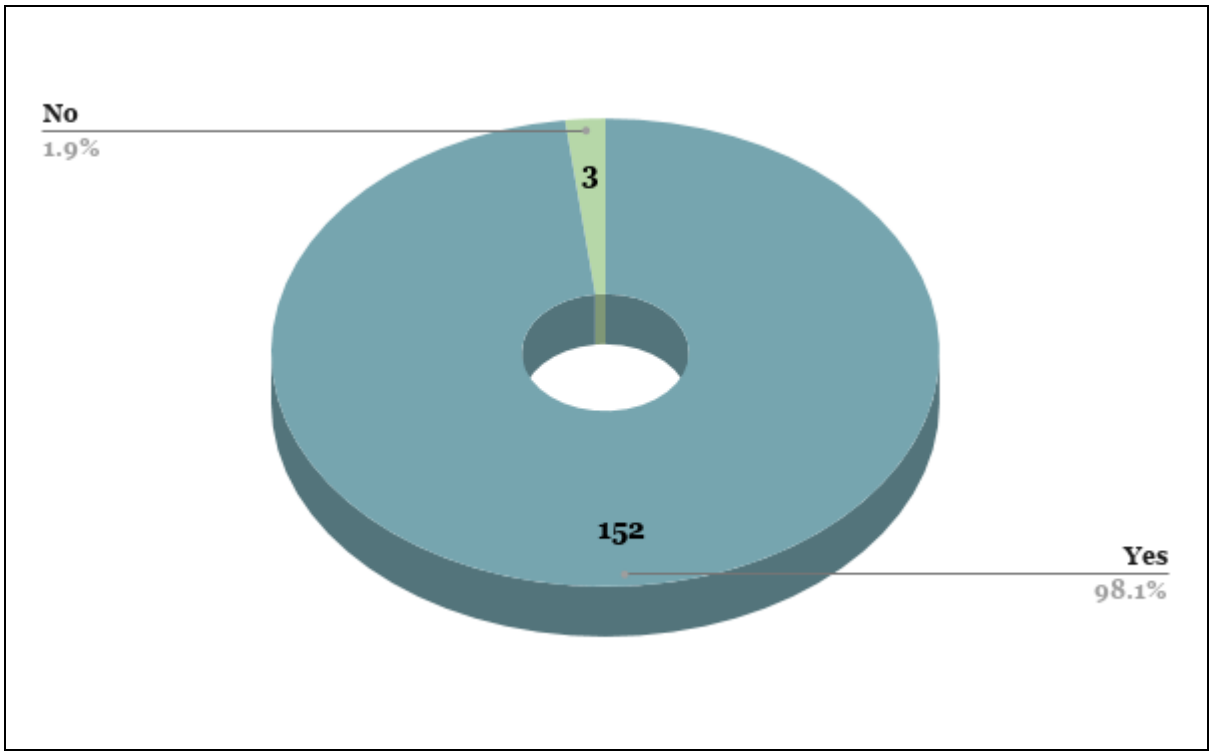

Figure 4.1: Incorporating an integrated electronic management information system
Source: Survey data (2020)

From figure 4.1 above, 98.1% of respondents agreed that incorporating an integrated electronic management system because it is easy to track defaulters and their addresses, is also easy to store information making it readily and easily accessible making it easy to make follow ups on defaulters. Whilst the other 1.9% respondents felt incorporating an integrated electronic management information system was not a good idea. The results are in support of unified theory of acceptance and use of technology by Venkatesh et al., (2016) who recommends the use and acceptance of technology in organisations to promote efficiency.

4.5 Hypothesis Testing

4.3.7 Regression Analysis

For the purpose of establishing the relationship between loan repayment and sustainability of youth development fund in Zambia, the study used a regression model of the form $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$.

Table 4.17: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.903	0.816	0.811	0.47219
a Predictors: (Constant), Use of Technology, Borrower Characteristics, Lender Characteristics, Loan Characteristics			

Source: Survey data, (2020)

The model summary results as presented in Table 4.17 indicates that the four independent variables (loan characteristics, borrower characteristics, lender characteristics and use of technology) had a strong positive influence on sustainability of development fund. This is shown by a joint Pearson correlation of 0.903. The implication of the result is that an improvement in loan repayment through results to a strong positive change in sustainability. The model summary results also show that the adjusted R-square was 0.811 implying that loan characteristics, borrower characteristics, lender characteristics and use of technology mutually account for up to 81.1% of the variation in sustainability of youth development fund in Zambia. The significance of the regression model is provided in table 4.18.

Table 4.18: Model Significance

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Regression	148.505	4	37.126	166.516	0.000
Residual	33.444	150	0.223		
Total	181.949	154			
a Dependent Variable: Sustainability of Youth Development Fund					
b Predictors: (Constant), Use of Technology, Borrower Characteristics, Lender Characteristics, Loan Characteristics					

Source: Survey data, (2020)

From the results in table 4.18, the significance of the regression model was confirmed by the F statistic at 5% (Sig =0.000). The F calculated statistic of 166.516 was greater than F (4, 150) critical value of 2.432 ratifying the significance of the regression model. The implication of the overall model significance is that loan characteristics, borrower characteristics, lender characteristics and use of technology are appropriate factors in predicting deviation of sustainability of youth development fund. Table 4.19 presents the regression coefficients.

Table 4.19: Regression Coefficients

	Unstandardized Coefficients		**Standardized Coefficients**		
	B	**Std. Error**	**Beta**	**t**	**Sig.**
(Constant)	-0.901	0.177		-5.081	0.000
Loan characteristics	0.446	0.054	0.382	8.229	0.000
Borrower characteristics	0.162	0.048	0.132	3.392	0.001
Lender characteristics	0.235	0.053	0.177	4.446	0.000

Use of technology	0.495	0.055	0.434	8.996	0.000
a Dependent Variable: Sustainability of Youth Development Fund					

Source: Survey data, (2020)

4.6 Summary of Hypothesis Testing

Hypothesis Four: Technology has no significant effect on the sustainability of Youth Development Fund in Zambia

Finally, use of technology positively and significantly influenced sustainability of youth development fund in Zambia (Beta = 0.495, Sig=0.000). The implication of the result is that more use of advance technology results to positive change in sustainability of youth development fund in Zambia. The null hypothesis (H_{04}) that Technology has no significant effect on the sustainability of Youth Development Fund in Zambia was rejected. The findings of this study oppose the results of Mungai (2015) who established that technology had no significant effect on sustainability of government revolving funds in murang'a county.

5.0 Summary, Conclusions and Recommendations

5.1 Summary

The main objective of the study intended to establish the effect of technology on sustainability of youth development fund in Zambia. The variable, technology was measured using the composite of use of credit reference bureau and the use of biometrics. Using the multiple regression analysis, the study established a strong positive relationship between technology and sustainability of the youth development fund. To this end, the study rejected the null hypothesis that the technology has no significant effect on sustainability of youth development fund. These findings are in line with the unified theory of acceptance and use of technology because the theory has an important role in enhancing the adoption of technology for better and improved effectiveness in every financial institution.

5.2 Conclusion

The test of hypothesis established that technology positively and significantly affects sustainability. If credit reference bureau and the use of biometrics was adopted it would improve the youth development fund and would also be easy to track defaulters in order to make follow ups to raise money and to encourage the paying back of loans on time. The implementation of technology would also bring efficiency to loan officers for the enhancement of sustainability. The implication of the study finding is that the adoption of technology results to a strong positive change in sustainability of the youth development fund in Zambia.

5.3 Recommendations

The youth development should adopt the use of credit reference bureau and the use of biometrics. The YDF adopting this form of technology for borrower and beneficiary assessment would be a brilliant way to track existing and defaulting beneficiaries and also

keep necessary records pertaining the fund and amounts disbursed and recovered from every beneficiary of the YDF. Every lending institution, microfinance or finance industry dealing with loans must have a system that will accurately disburse figures and show statistical data. Systematic processes have always proved to be better than manual, this avoids things such as corruption, bribery and nepotism when it comes to the beneficiaries. Adopting the use of credit reference bureaus and biometrics in government revolving funds such as the YDF avoids defrauding acts. A structured information management system takes good inventory of what's outstanding, and who should be blacklisted from borrowing Credit Reference Bureau measures where stringent. Apart from the biometric system, the government should create an app to update borrowers about their statements and the time remaining.

5.4 Suggestions for Further Study

There is need to duplicate the research effort centred on women empowerment groups and other youth empowerment groups, instead of the youth development fund. A comparative research can also be carried out in other parts of Zambia to confirm the results of the research could be generalised across the entire country. A study could also be carried out to investigate the other factors that would influence the sustainability of a revolving fund such as the youth development fund regards to the political influence and the insight it has on beneficiaries towards the fund.

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36. Linking Governance to Performance of Government-Funded Projects in Kenya

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ABSTRACT

The purpose of this paper is to identify project governance practices that affect the performance of government funded projects, especially in developing economies such as Kenya. Research has shown that successful project implementation plays a major role in building a country's economy. Despite this fact, failure in such projects is persistently being witnessed. To understand this, extant literature was conducted on project governance and performance of projects. Various studies seem to agree that project governance is a major project success factor that ensures project success criteria is met. While this has been renowned, there is no set of agreed upon project governance practices that suits all types of projects and consequently these practices will be determined by the specific project context. This then formed the basis of the study. Four governance practices are identified as contractual governance, business model governance, project risk governance and monitoring and control that if implemented well in projects may increase chances of project success. Future studies should however be geared towards developing a comprehensive list of project governance practices.

Key words: Governance, project governance, performance, government funded projects, contractual governance, risk governance, business model governance and monitoring and control.

1. Introduction

Major projects are increasingly being used for delivering public goods and services. In emerging economies, population growth, increasing urbanization, and rising per capita incomes are driving the demand for projects (Kariuki, 2014). These projects are normally intended to serve some overal societal goal and ultimately to benefit the whole nation (Volden & Andersen, 2018). Successful project implementation therefore has the potential of

enhancing a country's economic performance and improvement of the livelihoods of its citizens. Majority of these projects are funded by the government as they require huge capital outlay, which somehow explains the constant rise in public spending and this necessitates good project management practices to ensure value for money and to increase shareholder value.

Recent contributions by different scholars have examined the relationship among project governance practices and project performance in megaprojects (Guo et al., 2014; Sanderson, 2012). Project governance practices will however vary from project to project depending on the project context such that there is no "one size fit all" list of practices for all forms of projects (Nistor & Beleiu, 2014). While project governance has been shown to influence performance of projects, there is need to identify the governance practices that suits a given context as different contexts presents different challenges in terms of project implementation. Thus, the need to identify project governance practices that suit the case of Kenyan government funded projects.

1.1 Performance of Government Funded Projects

The public sector is facing a tremendous challenge not just to upgrade their service processes and infrastructures to match the needs and capabilities of their owners but also to develop their efficiency and effectiveness (Volden &Andersen, 2018). The public sector is characterized by complexity, management difficulties, long durations and multiple organizational structures. Public sector or government context are also subject to political pressures and issues related to public scrutiny and accountability (Klakegg et al., 2016). Research indicates that majority of these government projects fail (Shehu et al., 2014; Damoah et al., 2017). The most frequently reported shortfalls are the failure to meet deadlines, exceeding budget, not delivering the specified quality, and failing to deliver the functionality, benefit or contribution to business objectives intended upon initiation of a project, failure to meet expectations and agreed goals or failure to deliver what the users need (Klakegg & Haavaldsen, 2011). These impediments have seriously affected the operations in this sector and consequently, achieving effective project implementation requires devising effectual policies, rules and procedures to guide the operations in order to increase their chances of success.

1.1.1 Kenyan context

Kenya being the largest and most advanced economy in East Africa, it has made significant political, structural and economic reforms in the past decade that have largely driven sustained economic growth (World Bank, 2020). Kenya's Gross Domestic Product (GDP) has averaged 5.4% in the years 2015-2019. Although its recent broad based growth path has

been disrupted by Covid-19 (coronavirus), Kenya aspires to transform from a lower-middle income country to an upper middle income country by the year 2030. To attain this and sustained growth that creates employment opportunities, reduces poverty and provide access to essential services by the poor, the economy need to grow (Kenya Economic Report, 2017). This growth is achieved mainly through successful project implementation. The Kenya National Bureau of Statistics (KNBS) reported that the growth in major sectors have been realized through project implementation (Kenya Economic Survey, 2016). In the same vein, projects in these sectors have suffered from greater inefficiencies. Public spending has been increasing largely owing to major infrastructure projects supporting economic growth leading to over 50% of public debt to GDP. Government expenditure is now outpacing revenues at 8.1% of GDP. Moreover, the Kenyan budget continues to emphasize resource allocation towards development in key sectors of the economy (Kenya Economic Survey, 2016). The current government has also borrowed huge amounts of money to finance infrastructure development in a bid to achieve its "big four" agendas. Proper implementation of projects in such sectors is therefore the key in achieving a country's development strides. Successful project implementation has been greatly linked to governance of projects (Klagegg & Haavaldsen, 2011). This study presupposes the contribution of project governance practices on improving the project management and thus project performance in key sectors that will spur economic growth.

1.2. Measurement of Project Performance

A distinction is made between success criteria, the set of standards by which the measurement of success occurs, and success factors, those aspects that directly or indirectly influence project success (Chou et al., 2013). Project success is seen as the achievement of a particular combination of objective and subjective measures, manifest in the success criteria and measured at the end of a project (Joslin and Muller (2016). Generally, the success measure (success criteria) for a project is defined by accomplishing a project within specified cost, time, scope, quality, constraints, resources and risk (American Project Management Institute, 2013). Since our focus is on the public sector, we shall assess the project performance in terms of meeting project time, cost, and quality and stakeholder satisfaction. Project success factors are those aspects that influence the project outcomes. One of these factors is project governance, which has grown exponentially in popularity in the recent past (Biesenthal & Wilden, 2014; Joslin & Muller (2016). This study therefore explores the project governance as a project success factor.

Governance

Governance is a system that defines the structures used by the organization, establishes rights, roles and responsibilities and makes sure that the management process is effective and efficient within these structures (Too & Weaver, 2014), in order to achieve an ethical,

cohesive and transparent decision making process for the sake of achieving the mission of an organization (Badewi, 2015). According to Joslin and Muller (2016), it is important that governance covers all levels of the organization, starting with corporate governance to the project level of governance.

Project governance is "the use of systems, structures of authority, and processes to allocate resources and coordinate or control activity in a project" (Pinto, 2014). It coexists within the corporate governance framework with the objective to support projects in achieving their organizational objectives. On its most basic level, project governance supports an organization in aligning its project objectives with its organizational strategy, achieving set project objectives and monitoring performance. It also describes the means for attaining such objectives (PMI, 2013).

Project governance, being a relatively new topic, literature on it is fragmented (Ahola et al., 2014) and thus different scholars have defined project governance differently. Volden and Andersen (2018) defines project governance as a system of appropriate checks and balances that enables transparency, accountability and defined roles in the project, while at the same time support project managers in delivering their objectives. The guide to project management Body of Knowledge (PMBOK) (PMI, 2013) describes project governance as that which is able to supervise a project in accordance with the organization governance model through the whole project life cycle; providing a comprehensive, consistent method of control and ensuring its success by defining, documenting and communicating reliable, repeatable project practices. Thus, the need to come up with a comprehensive list of these projects governance practices has not been explored fully.

1.4 Statement of the problem

Government implements its development agenda through execution of public projects in major sectors of the economy. Major projects are increasingly being used for delivering public goods and services so as to spur economic growth. Existing literature has shown that developed economies attained their growth and development through implementation of government projects (Horta, Camanho and Costa, 2012). Developing countries attempt to follow suit by embarking on development projects. Kenya similarly aspires to transform from a lower-middle income country to an upper-middle income country by the year 2030. To attain this, the economy needs to grow at an annual rate of 10%. The Kenyan budget continues to emphasize resource allocation towards development of key sectors of the economy. Public spending has been increasing largely owing to major infrastructure projects supporting economic growth, leading to over 50% of public debt to GDP (Kenya Economic Report, 2016).

Past studies have demonstrated massive failure of government funded projects in terms of meeting time, scope and quality requirements, safety for the users, and stakeholder's satisfaction among other success criteria. To uncover the reasons behind the massive failure of public or government projects, a number of success factors have been developed. One of these factors is project governance, which has grown exponentially in popularity in the recent past. Despite these attempts, failure in government funded projects is still being witnessed to date. From the review of literature, different studies have attempted to explain this using a combination of different project governance practices. This study therefore examines the link between project governance and performance of government funded project and specifically looks at contractual governance, risk governance, business model governance and monitoring and control as project governance practices and the moderating role of the project context.

Objectives of the Review

The main objective of this review is to identify project governance practices that affect performance of government funded projects in Kenya.

2. Theoretical Review

Governance has been used widely in different fields and has yielded many definitions, applications, and theorizations.

2.1 Transaction Cost Economics (TCE) Theory

Three main influencers created, shaped and operationalized the Transaction Cost Economics (TCE) theory; Commons,(1931), Coase (1937) and Williamson (1979). TCE is an economic theory which suggests that organizations achieve the lowest transaction costs by adapting the governance structures to the nature of the transaction. According to TCE, the decision of whether to collaborate or not should be based on the efficiency of governance. High frequency of transaction costs, uncertainty and asset specificity guide firms towards hierarchy. In the context of governance modes, this implies that organizations can indeed have benefits by choosing a specific way of contracting depending on the amount of the resulting transaction costs.

2.2 Agency Theory

Agency theory, which is based on Jensen and Meckling's (1976) work, takes an economic view of the shareholder and manager relationship in companies by assuming rational and self-interested actors. According to agency theory, management acts as agents of shareholders and thus introducing the principal-agent relationship that addresses the interface dynamics and potential conflicts of interests between these parties (Eisenhardt, 1989; Muller, 2009).

Agency theory has been applied to corporate governance (John & Senbet, 1998), and project governance (Turner and Müller, 2003). It posits that project managers (agents) may use their control over the allocation of project resources opportunistically in order to pursue objectives not in line with the interests of the shareholders (principals) (Jensen & Meckling, 1976). This is exemplified in the principal – agent problem which occurs when both principal and agent act in a self-interested, utility maximizing manner (Mitnick, 1973). Principal agent problems arise from information asymmetry, because one party has typically more or better information than the other (e.g. the project sponsor as principal) (Wiseman et al., 2012). This results in a moral hazard risk which, unless mitigated, is likely to increase the agency effect (Poblete and Spulber, 2012).

Popular remedies to the problem include contracts and incentives that motivate agents to act in accordance with their principals, controlled through related control structures. Project governance, when designed correctly within the context of the organization, should minimize the risks and issues associated with agency theory. Agency theory based on Jensen and Meckling's (1976) view of principle agent models have been criticized because they neglect to consider that the principle-agent transitions are socially embedded and therefore impacted by broader institutional contexts (Davis et al., 1997; Wiseman et al., 2012). In this study we use agency theory as a proxy to explain behavior in the shareholder oriented and behavior controlled governance structures.

2.3 Contingency Theory

Contingency theory (Lawrence and Lorsch, 1967; Mintzberg, 1980) assumes that organizations can and should not be designed in isolation, but that their functioning and success are largely dependent on its internal and external situation. Rooted in organization theory, it argues that there is no one perfect way of organizing, but that managerial decision-makers should rather strive to design organizations which ensure a "fit" to its internal and external situation to be successful (Morgan, 1986). Since the context of a project might change throughout its course (Winch, 2006), its project governance design has to be continuously adjusted to ensure an external "fit." Due to these specific theoretical assumptions and features, contingency theory seems to be highly suitable to address the research problems of this paper.

3. Empirical Review

This chapter reviews empirical literature on the link between project governance and project performance. Project governance practices are identified as contractual governance, risk governance, business model governance and monitoring and control as discussed below.

3.1 Contractual Governance and Project Performance

In a highly connected and competitive world, most projects must function in an environment that interacts with external parties. Contracts helps in managing relationships with these external parties (Mutua, Waiganjo & Oteyo, 2014). Contracting theory has however been evolving. Initially, the focus was on designing complete (fully described) contracts. Most goods (services), however, cannot be fully described as they depend on a state that is yet to be realized, as is the case of government funded projects. Based on the principle of bounded rationality and the resulting cost implication of gathering and processing information, the feasibility of designing complete contracts has since be challenged with the argument that all contracts are incomplete for goods (services) that are exchanged at a future state that is unknown (Rai et. al., 2012). Incomplete contracts however need to be managed thoroughly as they may result in uncertainty, opportunism and future conflicts between the parties to a contract. Proper contract design is imperative for government funded projects, hence the need for contractual governance.

Danwitz, (2018) defined contractual governance as a corporate governance structure used to manage the relationship between the transacting parties and to reduce opportunism while attempting to mitigate conflicts and promote cooperation between the parties, while Luo, Liang & Ma, (2013) defined contractual governance as formal contracts which details out the obligations to perform particular actions in future, such as specifying roles and responsibilities to be performed, specifying procedures for monitoring and penalties for non-compliance and determining the final output to be delivered. In support of Luo, Liang &Ma (2013) definition, contractual governance should ensure that a project realize the outcomes it intended to achieve.

Contractual governance should be geared towards designing contracts that will efficiently deal with transactional hazards during and after project delivery. It checks that contracts are designed to deal with specific contractual risks (Brousseau, Coeurderoy and Chaserant, 2007) by implementing contractual commitments and governance mechanisms aimed at deterring opportunistic behaviours. Contractual governance also attempts to mitigate conflicts and promote cooperation between the parties (Luo, Liang & Ma, 2013). While formal contracts provide legal grounds to clearly define obligations between parties, there is also need for them to work collaboratively. Cooperation is imperative due to existence of division of work in inter-firm projects but there is absence of a sole authority to provide sufficient means to coordinate their efforts (Danwitz, 2018). Rai et al., (2012), in their study on how best to influence Business Process Outsourcing (BPO), suggested the use of strategies that applies both relational and contractual governance mechanisms as substitutes of each other. They however emphasized the importance of contractual governance mechanisms as they legally

define obligations and provide exchange parties with an instrument of control and escalation. You, Chen, Hua & Wang (2019) highlighted the importance of contracts in conflict management. The study sought to explain how contractual complexity makes a difference on task and relationship conflict. They found out that higher contractual control and coordination reduce the level of relationship conflicts and higher contractual coordination reduces the level of task conflicts.

A study by Sarhan et al. (2017) to investigate how project parties safeguard their project-specific assets against opportunism during procurement procedures, through a critical review, found that procurement decisions tend to be ultimately focused on contract administration and shifting risks, which may distract attention away from core efficiency purposes. Thus, there is need for adoption of a more efficient and collaborative business and project delivery models to build a close working relationship between the actors that fosters cooperation and thus an enhanced project performance. Presence of a governance structure that will build relational cooperation will help an organization to achieve its intended objectives.

3.2 Business Model Governance

Projects do not automatically align with general objectives of an entity. Driver (2014), for instance, maintains that 90 per cent of all strategies have very little impact. Driver asserts that strategic initiatives suffer from a lack of cause and effect evidence that a project really will create the intended result, that this result will be used as intended and that the use really will create the desired benefit. This is especially true in projects involving external suppliers. This implies a need to develop a structure and description of how the project supports strategic objectives. The use of business models is identified as a key to achieving this (Teece, 2010). Hjelmbrekke, Klakegg and Lohne (2017) defined business model as strategy-based performance recipes on how to create value for the client and benefits for the owner. They identified the main challenge in construction projects as being that the design has to be performed by external resources whose knowledge of success factors related to the project owner's goal is typically limited. They maintained that the risk of failure increases when engaging external design teams without ensuring that a set of common goals is established. These common goals should be governed by performance indicators established when commencing design. They also posit that if the business model of the design team is clearly focused on meeting customer requirements and delivering customer value within a governance framework, project success is more likely to be achievable. Thus a business model should focus on common goals, developed through dialogue between client and supplier(s) to secure consistency with strategic objectives, understanding of values and priorities.

Business Model governance will check that the right projects are being funded by ensuring that certain checks and balances are put in place that guarantees that projects are started and

completed as required thus increasing chances of project success. Samset and Volden (2016) identified lack of proper project governance structures as one salient reason for the apparent failures in projects in particular the multi-stakeholder engagement during the early phases of the project when confusion about what should be done, and by whom, caused a strong negative bullwhip effect that lasted over the project life-cycle. Similar results on importance of stakeholder involvement were reported by Nahyan et al. (2019). Klakegg and Haavaldsen (2011) focused on governance functions supporting decision making, planning and execution of projects at the front-end of projects taking an owner's perspective to ensure that a project meet its intended objectives. They found that defining a clear decision-making process and controlling quality of documents used as a basis for decision making was the most important governance functions in the Norwegian public projects. Problems in the front-end of major public projects that resulted in lack of relevance were identified as user needs and project objectives that were either unknown, misunderstood or ignored. Reasons for lack of sustainability of projects were identified as lack of commitment to the project from key stakeholders, conflict over objectives and/or strategies concerning the project, low economics and financial benefits compared to and operational costs, and business or other conditions changing between concept stage and final delivery (Klakegg and Haavaldsen, 2011). As a result the research supports the development and implementation of a governance framework providing a systematic way to unlock long-term value for a project while delivering value to the stakeholders. Thus, with a business model governance framework, there will be proper project selection that addresses the business needs, realignment of design goals with project goals, stakeholder identification and involvement and proper goal setting.

3.3 Risk Governance

Project managers are tasked with the role of managing risk of a project. For this duty to be simple, effective and efficient, good risk management needs to be done from the beginning. Thus, a proper and systematic methodology is required for an effective and efficient risk management approach. Fink (2016) defined project risk governance as deploying organizational structures, processes and relational mechanisms that not only minimize the uncertainty associated with negative project risks, but also maximize the benefits of positive project risks. It involves creating a risk superstructure for projects.

Projects are faced with a number of risks that affects the way in which projects are run or affects its final outcome. According to Ameyaw et al. (2015), projects are characterized by risk factors that significantly impact on variability between the contract sum and final account. They identified eight critical risk factors that cause budget overruns in Ghana to be project funding problems, underestimation of quantities, variation by clients, change in scope works, inadequate specifications, change in design by client, defects in design and

unexpected ground conditions (Ameyaw et al., 2015). Such risk factors need to be identified proactively early in the project lifecycle as to which may have adverse effects on the project and ways to assess and manage such risks. Literature, however, shows that risk management in projects is full of deficiencies that affect its effectiveness as a project management function (Serpella, *et al.,* 2014) and in the end, projects' performance.

According to Project Management Institute (2008), project risk management has a prominent position in the framework of project management theory and methods. Kinyua, Ogollah & Mburu, (2015) established an intimate relationship between effective risk management and successful project performance, while Wanyona, (2005) cites the importance of risk management in budget prediction and in estimating future risk impacts, which in turn increases project success. Thus, sound project risk governance within a project will provide guidance for sound and informed decision-making and effective allocation of resources. It allows for early identification of risks and thus proactive arrangements on how to effectively and efficiently deal with each identified risk.

Previously, risk management in projects has been approached using a reactive approach that mostly produced poor results and limits the quality of project management. Moreover, project risk is handled through the application of contingencies and floats which in many cases has been seen to be insufficient to cover the consequences of risks that do occur during project execution. Where this is the case, the result is usually cost and time overruns (Serpella, *et al.,* 2014). To make an effective and efficient risk management, it is necessary to have a proper and systematic risk governance structures methodology. For example, it requires knowledge of the unforeseen events that may occur during the execution of a project, on the actions that work well or not when one of these events happens, on ways to assess a risk or estimate the likelihood that it will occur, and so on. The absence of an effective project risk management function has several negative consequences for participants in a project due to lack of preventive action against the risks and uncertainty that any project presents.

3.4 Monitoring and Control

Monitoring and controlling project work involve tracking the actual performance with the planned project management activities. According to PMBOK (2004), the monitoring of and control process group consists of those processes performed to observe project execution so that potential problems can be identified in a timely manner and corrective action can be taken, when necessary, to control execution of the project. Monitoring and control of a project should take place in parallel with project execution activities so that, while the project

is being executed, the project is being monitored and controlled by implementing the appropriate level of oversight and corrective action. This ensures that the project is within acceptable variances of cost, schedule and scope, and that risk and issues are continually monitored and corrected as needed.

While recent studies have linked project monitoring and control to project success, they have focused mainly on the tools and techniques of monitoring and control of projects. Adebayo, Eniowo & Ogunjobi (2018) assessed project monitoring and control techniques used in a state construction company in Nigeria and found the use of Program Evaluation and Review Technique (PERT) for time/schedule control and Earned Value Management (EVM) among other tools for cost control to be effective in meeting set project objectives. Eneh et al., (2018) introduced the use of queuing data structure in project monitoring and control that encodes and enquires approved projects by the government which is executed using First Come First Serve (FCFS) basis. Reis et al. (2018) also proposed tools for project status control and project status overview that enables project management practices to be improved. Even with these tools in place, many projects still suffer from delays, budgets overspend, poor quality among others, often resulting in deserted projects (Enuh et al. 2018). Proper governance will ensure proper execution of monitoring and control tools and techniques, and processes, by providing oversight, checking deviation from plan and implementing the appropriate corrective actions thus enhancing project success.

3.5 Project Context

Project governance needs to be designed in consideration of the project environment. Ahola et al. (2014) identified project governance as both external and internal to the project, and that project governance as internal to a specific project builds on the assumption that unique projects require tailored as opposed to standardized project governance arrangements. Similarly, Danwitz (2018) identified contextual factors to directly affect the design of an adequate project governance framework and indirectly affects the performance of a given project. Nangesh and Thomas (2018) noted that factors influencing success of a project are varied considerably and mostly contextual. This paper therefore argues that there is no one-size-fit-all project governance framework, but it largely depends on the context of the project. Project context thus moderates the relationship between project governance and performance of projects

This paper, building on past research, suggests a project governance framework that is believed to be useful in explaining the inherent failures in government funded projects. Kenya is facing several undocumented challenges including corruption which mainly occurs at the front end of projects during contracting and during execution, political interference,

poor risk management, and conflicts of interests of project executors among others. This study therefore will be useful to the extent of clearly clarifying the issues surrounding project success. This prompted the need to examine the case in Kenya.

4. Discussion

Current project management is noted to focus on the project implementation process, without a macroscopic and overall thinking (Andersen, 2016) and therefore missing out in promoting project value achievement. Effective project governance however should go a long way in ensuring projects deliver the value expected of them. Project implementers should ensure that projects are correctly conceived, and get to be executed in line with best project management practices within the wider framework of the projects' governance processes. The study findings established that project governance is a critical project success factor, but there seems to be a lack of a definitive and comprehensive list of project governance factors or elements (Li, et. al., 2017). There is however no one-size-fit-all project governance framework for all projects. According to Danwitz (2018), project governance practices for a project will be determined by the project context. Kenya, in particular runs a high risk of budget overrun and significance late in project deliveries (Kirira, Owuor, Lino & Mavole, 2019). Thus proper governance is imperative in these projects to enhance project success.

Contractual governance is one of the governance practices that can help alleviate the many challenges faced by projects, especially those funded by the government. Majorly, these projects are executed through contracts. Execution of these contracts has however not yielded the expected results. They have been faced with uncertainty (Rai et. al., 2012), conflicts (You, Chen, Hua & Wang, 2019) and opportunism (Sarhan et al. 2017). According to Kirira et al. (2019), projects in Kenya are executed by ill-equipped contractors, awarded to on political basis. Contractors focus on reducing costs at the expense of delivering quality products. This may result in re-work that often have to be redone sooner or later, projects running behind schedules and having high cost overruns. Therefore, if these contracts are to deliver the value expected of them, then they need to be managed well. Proper contractual governance, will ensure proper contract design, a clear definition of the scope of performance, reducing room for opportunism (Luo, Liang & MA, 2013), thus ensuring that contracts are yielding the value expected of them, while at the same time mitigating conflicts and promoting cooperation between parties to a contract (You, Chen, Hua & Wang, 2019). This is in line with the work of Brousseau, Coeurderoy and Cheserant (2007) who were of the idea that contracts needs to be designed to deal with specific contractual risks.

Business model governance, on the other hand, will ensure that the right projects are identified and funded, that they are meaningful and value-driven and that these projects runs

to successful completion. That is, these projects should be need-based, with a clear description of how the project is intended to create value to the society. Hjelmbrekke et al. (2017) identified the challenge in project performance to be that the design of projects is performed by external resources that lacks knowledge on project objectives. This will result in projects that fail to deliver the intended value. There is therefore need to bring together the external parties and project owners who will then chart the common goals towards delivering project objectives. Stakeholder involvement is also key in delivering the right projects. Zwikael and Smyrk (2015) stressed the need for project governance to establish the accountability and specific duties of stakeholders clearly in the project. Involving the stakeholders especially early in the project will ensure proper identification and execution of projects. Involvement of the right stakeholders will help answer the commonly asked question of whether the projects are required or not. Finally for projects to remain relevant, there is need to define a clear decision making process. This will ensure that user needs are identified clearly and that the project objectives are geared towards addressing these needs. This is shown by Klakegg and Haavaldsen (2011) to increase relevance of the project

Risk governance, as another project governance practice, also increases the chances of project success. Uncertainty and unforeseen risk will always emerge since a project is dynamic (Zwikael & Smyrk, 2015) and thus the need for risk management. Studies have shown that while project risk management is widely practiced, the process is informal, inadequate and no measures have been put in place to mitigate the risks (Gitau, 2015). According to Serpella et al. (2014), risk management approach is mostly reactive; with project risks being handled by setting aside floats to pay off risks when they occur which in many cases is insufficient to cover the consequences of risks when they occur. Government funded projects in Kenya are equally faced with uncertainties including project funding, unexpected ground positions, change in scope of work among other challenges. Failure to address these risks early in time will result in project failure. Kirira et al. (2019) noted that risk management in Kenya is undertaken with no commonly agreed procedures and framework for dynamic risks, thus less prediction of such risks. In government-funded projects, this role is evidently missing or is done inappropriately such that project risks are identified too late in the project phase when projects have stalled and little can be done. Project top management should therefore ensure they offer the needed support to the project implementation through allocating sufficient resources and having an effective risk management strategy (Njogu. Namusonge & Oluoch, 2018), especially early during the design stage of the project life cycle (Gitau, 2015). This will ensure that projects risks are identified early and managed accordingly. Project risk governance should not only minimize the uncertainty associated with negative project risks but also maximize the benefits of positive project risks (Fink, 2016).

Governance of monitoring and control processes is essential in project management success. With increasing number of projects under supervision of government, there are greater difficulties in monitoring projects' status (Reis et al., 2018). The result is always budget overspend, poor quality, delays, abandoned projects among others. Proper tools and techniques for monitoring and controlling project status and progress need to be identified. But most importantly is the need to govern well the process of monitoring and controlling these projects. Involvement of top management is imperative. Proper governance will provide oversight at every stage to ensure that the project is being undertaken as planned and if any deviation, corrective measures are put in place as soon as possible. An area of focus is budgetary control. Lack of strict budgetary control measures compromises project execution (Mutheu & Muturi, 2018) especially in cases where corruption is deep rooted. In Kenya, World Bank (2012) cites factors affecting development projects implementation to be politics, corruption, embezzlements among other factors. Kenya Economic Survey (2020) also reports high levels of corruptions in Kenya. This has been witnessed severally in project implementation in various sectors and the result is budget overruns that leads to stalled projects.

5. Conclusion and Recommendations

The government of Kenya, like other governments around the world, implements its development agenda through projects. Successful implementation of such projects provides an impetus towards economic growth. Kenya's economic development is highly pegged on the performance of government funded projects as a huge part of the development budget is allocated to such projects. Identifying possible project success factors will ensure these projects pay the expected returns. Literature has clearly demonstrated the contribution of project governance to project success. For successful projects to be realized, all the four project governance practices will have to be put in place. Projects in Kenya, in particular, are surrounded with issues regarding contracts and contracting that has attracted corruption and a lot of inefficiencies, they are faced with high risks that have hindered project implementation. There is also improper monitoring of such projects such that inefficiencies are realized much later in the project when damage is already done and finally the lack of a business model, which acts as a formula for project implementation. The result is delays, cost overruns, stalling of projects and others are never started at all despite consuming resources. Thus the suggested project governance practices in this review will go a long way in ensuring that such issues are identified and dealt with early before causing much harm to the project. Further studies need to be done to validate this research empirically. Still, more research needs to be done on other governance practices.

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37. Credit Risk Management and Performance of Mortgage Lending Commercial banks in Kenya

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Abstract

In spite of Kenya's mortgage market having grown substantially, it is dominated by large mortgage lending commercial banks pointing to possible restrictions to entry or a likelihood

of high risk for tier II and III commercial banks in Kenya. In 2017, Kenyan mortgage lending commercial banks recorded an average gross non-performing loan ratio of 10.3 percent against the industry recommended Central Bank of Kenya average of 4 percent. In 2018, Kenyan mortgage industry assets was approximated to be 2.5 percent relative to the country's gross domestic product with about 24,458 mortgage accounts in the industry. The sector has also recently experienced increased non-performing loans. Thus, the study sought to evaluate the influence of credit risk management on performance of Kenya's mortgage lending commercial banks with the objective of establishing influence of delinquency rates and value at risk on credit risk management of Kenya's mortgage lending commercial banks. Credit history score acted as moderating variable. Merton's Default Theory, Portfolio Theory and Theory of Information Asymmetry guided this study. A census survey of Kenya's 34 mortgage lending commercial banks was utilized. Explanatory and descriptive research designs were adopted. The researcher used secondary panel data covering the period 2012 to 2018 with a record survey sheet as the data collection tool. Data was collected from published audited reports of mortgage lending commercial banks submitted to Central Bank and analyzed using STATA subject to various diagnostic tests. Panel regression of coefficients findings indicated there was positive and significant relationship between delinquency rate and performance of mortgage lending commercial banks, negative and significant relationship between value at risk and performance of mortgage lending commercial banks, positive .Credit history score had significant moderating effect on relationship between credit risk management and performance of mortgage lending commercial banks in Kenya since coefficient of determination rose after moderation.

Key Words

Credit Risk Management, Delinquency rate, Value at Risk, Credit History Score, Mortgage

Introduction

1.1.1 Credit Risk Management

Basel Accord III defines credit risk as the risk of loss of principal and advocates for commercial banks to make use of both financial and operating ratios in order to better evaluate and assess the financial performance of commercial banks to mitigate against the risk (Sinkey, 1975). Several researches such as Sinkey, (1975) and Altman, (1977) have since interrogated the usage of the financial and operational ratios in measuring performance.

Sinkey, (1975) in one of the studies in which discriminant analysis was used established that the ratios are better utilized in distinguishing commercial banks with sound credit risk management tools from those which are problematic. On the other hand, Altman, (1977) who analyzed assets and liabilities in commercial banks asserted that the ratios could be used to caution banks from a possible financial distress and aid them is formulation of strategies to counter it.

1.1.2 Delinquency Rates

Delinquency in the mortgage market is explained by an inability of the households to pay and thus defaulting on their payments (Stanga, Vlahu & Haan, 2018). In some instances, borrowers may default on a mortgage owing to a decline in the cost of housing and on weighing, the client perceives the gains of defaulting being higher than the related costs (Chatterjee et al. 2007). In developing counties such as Kenya, high default rate is related to issues of loss of unemployment and also the shocks that come with related costs that clients may not have been aware when they took the mortgage (Stanga, Vlahu & Haan, 2018).

In 2017, Kenya's mortgage market recorded highest, the level of growth in under performing loans rising from Kes 220 million in December 2016 compared to Kes 273 million in December 2017. Such high delinquency rates led to two financial institutions leaving the mortgage market owing to high losses (Muchira & Anyanzwa, 2018). Stanga, Vlahu and Haan (2018) indicate that high levels of delinquency were experienced in the United States owing by liquidity crisis which turned into a Global Crisis in 2008. The National treasury of Kenya in 2018 indicated that out of the Kes. 17.5 billion Mortgage assets held by Chase Bank, Kes. 4.5 Billion were non performing which was triggered by the period when the bank went through financial crisis (Guguyu, 2018).

1.1.3 Value at Risk

In the mortgage industry, value at risk is a parameter that entails quantifying the monetary risk for a given portfolio in a given period of time (Castagna & Fede, 2013). Risk could be in the form of liquidity risk, credit risk and market risk. Focus on housing and mortgage market was drawn because of the high default rates leading to very high loan to value ratios. Further, the market had been subjected to high interest rates that have led to risk of default being high. Value at risk was proposed as a mechanism which provides an analysis of various risk positions. It is a tool which provides the ability to assess risk for traders, managers and employees and thereby discouraging organizations from taking excess risk. It provides an avenue for entities to hedge against possible risk (Jin & Ziobrowski, 2011).

1.1.4 Distance to Default

Distance to default refers to the likelihood that there will be failure to meet loan requirements detailed in a loan agreement and is normally measured by the debt service coverage ratio (Saunders & Allen, 2002). Understanding the likelihood that a loan may be defaulted is an important tool in credit risk analysis. Prediction of default in an organization can only be done within a certain level of probability. Distance to default explains the frequency which standard deviations of the price of the asset should change in order for default to be triggered future (Akbar &La, 2014).

1.1.5 Bank Size

Bank size is the cumulative assets a bank has and indicates a financial strength and economic capability of the said financial institution. Bank size could be measured based on market capitalization, cumulative bank assets held, revenues generated from commercial activities of the bank, and the equity held in the books of the bank (Schildbach, 2017).

Statistics by the Central Bank of Kenya, (2017) indicate that 75.5% of the mortgages in Kenya have previously been advanced by six commercial banks with one being categorized as medium while five others are from the tier one. Mwendwa (2015) indicates that the firm size is statistically significant in explaining how mortgage financing effects the profitability of financial firms. Kenya's banks are seen to have the ability and capacity to issue mortgages in Kenya owing to financial stability available as measured by the asset base.

1.1.6 Credit History Score

Credit history score of an individual refers to the history of a borrower with regard to the credit worthiness of the individual in meeting their financial obligations (Gopal, 2008). Credit score is computed based on mathematical models that are based on an individual's credit history based on outstanding balances, late payments and the age of credit of an individual. Credit score according to Metropol in Kenya ranges between 200 to 900. A score of less than 400 indicates that customers are in default (Metropol, 2018).

1.1.8 Mortgage Lending Commercial Banks Performance in Kenya

The value of total nonperforming mortgage loans outstanding increased from Ksh. 10.8 billion in 2017 to Ksh. 11.7 billion in December 2018. The ratio of nonperforming loans to total mortgage loans increased from 8.7 percent in 2017 to 9.1 percent in 2018.This was above the central bank of Kenya recommended ratio of 7 percent, associated with cashflow constraints for the mortgagors attributed mainly to failure by both the county and national governments to owner payments for suppliers (Central Bank of Kenya, 2018).

Kenya had 24,458 mortgage loans accounts as at 2017 an upward shift from 22,013 held 2016, representing an increase of 2,445 or 11.11 percent due to increased demand from the ballooning middle class. The mortgage loan size increased from Ksh 7.5 million to Ksh 8.3 million attributed to high property prices. The number of commercial banks reduced from 37 to 34 in 2016 due to the collapse of Dubai and Imperial banks. Chase bank slumped into receivership under the guidance of the Central Bank of Kenya (Central Bank of Kenya,2017)

In terms of the gross NPL, the value increased from Ksh.81.4 billion in 2017 to Kshs 108 billion, representing an upward rise of 32.7 percent. Asset quality worsened of from 2.3 percent recorded in 2017 to 2.7 percent registered in 2018 a clear signal that credit risk in Kenya's mortgage sector was on the rise. Gross NPL ratio was 12.3 percent with an overall of 10.3 percent against the Central bank of Kenya recommended ratio of 4 percent.

1.2 Statement of the Problem

The mortgage sector in Kenya despite having recorded a significant growth, it still remains dominated by large mortgage lending commercial banks which could indicate probable restrictions with regard to entry or high levels of credit risk for both medium and small commercial banks. Kenya's total mortgage loans held as at 2017 was equal to 2.5 percent of Kenya's GDP with about 24,458 mortgage accounts in the whole industry. The mortgage sector has in the recent past experienced poor performance and increased cases of mortgage delinquencies and defaults. In the financial period ending December 2017, the Kenya mortgage lending commercial banks recorded an average gross NPL ratio of 10.3 percent relative to CBK's recommended average of 4 percent (Central Bank of Kenya, 2017).

A few studies that have been done in attempt to address concerns in Kenya's mortgage industry comprise; Oyedokun, *et al* (2013) conducted a study to evaluate the effect of lending practices with regard to residential mortgage default. Mkukwana (2012) did a study to establish impact of macroeconomic factors on risk default through a case study of residential mortgages. Specifically, in Kenya, Osero *et al* (2013) did a study to examine how effective management strategies among the mortgage lending banks in Kenya loan default. Further, Nanyuki and Omar (2016) examined factors that influence the performance of the mortgage lending commercial banks in Mombasa and finally, Abdulrehman and Nyamute (2018) did a study on effect of mortgage financing on the financial performance of mortgage firms.

The studies above, however, did not adequately address how credit risk management impact performance of the mortgage institutions which is an existing gap in the field. The study thus seeks to fill the gap by specifically evaluating how credit risk management influence performance of mortgage lending commercial banks in Kenya. Size of bank which was not factored in the aforementioned studies was included as a variable to factor in different risk appetites and capabilities for the commercial banks involved in mortgage lending in Kenya. Credit history score which was also not included in the aforementioned studies was incorporated in this study as a moderating variable having been emphasized on by CBK for all commercial banks monthly net debt position returns (Central Bank of Kenya, 2017). The credit history score is used for all loans classification to either normal, watch, substandard or loss (CBK, Prudential Guidelines, 2013)

1.3. Research Hypotheses

The study sought to resolve the below research hypothesis:

H_{01}: Delinquency rate does not have significant influence on the performance of mortgage lending commercial banks in Kenya.

H_{02}: Value at risk does not have significant influence on the performance of mortgage lending commercial banks in Kenya.

H_{03}: Distance to default does not have significant influence on the performance of mortgage lending commercial banks in Kenya.

H_{04}: Bank size does not have significant influence on the performance of mortgage lending commercial banks in Kenya.

H_{05}: Credit history score does not have significant moderating effect on the relationship between credit risk management and performance of mortgage lending commercial banks in Kenya.

Theoretical Review

2.1.1 Merton's Default Risk Theory

Merton's default theory was conceived by Merton, (1970). The theory has extensively been utilized in the assessment of defaults in cooperatives and mortgage lending firms. Merton's model postulates that credit analysts should better appraise financial institutions, while also checking on the firms' ability to remain liquid throughout the period under analysis and debt expiry (Jorion, 2014). It has been used to determine the ability of debt owners to pay their debt obligations and can thus help credit analysts to determine an organization's credit default risk.

Merton's theory was based on some basic assumptions about the capital structure of the firm (Merton, 1970). In the event of default occurring, the firm's market value of the assets owned by the company in relation to the liabilities of the company fall below the set certain threshold and thus, the firm is considered to have defaulted. One of the reasons for the default in the banks is the credit risk which is part of the risks experienced by commercial banks (Jorion, 2014).

2.1.2 Portfolio Theory

Portfolio theory was conceived and advanced by Markowitz (1952). The theory asserts that four basic steps are involved in portfolio construction as: security valuation, asset allocation, portfolio optimization and the performance management (Seibel, 2012). According to the theory, many companies use models for value at risk to manage market risk and interest rate risk exposures. According to Margrabe, (2007), in spite of credit risk remaining the largest risk facing most commercial banks, the habit of utilizing modern portfolio theory to credit risk management is yet to be fully embraced.

2.1.3 Theory of Information Asymmetry

Stiglitz *et al* (1970) established the theory which asserts that both mortgagees and mortgagors experience information asymmetry in their interactions. The phenomenon emanates from a mortgagor who borrows a mortgage and has information with regard to the probable risks related to the investment ventures for which the loan is intended. The mortgagee, however, is unaware of the information (Edward & Turnbull, 2013). The concealed details generate adverse selection and moral hazard problems (Horne, 2012).

2.1.4 Credit Risk Theory

The theory was advanced by Melton, (1974) and is also referred to as structural theory. It postulates that default occurrences stems from the development of the assets of the firm displayed by a dilution trajectory with fixed notable parameters like arrears rate, portfolio at risk and loan loss rate. According to the theory, loss provisional on default is recommended for all securitized loans since failure to pay debts could happen in the course of the entire life of a mortgage and not only at maturity (Crosbie *et al*, 2003).

Research Methods

3.1 Research Design

Explanatory and descriptive research designs were used for the study. Saunders *et al.* (2009), explains that explanatory research design establishes root association between variables. Researchers should be knowledgeable of the phenomenon in order to infer or detect pertinent root associations (Zikmund *et al*., 2012).

3.2.1 Empirical Model

According to Bard *et al*, (2014), several financial aspects that influence mortgagee's determination of the amount of mortgage advanced, for instance, financial market structure, mortgagor behavior, mortgage facility and bank characteristics. The borrower's features and behavior indicate the credit risk and hence affects amount of mortgage advanced. On the other hand, bank characteristic like credit policy, credit limits, reserve cash reserve ratio, and availability of money to lend are all supply-side factors that could affect the availability of credit.

This study used panel regression model. The model was adopted since it has been used extensively in literature and for its simplicity (Maddala, 2013).

Mortgage performance is hypothesized to be influenced by the below factors and can best be simplistically written as:

$$Y = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \varepsilon_{it} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (3.1)$$

Where;

Y=Performance of Kenya 's mortgage lending commercial banks as determined through ratio of gross nonperforming loans to total mortgage advances

X_1= Delinquency rate as measured by arrears rate which is measured by total installments past due divided by gross portfolio outstanding

X_2 = Value at risk as evaluated through ratio of loans to assets

X_3 = Distance to default as assessed by debt service coverage ratio

X_4 = Bank size as determined by log transformation of the cumulative assets of commercial banks under study

$\beta_{0=}$ Intercept

$\beta_1, \beta_2, \beta_3, \beta_4$ = parameters of independent variables under study

β_5= parameter of moderating variable under study

$\varepsilon_=$ Error term

i= Banks under study

t=Period in years (2012-2018)

3.2.2 Moderating model

$$RGNPL = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 M + \beta_6 X_{1it} M + \beta_7 X_{2it} M + \beta_8 X_{3it} M + \beta_9 X_{4it} M + \varepsilon_{it} \quad \text{(3.2)}$$

Where;

M=Moderating variable (Credit History Score)

All the variables have to be standardized using the moderating variable (M). The interaction terms (X_{1it} M, X_{2it} M, X_{3it} M and X_{4it} M) have to be calculated using the compute function as expressed in model (3.2). If $\beta_6, \beta_7, \beta_8$ andβ_9 are significant, moderation effects exist in the four relationships. If only one is significant, moderation effect only exists in one of the relationship and if both $\beta_6, \beta_7, \beta_8$ and β_9 are insignificant, no moderation effect exists and M becomes just another independent variable (MacKinnon, 2011).

3.2 Data Collection

Secondary panel data of the 34 mortgage lending banks in operating in Kenya for the period between 2012 and 2018 were collected using a record survey sheet. However, data for 3 mortgage lending banks were missing or incomplete and were excluded in the study. The choice of the period was guided by the availability of data and increased number of mortgage portfolio at risk culminating to increased mortgage delinquency rates and also defaults. The data were based on the published audited accounts of mortgage lending commercial banks submitted to the CBK. Annual CBK publications such as Banking Supervision Report and Economic Review Reports.

3.3 Data analysis

STATA was employed for the data analyses. Data which was quantitative in nature was analyzed in form of inferential statistics involved measurement and relationship which include: correlation, panel regression and analysis of variance. The output of data analysis was presented in form of tables.

Findings

4.1.1 Panel Regression Results

The panel model output is shown in Table 4.1.

Table 4.1: Panel Regression Results

NPL	**Coef.**	**Std. Err.**	**z**	**P>z**	**[95% Conf.**	**Interval]**
Delinquency rate	2.533986	0.228219	11.10	0.002	-3.79321	8.86118
Value at risk	-0.84222	0.315452	-2.67	0.036	-4.79244	3.107992
Distance to default	0.103365	0.0239567	4.31	0.027	-0.44618	0.492907
Bank size	-7.6355	2.86961	-2.66	0.041	-70.4992	15.22812
_cons	5.6739	3.9529	1.43	0.193	-160.465	795.8128
R-squared:	within = 0.4917					

	between = 0.5309
	overall = 0.4836
Wald chi2(4)	=48.89
Prob > chi2	=0.0000

The R squared checked the explanatory power of the variable. The study was supported by R square of 0.4836 as shown in Table 4.9. This means that delinquency rate, value at risk, bank size, distance to default explains 48.36% of performance of mortgage lending commercial banks.

4.1.2 Delinquency rate and performance of mortgage lending commercial banks

The output in Table 4.1 revealed that delinquency rate and performance of mortgage lending commercial banks are positively and significantly related (β =2.533986, p=0.002). The model is also justified by z-statistic of 11.10>1.96. This implies that a rise in delinquency rate results to a subsequent increase in the performance of mortgage lending commercial banks measured using non-performing loans. $Ho_1$was not rejected since p-value is 0.002<0.05.

4.1.3 Value at risk and performance of mortgage lending commercial banks

Results in Table 4.1 also showed that value at risk negatively and significantly related to performance of mortgage lending commercial banks (β =-0.84222, p=0.036). The model is also justified by z-statistic of 2.67 >1.96. This implies that a rise in delinquency rate results to a subsequent increase in the performance of mortgage lending commercial banks measured using non-performing loans. Ho_2 was not rejected since p-value is 0.002<0.05. Value at risk is employed by banks to measure the risks.

4.1.4 Distance to default and performance of mortgage lending commercial banks

Panel model in Table 4.1 revealed that distance to default is positively and significantly related to performance of mortgage lending commercial banks (β =0.103365, p=0.027). The model is also justified by z-statistic of 4.31>1.96. This implies that a rise in delinquency rate results to a subsequent increase in the performance of mortgage lending commercial banks measured using non-performing loans. $Ho_3$was not rejected since p-value is 0.027<0.05.

4.1.5 Bank size and performance of mortgage lending commercial banks

It was also found as illustrated in Table 4.1 that bank size is negatively and statistically related to performance of mortgage lending commercial banks (β =-7.6355, p=0.041). The model is also justified by z-statistic of 2.66 >1.96. This implies that a rise in delinquency rate

results to a subsequent increase in the performance of mortgage lending commercial banks measured using non-performing loans. $Ho_3$was not rejected since p-value is 0.041<0.05.

4.2 Moderating effect of Credit History Score

The study assessed the moderating of credit history score on linkage between credit risk management and performance of mortgage lending commercial banks in Kenya. Table 4.9 shows model the fitness for a regression model after moderation.

Table 4.2: Moderating effect of Credit history score

NPL	Coef.	Std. Err.	Z	P>z	[95% Conf.	Interval]
Delinquency rate	2.597786	0.537148	4.84	0.021**	-4.3349	9.53047
Value at risk	0.77609	2.85678	0.27	0.786	-6.37528	4.823094
Distance to default	-0.01044	0.00429	-2.433	0.042**	-0.58724	0.566367
Bank size	28.7777	22.28923	1.29	0.197	-72.4638	14.90836
Delinquency rate*M	0.17619	0.018468	9.54	0.003**	-0.53815	0.185771
value at risk*M	-0.12021	0.017879	-6.72	0.017**	-0.37064	0.33022
Distance to default*M	0.021349	0.006104	3.50	0.025**	-0.01061	0.013312
Bank size*M	-0.011609	0.099244	0.12	0.907	-0.18291	0.206124
_cons	352.9227	248.2164	1.42	0.155	-133.572	839.4178
R-sq:	within = 0.5669					
	between = 0.5373					
	overall = 0.5185					
Wald chi2(4) =	43.93					
Prob > chi2 =	0.0034					

M=Moderator/ credit risk score

Output results pinpoints that R^2 rose from 0.4836 before moderation (Table 4.2) to 0.5185 after moderation. Delinquency rate, value at risk and distance to default were significantly related performance of mortgage lending commercial banks in Kenya post introducing the moderator. The hypothesis that credit history score does not have significant moderating effect on the relationship between credit risk management and performance of mortgage lending was rejected. The study accepted the alternative hypothesis that credit history score has a significant moderating effect on the relationship between credit risk management and performance of mortgage lending.

Summary, Conclusion and Recommendation

5.1 Summary of the Study

The findings indicated that delinquency rate is positively and significantly related to performance of mortgage lending commercial banks. Value at risk is negatively and significantly related to performance of mortgage lending commercial banks while distance to default is positively and significantly related to performance of mortgage lending commercial banks. It was further noted that bank size is negatively and significantly related performance of mortgage lending commercial banks. The findings also indicate that coefficient of determination improved after moderation using credit history score hence having a significant moderating effect.

5.2 Conclusion

The study concludes that delinquency rate positively influences performance of mortgage lending commercial banks in Kenya. A high delinquency rates may result to financial institutions leaving the mortgage market owing to high losses. Value at risk negatively influences performance of mortgage lending commercial banks in Kenya. Value at risk is a mechanism that provides an analysis of various risk positions. It provides an avenue for commercial banks dealing with mortgage funds to hedge against possible risk.

Distance to default positively influences performance of mortgage lending commercial banks in Kenya. Understanding the likelihood that a loan may be defaulted is an important tool in credit risk analysis since prediction of default in an organization can only be done within a certain level of probability. Bank size negatively impacts performance of mortgage lending commercial banks. Bank size describes the economies of scale of the bank. A large bank reduces cost because of economies of scale and scope.

The study also concluded that credit history score moderates linkage between credit risk management and performance of mortgage lending commercial banks. Financial institutions including mortgage banks use the credit score in making an analysis of whether one will pay back their loans or they will default.

5.3 Recommendations

Mortgage lending commercial banks management may need to carefully draft credit policies with clear implementation procedures to enhance performance of mortgage lending to ensure maximum returns while minimizing default rates. Credit guidelines of the commercial banks may be integrated with the mortgage lending guidelines to form sound credit management procedures.

The use of credit-scoring models to screen loan applicants should be emphasized. However, this method may not be very precise and so commercial banks offering mortgages may be willing to absorb expenses of higher expected default rates in exchange for ancillary benefits related to high-volume credit-scored loans attached to securities.

5.4 Areas for Further Research

Further research may be conducted on demographic factors that result to mortgage loan default and also macroeconomic elements that impacts growth of mortgage lending in commercial banks. The macroeconomic factors include inflation, interest rate and money supply.

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38. Academia-Industry partnerships for competitive innovations and global sustainable development

学术-产业合作：科技创新与可持续发展

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摘要:中国学术界学术成果丰富，但学术界研究成果与产业界合作率相对较低。加强学术界研究成果与产业界合作促进成果转化有助于学术界研究创新能力和研究人才的培养，有助于促进产学研融合、促进社会经济的快速发展，有助于增强人民的幸福感。而目前成果的实用性，激励机制和专业化的对接平台制约了其合作。而且，学术界与企业对科技成果的对接平台做出了成功的探索。在学术研究成果与企业合作的新型关系下，只有加强学术实用性研究人员和企业管理人员培养，制定有利于学术研究与企业合作的科技政策，加大政府和产业界的科研资金投入，建全学术成果转化激励机制，搭建对接专业化的转化平台，才能提升学术界学术研究与企业相互合作的效率，促进社会经济的高速发展，提高学术和产业的科技创新竞争力，促进全球可持续发展。

关键词：学术与企业合作 成果转化 学术界 企业

China's academia is rich in scientific and technical achievements, but the partnerships of the academia and industry is relatively at the early development. Strengthening the cooperation between academia and industry to promote the transformation of achievements contribute to the cultivation of innovation ability and researchers in academia, to the integration of production, learning and research, to the rapid development of social eco
nomy, and to the enhancement of people's happiness. However, the practicability of current achievements, incentive mechanism and professional docking platform restricted these partnerships. Moreover, the way has been explored successfully by establishing a docking platform of scientific and technological achievements between the industry and academia. With this new academia-industry partnerships, only by strengthening the cultivation of researchers and business managers, updating scientific and technological policies for academic research and enterprise cooperation, increasing the investment of government and industry in scientific research, building a complete incentive mechanism, and building a specialized docking platform can promoted the efficiency of academia-industry partnerships , development of the social economy, competitive innovations and global sustainable development.

Keywords: *Academia-industry partnerships achievement transformation academia industry*

39. Multi Agencies Strategic Intervention on Prosecution and the Level of Asset Recovery in Kenya

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Abstract
The core function of the office of the Director of Public Prosecutions(ODPP) in corruption cases is to prosecute those charged by the Ethics and Anti-Corruption Commission with corruption offences while upholding, protecting and promoting their human and constitutional rights. Speedy and successful prosecution of corruption offences contributes to the deterrence of the offences as well as increase in the value of assets recovered. It is clear that multi-agencies cooperation at the national level is not only crucial to effective prosecution of corruption offences but also an important precondition for cooperation against the vice. Consequently, ODPP can play a key ;llll. within these mechanisms and pave the way to more effective prosecutions based on multi-agencies' strategic intervention. This paper is based on a research which main purpose was to establish the influence of multi agencies' strategic intervention on prosecution of corruption cases and the level of asset recovery in Kenya. Specifically, the paper focuses on influence of instituting and undertaking criminal proceedings on the level of asset recovery in Kenya. The study adopted a descriptive design where both quantitative and qualitative data was collected. The target population of the study were senior managers of seven agencies that collaborates in the fight of corruption in Kenya. The sampling frame was 68 managers of the seven agencies The research instrument was a questionnaire. Data was analysed by use of descriptive analysis, inferential analysis, and content analysis. The study findings showed that there is a significant relationship between multi agencies strategic intervention on prosecution and the level of asset recovery in Kenya. The strategic approach in fighting corruption discussed in this paper will ensure sustainable development for the country in line with the theme of this conference.

Keywords: *Multi Agencies, Strategic Intervention, Prosecution, Asset Recovery, instituting, criminal proceedings*

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40. Mentored Staff Induction and Employee Turnover in Advertising Firms in Kenya

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ABSTRACT

The problem of employee turnover has become one of the most persistent concern in the business world today and has resulted into massive losses in production and training time of many business establishments. *A number of researchers have strongly emphasized the positive relationship between mentored staff induction and employee retention, however no research has been conducted exploring*

the relationship between staff induction and employee turnover, specifically not in advertising firms in Kenya. Accordingly, this paper was focused on investigating the effect of mentored staff induction on employee turnover in advertising firms in Kenya. Specifically, the study sought to establish the effect of senior staff, peer mentoring, and ongoing staff support in mentored induction programs on employee turnover in advertising firms in Kenya. The overall theory used in the study was the TPI theory of induction. The target population of the study was 750 employees working with the 19 advertising firms in Kenya that are registered with the Association of Practitioners in Advertising. The sample size for the study was 254 respondents obtained using simple random sampling technique. Data was collected using a semi-structured questionnaire. Data analysis entailed descriptive and inferential analysis using the Statistical Package For Social Sciences. The study findings established that mentored staff induction had a positive significant relationship with employee turnover in advertising firms in Kenya. This was indicated by an overall mean score of 4.025, normality test score of 0.768 and linearity test of $r=0.624$, $p<0.05$. The study recommended that advertising companies in Kenya should focus on ongoing staff support as a key method of implementing mentored induction programs. The method obtained an overwhelming approval by the respondents as the best way of managing employee turnover.

Key words: Mentored Staff-Induction, Employee-Orientation, Turnover, Mentoring, Training.

1. Introduction

Mentored staff induction is the process used within organizations where employees who are more experienced and knowledgeable welcome and guide new employees or new graduates, in order to prepare them for their new roles (McArthur-Rouse, 2008). Organizations use mentored induction programs to provide new employees or fresh college graduates with a systematic structure of support that helps them become familiar with their current or future work environment. Mentored induction programs should include development of theoretical and practical skills, but also meet interaction needs that exist among the new employees (Robinson, 2014). In Kenya, firms and Government agencies have adopted mentored staff induction programs *for the purposes of guiding* the newly recruited staff in *their personal* and *professional growth*, and for *sharing essential career knowledge* in the respective *fields (Tettey, 2006).*

A number of researchers have strongly emphasized the positive relationship between mentored staff induction programs and employee retention, however no research has been conducted exploring the relationship between staff induction and employee turnover, and specifically in advertising firms in Kenya. According to Ahmed (2014), properly planned mentored induction programs give a positive return for the company through employee retention. Chidambaram, Ramachandran, and Thevar (2013) further identify lack of proper mentored induction programs as among the key causes of employees wanting to leave companies. Globally, mentored induction of new hires has become the norm. The central focus of human resource managers in a company is to understand the causes of turnover among employees in order to diminish its rate in the organization (Noe, Hollenbeck, Gerhart & Wright, 2017). Yet, some companies underrate the role of mentored employee induction and take the risk of employee turnover. Nica (2016) studied employee voluntary turnover as a negative indicator of effectiveness in the organization and reported a relationship between the study

variables. The study however used organizational effectiveness as the dependent variables and voluntary turnover as independent variable

Korrir (2018) explored the expected outcome of human resource practices on labour turnover in Kenyan restaurants and confirmed that human resource practices contribute to labour turnover. However, the study explored the broad effect of the human resource practices in restaurants in Kenya which is different from the focus of this study. The high mobility of workers in the advertising firms in Kenya is an issue of much concern to the operators of the industry. Sheehan (2013) observed that there is a high employee turnover rate in the advertising agencies and that the advertising industry has a retention problem. The average staff turnover rate in the advertising sector is much higher than 30 percent, second only to tourism. This study therefore filled the identified gaps by considering the effect of mentored staff induction on employee turnover in advertising firms in Kenya.

1.1 Objectives

1.1.1 Overall Objective

The main objective of this study was to establish the effect of mentored staff induction on employee turnover in advertising firms in Kenya.

1.1.2 Specific Objective

22. To establish the effect of use of Senior Staff in mentored staff induction programs on employee turnover in advertising firms in Kenya.
23. To determine the effect of Peer Mentoring in mentored staff induction programs on employee turnover in advertising firms in Kenya.
24. To find out the effect of Ongoing Staff Support in mentored staff induction programs on employee turnover in advertising firms in Kenya.

1.1.3 Research Hypotheses

The study was guided by three hypotheses below;

i. **$H0_1$:** Use of senior staff in mentored induction program has no effect on employee turnover in advertising firms in Kenya.
ii. **$H0_2$:** Peer mentoring in mentored induction program has no effect on employee Turnover in advertising firms in Kenya.
iii. **$H0_3$:** Ongoing staff support in mentored induction program has no effect on employee turnover in advertising firms in Kenya.

2. Theoretical Foundation and Empirical Review

2.1 Theoretical Framework

This study was hinged on the TPI theory of induction. The TPI theory of induction was developed by Adams (2010) when carrying out a study on integration. The focus of the study was on the importance of mentored induction programs on the integration of employees and it was established that there are key areas that employers need to focus on when they acquire new hires. The key areas include; Theoretical (T) knowledge, Practical (P) knowledge, and Integration (I), thus the TPI theory of induction. This theory seeks to resolve the concept of socialization commonly offered in theory,

such as the processes of assimilation or integration. The theory of induction is an approach useful in the understanding of the effect of assimilation as well as integration.

The TPI theory proposes that new employees should improve on their skills theoretically and practically to enable them to adequately perform their new jobs, and fulfil the needs of integration occurring among workers (Bauer & Erdogan, 2011). The three situations must be satisfied for an employee to become completely assimilated in the group. In view of the TPI theory of induction, firms can give support in three crucial areas since when new workers join the company they should put into practice the theoretical knowledge they gain. The firm, on the other hand, has to give support to new hires through initial training, workshops, and seminars for the employees to better their practical skills (Ndebele, 2013). Companies should fulfil the needs of integration among new workers and with the other present employees.

The organization can achieve this through organizing corporate events, staff meetings, as well as departmental meetings to allow new hires to interact with other workers (Maruhi, 2018). Nevertheless, this theory has some weaknesses such as the view that induction training is basically centred on applied knowledge as well as skills and less on theoretical knowledge. However, despite the limitation, the TPI theory of induction was found applicable in this study in support of the independent variable, mentored staff induction. For example; peer mentoring familiarizes *new workers* with the company and the existing staff. Use of senior staff in mentored induction program enables a *new* employee to turn out to be productive as quickly as possible. Finally, through ongoing staff support, employees produce their best results and achieve organizational objectives.

2.2 Empirical Review

One of the methods of implementing mentored staff induction programs is to assign a senior employee to one or a group of new and junior employees or new graduates, and let him have frequent one-to-one sessions to monitor progress over, say, a six-month period. During this time, they will concentrate on a range of skills which includes both soft and hard skills (Heidari, 2007). The senior employee will form a relationship with the mentees, be available for any queries, and report each employee's progress. Having the senior employee observing the new employees as they grow over a long period can help management make crucial business decisions, such as aligning the career path of an employee with their strongest skills for the business (Robinson, 2014). According to Mavrinac (2005) peer mentoring in a mentored induction program has a strong potential to build trust in the organization because opportunities are available to all motivated and interested employees. It provides opportunity for the peer mentor to share knowledge with the mentee as well as to provide him with support and guidance. Further, peer mentoring in a mentored induction program formalizes and encourages non-hierarchical developmental relationships that already occur in many work settings and therefore provides an open environment for feedback.

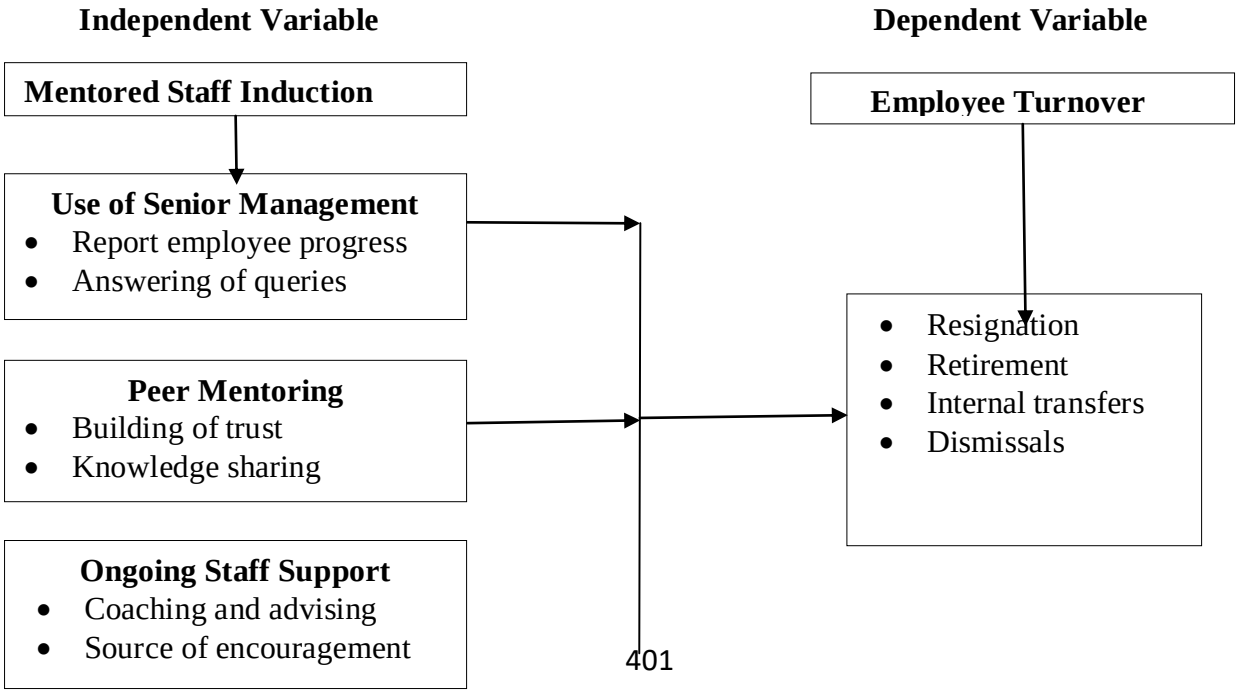
According to Gilles and Wilson (2007), mentored staff induction is also concerned with providing ongoing staff support. It includes providing guidance and support to the mentee based on his or her unique developmental needs. At different points in the relationship, it will take on some or all of the roles which include; coach or advisor, source of encouragement or support, resource person, champion and devil's advocate. Mogusu and Atambo (2016) investigated the factors affecting induction of new workers in tea factories in Nyamira County in Kenya through a descriptive design. The accessible population of the study was 350 workers in seven tea factories in Nyamira County. Data collection was through a questionnaire and data was analysed through the SPSS. Results indicated that there was a statistically insignificant relationship between mentorship and induction.

As a result, the relationship may not be causal. Even though the relationship was statistically insignificant, it is important noting that there existed a strong positive relationship between mentorship and induction. Therefore, this study seeks to establish the effect of mentorship as an employee induction program on employee turnover in advertising firms in Kenya.

Aman (2015) examined the effect of mentoring on military personnel retention in Ethiopian military academies. The study adopted a quantitative approach and consisted of both the descriptive and explanatory designs. The study employed stratified random sampling targeting the protégés of military academies in Ethiopia. Data was collected using a structured questionnaire and analysed. using descriptive as well as inferential statistics. Results of Pearson correlation regression analysis showed that mentoring positively and significantly relates to personnel retention, career development, and psychological readiness. The study results support Conboy and Kelly (2016) that focused on the evidence that mentoring works to retain as well as promote employees, particularly diverse Workers, within a single firm. The study established that mentoring is more successful in promoting diversity at the workplace than diversity in training programs alone. The study however was a case study of the military personnel in Ethiopia while this study will target the advertising firms in Kenya.

Nyamori (2015) conducted a case study of SOS Children's villages examining the effect of workplace mentoring on employee performance. A descriptive study was conducted whereby 160 employees of the SOS Children's Villages were targeted. The primary data gathering methods involved the use of questionnaires and data was analysed statistically using SPSS. The study computed inferential as well as descriptive statistics. Results showed that mentorship enables new hires to set as well as achieve goals for their job role. The study findings confirmed that just as Conboy and Kelly (2016) and Aman (2015) assert that mentoring is important in organizations, mentorship increases staff proficiency on the job as it motivates them. However, these study findings cannot be generalized to advertising firms because the study was limited to SOS Children's villages and the study used employee performance as the dependent variable instead of employee turnover.

2.3 Conceptual Framework



Source: Author (2020)

3. Methodologies

3.1 Research Design

The study adopted a descriptive research design. Descriptive research design was applicable to this study because it sought to establish the effect of mentored staff induction on employee turnover in advertising firms in Kenya. A descriptive design is allowed for making observations on the natural behaviour of the subjects without influencing or affecting them in any way (Ogalo, 2018).

3.2 Empirical Model

The study adopted multiple linear regression model since it has three independent variables, that is; Use of Senior Staff, Peer Mentoring, and Ongoing Staff Support that influence employee turnover in advertising firms in Kenya. The model was expressed as follows;

$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \varepsilon$

Where;

Y = Employee turnover

$\beta 0$ = Coefficient of intercept

X1 = Use of Senior Staff

X2 = Peer Mentoring

X3 = Ongoing Staff Support

ε = Error term

$\beta 1 .... \beta 3$ = Corresponding coefficients for the independent variables

3.3 Target Population

The target population for the study was 750 employees comprising of both management and non-management staff of the 19 advertising agencies registered with the APA (2018).

3.4 Sampling and Sample Size

The study employed a simple random sampling technique and the table by Krejcie and Morgan (1970) was used in determining the sample size from a definite population. According to the table if N (target population) is 750 with a confidence level of 95%, then the sample size should be 254 respondents. The sample size was thus 254 respondents (employees) currently working with the 19 advertising agencies registered with the APA.

3.5 Data Collection and Analysis

The study used a semi-structured questionnaire to collect primary data. Both primary and secondary data was used in this study. Secondary data was obtained from official documents. The researcher obtained a letter from Kenyatta University which acted as an introduction to the management of the advertising firms in Kenya. The questionnaire was also accompanied by a research permit from the National Commission for Science Technology and Innovation (NACOSTI). The study conducted a pilot study at the Yellow Agency (Ya) head office and Prosel Ltd, which represents approximately 10 % of the target population. Face validity of the research questionnaire was achieved through proof reading of the questions by the participants and strong references drawn through meta-analysis on past research as well as related theory on staff induction programs and employee turnover (Subekti, 2016). Experts' opinion was included on the content of the questionnaires. Reliability of the research questionnaire was established through conducting a pilot study. The Cronbach-Alpha coefficient was used to measure the reliability coefficient. The values of the Cronbach's Alpha coefficient range from 0-1. The collected data was verified for correctness as well as completeness, and then coded and analysed using qualitative as well as with quantitative techniques using the SPSS software. The study used descriptive statistics involving percentages, frequencies, mean, and standard deviation as well as inferential statistics comprising of correlational analysis and regression analysis. The results were presented under appropriate sub-headings corresponding to the objectives of the study. The results were then summarized in the form of tables, pie charts, and graphs.

3.6 Ethical Consideration

The researcher assured the respondents of confidentiality and that the data collected was used for research purposes only and not to cause damage to their integrity and interests at the workplace. Permission was sought from the management of advertising firms in Kenya and the respondents were informed that participation in the study was voluntary. Additionally, information from other authors was fully acknowledged.

4 Results and Discussion

4.1 Response Rate

The return rate of questionnaires distributed to the various respondents was high. A total of 254 questionnaires were distributed to selected advertising companies in Kenya. Questionnaires were distributed to 254 respondents and only 200 were returned fully completed. This constituted a response rate of 78.7%. This was acceptable according to (Mugenda & Mugenda, 2003) who observes that a response rate of 50% is adequate, 60% good and above 70% is rated very good. This method also ensured that the respondent's queries concerning clarity were addressed at the point of

data collection; however, caution was exercised so as not to introduce bias in the process. The other questionnaires were found to be unusable for the study; hence, their results were not included in the findings.

Table 4.1: Response Rate of The Questionnaires

Category	**Frequency**	**Percentage**
Questionnaires Returned	200	78.7%
Questionnaires Not Returned	54	21.3%
Total	**254**	**100%**

Source: Research Data (2020)

4.2 Reliability Test

The researcher administered a set of designed structured and unstructured questionnaires through a pilot study to appraise the questionnaire's soundness of the items and to estimate time required to answer the items. The pilot study covered some of the 20 respondents not covered in the sampled population. The results of the pilot study were discussed with the respondents to make the required adjustments. The major objective was to test the instrument's reliability and validity.

Table 4.2 Reliability Analysis

Item	**Questions**	**Cronbach Alpha**	**Comment**
Use of Senior Staff	5	.764	Reliable
Peer Mentoring	5	.772	Reliable
Ongoing Staff Support	5	.784	Reliable
Employee Turnover	5	.792	Reliable

Source: Research Data (2020)

4.3 Demographic Characteristics

4.3 Advertising Companies

The questionnaires received from study showed that Saracen Media had the highest response rate, this was represented by 10.5% of the target population. Consequently Express DDB Kenya and Brainwave Kenya tied with the least response rates represented by 3% each. From the findings it showed that the advertising agencies clearly, cooperated in giving information relevant to the study.

4.3.1 Gender

From the findings in table 4.4, it was clear that female respondents represented a higher percentage in comparison to their male companions in the study. Male respondents accounted for 40% and 60% respondents represented female. This indicates that the advertising companies were eager to recruit females due to their dynamism in the field of advertising.

Table 4.4: Gender of Respondents

Category	**Frequency**	**Percentage**
Male	80	40%
Female	120	60%
Total	**200**	**100%**

Source: Research Data (2020)

4.3.2: Age of Respondents

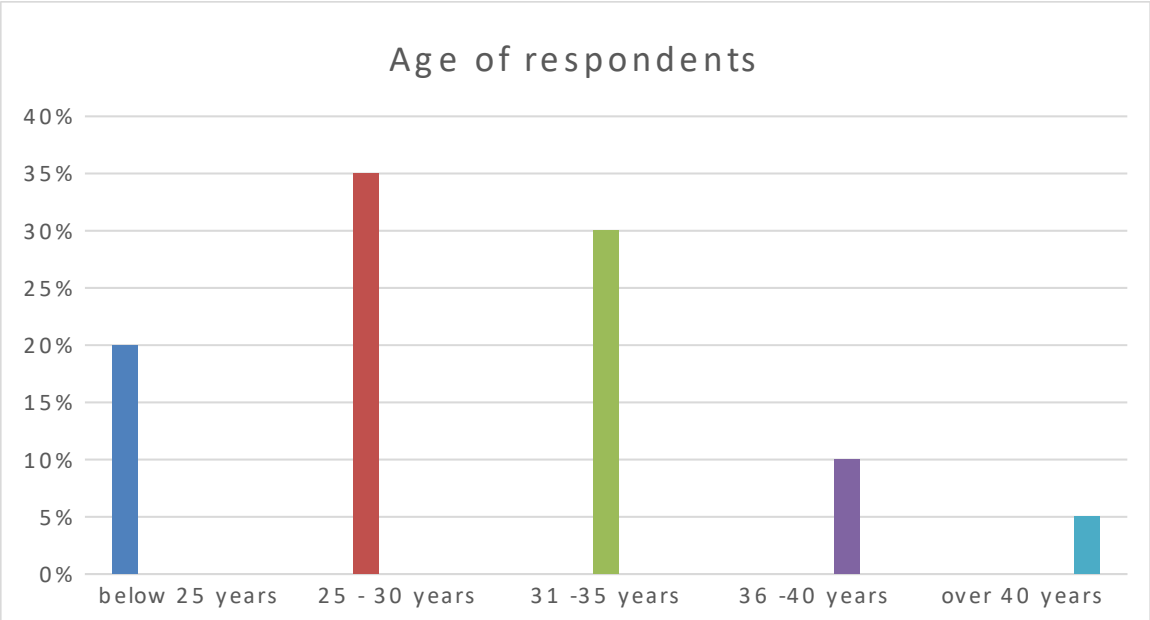
The results in Table 4.5 indicate that majority of the respondents were between the age of 25 -30 years, this was represented by 35% of the target population. respondents who were over the age of 40 were the least, this was represented by 5% of the total population. This indicates that the advertising companies had young people due to their dynamism and need to mould them and build their career in advertising.

Table 4.5: Age of Respondents

Category	**Frequency**	**Percentage**
Below 25 years	40	20%
25 -30 years	70	35%
31 -35 years	60	30%
36 -40 years	20	10%
Over 40 years	10	5%
Total	**200**	**100**

Source: Research Data (2020)

Fig 1.3 Age of Respondents



Source: Research Data (2020)

4.3.3: Years of Working In The Agency

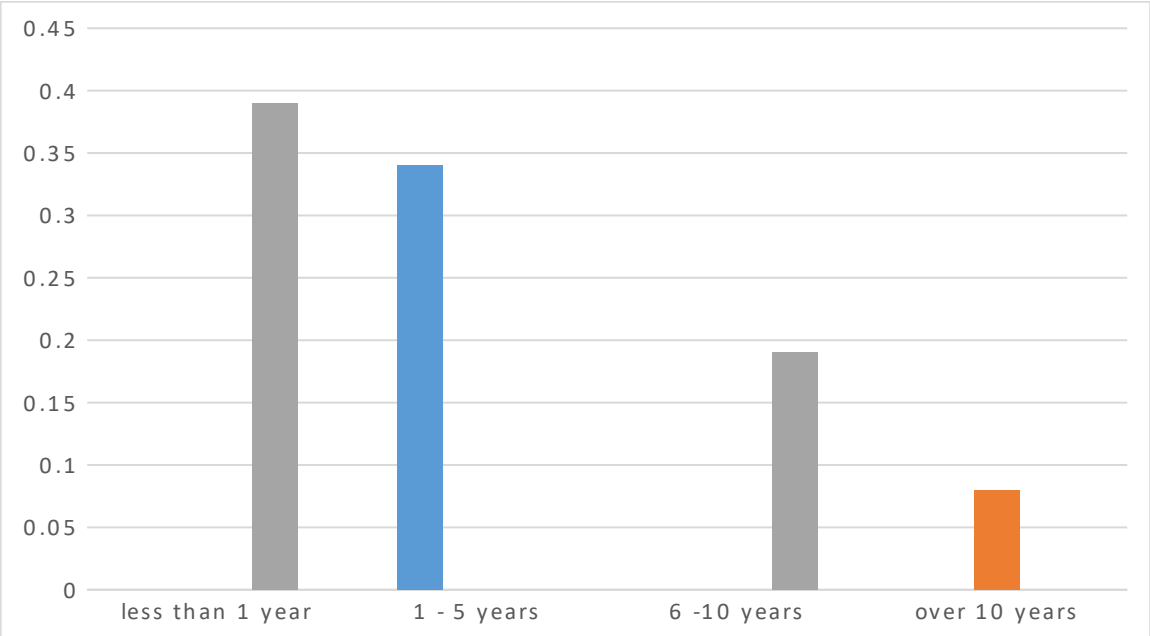
The study findings in table 4.6, clearly show that, most of the respondents had worked for a period of less than 1 year, this was represented by 78 (39 %). This clearly shows that some of the employees were on a contract basis at the advertising firms. Respondents who had worked for a period of 1 -5 years, were represented by 68 (34%) of the target population. Respondents who had worked in the advertising firms for a period of 6 -10 years were represented by 38 (19 %). Some of the respondents had been working in the advertising agency for over 10 years this was represented by 16 (8 %). This is a clear indication that these are employees who are in the management department and are major shareholders in the advertising companies.

Table 4.6 Years of Working In The Agency

Category	**Frequency**	**Percentage**
Less than 1 year	78	39%
1 – 5 years	68	34%
6 – 10 years	38	19%
Over 10 years	16	8%
Total	**200**	**100%**

Source: Research Data (2020)

Fig 1.4 Years of Working in the Agency



Source: Research Data (2020)

4.3.4 Level of Education

The results also suggest that most (40%) of the respondents had diploma level of education as their highest academic qualifications indicating that the advertising companies were keen on recruiting quality staff. This could have been informed by the fact that well educated staff require only minimum supervision and are more productive.

Table 4.7: Respondents Highest Level of Education

Category	**Frequency**	**Percentage**
PHD	4	2%
Masters	12	6%
Degree	30	15%
Diploma	80	40%
Certificate	74	37%
Total	**200**	**100%**

Source: Research Data (2020)

4.3.5 Previous Work Experience

From the study the findings in table 4.8 clearly show that the majority of employees in the advertising firms responded that they had no previous work experience before joining the advertising

companies. This was represented by 110 (55%) of the target population, whereas those that had previous work experience were represented by 90 (45%) of the target population. The study findings, clearly indicate that there is need for staff induction in order to improve on employee turnover.

Table 4.8: Respondents Previous Work Experience

Category	Frequency	Percentage
Yes	90	45%
No	110	55%
Total	200	100%

Source: Research Data (2020)

4.3.6 Induction for New Employees

From the study findings in table 4.9 it clearly shows that advertising companies hold induction programs for new employees. This was represented by 56% of the target population. From the study it was clear that, 44% of the advertising companies do not hold induction programs for their employees.

Table 4.9 Induction For New Employees

Category	**Frequency**	**Percentage**
Yes	112	56%
No	88	44%
Total	**200**	**100%**

Source: Research Data (2020)

4.3.7: Employee Cadre

From the study findings in table 4.10 it was clear that most of the respondents were from the non-management cadre, this was represented by 136 (68%) of the target population. From the findings it was clear that respondents in the management cadre were 64 (32%). From these findings It is clear that most advertising companies do not retain most of their employees on a permanent basis.

Table 4.10: Respondents Employee Cadre

Category	**Frequency**	**Percentage**
Management	64	32%
Non- management	136	68%

Total	**200**	**100%**

Source: Research Data (2020)

4.3 Descriptive Statistics

4.3.1 Use of Senior Staff And Employee Turnover

The first objective of the study was to analyse how use of senior staff in mentored induction programs influence employee turnover in advertising Companies in Kenya. Use of senior staff in mentored induction programs was measured using indicators comprising; Reporting employee progress and Answering queries. This objective was realized by asking the respondents to respond to several statements pertaining to their feelings on the use of senior staff in mentored induction programs in their advertising Companies. The status of effects of this variable was rated on a 5 point Likert scale ranging from; 1 = Strongly Agree to 5 = Strongly Disagree. The results of this are summarized in Table 4.11

Table 4.11: Use Of Senior Staff In Mentored Induction Programs And Employee Turnover

Item	**N**	**Mean**	**SD**
This advertising agency uses Senior Staff in mentored induction programs .	200	3.96	1.299
This advertising agency makes appropriate business decisions related to employees because it uses Senior Staff in mentored induction programs.	200	3.95	1.168
The firm receives timely mentored induction progress report because it uses Senior Staff in the program.	200	3.95	1.168
Senior Staff when used in mentored induction program in this agency, take charge of answering queries from both the new employee and the management.	200	4.1	1.09
Good relationship is built with the new employee in this company when Senior Staff is used in mentored induction programs.	200	3.895	1.192
Aggregate scores	**200**	**3.971**	**1.183**

Source: Research Data (2020)

The overall findings of the respondents showed that the respondents agreed with the statements in correspondence to the study. The aggregate mean was 3.971 and the standard deviation was 1. 183. From the findings in table 4.7, it can be deduced that the respondents agreed with the statements

given. It was found that the respondents agreed that when senior staff are used in mentored induction program, they take charge of answering queries from both the new employee and the management. This was represented by a mean of 4.1 and a standard deviation of 1.09. From the findings it was clear that, the respondents agreed that the advertising agencies make appropriate business decisions related to employees because they use senior staff in mentored induction programs and they also agreed to the statement that the firm receives timely mentored induction progress report because it uses senior staff in the program, this was represented by a mean of 3.95 respectively. They also agreed to the statement that good relationship is built with the new employee when senior staff is used in mentored induction programs, this was represented by a mean of 3.895. Hence, it is evident from these findings that use of senior staff in mentored induction program was instrumental in developing employees' confidence in the organization and self in the advertising companies.

4.3.2 Peer Mentoring Induction Program And Employee Turnover

The second objective of the study was to establish the relationship between peer mentoring induction program and employee turnover on advertising companies in Kenya. Peer mentoring staff induction was measured by the indicators that entail; building of trust and knowledge sharing. This objective was measured by asking the respondents to react to various statements concerning their satisfaction with their work resulting from peer mentoring induction process. The status of this variable was described and rated on a 5 point Likert scale ranging from; 1 = Strongly Agree to 5 = Strongly Disagree. These results are presented in Table 4.12.

Table 4.12: Peer Mentoring Induction Program And Employee Turnover

Item	N	Mean	SD
The Company encourages the use of peer mentoring in the induction program.	200	3.55	1.420
The new employees in this advertising agency get more conversant with the company environment when mentored by an experienced colleague in the same group and in the same department.	200	3.705	1.344
The new employees in this advertising agency builds more trust in the Company when mentored by a more experienced colleague in the same group and in the same department.	200	4.185	1.067
The new employee and a mentor who is a more experienced colleague in the same group and in the same department in this agency benefit from knowledge sharing.	200	4.045	1.118

The new employee in this Company get more acquainted with the basics of the organization's vision and mission when mentored by experienced colleague in the same group and in the same department.	200	3.9	1.207
Aggregate scores	**200**	**3.867**	**1.2312**

Source: Research Data (2020)

From the findings it was evident that the respondents agreed with the findings that the new employee builds more trust in the company when mentored by a more experienced colleague in the same group and in the same department. This was represented by a mean of 4.185 and a standard deviation of 1.067. The respondents also agreed with the statement that the new employee and a mentor who is a more experienced colleague in the same group and in the same department benefited from knowledge sharing. This was represented by a mean of 4.045 and a standard deviation of 1.118. From the findings in the table the respondents equally agreed that, the new employee in the advertising agency gets more conversant with the company environment when mentored by an experienced colleague in the same group and in the same department, this was represented by a mean of 3.705 and a standard deviation of 1.334. The aggregate scores from the table also reveal that, the respondents agreed with the statements, this was represented by a mean of 3.867 and a standard deviation of 1.2312. The overall conclusions of these findings were that peer mentoring induction program enables knowledge sharing and building of trust making the new employee to become confident and develop a sense of job security.

4.3.3: Ongoing Staff Support In Mentored Induction Program And Employee Turnover

Ongoing staff support in mentored induction program was measured by the indicators which include; coaching and advising and source of encouragement. In order to achieve this objective, the respondents were asked to respond to various questions describing the different indicators to ongoing staff support in mentored induction program they had observed in the advertising companies. The responses of this variable were rated on a 5 point Likert scale ranging from; 1 = Strongly Agree to 5 = Strongly Disagree. These results are presented in Table 4.13.

Table 4.13: Ongoing Staff Support In Mentored Induction Program And Employee Turnover

Item	N	Mean	SD
The senior employees in this advertising agency take the ultimate responsibility of coaching and advising new employees.	200	4.25	.905
The firm management is a source of encouragement of the new employee.	200	4.14	1.01
The Company provides the necessary resources and tools needed to support	200	4.1	1.12

performance of new employee.			
The Company guides new employees to the path of career development.	200	4.0	1.18
There is easy access to information in the company by the new employees.	200	3.635	1.407
Aggregate Scores	**200**	**4.025**	**1.124**

Source: Research Data (2020)

From the study findings it was clear that the respondents agreed that, the senior employees in the advertising agency take the ultimate responsibility of coaching and advising new employees, this was represented by a mean of 4.25. The respondents also agreed to the statement that the firm management is a source of encouragement to the new employee; this was represented by a mean of 4.14. From the respondents' responses, there was concurrence that, the company guides new employees to the path of career development; this was represented by mean of 4.0. The response with the least mean was the response that there is easy access to information in the company by the new employees with a mean of 3.635. The overall mean proved that most of the respondents agreed to the statements, the overall mean was 4.025. These findings suggest that majority of the employees at the institution had benefited considerably from the ongoing staff support in mentored induction programs and were drawing some satisfaction from their jobs as a result.

4.3.4 Employee Turnover In Advertising Agencies In Kenya

Employee turnover was the dependent variable in the study. It was measured by various indicators that entailed; resignation, retirement, internal transfers and dismissals. In order to achieve this objective, the respondents were asked to respond to various questions describing the different indicators to employee turnover they had observed in the advertising companies. The responses of this variable were rated on a 5 point Likert scale ranging from; 1 = Strongly Agree to 5 = Strongly Disagree. These results are presented in Table 4.14.

Table 4.14 Employee Turnover in Advertising Agencies

Item	N	Mean	SD
Poor mentored induction in this advertising agency leads to employee resignations.	200	4.175	.948
Early retirements in this advertising agency are caused by poor mentored staff induction.	200	2.25	1.35
Poor mentored staff induction in this advertising agency leads to increased levels	200	3.42	.89

of internal transfers within the organisation.			
Poor mentored staff induction in this advertising agency leads to employee dismissals.	200	2.13	1.23
Poor mentored staff induction in this advertising agency increases the employees' intention to leave the organisation.	200	2.98	1.18
Aggregate Scores	**200**	**2.991**	**1.1196**

Source: Research Data (2020)

From the responses most of the respondents did not agree with the statements, whereas others were not sure with if really the advertisement firms adhered to the given statements. Hence the overall mean was 2. 991. Some of the respondents agreed to the statements that, Poor mentored staff induction in this advertising agency leads to employee resignations, the mean was 4.175. Some of the respondents did not agree with the statement that Poor mentored staff induction in this advertising agency leads to employee dismissals. This was represented by a mean of 2.13. The respondents did not agree to the statement that, Early retirements in this advertising agency are caused by poor mentored staff induction, this was represented by a mean of 2.25. From the study findings some of the respondents were not sure that, Poor mentored staff induction in this advertising agency increases the employees' intention to leave the organisation, this was represented by a mean of 2.98. The overall finding on employee turnover is that, poor mentored staff induction may lead to poor employee turnover in the advertising companies.

4.4 Inferential Statistics

This section presents the results of the correlation and regression analysis done in the study to evaluate the relationships between the dependent and independent variables. Pearson's product moment correlation was used as well as multiple regressions.

4.5 Regression Analysis

To compute the strength between dependent variable and the independent variables the researcher conducted several forms of inferential analysis on the study data. In particular, the researcher conducted a multiple regression analysis, an Analysis of Variance (ANOVA), and evaluated the study's coefficient of determination.

4.5.1 Regression Of Use Of Mentored Induction Program And Employee Turnover In Advertising **Firms In Kenya**

Table 4.19 (i) Regression Of Mentored Induction Program And Employee Turnover In Advertising Firms In Kenya

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of Estimate**
	.768[a]	.621	.784	.1803
Dependent variable: Employee Turnover				

Source: Research Data (2020)

Table 4.19 (i) indicates that the adjusted R^2, also called the coefficient of multiple determinations, is the percent of the variance in the dependent variable explained uniquely or jointly by the independent variables. The model had an R square coefficient of determination of 0.621 which implied that 62.1% of the variations on mentored induction program were explained by employee Turnover, while the rest are explained by variables not fitted in the model.

4.19 (ii) ANOVA of Mentored Induction Program

Model		**Sum of Squares**	**Df**	**mean**	**F**	**Sig**
1	**Regression**	10.345	3	3.756	118.061	.000[b]
	Residual	9.213	197	.161		
	Total	19.558	200			
a).Dependent Variable: Employee Turnover In Advertising Firms						

Source: Research Data (2020)

The ANOVA results, Table 4.19 (ii), show statistically significant relationship between mentored induction program and employee turnover. The F-test results 118.061, was positive and significant at $p= 0.000 < 0.05$. Therefore, the null hypothesis was rejected and concluded that there was significant relationship between mentored induction program and employee turnover.

4.19 (iii) Coefficient Of Mentored Induction Program And Employee Turnovers

	Unstandardised Coefficients		**Standardised Coefficients**	T	Sig
	B	**Std. Error**	**Beta**		

	(constant)	.254	.188			
	Use of senior staff	.357	.076	.187	3.563	0.000
	Peer mentoring	.526	.082	.316	4.315	0.000
	Ongoing staff support	.461	.0.83	.284	4.108	0.000

Source: Research Data (2020)

Results in Table 4.19 (iii) indicate a multiple linear regression of mentored induction program and employee turnover in advertising firms in Kenya.

$Y=0.254+0.357X_1+0.526X_2+0.461X_3+\varepsilon$…….(i)

From the above regression equation, it was revealed that if; use of senior staff, peer mentoring and ongoing staff support remains at a constant zero, employee turnover of advertising firms would be at 25.4%, a unit change in use of senior staff would lead to 35.7% change in employee turnover, while a unit change in peer mentoring would change employee turnover by 52.6%, and a unit change in ongoing staff support would change the employee turnover by 46.1%. The study findings indicate that the overall mentored induction program was important, with impact on results of all variables on employee turnover.

5. Conclusions

Employee turnover is a key focus in the management of today's organizations and specifically the advertising firms in Kenya. This study investigated the relationship between mentored staff induction programs and employee turnover. Based on the findings of this study, it is reasonable to conclude that mentored staff induction programs contributed to employee turnover of advertising firms in Kenya. Accordingly, on the basis of the findings, the researcher concluded on some important relationships in the study. The use of senior staff in mentored staff induction program was found to have a positive significant relationship in influencing employee turnover through indicators such as; progress report by the mentor, answering of queries from both the management and the new staff and enabling the management to make business sound decisions about its workforce. The responsibility of helping guide someone's career and goals puts the more senior employee in a unique position. This is because the senior staff does not lose his position as a leader even though he needs to teach and to motivate new staff as well as to offer valued feedback.

Peer mentoring in mentored induction programs was found to have a positive significance in relation to employee turnover in advertising companies in Kenya. Peer mentoring benefits the Advertising firms and their new hires in several ways including; the new employee benefit from knowledge sharing which in turn benefits the company due to increased productivity, since the mentee and the

mentor share status apart from difference in experience, trust and confidence prevail and therefore the new hire is able to settle quite well, peer mentors provide individualized assistance and instruction to new employees, fostering a more structured and team-oriented workplace and finally peer mentors can provide valuable insight for employers about how best to utilize employee strengths. It was therefore observable in the findings that having peer mentoring in the mentored induction program positively and significantly influenced the rate of employee turnover in the advertising firms.

Finally, the study found that ongoing staff support had a positive significant relationship on employee turnover in advertising firms in Kenya. Comparatively, this variable "ongoing staff support" had the greatest positive influence over employee turnover in the advertising firms. Ongoing new staff support can be carried out in several ways. However, the study discovered two main ways by which the advertising firms in Kenya implement ongoing staff support in the process of mentored induction; first, through coaching and advising. The first step in any effort to improve employee performance is counselling or coaching. Coaching and advising are part of the day-to-day interaction between a supervisor and an employee who reports to him r her, or an HR professional or line manager. Coaching and advising often provides positive feedback about employee contributions. Employees need to know when they are effective contributors. Second, the study showed that the advertising firms provide a source of encouragement to their new hires. Companies understand that as soon as a new employee steps through the door, the honeymoon phase begins to deteriorate. They feel as though they are just another warm body, hired to complete tasks on command. Therefore they need encouragement to stick around. The study therefore concluded that ongoing staff support through coaching and advising as well as encouragement, significantly influence employee turnover in advertising firms in Kenya.

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41. Environmental and Sustainability Reporting in Selected Corporate Firms in Kenya: A Review of the Literature

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There is an emerging debate on the role of environmental and sustainability reporting in corporate firms as part of their wider goal of satisfying stakeholder needs and ultimately attainment of United Nations Social Development Goals. Therefore, this paper investigates the environmental and sustainability reporting practices in selected corporate firms in Kenya using a conceptual research approach or review of literature. This paper is underpinned by the legitimacy theory, stakeholder theory and agency theory while also entailing a review of accounting and finance theoretical and empirical literature. The study findings suggest that firms that have adopted environmental and sustainability reporting have more optimal financial performance as compared to firms that are limited to conventional reporting practices.

Keywords: *Environmental accounting, sustainability reporting, corporate firms, Kenya*

42. Firm Size, Financial Risk and Financial Performance. Evidence from Commercial and Services companies listed in Nairobi Securities Exchange

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Abstract

The study sought to assess the financial performance of the companies listed in the commercial and services sector at the Nairobi Securities Exchange (NSE), Kenya with an aim of determining the implications of firm size and financial risk on their performance. It was anchored on the agency theory. The study applied explanatory research design and the target population was the 14 companies listed under this sector. Secondary panel data contained in published annual reports for the year 2013 to 2017 was collected. A panel regression model was applied with the random effect model being used based on the Hausman specification test. Findings showed that financial risk had mixed effects on performance as proxied by return on equity (ROE). The findings further showed that firm size had a moderating effect on the relationship between financial risks and performance. It concluded that firm size played a role in the risk management of a company i.e. companies with higher total assets managed risk better than their counterpart. The study recommends that for companies to record improved financial performance, they needed to manage their financial risks by implementing risk management initiatives and increasing their total assets base.

Keywords: *Firm Size, Financial Risk, Financial Performance, Commercial and Services Companies, Nairobi Securities Exchange*

43. Dimensions of IT capability and performance of manufacturing firms in Nairobi City County, Kenya

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Abstract
The business competitive environment has increasingly been dynamic over the last three decades, a case which is associated with rapid changes in technology, globalization and blurred firm boundaries. These changes have not only been attributed to global and national competitive forces but also to other environmental alterations. The question whether Information Technology (IT) capabilities lead to competitive advantage and improved performance in firms has raised a big debate amongst scholars. While some scholars posited that the application of technological and organizational resources in building IT capabilities significantly contribute to improved firm performance, others argue that IT capability has no effect on firm performance. Additionally, there is no consensus among researchers on the relationship between IT capability, competitive advantage and firm performance. Manufacturing firms are often faced with challenges such as changes in technology, innovative products, customer demands and the desire to remain flexible. Firms respond to these conditions by adjusting their purpose and shape through deployment of appropriate strategic capabilities to overcome the challenges enhance competitiveness and sustain high performance. A significant number of manufacturing firms have made a huge investment in IT to achieve economic value and to cope up with the ever changing business environment. However, some firms have recorded appreciable benefits while others have not with noted renewed relevance of IT extending the traditional interpretations within the context of Resource based view (RBV). This paper will examine the dimensions of Information Technology capability and firm performance in manufacturing firms in Nairobi City County Kenya and further investigate the mediating effect of competitive advantage, in the dimensions of IT capability and firm performance. The study will be anchored on Resource Based View, Unified Theory of Acceptance and Use of Technology and Dynamic Capability Theory. This study will adopt positivism philosophical approach while descriptive and explanatory research design will be used. Random sampling technique will be applied to derive a sample of 174 firms from a population of 526 manufacturing firms in Nairobi City County which are members of Kenya Association of Manufacturers (KAM). The firms are grouped into 13 categories. In the study, primary data will be collected through a semi-structured questionnaire. The data will be analysed using descriptive analyses, simple and multiple regressions. The findings will benefit academicians and researchers by providing empirical evidence on of changing firms' resources, operation routines and competences which in turn affect firm performance. Other stakeholders such as managers will be guided in making informed decisions on appropriate technological innovations, integration and reconfigurations.

Keywords: *IT capabilities, performance, competitive advantage, manufacturing firms, dynamic capability.*

44. Concentration on Core Competency and Organizational Performance of Madison Group of Companies in Kenya

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Abstract
Insurance companies in Kenya are forced to cope with dynamic and competitive environment due to the increased effects of globalization and internationalization. Strategic demerger is one strategy that aims at differentiating an organization from competitors in a way that in the future it remains competitive. As the world market becomes increasingly rapid and dynamic, companies require responsive strategies that are capable of responding rapidly to market changes in order to fulfill customer requirements and to rival with business competitors hence their survival in the industry. This paper presents the results of the study on strategic de-mergers and organizational performance of Madison group of companies in Kenya. It focuses on the effect of concentration on core competency on organizational performance of Madison group of companies in Kenya. This study is anchored on resource based theory and it adopted a descriptive research design. The target population was 161 management level employees in all the branches of Madison group of companies. Stratified random sampling technique was adopted in selecting study sample. The sample size of the study was 115 respondents. Data collection tool was questionnaire. SPSS was used in analyzing data where quantitative data was analyzed by computing descriptive statistics and inferential statistics. The results were displayed in tables and figures. Qualitative data was analyzed using content analysis. The study found that concentration on core competency positively and significantly influenced organizational performance of Madison group of companies in Kenya. The study therefore recommends management of the company to resolve to increasing performance of the organization through proper management of core competencies which include cooperation, shared vision and empowerment.

Keywords: *Core competency, strategic demerger, organizational performance, cooperation, shared vision, empowerment.*

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45. Information Technology and Performance of Occupational Pension Schemes in Kenya

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Abstract
Funded pension systems have gained popularity since they contribute to the economic growth of countries worldwide through direct contribution to the GDP. In Kenya, the pension system contributes to an estimated 68 percent of the total income of retirees and controls wealth estimated at Ksh. 397 billion, the equivalent of 30 percent of the country's GDP. Evidence suggests that pension schemes in Kenya are associated with loss of billions of money every year and results to low economic development of the Kenyan economy hindering realization of achievement of Vision 2030. This study sought to establish the relationship between information technology and performance of occupational pension schemes in Kenya. The study was guided by five specific objectives, that is, employee IT skills, IT policy, top management IT support and organization IT resources, regulation as a moderating variable and performance of pension schemes as the dependent variable. The study

was guided by the theory of experiential learning, the unified theory of acceptance and use of technology (which the study is anchored), the upper echelons theory, the resource based view and the institutional theory. The study used descriptive research design and the target population constituted 1,216 registered occupational pension schemes in Kenya. Stratified sampling technique was employed which involved dividing the population into different strata which included: defined benefits and defined contributions. The study selected a sample of 192 respondents .Simple random sampling was also employed. The instrument of data collection was a questionnaire which was self-administered. A pilot study was conducted to test validity of the questionnaire and the Cronbach's alpha was utilized in testing its reliability. A regression model was used to analyze the objectives and a moderated multiple regressions (which is an inferential procedure consisting of comparing two different least-squares regression equations) was used to test the moderating effect of government regulation while content analysis was used to analyze qualitative data. The collected data was presented using frequency tables, bar charts, and pie charts. The study will benefit several stake holders among them the government of Kenya (regulator), the pension schemes management on the influence of information technology on performance of pension schemes in Kenya. The study findings showed that all the five variables had significant influence on the performance of occupational pension schemes in Kenya. The study concluded that IT human capital policy; IT universal internet access policy and Harmonization of IT policy initiatives and IT guideline policy influence IT policy on the performance of pension schemes in Kenya. The study recommends that IT leadership support; Level of involvement in information requirement analysis should be enhanced since both influence top management IT support on the performance of occupational pension schemes in Kenya.

Keywords: *IT policy, Occupational pension schemes, Defined Benefits Scheme, Defined Contribution Scheme, liberalization, Technology.*

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46. Big Data Analytics for Marketing Intelligence: A Review Of Literature

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In this era of web 2.0 the concept of big data analysis is growing tremendously thus changing the panorama of marketing. The focal point of this big data analytics is the market intelligence which is imperative in providing information concerning a firm's market on the basis of competitors, consumers' behavior and trends. Despite the various benefits that a firm can harness from the big data analytics, there still exists limited comprehensive literature review especially in the developing countries. This paper therefore seeks to examine past literature based on the four cornerstones of marketing intelligence; competitors, customers, products and market. Content analysis of journal articles in the period 2010-2019 has been utilized in this study. This paper has provided a discussion on various methodologies employed as well as topical inclinations. The findings have indicated that currently there is much focus on big data analytics to enhance marketing intelligence and decision making. Recommendations and directions for further research have also been outlined.

Keywords: *Big data analytics, Marketing intelligence, Content analysis, Consumer behavior*

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47. Assessment of the Role of Operational Capability on Firm Performance in the context of Air Kenya Express Limited, Nairobi City County, Kenya

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Abstract

In the recent years, performance in the airline industry globally, regionally and locally has been unstable more so due to the dynamism of the environmental parameters that the aviation industry is characterized with. Organizations in this industry therefore ought to be able to deal with the market and industry changes, and even emerging and foreseen global epidemics that could affect the global economy, if at all they have to attain remarkable success in performance. This study sought to examine the influence of operational capability on performance AirKenya Express limited in Kenya as one of its specific objectives. Operational capability had four variables which are responsiveness, reconfiguration, customization and innovation. The study determined that operational capability has an impact on the performance of AirKenya Express Limited, and the organization can utilize this to improve its performance through monitoring, quality assurance, surpassing customer requirements, interests and needs. This study was anchored on resource based view of the firm and dynamic capabilities theory. Two research designs that were used are explanatory and cross sectional research designs. The research target population was the valid employees of Air Kenya Express Limited, and in particular those based at its headquarters at Wilson Airport Nairobi and those in other outstations that are based in Kenya. The selection of the respondents of this study utilized stratified proportionate sampling. Primary and secondary data were used, whereby the primary data collection was done using the questionnaires that were administered using the drop and pick method while the secondary data collection was done through a review of relevant documents. The purpose of secondary data was to validate the primary data collected. The descriptive statistics were presented in the form of percentages, frequencies, mean, standard deviation and co-efficient variations. They served the purpose of providing summary measures of the observed data. Conclusions and generalizations were made based on the inferential statistics done through multiple regression analysis. The analysis of quantitative data was presented in terms of tables and figures while content analysis was used for the qualitative data and presented in a prose form

Keywords: *Role of Operational Capability on Firm Performance in the context of AirKenya Express Limited, Nairobi City County, Kenya*

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48. The Role of Strategy Formulation on Service Delivery: A Perspective of Turkana County in Kenya

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Abstract

Service delivery in Turkana County has been affected by a number of issues such as shortage of skilled workers in the county. The study looked at how strategy formulation affects service delivery in Turkana County. Quality service delivery should be a priority in Turkana. Turkana residents should experience the fruits of devolution and this can be done by giving them better services. The county government should work towards improving the living standards of its residents. The theoretical review focused on two theories that include; the agency theory and resource based theory. Descriptive survey design was employed. This study will be helpful to Turkana County; it will be in

a position to review its preposition so as to make crucial decisions that in the end will bring forth development. This study found out there exist a positive relationship between strategy formulation and service delivery in Turkana County. It was established that Turkana County does practice delegation. The study also revealed that employees are engaged in strategy formulation process by management of Turkana County. Public participation is effective since public are actively engaged by the county of Turkana. Findings from the study show that there exists effective communication during the strategy formulation processes. This study recommends training opportunities to be availed to employees of Turkana for them to handle their task diligently and more effectively. A strong internal control system was also recommended. This will aid in achieving the county's strategies. Turkana County should also consider having partnership with other stakeholders. This may aid the county in achieving its goals and objectives.

Keywords: *Service delivery, Strategy formulation, Public participation, Devolved Governance system, Descriptive survey*

49. The Role of Management Consultancy on Organizational Development

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Abstract
This article draws upon empirical research into the concept of management consultancy as a tool for organizational development. Organizations globally and in the local arena are facing a new norm on metamorphosis of work patterns, and at the same time increasing competition in the marketplace. In addition, organizations are pushed to implement and learn new patterns of carrying out work. Further, to increase overall effectiveness, planned processes through tailor –made changes and interventions are paramount to be thought through to create the desired organizational climate wherein an organization is able to realize its goals. The insatiable demand by organizations for new and stable technological platforms for work flow processes is on an upsurge, hence the need for management consultancy with the relevant stakeholders to meet this demand. This paper therefore looks at the effect of internal and external management consultancy as a driver for organizational development.

Keywords: *Management consultancy, organizational development*

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50. Business Intelligence User's Capabilities and Performance of Mobile Service Providers in Kenya

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ABSTRACT

The mobile service providers play a critical role in the knowledge-led service enterprises though faced with unstable trends in their growth. The Quality-of-Service (QoS) report by the Communication Authority of Kenya indicated that all the mobile service providers have been fined by their regulator for failing to achieve the 80 percent minimum threshold set for compliance since the year 2014. A positive derivative for performance can be achieved by generating and diffusing new knowledge through innovation activities based on the use of Business Intelligence (BI). This study investigated the influence of BI users' capabilities on the performance of mobile service providers in Kenya. Specifically, the study sought to determine the influence of level of skills, ability to utilize data, willingness to optimize BI and level of integrity of the BI users on performance of mobile service providers in Kenya. The study was anchored on Technology-Organization-Environment framework and Technology Acceptance model. The study adopted positivism philosophy and explanatory non-experimental design research. The target population included three mobile service providers in Kenya, namely Safaricom limited, Telkom and Airtel. Secondary panel data for the period 2010-2019 was collected. Data analysis involved descriptive statistics percent and panel regression to find out the nature and magnitude of the relationships between the variables and test the hypothesized relationships. The study findings established that user's capability had

significant influence on performance of mobile service providers in Kenya. The study concluded that majority of users optimized BI information which enabled the respective firms to increase their performance. However, there was need to enhance level of skills of the users, ability to utilize BI data and their level of integrity for better performance of the mobile service providers. The study recommended that usefulness and ease-of-use of BI capabilities should be carefully considered by the management of any organization.

Key words: *Business Intelligence, Quality of service (Qos) standards, Average Revenue per User (ARPU), Users' Capabilities, Mobile service providers*

Introduction

Research has established that the mobile service providers are the main growth pillar for other sectors of the economy as well as a major enabler to the enterprise growth of regions (Venkatram & Zhu, 2012). The economic growth of a country is enhanced through adoption of mobile service providers by connecting not only the international financial market but also the domestic financial market and commodity market. Badra*n et al*., (2012) postulated that for a majority of new frontiers, mobile service providers are key sources of revenue for national treasury. Considering the telephone density and its effect on the business environment, International Finance Corporation and World Bank, (2013) reported that as the world wide telephone density (density of telephone users) grows by 10 percent, the global gross domestic product (GDP) should go up by 6 percent.

Shollo and Constantiou (2013), asserted that for an organization to develop competitive advantage in business environment, the accessibility of reliable and adequate information in a timely manner is paramount. In the contemporary knowledge-based economy, innovation activities, which generate and diffuse new knowledge, have become major research topics (Karlsson, 2014). This cannot be achieved without use of current Business Intelligence systems especially the idea of Business Intelligence (BI), ICT and digital networks. Business Intelligence is a combination of methods and concept geared to enhancing decision making in the business to arrive at a fact based support system for the firm (Irtaimeh, Obeidat, Abualloush, & Khaddam, 2016).

BI applications (Olaru, 2014) play a significant role in the mobile service providers due to the availability of large volume of data and the rigorous competition in the industry. Globally, mobile network technology has progressively spread worldwide positively impacting lives. Despite the tremendous growth, the mobile service providers still face challenges. There is a shortage of growth in traditional mobile services in developed countries. As of 2017, 2.3 billion people in developing countries did not use mobile services and 3.9 billion did not have access to the mobile internet (Kenney & Pon, 2011). Emerging markets are also witnessing decreasing growth rates and lower voice ARPU (Average Revenue per User).

Meanwhile, India boasts of being the second-largest market for Telecommunications products globally, with around 1.19 billion members on the close of September 2018. African mobile telecoms have witnessed massive growth over the last decade; subscriptions in terms of Compound Annual Growth Rate (CAGR) reached 3.3 percent during 2012-14 and 4.2 percent 2015-17

(Deloitte & Touche, 2014). Large countries with high subscription growth or comparatively higher Average Return per User (ARPU) levels continue to be viewed as high-growth markets. In much of Africa, there is evidence of limited network penetration and access coverage remains a major block for universal mobile internet acceptance. In Kenya, mobile broadband access has had a penetration rising to 12.7 million in 2016 from 7.2 million in 2015. The mobile firms offer vast possibilities for investments and possible partnerships (Maitai & Omwenga, 2016). The Kenyan administration has made it a universal right to access ICT which is a major objective of Kenya's Vision 2030 which is aimed at propelling Kenya from a least developed nation to a middle-income country.

The mobile mass telephony valued service providers in Kenya is comprised of three firms; Safaricom Limited, Airtel Networks Kenya and Telkom Kenya Ltd. These firms offer a wide range of services which include voice, data, cloud computing, mobile money transfer and mobile money banking. Safaricom Kenya Limited has the largest market share in an intensively competitive market of 71 percent as at December 2017. The second largest operator by market share is Airtel at 15 percent. This is followed closely by and 9 percent respectively (www.ca.go.ke). Most organizations do not have the skills and organizational commitment for managing, implementing and supporting significant cross-functional BI projects. The firm's knowledge of where key complementary skills are located, specially without the firm is an important requirement for this case: "the kind of skill set of who understands what, who may assist with your issue, or who may be able to utilize new data" (Jayawardhana & Weerawardena,2014).

Statement of the Problem

According to the Kenya Economic report (2017), the ICT sector, in which the mobile service providers are the main players, was the lowest contributor in terms of GDP rating at 6.1 percent by end of 2017, failing to achieve the set target of 8 percent as per the second medium term plan of vision 2030, (Kenya Economic Outlook 2017), (http://www.kippra.org,). In addition, the Communications Authority of Kenya has penalized the mobile market players since 2014 for failing to achieve the 80 percent minimum threshold set for compliance thus failing to adhere to the standard procedures (CAK, 2017), (Www.coastweek.com). Further, the market performance in the internet and mobile service providers fail to indicate stable trends in their growth (Communications Authority of Kenya, 2018). This is a clear indication that the mobile service providers are not performing as expected by their regulator and in the set standards of the Vision 2030.

The Firm's focus should be directed to BI capability which extends to competence and provision of insights by applying data management, infrastructure and people capability to grow the enterprise into a great force. Caseiro and Coelho, (2018) revealed that learning happens when individuals share their information, data, and information. Njuru, Julius (2015), revealed that although many managers knew of existence of BI systems at their companies, they did not know of their capabilities. In this consideration of the outcome, the current study sought to investigate the influence of BI Users' Capabilities on performance of mobile service providers. Njenga, Wanja, Mohamed and Angaga, (2012), in their study to investigate the application of data mining in the Telecommunications industry in Kenya, recommended that relevant staff in these firms should be further trained on the

concept of data mining and application of business intelligence, in order to enhance the adoption of the right data mining methodologies, coupled with allocation of additional resources to this effort. The reviewed studies showed that previous studies have focused on different measures of performance of mobile service providers and also failed to analyze the effect user's capabilities on performance. This study sought to investigate the effect of BI users' capabilities in terms of the level of skills, the user's abilities to utilize BI data, the level of willingness to optimize BI information and the level of integrity. The measures of the performance of mobile service providers were ARPU and QoS Standards.

2.0. Literature Review

2.1 Theoretical Foundation

The first theory that informs this study is the Technology Acceptance Model (TAM) which aims at explaining the behavior of ICT usage was authored by Davis in 1989and. The TAM prediction of the user acceptance of any technology is based on perceived usefulness and perceived ease-of-use. Inside the TAM, the Perceived Usefulness (U) is characterized as the degree to which a given client accepts that utilizing a framework will upgrade his/her exhibition. On the other hand, Perceived Ease-of-Use (EOU), is defined as the extent to which a given user believes that by using a given system, his/her efforts will be reduced (Davis, 1989). Both the perceived usefulness and the perceived ease of use are based on the perceptions of the user's belief about the system. According to the TAM, Perceived Usefulness (U) and Perceived Ease of Use (EOU) impacts significantly on a user's attitude towards the use of a system. The perceived ease of use is highly related to the training and skills that the employees possess. The mobile service providers should train their staffs on the implementation of the systems to enable them apply the technology effectively and efficiently.

The Technology-Organization-Environment (TOE) structure is the second theory that has informed this study because it recommends that the mechanical setting, authoritative setting, and condition setting are three significant components that impact the procedure by which associations receive and execute developments (Tornatzky and Fleischer 1990). The Technological setting identifies with the advances accessible to the association and portrays both the current advances being used and the new innovations important to the firm. The authoritative setting portrays the hierarchical structures and procedures that can encourage or compel development reception and utilization. It alludes to hierarchical attributes, for example, extension, size, and the measure of slack assets accessible inside. The ecological setting envelops outer components including industry/administrative conditions that may impact innovation reception. It incorporates the field where the firm directs its business , rivals, Government and so forth. These three settings present limitations and open doors for mechanical development (Tornatzky and Fleischer, 1990).

Since BI usage possesses specific characteristics in three contexts that necessitate examination, integrating TOE framework into this study guided the research. First, the unique technological characteristics possessed by BI implementations can significantly influence their usage. As BI outputs rely on quality input data, the motivation to use BI depends on the output and this output is in turn dictated by the back-end IT infrastructure that supports quality data creation. Second, prior

research suggests that capital intensive investments like BI need some critical mass as is available in large organizations and hence studying organizational characteristics is required. Thirdly, the BI can effectively position the firms to react to marketplace changes, studying the influence of market characteristics like environment dynamism and if they motivate BI usage are vital areas to examine.

2.2 Empirical Literature Review

Caseiro and Coelho, (2018) proposed a model to research the immediate impacts of Business Intelligence (BI) on execution, and the aberrant impacts, through system learning (NL) and inventiveness (INNOV). The examination depended on an example of 228 new companies from various European nations. The specialists investigated the proposed connections utilizing Structural Equation Modeling. The consequences of this investigation indicated constructive outcomes among the various factors and presumed that Business Intelligence limits affect arrange learning, ingenuity and execution. Learning happens when individuals share their information, data, and information. From these discoveries, it tends to be contended that some consideration must be made to the business knowledge limits in new companies, given the effect it can have on firm execution. Likewise, the system learning impact through BI is huge and presents a positive impact in execution. As new companies for the most part are battling with absence of assets and the group faces numerous consideration requests it appears that proposing business insight rehearses is another test to survived, however as data is a secret weapon for better basic leadership it can result. This study explored learning as an indicator of users' capability in influencing the performance of mobile service providers in Kenya.

Njiraini, Gachanja and Omolo, (2018) used a Probit econometric model to analyze factors that affect Micro and Small Enterprises (MSEs) decision to innovate or not. Stratified sampling techniques were used to collect data. The information was broadly delegate as the review utilized the Kenya National Bureau of Statistics (KNBS) 2012 Census of Business Enterprises. The KNBS Census had 6147 firms that had in excess of five representatives and another 3717 firms with five or less workers. Further than the complete firms in the Census, the review met 720 firms with in excess of five representatives and another 360 firms with five or less workers. The review's unit of study was the physical foundation where the venture administrators were met. Results from the examination show that the normal number of long stretches of instruction for a generation laborer, physical capital force, age of a MSE, access to back and measure of a MSE are significant components impacting MSEs advancement choices. Higher outside possession and chief's experience were found to go about as deterrents towards MSEs' choice to enhance. In view of the discoveries study obviously human capital information and a MSE's asset blessing emphatically impact MSEs imaginativeness. From a hypothetical point of view, there is requirement for aptitudes division to separate human capital abilities that are generally significant for invigorating MSEs imaginative exercises. The current study explored skills and more dimensions of users' capability and their influence on performance within the mobile service providers in Kenya.

Gaardboe *et al.,* (2017) empirically tested the DeLone and McLean's IS Success Model on a Business Intelligence System applied to human services data Systems at 12 open clinics in Denmark.

The reason for the examination is to explore which variables add to BI Success. A sum of 1351 end-clients answered to the poll, and the reaction rate was 32 percent. Eight connections in the model were tried, and four connections were seen as huge. No huge relationship was found between Information Quality and Use (H1) in either Model 1 or Model 2. This demonstrates higher Information Quality doesn't naturally prompt more prominent utilization of BI. There is a positive and huge connection between System Quality and Use of the System (H3). In this manner, if the BI framework is anything but difficult to utilize and simple to learn, workers will utilize it more. With respect to System Quality, the thing 'The data in BI is straightforward' was appraised most noteworthy by the clients. The clients found that the framework was anything but difficult to utilize, and in last spot, it was anything but difficult to learn. Framework Quality is emphatically and fundamentally connected with Use and User Satisfaction. In this study, the expertise of users was explored as a measure of BI users' capability in relation to the performance of mobile service providers in Kenya.

Njenga, Wanja, Mohamed and Angaga, (2012) carried out a study to investigate the application of data mining in the Telecommunications industry in Kenya. Specifically, the researchers sought to determine the level of awareness of the concept of data mining, and if the firms were applying data mining in the traditional application areas of network management, sales and CRM, fraud detection, and, as identified in literature. They surveyed all the four firms in the industry. The study established that though data mining is a new concept, all the firms were aware of it, and that they had recently carried out a data mining exercise. They all indicated that they applied the knowledge gained, and that they improved the processes and techniques of data mining in subsequent exercises. The study produced useful insights into the current appreciation and utilization of business analytics in the firms in the Kenyan mobile industry, with the research data pointing to these firms as being classified in Stage 4 of Davenport's stages of analytical competition among organizations: they have the vision of data mining, and are close to achieving it, they are competing on the basis of analytics, but also on the basis of other factors. They recommended that relevant staff in these firms should be further trained on the concept of data mining and application of business intelligence, in order to enhance the adoption of the right data mining methodologies, coupled with allocation of additional resources to this effort. The current study tested the effect of level of skills and integrity and how they influence users' capabilities of BI tools on the performance of mobile service providers in Kenya.

Fletcher, (2008) opines that Business Intelligence system technology allows the users to respond quickly and understand complex information to make better and faster decisions to realize business goals. BI can possibly convey esteem if the clients are equipped for using data picked up and transform them into sound business choices. The clients must have inside and out aptitudes of business procedures and activities so as to follow up on the aftereffects of the investigator. Numerous purchasers essentially don't have time, tendency or expected information to employments of the BI

frameworks. Along these lines, quality clients with various arrangement of abilities, for example, specialized, business and scientifically are required so as to perform essential errand.

3.0 Research Methodology

The study embraced Positivism research approach as the study is quantitative and is associated with testing of hypothesis. Positivists hold that facts do exist and can actually be measured. Explanatory non-experimental study design was used for this study where the mobile service providers were involved. An explanatory research seeks to establish causal relationship between variables and a non-experimental research is systematic empirical inquiry in which the researcher does not have direct control of independent variables because their manifestations have already occurred (Sekaran and Bougie, 2011).

An empirical model was used to test the statistical significance of the relationship involving the independent and dependent variables. A rating likert scale ranging from 1=strongly disagree to 5=strongly agree was used to measure the indicators of the independent variable (users' capability) and the dependent variable of performance of mobile service providers measured by Average revenue per user (ARPU) and Quality of Service (QoS) standards. This study focused on three mobile service providers in Kenya namely; Safaricom limited, Airtel and Telkom Kenya. This was based on the Communications Authority of Kenya (CA) list of mobile service providers within the Telecommunication industry that have been active and operational in the period under study (2010-2019) without changing ownership (CA, 2017).

The study adopted a census approach and therefore all three (3) mobile service providers were studied. Secondary data was utilized which was collected via document review from sector statistical reports from the Communication Authority of Kenya (CA); mobile service providers audited published financial statements and annual data from the Kenya National Bureau of Statistics (KNBS) for the period between 2010 and 2019. Data collected was analyzed using descriptive statistics and panel multiple regression analysis. The study ensured that ethical standards were upheld by seeking permission from the relevant authorities prior to the commencement of the study. The data collected was strictly kept private and confidential with use only for academic research, ensuring privacy of the firms from which data was collected.

4.0. Results and Discussions

The study sought to establish the effect of BI user's capabilities in mobile service providers by analyzing the skills, ability to utilize data, willingness to optimize BI and level of integrity capabilities. The table below presents the descriptive results of the user's capabilities which include percentages, mean and standard deviation.

Table 4.1 Users' Capabilities in mobile service providers in Kenya

	Very Unsatisfactory	Unsatisfactory	Moderately Satisfactory	Satisfactory	Very Satisfactory	Mean	Std Dev

Skills	6.7%	20.0%	30.0%	33.3%	10.0%	3.20	1.10
Ability to Utilize Data	23.3%	3.3%	36.7%	23.3%	13.3%	3.00	1.34
Willingness to Optimize BI	13.3%	13.3%	20.0%	36.7%	16.7%	3.30	1.29
Level of Integrity	6.7%	13.3%	33.3%	16.7%	30.0%	3.50	1.25
Overall Mean score						3.31	

The results in table 4.1 showed that the level of skills of BI users in mobiles services providers were satisfactory (33.3 percent), moderately satisfactory (30.0 percent) while 20.0 percent were found to be unsatisfactory. On average, 43.3 percent of the users (33.3 percent satisfactory and 10 percent very satisfactory) had satisfactory level on the level of skills imparted on them to manage BI related activities. This percentage was slightly below half of the users which indicated low level of training and motivation towards use of BI tools. In addition, 26.7 percent were unsatisfied with the level of skills attained in using BI tools.

The study further sought to find out whether BI users had the ability to utilized data. The results showed that majority, as indicated by the mean of 3.00 had moderate ability to utilize data. It is evident that only 36.6 percent (23.3 percent satisfactory and 13.6 percent very satisfied) of the users were satisfied with the abilities achieved in making use of data in the firms while 26.3 percent were unsatisfied. In comparison to the other indicators of users' capabilities, the ability to utilize data scored the lowest mean of 3.00 though above average. The ability of the users to utilize data was not fully developed for maximum output of the firms in the area of a Business Intelligence.

The willingness to optimize BI users' capabilities was also tested and the results indicated that the majority of the BI users were moderately willing to optimize BI capabilities as represented by the mean of 3.30. In addition, 16.7 percent of the users were very satisfied and 36.7 percent were satisfied with their willingness to optimize BI capabilities. This adds up to 53.4 percent level of satisfaction of the users which is the highest as compared to the other indicators of users' capabilities considered in the study. This percentage of the users is above average which indicated that most of the users were willing to make use of BI tools and effectively optimize BI information.

The last indicator of Users' capabilities was the level of integrity within the users. The results showed that slightly below half ,46.7 percent (16.7 percent satisfactory and 30.0 percent very satisfactory), of the users had satisfactory level of integrity while 33.3 percent were moderately satisfied with their level of integrity in the use of BI tools. A mean of 3.50 indicated that the users of BI tools had moderate level of integrity in their work output.

The overall mean of 3.31 implied that majority of the users had moderate capabilities in utilization of the business intelligence in mobile services providers in Kenya. Lack of skilled, competent and capable users limits the effective of companies in use of BI capabilities. This finding agreed with Kiron *et al.,* (2014) who highlighted that BI capability definition extends to competence and provision of insights by applying data management, infrastructure and people capability to grow the enterprise into a great force. Ross *et al*., (2013) who argued that companies focus should be directed to building a formidable capability, which yield unmatched abilities by existing competitors by empowering their user of these technologies to be able to effective use to derive value for the companies.

Correlation analysis was also conducted to investigate the relationship between BI users' capabilities and performance of mobile service providers in terms of ARPU and Qos standards.

Correlations		Users Capability Mean	Overall QoS Performance	ARPU
Users Capability Mean	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	30		
Overall QoS Performance	Pearson Correlation	0.499	1	
	Sig. (2-tailed)	0.000		
	N	30	30	
ARPU	Pearson Correlation	-0.311	0.148	1
	Sig. (2-tailed)	0.003	0.436	
	N	30	30	30

The correlation between User capability and QoS Performance was r=0.499, p=0.000. This finding implied that user capability was positively and significantly correlated with QoS Performance. The outcome indicated that improving user capability would result to an increase in QoS Performance of mobile service providers in Kenya. The results further show that the correlation between user capability and ARPU was r=-0.311, p=0.000 which implied that user capability had a negative and significant correlation with ARPU for mobile service providers in Kenya. The findings implied that increasing user capability decreased ARPU for mobile service providers in Kenya.

The findings showed that improving user capability among the mobile services providers increase the quality of services of the firms since user's satisfaction in the services provided was increased. Increasing user's satisfaction in the services provided implied that overall quality of services would be highly rated the stakeholders. On the other hand, improving user capability seem to negatively impact on revenue per users because of the efficiency of the services provided. However, since there

is increased quality of services, the firms can rely on maximizing the overall revenue by increasing the numbers of users instead of the focusing on the average revenue per users.

5.0. Conclusion and Recommendation

The study concluded that the BI capabilities were important and that the real impact on firm performance depended on usability of the BI capabilities as indicated by the results of the correlation analysis. The firms should enhance effective training and development of the users of BI tools in order to boost the level of skills and increase the abilities to utilize BI data within the firms. The firms that invested in the right BI users' capabilities stood to benefit more than those that invested in non-consequential BI users' capabilities.

The study recommends that usefulness and ease of use of BI capabilities should be carefully evaluated by management of firms that intend to invest in BI capabilities. Failure to guarantee usefulness and ease of use of BI capabilities results on dismal performance.

6.0 Suggestions for Further Studies

A longitudinal approach was followed by most of the studies reviewed to determine the BI users' capabilities influencing performance of mobile service providers in Kenya; future studies can use cross sectional approach in order to provide results which can be generalized. The performance of mobile service providers might be affected by the services provided by the mobile service subscribers e.g. one service provider might offer more services than the other; a future study can focus on a comparative study to analyze if there are any differences in the BI users' capabilities between the different mobile service providers. Since level of skills has been found to be a factor influencing the performance of mobile service providers, it would be interesting to do a comparison of the type and depth of training offered by these different mobile service providers and see their impact on the performance. Further study can be conducted covering a large sample size in order to bring out more relevant and reliable results that will reflect the telecommunication industry as a whole.

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51. Capital Structure, Corporate Investment and Firm's Value of Selected Firms Listed at Nairobi Securities Exchange, Kenya

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ABSTRACT

The long term survival of a firm is one of the most important goal of listed firms. This ensures continued growth of wealth for the shareholders. To enable this, increased and stable firm value should be the main goal of financial managers of these firms. However, the Kenyan securities market has undergone periods of decline in firm value as shown by reduction in market capitalization from a high of 6161 points in 2007 to a low of 2789.64 points in 2016. The study was carried out to determine the effect of capital structure decisions and corporate investment decisions on firm value of selected firms listed at the NSE. The moderating effect of political risk on the relationship between each of the variable and firm value was further tested. The target population was the 46 non-financial companies listed in the NSE. A census of all non-financial firms listed in the Nairobi Securities Exchange was done. The study utilized secondary data from financial reports as published in the NSE handbook and Kenya National Bureau of Statistics for the period between 2008 and 2016. Panel regressions analysis and Pearson's product moment correlation analysis were used for inferential analysis while means and standard deviations were used for purposes of descriptive analysis. Feasible Generalized Least Square (FGLS) regression results indicated that capital structure ($p=0.044$, <0.05) and corporate investment ($p=0.0000$, <0.05) had a statistically significant positive

effect on firm value. Political risk was found to have significant negative moderating effect on the relationship between each of the variable and firm value. The study therefore recommends that corporate managers should prefer debt to equity and also increase capital expenditure. CMA should come up with regulation on stock buybacks and enhance corporate bond market. The government should also increase capital allowances to encourage corporate investment. Corporate managers should cross list their securities while CMA should work with other regulators in the region to harmonise market regulations to encourage cross listing.

Keywords: Capital Structure, Corporate Investment Decisions, Firm Value, NSE, Kenya

Introduction

Firm value is very important since it determines the ultimate survival of a company (Muruga, Somu & Mathivathani, 2013). Firm value is reflected by the market prices of its securities, largely because market prices reflect company's investment decision, financing and asset management decisions. In case of increase in the real prices of securities the firm or the wealth of the shareholder's increases. Conversely, decrease in the security prices, decreases the firm value and thereby reducing the shareholder's wealth (Debby, Mukhtaruddin, Yuniarti, Saputra & Abukosim, 2014). Lestari (2016) indicates that firm value maximization is superior goal compared to other goals of a firm including profit maximization, social responsibility and growth. Despite the significance of firm value in finance practice, it remains largely unclear if the same is significantly affected by the company's capital structure and corporate investment decisions. Similarly, the moderating effect of political risk on the relationship between the two financial management decisions have yielded mixed results.

Dolenco, Stubelj and Laporšek (2012) indicate that value maximization is not equivalent to profit maximization. In concurrence, Lestari (2016) concludes that value maximization objective is superior to profit maximization objective and as such, firms are moving from the traditional goals of profit maximization to value maximization. Paminto (2015) concludes that, management of firm should espouse the concept of firm value maximization by applying deliberate efforts to maximize the firm value as measured by the market prices of shares. Though Numerous companies have embraced value based management which endeavors to maximize the firm value and thereby increasing the shareholder's wealth, low market valuations of securities and high fluctuations in the market price of the shares makes it essential to examine the factors influencing firm value (Ganesh, Somu & Mathivathani, 2013). Adenugba, Ige and Kesinro (2016) indicates that, though empirical studies have identified financial management decisions as one of the key factor in determining the firm value, a considerable debate remains on the direction and strength of such relationship.

According to Aggarwal and Kyaw (2006) capital structure adopted by a firm may affect the firm value positively or adversely. Afza and Nazir (2008) indicate that the decisions regarding capital structure are very critical and have a link towards firm valuation. Issue of debt or equity communicates a signal to the market which affects the share price. It's therefore important for firm to come up with appropriate level of debt, equity or judicious mix of debt and equity in order to come up with the optimal firm value (Pandey, 2010). Studies relating to capital structure and the firm value are diverse and have given rise to contradicting theories in endeavors to explain the effect of capital structure and the firm value with others testing the granger casualty of capital structure and firm value (Bhaduri, 2002).

According to Bhaduri (2002), capital structure is the different options used by a company in financing its assets. These options are largely classified as falling under equity or debt and they could be long term or short term. Muritala (2012) defines Capital structure decisions as the choices made by management regarding the best option to finance their activities.

Modugu (2013) observes that as companies attempt to maximise their value, they will adapt dissimilar capital structures This has led to diverse capital structure theories that try to explain the different types of capital structures and their effect on the firm value (Shah, Hijazi & Hamdani ,2005). The relative importance of the capital structure and contradicting results of various empirical studies linking capital structure and firm value have attracted lots of attention amongst scholars and practitioners (Obaid, 2016). Consequently, Antwi, Mills and Zhao (2012) observe that, diverse measures of capital structure have been adopted while testing such relationships. In most cases, ratios relating to leverage and equity have been found to be very important tools in analyzing the capital structure of companies. Muathe, Mwangi and Kosimbei (2014) used financial leverage, total current liabilities to total assets ratio and total current assets to total assets ratio to indicate capital structure. Muritala (2012) utilized debt ratio, assets turnover, size age, and asset structure and growth opportunities as a measure of capital structure. The current study adopted the ratio of total liabilities to stockholder's equity as advocated for by Modugu (2013).

The highly developed capital market has enabled easy access to Equity and debt capital through the Nairobi Securities Exchange (NSE, 2016). This has witnessed increase in equity and debt capital over the last decade. Debt capital raised through NSE by listed companies rose from below Kshs. 1 billion in year 2008 to Kshs. 2.3 billion in the year 2016. Equity capital raised in the same period through NSE increased from Kshs. 636 billion to Kshs 585 billion (NSE, 2016). This affects the capital structure and hence the firms value either positively or negatively.

According to Brealey and Myers (2003), corporate investment decisions are concerned with massive investments in noncurrent assets. The assets could be tangible or intangible and they may include property plant and equipment and also intangible ones for example trademarks, copyrights and franchises. Dayananda (2002) contend that corporate investment decisions are used to make investment decisions so as to increase shareholders value. Accordingly, Pandey (2010) defines investment decisions as a company's endeavors to invest its current assets most efficiently in the non-current assets in order to increase the shareholder's wealth through increase in the firm value. Corporate investment decision in the current study was indicated by Capital Expenditure (CAPEX) on noncurrent Assets, that is, ratio of change in capital expenditure on noncurrent assets to total assets in the previous period. According to Global Investor Sentiment Survey carried out in 2015, investors were found to be constantly optimistic in selected markets. This was associated with investor beliefs, misconceptions and biases which have greater effects on the value of the company. Foreign investments are on increase and 7 out of 10 investors interviewed expected high returns from equity investment outside their home country (Nabianga & Ibrahim, 2015).

In the year 2015, the value of NSE listed companies shrunk by Kshs. 250.0 BN as their value measured by market capitalization dropped from Kshs. 2.30 TN in 2014 to Kshs 2.05 TN in 2015. Cumulative returns on investments declined by 20.97 % as NSE 20-Share Index closed at 4,040.75 points in 2015 from 5,112.65 in year 2014. The market was bearish in 2016 recording a low of 2789.64 points in market capitalization while the NSE all share index and

NSE 20-Share Index deepened by 1.2% and 14.3% respectively (NSE Monthly Market Statistical Bulletins, 2016). Such declines in the firm value results in losses to investors and especially corporate investors who rely heavily on capital growth of such securities to meet their future obligations, for instance pension fund management organizations. This necessitates empirical studies to determine the causes of such declines and how they interplay to drive the firm value. This formed the basis of the current study by considering the role of capital structure and corporate investment unit in determination of firm value and in particular, the effect of the decisions on firm value.

Literature Review

Modigliani and miller (1963) Theory

This theory was founded by Modigliani and Miller in 1963 as an improvement to their original theory of capital structure in 1958. In situation where taxes are not included, the proponents argue that, since investors are rational, the expected return of equity (Ke) is directly proportional to the increase in gearing (D/E). The expected return of equity (Ke)is compensated by the benefit of cheaper debt finance, and, therefore the Weighted Average Cost of Capital (WAAC) remains unchanged. This therefore means that that firm value would not be affected by capital structure. Where taxes are included, Modigliani & Miller (1963) argue that firms can decrease weighted average cost of capital (WAAC) by increasing the debt percentage in the capital structure. This is largely due to the benefits associated with tax shield as documented by Brigham & Ehrhardt (2010). This in effect indicates that that where taxes are included, use of debt in the capital structure increases the firms' value. The current study considered Modigliani & miller (1963) proposition II, with taxes since the context of study requires payment of taxes.

The Modigliani and miller theory was considered important in the current study in developing the hypothesis related to capital structure in order to test the relationship between capital structure decisions and firm value. This theory has been supported by various empirical literature and some other theories. For example, Frydenberg (2004) indicates that companies give a positive signal to the market whenever they issue debt; this is by showing that the company is exceptional and confident of repaying debt and interests and hence increasing the value of the company. In opposition, Frank and Goyal (2007) indicates that companies intending to increase the firm value should first utilize the internal sources of funding before proceeding to external sources in support of pecking order theory. This is by utilizing internal sources of finance before going for debt capital (Abeywardhana, 2017).

Capital Structure Decisions and Firm Value

Muchiri *et al*. (2016) investigated the Relationship between Financial Structure and Financial Performance of Companies Listed at East Africa Securities Exchanges. The study used explanatory research design with secondary cross sectional time series data for 61 companies. Using the Feasible Generalized Least Squares the study found that, long term debt, short term debt, external equity and retained earnings had insignificant positive association with ROE

but insignificant negative association with ROA. Capital structure was found to be positively related to ROE and negatively related to ROA. GDP was similarly found to have a significant moderating effect. However, this study considered only the financing structure without regard to other factors including dividend decisions, cash holding decisions and corporate investment decisions which form the larger financial management decision making unit. The study also considered the profitability measures of performance as opposed to use of more robust measures of performance such as Tobin's Q.

Obaid (2016) studied the impact of financing structure and dividend decision on firm value in Pakistan. The method of analysis was panel data regression analysis for the time period between 2006 and 2013. The research showed that capital structure and dividend decision has a significant effect on the firm value as measured by Tobin's Q. This study assumed a direct relationship between the explanatory and dependent variable. The current study in addition to dividend decision and capital structure decisions incorporated cash holding as an explanatory variable and GDP and political risk as moderator variables. Mwangi, Muathe and Kosimbei (2014) sought to determine the relationship between capital structure and the performance of non-financial companies listed in the Nairobi Securities Exchange (NSE). The study used a census of 42 non-financial companies listed in the Nairobi securities exchange and applied explanatory non- experimental research design. The results indicated that debt had a statistically significant negative relationship with performance as determined by return on assets and return on equity. Methodologically, the study utilized the traditional measures of performance; ROE and ROI. The current study utilized Tobin's q as a measure of value which is considered superior to traditional profit measures.

Antwi, Mills and Zhao (2012) investigated the effect of capital structure on a firm value. The finding of the study indicated that shareholder's equity and long term debt are the key determinants of the value of the company. Debt was found to have a positive relationship with the firm value while equity was found to have a negative relationship with value of the company. Following the findings of the study, companies intending to maximize their value should employ more leverage than equity. However, Antwi *et al.* (2012) considered capital structure as the only financial management decision affecting the value of the company. Tremendous efforts were made in the current study to include all the components of financial management decisions and considering the GDP and political risk as a moderating variable.

Ali and Chowdhury (2010) studied the effect of financing decisions on the firm value in Bangladesh. The study considered a stratum of the four most profitable companies in Bangladesh in order to enhance robustness of the results. The study found a strong positive correlation between capital structure and the value of shares when the industry was stratified. This study however solely considered capital structure as the key driver of value and ignored dividend decisions, cash holding and corporate investment decisions and the likely effect of political risk and GDP on the relationship between aforementioned financial management decisions and firm value. Efforts were made in the current research to incorporate the key financial management decisions and also the GDP and political risk as the moderator variables.

Corporate Investment Decisions and Firm Value

Ariemba, Muli and Evusa (2016) analyzed the effect of investment decision on the financial performance of SACCO'S. Census sampling was utilized in the study to collect data from all twelve SACCOS in Kitui Town. The study findings indicated a significant negative relationship between investment decisions indicated by expansion, replacement, renewal and research and development cost and the company performance. However, this study concentrated on SACCO'S which are not representative of all sectors. The current study concentrated on companies listed in NSE and considered their value as opposed to traditional measures of performance. The current study also incorporated GDP and political risk as the moderating variables as opposed to considering direct relationship.

Mushaho, Mbabazize and Shukla (2015) investigated the impact of investment decisions on the performance of organization. The study applied exploratory research design and data was collected using questionnaires. The unit of analysis was employees working in finance and accounting departments and senior managers of Bahresa Grain Milling Rwanda Ltd. The research findings indicated positive correlation between capital budgeting and companies performance. This study however concentrated on one organization. A more robust result was enhanced in the current study by considering more sectors as represented by companies listed in the NSE. The current study utilized the firm value as the dependent variable as opposed to traditional measures of performance.

Sharma and Mathur (2012) studied the effect of debt decision on the investment decision. The research design applied in the study was non-experimental field study design where questionnaire was used to collect data on perceptions, feeling, beliefs regarding the independent and dependent variable. The study findings indicated that debt decision, small business performance, current assets and family values have a positive significant effect on investment decision of small business owners. This study dwelt on the determinants of investment decisions and particularly concentrated on small companies. The current expanded the scope by looking at the companies listed in the NSE which represents companies in different sector and sizes. The current study also widened the content scope by considering other elements of financial decision.

Conceptual Framework

Figure 1 shows the relationship between the independent variable, moderating variable and dependent variable. The independent variables used in the study were capital structure decisions, and corporate investment decisions. The capital structure was determined by total debt to total assets ratio while corporate investment was determined by a ratio of changes in capital expenditure on noncurrent assets to total assets in the previous period. The dependent variable of the study was firm value which was proxied by Tobin's Q.

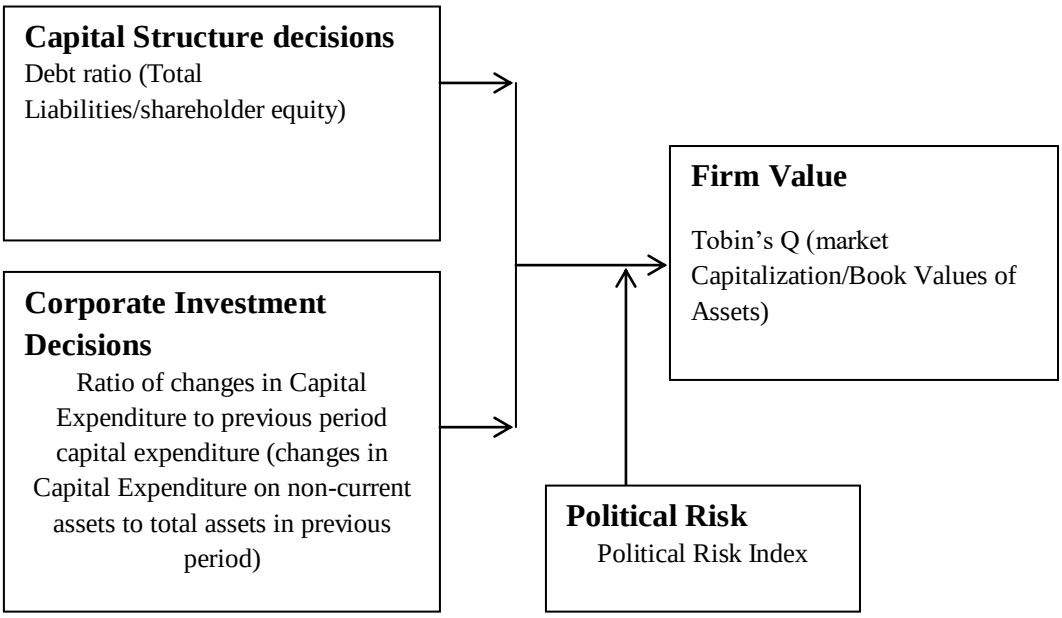

Figure 1 Conceptual Framework

Materials And Methods

The study adopted positivism approach since the research was based on observable social reality and the phenomenon under the study was observable and hence ability to produce credible data. The study adopted explanatory non experimental research design. Corresponding to Kerlinger and Lee (2000), the design was more suitable in identifying factors that cause change in the value of companies, without influencing the financial management decisions variables. The study adopted a census where 46 listed companies in NSE were considered. The target population excluded companies in Banking and Insurance industries largely because they are regulated in their financial decision. Companies in NSE were chosen as units of analysis because data is readily available and represent a wide range of industries.

The study utilized secondary data since it could be used for comparison purposes, requires less resources and it easily allows for panel data analysis (Saunders *et al.*, 2009). The data was obtained from the company's financial reports as published in the NSE handbook and Kenya National Bureau of Statistics for the period between 2008 and 2016. The study utilized both descriptive and inferential statistics to analyse data. Panel multiple regressions were used in the study since the data had time and cross section dimensions. The general model of the study was given as;

$$\mathbf{FV_{it} = \beta_0 + \beta_1 CS_{it} + \beta_2\ CI_{it} + \varepsilon_{it}} \quad \text{.....3.1}$$

Where;

FV_{it}= Firm Value of firm *i* at time *t*

CS_{it} =Capital Structure Decisions of firm *i* at time *t*

CI_{it}=Corporate Investment Decisions of firm *i* at time *t*

β_0=Constant
β_{1-2}=Beta Coefficients

Results And Discussion

Descriptive Analysis

Results in Table 1 show the summary of the descriptive statistics of capital structure, corporate investment. Table 1 indicates that on average companies were more geared relative to equity. This is shown by average of debt to equity of 0.889917. This points out to a trend in companies applying more of debt than equity. To complement the findings, Kazi Tashkin Huda (2015) who contends globally firms utilize more debt than equity in their financing structure. Acheampong, Agalega, and Shibu (2014) contradict the findings of the current study by documenting application of lesser debt in capital structure relative to equity as a global trend. The standard deviation of debt ratio was 0.6661 indicating a higher variability in the debt ratio among the companies considered in the period of study. Such high variability was documented by Masavi, Kiweu and Kinyili (2017) who documented high variability of debt ratio in in companies listed in NSE. The maximum and minimum of the debt ratio was 15.23839 and -93.60150 while the negative in the minimum indicating that more companies were geared.

Corporate investment had a mean of 0.5922 indicating that firms on average were increasing corporate investments. Similar findings were found in Ariemba *et al* (2016) where firms were found to on average increase their investments in capital assets. The standard deviation of 0.2623 indicated a low variation in changes in corporate investment. The minimum and maximum of corporate investment was -0.838934 and 30.94. The negative indicating that some firms reduced corporate investment in subsequent years. The results further indicate that; the ratio of corporate investment was skewed to the right indicating that most firms had increased corporate investments in the study period.

Table 1: Descriptive Statistics

	Capital Structure	Corporate Investment
Mean	0.889917	0.592292
Median	0.766120	0.025141
Maximum	15.23839	30.94109
Minimum	-93.60150	-0.838934
Std. Dev.	5.778509	2.623090
Skewness	-12.76850	9.032937
Kurtosis	203.7340	101.1279
Jarque-Bera	614194.0	149331.8
Probability	0.000000	0.000000
Sum	320.3701	213.2250
Sum Sq. Dev.	11987.43	2470.135

Observations	360	360

Correlation Analysis

This section presents the finding of correlation analysis. The study used correlation to test the association between independent variables and dependent variable. According to Field (2009) correlation ranges from -1 to +1 where values above 0.7 indicate strong correlation while values below 0.7 indicates weak correlation. On the other hand, values of +1 and -1 indicate perfect correlation. The table below indicates the test results.

From the result findings, capital structure decisions and firm Value had a Pearson Correlation r= 0.13, which implies that capital structure decisions and firm value had a weak positive correlation. The study finding further implies that a good capital structure led to increase in firm value. The study finding are in agreement with those in with those of Lixin and Lin (2008) who contended that, as the proportion of cheaper source of funds (debt) increases, overall cost of capital declines which consequently increases the market value of the firm.

The study findings further indicated that corporate investment and firm Value had a Pearson Correlation r= 0.27, meaning corporate investment and firm value had a weak positive correlation. The study findings implied that positive corporate investment lead to increase in firm value. The study findings are consistent with capital budgeting theory which was developed by Woods and Randall (1989). The theory indicates that the future of Conventional Capital planning approaches is biased towards investing in the long term investments in order to increase firm value.

Table 2: Correlation Matrix

	Capital Structure	Corporate Investment	Firm Value
Capital Structure	1		
Corporate Investment	0.37	1	
Firm Value	0.13	0.27	1
Correlation coefficients, using the observations (2008 – 2016) 5% critical value (two-tailed) = 0.0064 for n = 9			

Regression Analysis

The results in table 3 indicate an R squared of 0.2694. This implies that the financial management decisions variables (Capital structure decisions, and corporate investment decisions) had low explanatory power on firm value. The F statistic value was 2.7092 with a p-value of 0.0000 which is less than 0.05. This indicates that, capital structure decisions and

corporate investment decisions had significant effect on firm value of selected firms listed at Nairobi Securities Exchange, Kenya.

Table 3: FGLS Regression Results (Dependent variable: Tobin's Q)

Variable	Coefficient	Std. Error	t-Statistic	P>|t|	Low	High
C	1.5468	0.438	3.5285	0.001	0.684	2.409
Capital Structure decisions	0.007	0.003	2.594	0.044	-0.03	0.016
Corporate Investment decisions	0.8426	0.067	12.5519	0.000	0.711	0.975
R-squared	0.269356					
Adjusted R-squared	0.169933					
S.E. of regression	3.341509					
F-statistic	2.709195					
Prob(F-statistic)	0.000					

The regression results presented in Table 4.9 indicate that the p- value of capital structure decisions was at (p=0.044, <0.05) indicating a statistically significant relationship between capital structure decisions and firm value of selected firms listed at the NSE. The findings of the current study were consistent with Net Income approach to capital structure. This approach was founded by Durand David (1959). According to this approach, the market value of equity shares is based on the earning available for equity Shareholders after the payment of interest on debt if it is included in the Capital Structure (Pandey, 2010). In line with this theory, Lixin and Lin (2008) contend that, as the proportion of cheaper source of funds (debt) increases, overall cost of capital declines which consequently increases the market value of the firm. Hence, the optimum capital structure exists when the firm employs 100% debt or maximum debt in the capital structure (Durand, 1959; Klein, O'Brien & Peters, 2002). From the above results, use of debt in the capital structure significantly increases the value of the firm as indicated by 0.7%.

The result of the current study support the findings of Obaid (2016) who found a positive relationship between capital structure and the value of the firm. Correspondingly, Antwi et al. (2012) found a positive relationship between debt and the firm value while equity was found to have a negative relationship with the value of the company. Further, Muchiri et al. (2016) found a positive relationship between debt financing and performance. In contradiction to the findings of the study, Abor (2007) established that, long-term and total debt ratios, negatively affect performance negatively affected the value of SMEs. Other studies that controvert the findings of this study in regard to capital structure and firm value includes: Myers (1984); Desai, Foley and Hines (2008); Mahajan and Tartaroglu (2008); Vasiliou and Daskalaskis (2009). The Differences in results could be attributed to use of different proxies of capital structure variables, study contexts and methodology used.

The p- value of corporate investment (p=0.000, <0.05) showed a statistically significant positive relationship between corporate investment and firm value of selected firms listed in

the NSE. Hence the study rejected H_{04} at α=0.05 and concluded that there is a statistically significant positive relationship between corporate investment and firm value of selected firms listed in the NSE. The study findings are consistent with capital budgeting theory which was developed by Woods and Randall (1989). The theory indicates that the future of Conventional Capital planning approaches is biased towards investing in the long term investments in order to increase firm value. The value of a company is determined by expected future returns which depend on the investment in the capital assets (Clancy & Collins, 2014). This implies a positive relationship between corporate investment and firm value. The findings are consistent with findings in Mushaho *et al.* (2015) who found a positive relationship between capital budgeting and company's performance. Similarly, Sharma *et al.* (2012) found a positive relationship in concurrence with the current study. The study contradicts the finding in Ariemba *et al*. (2016) who found a negative relationship between corporate investment and firm value. The contradictions in findings of the previous studies and the current study could be attributed to the different contexts of studies, indicators of corporate investments and study period.

Test for Moderating Effects of Political Risk

The study sought to determine the moderating effect of political risk on the relationship between capital structure and corporate investment decisions and the firm value. The test applied Whisman and McClelland (2005) which involves two steps; in the first step, each moderator is run as an independent variable in addition to other explanatory variables. If the coefficient is insignificant at 0.05, then the variable in question becomes an independent variable. If insignificant, then second step is necessary to include interaction effect of the moderator with each of the variable in consideration.

The R-squared of 0.8391 indicate that the 83.91% changes in the dependent variable could be explained by the explanatory variables. The result findings indicated that P-value was insignificant (p=0.0810, <0.05). Since the coefficient of the moderating variable was insignificant, the null hypothesis that political risk was an explanatory variable was rejected and the alternative hypothesis that it is a moderating variable accepted (Whisman *et al.*, 2005).

Table 4: Summary Table for Moderation effect of Political Risk

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-28.5748	26.77626	-1.06717	0.287
Capital Structure	-34.9167	8.094048	-4.31387	0.000
Corporate Investment	58.44832	22.9407	2.5478	0.011
Political Risk	0.427553	0.402408	1.062485	0.081
CS*PR	-0.52926	0.122584	4.317537	0.000
CI*PR	-0.83426	0.327427	2.547918	0.011

R-squared	0.839116			
Adjusted R-squared	0.814285			
S.E. of regression	2.827607			
F-statistic	33.79318			
Prob(F-statistic)	0.000			

The results in Table 4 indicate a significant negative moderating effect of political risk on the relationship between capital structure and firm value (p=0.0000, <0.05). Çam (2013) documents an incongruity with the findings of the current study and documents a significant negative moderating effect of political risk on the relationship between capital structure and firm value. Hassan, Hollander, van Lent, and Tahoun (2017) found no evidence of such moderation but document a significant negative relationship between political risk and firm value and document political risk to be explanatory variable. The results in Table 4 indicated that political risk had a significant moderating effect on the relationship between corporate investment and firm value (p=0.0113, <0.05). This finding is consistent with Molonko and Ampah (2017) who documents a significant negative moderating effect of political risk on the relationship between capital expenditure and sectoral economic growth in Kenya. Inconsistent with Restrepo, Correia, and Población (2012) found different expressions of political risk influencing both positively and negatively the value of investment opportunities and the decisions of firms to invest.

Conclusion and Recommendations

The study documents an increased trend in use of debt as opposed to equity. The study therefore concludes that there is an elaborate financial institutions available fund for firms to borrow. In addition to this debt financing was found to have a positive significant relationship with firm value. Therefore, the study concludes that when a firm increases debt in its financing structure the value of the firm is increased. This has been supported by various literatures for example the Net operating income approach to financing. The conclusion has also been opposed by other schools of thought for example Modigliani and miller theory of capital structure. The results indicated that corporate investment had a positive significant effect on firm value. The study concludes that increase in corporate investment leads to increase in firm value. This compliments capital budgeting theory which advocates for increased investment in fixed assets in order to enhance the firm value. Political risk had a significant negative moderating effect on the relationship between financial management decisions variables and firm value and therefore the study concludes that political risk indeed affect such relations as a moderator variable negatively.

The study therefore recommends that corporate managers should prefer debt to equity in order to take advantage of the cheaper cost of capital and thereby increasing the firm value. The literature reviewed further indicates increased debt increases financial risk which may offset the benefits of interest tax shield. Consequently, it is recommended that the increased

leverage should be up to an optimal level. The government should adopt more proactive approach to ensure that cheaper sources of debt are available to stir growth of firm value. Consequently, the study recommends corporate manages to make deliberate efforts to increase capital investments. From the literature reviewed in the study, corporate managers should use the capital budgeting tools to ensure that, capital investments are made on items with ability to generate positive NPVs. Political risk increases the interest rates as the lenders require a premium for superfluous risk and thereby negatively affecting the firm value. Additionally, during periods of high political risk, corporate investment reduces. Consequently, the current study recommends precautionary incentive of managers in response to political shocks. The study also recommends solicitous interventions from the government to ensure stronger legal and investor protection.

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52. Human Resource Management Practices, Self-Determination Theory, and Employee Intention to Stay: Evidence From a University Setting in Kenyan Context

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Abstract
This study investigated the effect of human resource management practices on employee intention to stay and the mediating impact of self-determination theory in the relationship. Using a cross-sectional survey data obtained through online Google Forms from one hundred and ninety seven respondents in a university setting in Kenya, this study found that human resource management practices positively related and significantly predicted employee intention to stay. The findings of the study revealed significant effects of the dimensional areas of human resource management practices (ability-enhancing, motivation-enhancing, and opportunity-enhancing practices) on employee intention to stay. The study employed PROCESS macro to test the hypotheses of mediation effect and the results revealed that self-determination theory partially mediated the relationships between ability and opportunity-enhancing practices. The theoretical, policy, and future research implications of the study were thereafter discussed.

Keywords: *Ability-enhancing practices, motivation-enhancing practices, opportunity-enhancing practices, self-determination theory, intention to stay.*

Introduction

In the quest to comprehend how human resource management contributes to the attainment of performance at various levels of an organisation, Guest (1997) made a call to mobilise appropriate theories to understand the concept of human resources management practices, performance, and mechanisms through which HRM practices-performance relationship is generated. The responses to Guest's call were evident in the recent empirical studies of both direct and indirect relationship between human resource management practices and performance at various organisational levels (Li, Naz, Khan, Kusi, & Murad, 2019; Morales-Sánchez & Pasamar, 2019). A handful of studies have shown that significant relationship existed between HRM practices and performance at organisational level (Rasool, Samma, Anjum, & Khan, 2019), employee level (Rodrigues, Butler, & Guest, 2019), and the HRM practices-performance relationship has been theoretically underpinned (Boselie, 2010).

In an attempt to elucidate the relationship that exists between HRM practice and performance, researchers, in the last decade, have largely employed theoretical lenses of theories such as ability, motivation, and opportunity framework (AMO), social exchange theory (SET), resource-based view theory (RBV), and leader-member exchange theory (LMX) (Savaneviciene & Stankeviciute, 2012).Scholars have expressed apprehensions that most of the theories underpinning HRM practices-performance relationship are poorly defined and vaguely tested, and therefore may be less applicable unless validated across contexts via empirical inquiries (Kelliner, Cafferkey, & Townsend, 2019; Townsend, McDermott, Cafferkey, & Dundon, 2019). While acknowledging the importance of theoretical paradigms employed to comprehend HRM practices-performance relationship, the inadequacies observed in these theoretical frameworks are salient factors to be taken into consideration when mobilising them and other theories left unexamined by researchers in HRM literature.

An important theory of human motivation, development, and wellness, left unexamined, is self-determination theory, and it has attracted a limited usage among researchers and scholars in HRM literature. As a framework that has been applied in a wide domain of life (Reci & Ryan, 2000), self-determination theory is also mobilised in HRM literature to explain the importance of HRM practices in the satisfaction of basic psychological needs of autonomy, competence, and relatedness towards enhancing positive attitudinal and behavioural outcomes, that would, in turn, generate organisational outcomes (Gardner, Wright, & Moyniham, 2011, Kuvaas, 2009). However, studies have remained limited in identifying how HRM practices can generate HR outcomes via mechanism of need satisfaction (self-determination theory) at various levels of an organisation (Marescaux, De Winne, & Sels, 2013). In addition, the theoretical confidence in self-determination theory would be more boosted if it is validated using empirical data not only from the context of high and middle-income countries but also from the low-income economies. This study therefore purposively employed data from the context of developing economy (Kenya) to validate self-determination framework by investigating how HRM practices and HR outcome is generated via self-determination theory.

Conceptual and Empirical Literature Review

Human Resource Management Practices

A chunk of studies in HRM literature have attempted to conceptualise human resource management practices using several vocabularies (Valeau, Paille, Dubrulle & Guenin, 2019). HRM has been conceptualised as high performance work system (Obeidat, Mitchel, Bray,

2016), high involvement work practices-HIWP (Boxal & Macky, 2009), high performance human resource practices-HPHRP (Mostafa, 2016), and as well as innovative employment practices (Owoeye, Kaumbulu, & Alago, 2019). The common ground that characterised the conceptualisations of the term HRM practices rests on the premise that it functions as a means through which human capital elements are acquired, developed, motivated, and retained, so as to attain predetermined organisational objectives. In addition, there is no uniformity as to the practices constituting HRM interventions investigated by researchers in HRM literature, and however, opinions are divided across studies whether HRM interventions should be operationalised as universal best, contingency fit, and configurational practices (Chew & Chan, 2008). Meanwhile, research studies in HRM literature for the last two decades have attempted to embrace theoretical frameworks to guide direction on what constitutes HRM practices, and evidence revealed that AMO theory has been largely employed to comprehend HRM and its components in organisations (Boselie, 2010; Savaneviciene & Stankeviciute, 2012).

Drawing from AMO framework, HRM practices have been comprehended as interventions for enhancing employee knowledge, skills, and abilities, incentivising, and empowering employees to perform in their respective organisations (Demortier, Delobbe, Akremi, 2014). HRM practices such as rigorous recruitment, selective selection, training and development, mentoring, job rotation, and coaching have been identified with interventions for enhancing employee ability- knowledge, skills. And abilities (Obeidat, Mitchell, & Bray, 2016), fair pay, recognition, job enrichment, employment security as interventions for motivating employees (Jiang, Lepak, Hu, & Baer, 2012; Owoeye, Kiiru, & Muli, 2020), and information sharing, employee involvement, empowerment, work-life initiatives, fair complaint process, and among others as interventions for providing opportunity for employees to perform (Paré & Tremblay, 2007; Gardner, Wright, & Moynihan, 2011). It has, therefore, been observed in literature that organisation's investment in practices for enhancing employee's ability, motivation, and opportunity to perform signals and communicates to organisational workforce that their presence is needed beyond short-term basis, and they may thus develop attitude and behavioural outcomes, that will in turn, generate favourable organisational performance (Demortier, *et al*., 2014; Karatepe & Olugbade, 2016).

A handful of studies in literature have provided evidence of HRM-practices, HR outcomes and performance relationship in organisations. Latorre, Guest, Ramos, and Garcia's (2016) study found that high commitment HR practices significantly related to employee performance and the relationship was indirectly explained through mechanisms such as perceived organisational supports, job security, and job satisfaction in Spanish education, service, and manufacturing sectors. A study investigated by Snape and Redman (2010) in North-East England found that human resource management practices were positively associated with organisational citizen behaviour and the relationship was mediated by job influence. In the study of Bowra, Sharif, Saeed, and Niazi (2012), the findings of significant relationship were found between human resource management practices and employee performance in banking sector in Pakistan. Tabiu, Pangil, and Othman (2016) found significant effect of human resource management practices on employee performance in Nigeria public sector. Aryee, Seidu Walumbwa, and Otaye (2013), in the study conducted in Ghana, found that HPWS significantly related to individual service-related quality, and the relationship was indirectly explained by human capital (ability) and aggregated service orientation (motivation). In the meta-analytic study conducted by Jiang, *et al.* (2012), the dimensions of HRM practices- ability, motivation, and opportunity-enhancing practices, were significantly and positively related to financial outcomes, and the indirect relationship was

significantly explained by human capital. In a similar meta-analytic study by Tzabba, Tzafrir, and Baruch (2016), human resource management practices were found to be significantly related to organisational effectiveness. The aforementioned findings were in consonance with previous results in earlier studies on the effect of HRM practices on performance at both micro and macro levels of an organisation (Boselie, 2010; Huselid, 1995; Delaney & Huselid, 1996; Appelbaum, Bailey, Berg, & Kalleberg, 2000).

While the findings of positive relationship between HRM practices, HR outcomes, and performance are appreciated in literature, it is indeed imperative to examine how important behavioural outcome (employee's intention to stay) is generated by HRM practices. A study conducted by Valeau, *et al.* (2019) showed that a significant relationship existed between human resource management practices and intention to stay and the relationship was mediated by professional and organisational commitment among professional employees in France. In the study of Marescaux, De Winne, & Sels (2013), the relationship between HRM practices and turnover intention was found to be positively related and also mediated by HR outcomes such as organisational commitment and work engagement among Belgian employees. The need for studies on the relationship between the dimensions of HRM practices (ability, motivation, and opportunity) and HR behavioural outcomes, and the mechanisms explaining the relationship still demands further empirical inquiry, especially in collectivist environments like sub-Saharan Africa.

Employee Intention to Stay

The resource-based view of the firm emphasised on internal resources and capabilities that are valuable, rare, inimitable, and non-substitutable as a platform for generating sustainable competitive advantage over rival competitors (Barney, 1991). Human resource element has been identified in literature as a valued resource with great capabilities to attain superior performance, and therefore has necessitated the need for firm's investment in HRM systems to endear employee intention to stay in the organisation. Intentions to stay is an inverse concept of intention to quit or turnover intention, and it has been conceptualised in literature as employees' intention to remain in the employment relationship with their current employers beyond short-term basis (Johari, Yean, Adnan, Yahya, and Ahmad, 2012). In an attempt to avoid costs relating to employees leaving organisation: decreased productivity, loss of intellectual capital, competitors gaining pivotal assets, organisations have resorted to integrating retention strategies into overall business strategies (Stokes, *et al.*, 2013). As observed by Johari, *et al*. (2012), employees leaving a firm will culminate to costly knowledge base, increase in work pressure, drop in employee morale, and failure to achieve desired results. Firms may, therefore, find solace in leveraging on HRM practices to earn the interests of their workforce to remain with them beyond short-term basis.

In human resource management literature, scholars have attempted to investigate organisational events that may likely influence employees' intention to stay with their respective organisations. Chew and Chan's (2009) study in Australia found that HRM practices: remuneration, recognition, training and development, and challenging job assignment were significantly related to intention to stay. Stokes, *et al.* (2013) found that affective commitment, normative commitment, and role clarity significantly predicted employees' intention to stay, while employee engagement, organisational culture, and compensation and benefit were found as less predictors of employee's intention to stay in India. In Johari's, *et al*. (2012) study in Malaysia, compensation and benefits were only HRM practices that significantly related to intention to stay while training and development, career development, and performance appraisal were insignificantly related to employee's intention to stay. The inconsistencies of findings in the investigation of the relationship between HRM

systems and employees' intention to stay across studies create a gap that demands further empirical inquiries.

Self-Determination Theory

A theory of human motivation, development, and wellness that emphasised on the satisfaction of basic innate psychological needs is termed self-determination theory (SDT). Self-determination theory was put forward by Deci and Ryan in 1985 to explain the behaviour assumed by people as a result of the satisfaction of three innate psychological needs of autonomy, competence and relatedness. According to Deci and Ryan (1985), the need for autonomy reflects the need to feel for choiceful and volitional, that is, one is an instigator on one's action and choices. The need for competence reflects that one is capable and able of achieving a desired outcome, and the need for relatedness entails the need to close to and be understood by important others. According to Kuvaas (2009), these needs are universal necessities, and therefore the focus of SDT is not on individual strength of the needs but the extent to which the needs are satisfied.

In human resource management literature, scholars have employed SDT as a theoretical lens to explain how HRM systems generate performance outcomes (Gardner, *et al*., 2013). The common ground that necessitated the mobilisation of SDT among scholars in HRM literature is based on the explanation that organisational practices (HRM practices) that can satisfy the needs for autonomy, competence, and relatedness will likely induce attitudinal and behavioural outcomes that will in turn lead to performance outcomes. In addition, the needs satisfaction (SDT) can also be employed as a mechanism via which HRM practices generate both HR and performance outcomes at various organisational levels (Marescaux *et al*., 2013). The employment of needs satisfaction to explain indirect relationship between dimensions of HRM practices and HR outcome (employee's intention to stay) has attracted a scant attention of scholars in literature, and therefore demands the need for further empirical inquiries.

Hypothesis Development and Conceptual Framework

A handful of studies in HRM literature provided evidence that HRM practices that are designed and implemented in organisations have the potency to influence positive attitudinal and behavioural outcomes, which will in turn, enhance performance outcomes (Jiang, *et al*., 2012). HRM practices such as recognition, training and development, and employment challenging assignment, mentoring, career development, developmental appraisal were found to be significantly related to employees' intention to stay in their respective organisations (Marescaux *et al*., 2013; Chew & Chan, 2009; Valeau, *et al*., 2019). While it is important for firms to invest in their employees via HRM practices for the purpose of achieving and sustaining employee retentions, however, employees may choose to quit and join competing or rival organisations (Gellartly, Hunter, Currie, & Irving, 2009). In addition, empirical evidence in literature has shown that HRM practices functioning to enhance employee knowledge, skills, and abilities significantly related to voluntary turnover (Gardner, *et al*., 2013). Moreover, Johari, *et al*. (2012) found that training and development, career development, and performance appraisal were insignificantly related to employee's intention to stay in organisation. The inconsistencies of findings of the effect of HRM practices on employees' intention to stay therefore demand the need for further empirical inquiries. Drawing from the preceding explanations and tenet of self-determination theory that states that organisational events (HRM practices) that satisfy the basic innate psychological needs

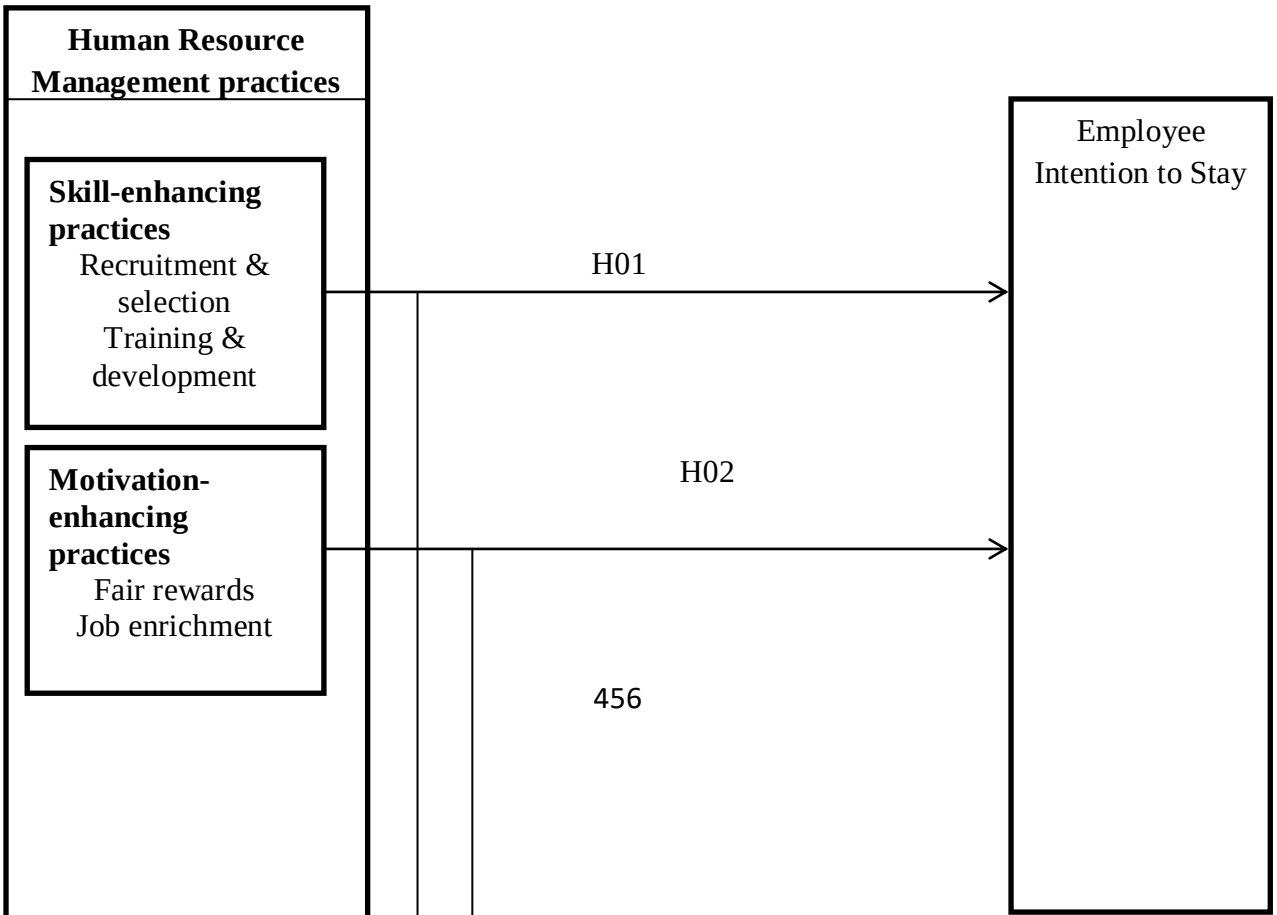
of autonomy, competence, and relatedness will endear positive behavioural attitude, behavioural, and as well as performance outcomes, this study therefore hypothesised as:

1. Ability-enhancing practices do not have significant effect on employees' intention to *stay*
2. *Motivation-enhancing practices do not have significant effect on employees' intention to stay*
3. *Opportunity-enhancing practices do not have significant effect on employees' intention stay*

A number of studies have employed self-determination theory as a theoretical lens to shed light on the conceptualisation of HRM practices, performance, and the mechanism through which HRM practices generate performance outcomes (Gardner, *et al*., 2013). However, the use of needs satisfaction (autonomy, competence, and relatedness) as a possible mechanism through which HRM practice generated HR outcomes has remained limited across studies (Marescaux, *et al*., 2013). The indirect relationship between HRM practice and employees' intention to stay is hypothesised in this study as follow:

4. *Self-determination theory does not mediate the relationship between ability-enhancing practices and employees' intention to stay*
5. *Self-determination theory does not mediate the relationship between motivation-enhancing practices and employees' intention to stay*
6. *Self-determination theory does not mediate the relationship opportunity-enhancing practices and employees' intention to stay*

The conceptual framework of this study (as shown in Figure 1) depicts the various relationships hypothesised to be tested. The first, second, and third hypotheses depict the direct relationships between the decomposed HRM practices and employees' intention to stay. The fourth, fifth, and sixth hypotheses depict the indirect relationships between the dimensions of HRM practices and employees' intention to stay.



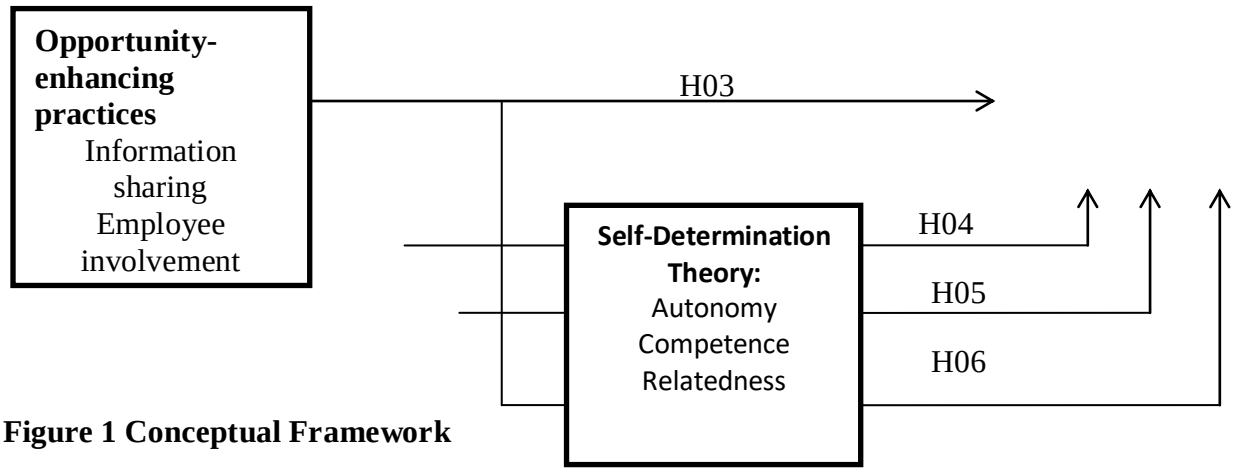


Figure 1 Conceptual Framework

Methodology

This study adopted descriptive and explanatory research designs. As observed in literature, descriptive research design is adopted in studies for the purpose of explaining the characteristics of the events under study while explanatory design aids the analysis and explanation of the direction of correlation or causal effect of the constructs under study (Saunders, Lewis, and Thornhill, 2009). Therefore, both descriptive and explanatory designs guided the direction of analysis and explanation of the variables investigated in this study. The study population comprised staff (permanent and pensionable) of Kenyatta University, Nairobi, Kenya. The staff were categorised into two: teaching and non-teaching staff and out of 5000 staffers (teaching = 1500, and non-teaching =3500) a sample size of 370 was determined using Yamane formula. The study respondents were selected using stratified and random sampling techniques, and cross-sectional data were collected using online survey questionnaires (Google Forms). Data collected from 197 respondents were subjected to descriptive and inferential analysis using analytical software of Statistical Package for Social Sciences (SPSS), version 20.

Measures

The study adapted instruments from previous studies but subjected to slight modifications in terms of rewording and scaling so as to suite the present study context. Ability-enhancing practices were measured using latent variables of recruitment & selection, and training & development with 8-item instruments adapted from Karetepe (2015). Motivation-enhancing practices were measured using latent variables fair rewards with 4-item instruments adapted from Valeau, *et al*. (2019), and job enrichment with 6-item instruments adapted from Hackman (1980). Opportunity-enhancing practices were measured using latent variables of information sharing with 6-item instruments from Paré and Tremblay (2007) and employee involvement with 4-item instruments adapted from Qi and Wang (2016). Self-determination theory was measured using three basic psychological needs- autonomy, competence, and relatedness, with 18-item instruments adapted from Marescaux, *et al*. (2013). The dependent variable- intention to stay was measured using 3-item instruments adapted from Valeau, *et al*. (2019). All items were measured on 5-point Likert scale ranging from 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree.

Validity and Reliability of Research Instruments

This study used adapted instruments which were previously validated and reliability ascertained in past studies. However, there was need to ascertain the validity and reliability of the adapted instruments because the contexts where the items were developed and employed were different from where this current study took place. To ascertain the appropriateness of the study instruments, Principal Component Analysis (PCA) was performed. Using PCA for factoring appropriateness of research items, certain conditions must be met: correlation matrix with coefficients (r) = .3 or greater, Barttlet's Test of Sphericity is statistically significant at $p < .05$, and Keiser-Meyer Olkin value is 0.6 or greater (Pallant, 2005). These conditions were used as a benchmark for determining the appropriateness of the adapted instruments used in this study. As shown in Table 1, the conditions set as a benchmark for factorability of research items were all met. The correlation matrix showed correlations (r) of .3 and above, KMO sampling adequacy showed values exceeding recommended value of .6 (Ability-enhancing practices = 0.697, Motivation-enhancing practice = 0.637, Opportunity-enhancing practices = 0.860, Self-determination theory = 0.707, and intention to stay = 0.623), and Bartlett's Test of Sphericity was significant at $p = 0.000$ for each construct. The study used orthogonal approach via Varimax technique of rotation and each item loading with correlation coefficient of .5 was retained and considered. The loading of items with r = .5 has been identified as adequate and appropriate for analysis in research study (Boselie, 2010; Snape and Redman, 2010). The PCA revealed two components solution for ability-enhancing practices explaining total variance of 38%, two components solution with 34% variance explained by motivation-enhancing practices, two components solution with 33% variance explained by opportunity-enhancing practices, two components solution with 31% variance explained by self-determination theory, and 1 component solution with 70% variance explained by intention to stay. During the analysis 3 items were found loading with correlation coefficient (r) below .5 under the items measuring motivation-enhancing practices, and 5 items loaded with correlation coefficient (r) below .5 under the items measuring self-determination theory. These 8 items were deleted from the original items measuring the constructs of this study. The strong loadings of the remaining items measuring the observed variables in various components solution further ascertained the validity of the instruments adapted in this study. As also shown in Table 1, the internal consistency of the instruments was tested using Cronbash's Alpha (α) coefficient and it was revealed that the recommended alpha coefficient of 0.7 was exceeded except for motivation-enhancing practices (ability-enhancing interventions = 0.777, Motivation-enhancing practices = 0.640, Opportunity-enhancing practices = 0.886, Self-determination theory = 0.803, and Intention to stay = 0.789), and therefore the study concluded that instruments were reliable. The results of the PCA and internal consistency showed appropriateness and adequacy of 41-item instruments, and these items characterised data that were subjected to further analysis.

Table 1: Results of Factor Analysis

Variables	KMO	α	Factor Solution	Var. Explained	Bartlett's Test of Sphericity		
					Approx. Chi-Square	Df	Sig
Ability-enhancing	0.697	0.777	2	38.14	668.336	28	0.000

Practices							
Motivation-enhancing practices	0.637	0.640	2	34.45	356.677	21	0.000
Opportunity-enhancing practices	0.860	0.886	2	32.88	936.549	45	0.000
Self-determination theory	0.707	0.803	2	30.59	1266.105	78	0.000
Intention to stay	0.623	0.789	1	70.45	198.719	3	0.000

Note: $p < 0.05$, $N = 41$

Descriptive Statistics

Demographic Characteristics of the Respondents

Data collected from 197 respondents and analysed showed that the percentage of female to male respondents as 62% to 38% respectively. The distribution in terms of work experience showed that respondents with 6-10 year experience had the highest percentage (39%) of work experience, 1-5 year constituted 33% of work experience, more than 16 year constituted 18% work experience, and 11-15 year had the lowest percentage (11%) of work experience. The distribution of staff status showed that non-academic staff constituted 62% of the respondents and the remaining 38% constituted academic staff.

Descriptive Analysis of Variables

The aggregate mean and standard deviation scores were used to explain the characteristics of the survey data in this study. As shown in Table 2. The aggregate mean and standard deviation scores for ability-enhancing practices stood at 3.8579 and 1.09156 respectively. The aggregate mean score approximates to 4 (agree) on 5-point Likert's scale adopted in this study indicates that the respondents agreed to all the items measuring ability-enhancing practices in this study. The standard deviation score also indicates that there was low variability of responses among the respondents. The aggregate mean and standard deviation scores for motivation-enhancing practices stood at 3.1095 and 1.12275 respectively. The aggregate mean score of 3 (neither agree nor disagree) on the scale adopted in this study indicates that there was a moderate agreement by the respondents on the existence of motivation–enhancing practices in their workplace. The aggregate standard deviation also shows a moderate dispersion from the mean score. The aggregate mean score of 3.1954 recorded for opportunity-enhancing practices indicates that the respondents neither

agreed nor disagreed with the existence of practices incentivising them in their workplace. While the standard deviation score of 1.15299 shows moderate variation in responses from the respondents. The aggregate mean score of 3.1011 for self-determination theory indicates that there were moderate opinions among the respondents, and the standard deviation score of 0.94678 indicates that there was low variability of responses. The aggregate mean score of 3.3198 indicates a moderate agreement by the respondents on the items measuring intention to stay, and a standard deviation score of 1.3453 shows a moderate variation among the respondents. All the aggregate standard deviation scores indicate a moderate dispersion from the mean scores, and therefore the mean reflects as a true estimate of the population mean.

Table 2: Descriptive Analysis of Variables.

Variables	**Mean**	**Standard Deviation**
Ability-enhancing practices	3.8579	1.09156
Motivation-enhancing practices	3.1095	1.12275
Opportunity-enhancing practices	3.1954	1.15299
Self-determination theory	3.1011	0.94678
Intention to stay	3.3198	1.34529

Inferential Statistics

Test of Hypothesised Relationships

The hypothesised relationships in this study were tested using simple linear regression method. As shown in Table 3, the coefficient of correlation was significant at 95% level of confidence ($R = 0.408$, $p < 0.05$), and this indicates that the composite construct of human resource management practices strongly predicted employees' intention to stay. The coefficient of determination was also significant ($R^2 = 0.167$, $P < 0.05$), and this indicated that 17 per cent variation in intention to stay was explained by human resource management practices. The fit between the regression model and the survey data was explained by the significant value of the F coefficient ($F = 12.864$, $p = 0.000$). As indicated in table 3, at $\beta = 0.194$, $t = 4.608$, and $p = 0.000$, the correlation coefficient was significant, and therefore the null hypothesis of no significant effect of ability-enhancing practices on employees' intention to stay was rejected. The null hypothesis of no significant effect of motivation-enhancing practices on employees' intention to stay failed to be accepted as the regression parameters showed significant values ($\beta = 0.222$, $t = 5.014$, $p = 0.000$). In addition, at $\beta = 0.082$, $t = 2.780$, $p = 0.006$, the regression parameters were significant and, therefore, the null hypothesis of no significant effect of opportunity-enhancing practices on employees' intention to stay failed to be accepted.

Table 3: Regression Results for Direct Hypothesised relationships

Goodness of fit	Test Statistics	p-value	
R	0.408		
R-squared	0.167		
Adjusted R-squared	0.154		
F-value	12.864	0.000	
Dependent Construct =Intention to stay			
	Coefficients	t-statistics	p-value
Ability-enhancing practices	0.94	4.608	0.000
Motivation-enhancing practices	0.222	5.014	0.000
Opportunity-enhancing practices	0.082	2.780	0.006

Note: p is statistically significant at 95 per cent

Test of Hypotheses for Mediation Effects

The hypotheses of mediation effects in this study were tested using PROCESS macro developed by Hayes (2018), and the generated results were interpreted following the three-variable steps and decision criteria offered by MacKinnon, *et al*. (2002). The mediation effect takes place if the significant value of the difference between the coefficients of the independent variable in both the total and direct effects equals the significant value of the product of the coefficients of the mediating variable in both the direct and indirect steps. In addition, the condition for full or complete mediating is satisfied if the coefficient of the independent variable in direct step is insignificant but the coefficient of moderating variable in direct step is significant. The condition for partial mediating effect is satisfied if the coefficients of both the independent and mediating variables in direct step are significant. The effect of no mediation is satisfied if the coefficient of the mediating variable in the direct step remains insignificant. As shown in Table 4, the condition for partial mediation effect of self-determination theory on the relationship between ability-enhancing practices and employees' intention to stay was satisfied (β_1- β_2 = 0.0022, β_3*β_4 = 0.0022, p = 0.0214). Therefore the hypothesis of no significant mediating effect of self-determination theory on the relationship between ability-enhancing practices on employees' intention to stay failed to be accepted. The condition for mediation effect of self-determination on the relationship between motivation-enhancing practices and intention to stay was not significant and not satisfied (β_5-β_6 = 0.0144, β_7*β_8 = 0.0144, p = 0.4396). Therefore, the hypothesis of no significant mediating effect of self-determination theory on the relationship between motivation-enhancing practices and employees' intention to stay was not rejected. The condition for partial mediation effect of self-determination theory on the relationship between opportunity-

enhancing practices and employees' intention to stay was satisfied (β_9-β_{10} = -0.0012, β_{11}*β_{12} = -0.0012, p = 0.0175). Therefore, the hypothesis of no significant mediating effect of self-determination theory on the relationship between opportunity-enhancing practices on employees' intention to stay was rejected. The overall results indicate that the relationships between ability-enhancing and opportunity-enhancing practices and employees' intention to stay were partially mediated by self-determination theory, and however the relationship between opportunity-enhancing practices was not explained by self-determination theory.

Table 4: Summary of Regression Results for Mediating Effect

Variable	Step 1 Total Effect	Step 2 Direct Effect	Step 3 Indirect Effect	Test	Remarks
Ability-en practices	β_1= 0.1940 p = 0.000	β_2= 0.1918 p = 0.000	β_4= -0.0263	β_1- β_2 = 0.0022	There is a partial mediation effect
SDT		β_3= -0.0815 p = 0.0214	0.0022	β_3*β_4 = 0.0022	
Motivation-en practices	β_5= 0.2571 p= 0.000	β_6= 0.2427 p = 0.000	β_8 = -0.4975	β_5-β_6 = 0.0144	There is a no mediation effect
SDT	0.000	β_7= -0.0290 p = 0.4396	0,0144	β_7*β_8 = 0.0144	
Opportunity en.practices	β_9=0.0816 p = 0.0060	β_{10} = 0.0828 p = 0.0048	β_{12} = 0.0139	β_9-β_{10} = -0.0012	There is a partial mediating effect
SDT		β_{11}= -0.0869 p = 0.0175	-0.0012	β_{11}*β_{12} = -0.0012	

Note: Coefficient (β) is significant at 95% level of sig.

Discussion

This study was interested in finding whether human resource management practices could predict employees' intention to stay, and also to explain HRM-intention to stay relationship via mechanism of needs satisfaction as provided by self-determination theory in a university

setting in Kenyan context. Data collected from this study were factored analysed using principal component analysis and 41 out of 49 items measuring the hypothesised constructs were considered factorable and subjected for further analysis. The aggregate mean and standard deviation scores, from the descriptive analysis of survey data, established the reality of the decomposed HRM practices by respondents in the workplace, and also demonstrated understanding of the items measuring self-determination theory and intention to stay.

The overall objective of this study was to establish the relationship between human resource management practices and employees' intention to stay in Kenya's context, and this was supported by the findings of positive and significant relationship. HRM practices were found to positively and significantly predict employees' intention to stay. The findings were in consonance with findings of prior studies with positive relationship between HRM practices and employees' intention to stay (Valeau, *et al.*, 2019; Marescaux, *et al*., 2013). This study also investigated the significant effect of dimensions of HRM systems: ability, motivation, and opportunity-enhancing practices, on employees' intention to stay. The findings revealed that the three dimensional areas had significant effects on employees' intention to stay. The findings of significant effect of ability-enhancing practices with metrics such as recruitment and selection, training and development, on employees' intention to stay were in disagreement with findings of prior studies of Gardner, *et al*. (2013) and Johari, *et al*. (2012) with insignificant effect of ability-enhancing practices on employees'' intention to stay. The findings of significant effect of motivation and opportunity-enhancing practices on employees' intention to stay were in agreement with previous findings of significant effect of HRM practices and HR outcomes (Boselie, 2010; Kuvaas, 2009; Gardner, *et al*., 2013).

This study also poised to investigate whether basic needs satisfaction as explained by self-determination theory would explain the indirect relationship between the dimensions of HRM practices and employees' intention to stay. The findings of this study revealed that self-determination theory (needs satisfaction) partially mediated the relationship between ability and opportunity-enhancing practices on employees' intention to stay in a University setting in Kenyan context. However, the relationship between motivation-enhancing practices and employees' intention to stay was not mediated by self-determination theory. The findings of mediating effect of self-determination theory were in consonance with findings of prior study of Marescaux, *et al*. (2013).

Conclusion

This study investigated the relationship between HRM practices (ability, motivation, and opportunity-enhancing practices) and employees' intention to stay employing self-determination theory (need satisfaction) as mediating construct in Kenyan context. The strengths of this study lie in its findings which have theoretical, practical, and future research studies implications.

Theoretical Implication

One of the strengths of this study lies in its finding of significant relationship between HRM practices and employees' intention stay in a Kenyan context which researchers have paid scant attention to especially in sub-Saharan Africa. Therefore, this study contributes to body of knowledge in HRM literature by its findings of significant relationship between HRM practices on HR outcomes such as employees' intention to stay. In addition, studies have remained limited in examining the effect of dimensions of HRM practices (ability, motivation, and opportunity-enhancing practices) on employees' intention to stay. Previous studies concentrated efforts on investigating the effect of single HRM practices on HR outcome such as voluntary turnover or intention to quit. This study thus contributes to the body of literature by its findings of significant effect of the decomposed HRM practices (ability, motivation, and opportunity-enhancing practices) on employees' intention to stay in an organisation. Moreover, more scholars have emphasised in literature that the applicability of a theoretical framework would be ascertained if it could be tested using data from several contexts. Therefore, self-determination theory, that has attracted limited usage among researchers, was employed and its components were tested using data from a developing context (Kenya). Therefore, self-determination theory as a theoretical lens to anchor this study and the significant findings of its composite components as mediating construct as a mechanism in elucidation of HRM practices-employees' intention to stay relationship is a justification of the applicability of the framework across in a Kenyan context. This is an important contribution to the body of knowledge that self-determination theory can be used to underpin the concept of HRM practices, HR outcomes, and also as a mechanism for explaining how HRM practices generate HR and organisational outcomes.

Practical Implication

This study was carried out in a university setting in Kenya, and therefore its findings have some implications that can be infused into the policies of managing human capital elements so as to enhance organisational effectiveness. Firstly, the results of the descriptive analysis of the constructs investigated in this study revealed that the respondents agreed to practices that enhanced employees' knowledge, skills, and abilities at workplace, while they (respondents) neither agreed nor disagreed to the practices enhancing employees' motivation and opportunity to perform. The implication of this is that the University Administration in Kenya needs to factor into consideration practices for incentivising and empowering employees in the HR policies of managing employees at workplace. In addition, University Administration in Kenya should beam more light on designing and implementing HRM practices that can lead to the satisfaction of the basic psychological needs of autonomy, competency, and relatedness. Though the findings of this study revealed that practices for enhancing employees' ability and empowerment would lead to needs satisfaction which would in turn culminate to employees' intention to stay, the findings of insignificant intervening effect of needs satisfaction on the relationship between practices for motivating employees so as to enhance employees' intention to stay need to be improved upon in university settings across Kenya. The University Administration in Kenya can use overall findings of this study to improve administration of human capital elements.

Future Research Studies Implication

The findings of this study have some implications that researchers can leverage upon to front further research inquiries. Firstly, the coefficient of determination reported in this study appears to be reasonably small. This indicates that various variables incorporated to measure the composite construct of HRM practices are not exhaustive and therefore there are other unexamined variables that can be operationalised to explain employees' intention to stay in organisation. Future research inquiries can be investigated using variables not considered in this present study. Secondly, this study used single level unit analysis (university), and therefore the findings may be constrained from being generalise to other sectors. Future research studies can, therefore, make use of data from multiple level unit of analysis to explain the effect of HRM practices on employees' intention to stay so as to improve generalisation of findings. Thirdly, this study is cross-sectional and therefore the findings of correlational effect do not equal to causal effect. Future research studies can, therefore, embark on longitudinal study in order to find causal effect of the relationship between HRM practices and employees' intention to stay in an organisational setting.

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53. Trainers Attitudes Towards Tourism Training in Technical and Vocational Colleges: Case study in Nairobi County, Kenya

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ABSTRACT

Trainers in Technical and Vocational Colleges (TVCs) have been instrumental in manpower training for the tourism sector and national development in Kenya. Despite this, no comprehensive study has been undertaken to assess the attitudes of TVC trainers in tourism training in order to attain Kenya's Vision 2030. Therefore, the objective is to assessed the Trainers Attitudes Towards Tourism Training in Technical and Vocational Colleges in Nairobi County, Kenya. Specifically, to assess the Trainers attitudes towards tourism training in TVCs. The study utilized the descriptive research design and targeted tourism trainers. Twenty (20) TVCs were randomly sampled for this study from Nairobi County. Trainers from 16 TVCs were interviewed to get their characteristics on social-demographic and their attitudes towards programs offered in TVCs. A sample of 105 trainers for the study comprising of 45 from public TVCs and 60 from private TVCs who were purposively selected. Data was collected using questionnaires, while descriptive and inferential statistics including ANOVA and Chi-square test were used for analysis. Findings from trainers revealed that tourism training in Kenya was adequate, while lack of practical skills within the tourism sector hindered teaching in TVCs. Public TVC trainers complete their syllabi on time and the entry behavior for trainees to programs is crucial to trainers in these institutions as compared to Private TVCs. TVCs are a critical source of middle level technical human capital in the tourism industry and different types of colleges are critical for healthy competition that leads to better trained graduates. It is recommended that the government

coordinates tourism trainings in all TVCs and up-to-date training of trainers in TVCs, to ensure quality graduates for tourism sector.

Key Words: Technical and Vocational Colleges, Trainers, Tourism, Training, Programs

INTRODUCTION

Koech (1999), the knowledge Kenyan are to acquire is far greater than what they already have, because on the global scene knowledge is growing faster than what has been integrated into the education system. There is a gap between what needs to be known and what is known also, there is a skills gap. These gaps will have to be understood so that to accelerate industrial development in Kenya according to Vision 2030. Therefore, there is mismatch between skills imparted by the education system and the requirements of the labour market. This mismatch is to be corrected in order to identify the existing gap in human resource development in all the sectors including tourism so that to meet the demands for the challenging economy (MoPND, 2007).

The standard skills needed are developed by the employer at workplaces while trainers, design and provide programmes for professionals, and, the government regulates the standards and issue certification (WTO, 1997). Training is part of development by equipping any country with the required human resource in spurring growth and development. The development of tourism sector requires different training levels in certificate and diploma undertaken by Technical and Vocational Colleges (TVCs) and degree training offered by universities. Graduates from TVCs work directly with tourists due to their responsibilities in middle management level (Table 2.1), therefore, they have to get proper training. Hence, training is a planned process that aims at modifying attitude, knowledge or skill behavior through learning experiences to achieve effective performance in a range of activities in human development, in order to develop the abilities of the individual and to satisfy the current and future needs of the tourism sector (Goldsmith *et al.,* 1997).

The combination of tropical beaches and spectacular wildlife makes Kenya an ideal tourist destination. The improvement in the sector is attributed to successful tourism promotion and the political stability in the country.

Statement of the Problem

The attention given to the human resource development in the tourism sector in Kenya is wanting, hence, leading to an explosion of most employees within the tourism sector having questionable qualifications needed to man the sector which has negative effect on tourism promotion and development. This may be due to type of institutions, level of training, syllabus, facilities just to mention but a few the trainees underwent. However, there is a feeling that the public training institutions produces half-baked graduates with obsolete or market-irrelevant skills, although, the cost of training is much higher as compared to private training institutions (Johnson & Adams, 2004).

Human resource training is a major concern to the tourism sector as it expands. The tourism sector requires 10,000 graduates annually but TVCs and universities offload only 1,920 into the job market (GoK, 2010). Therefore, there is huge gap to be filled, hence, impacting negatively to tourism promotion and development in the country. These leads to declining standards of the performance of some graduates released into the job market. Although, the government is concerned the high rate of unskilled labour finding their way into the hospitality and tourism sector. The government recommends the implementation standardization programmes to improve the status. If a quick solution towards updating technological shifts and training of highly qualified personnel is not found, the sector will struggle to keep pace with its growth demands.

Although, Sessional Paper No.1 of 2005, the technical, industrial, vocational and entrepreneurship training (TIVET) identified a gap between the skills learnt in TVCs and skills demanded by the tourism sector (Ministry of Education, MoE, 2005), Kenya's Vision 2030 has underscored tourism as one of the major pillars of the economy, hence this study generates information that can fill the foregoing gap, and serve as a basis for making informed decisions in the tourism sector (MoPND, 2007). Kenya, is experiencing a professional succession gap in its tourism labour force and the market where by the young generation has missed out the opportunity of gaining appropriate skills as the highly skilled generation, who benefited from early employment, vocational training and apprenticeships exit the job market. Despite all these, the study is useful to assess the attitudes of trainers towards tourism training in TVCs and their implications on tourism promotion and development in Kenya, with a view of keeping pace with the ever-changing needs and expectations in the tourism sector.

Objectives of the study

The main objective of the study was to assess the Trainers Attitudes towards Tourism Training in Technical and Vocational Colleges (TVCs), in Nairobi County, Kenya. The specific objective is to assess the attitudes of trainers in TVCs towards tourism training.

LITERATURE REVIEW

TVCs have contributed greatly to the training and development of tourism experts, both at operational and management levels. According to KNEC a total of 522,870 candidates sat for the 2015 KCSE examination, 31.52% translating to 165,766 candidates attained the minimum university entry qualification of C+ and above, leaving out 357,104 to join TVCs (KNEC, 2016).

Training in Technical and Vocational Colleges

The country needs to focus more on technical and vocational training education (TVCs) to train skilled manpower required in fighting unemployment as per Vision 2030, although, the major issue is the "mismatch between what is offered by TVCs and the industry needs". Therefore, there is need to link training and employment by integrating practical skills with conceptual knowledge in the tourism industry. According to Odhiambo (2012), continues

learning is coordinated and offered at various levels in TVCs, namely: Artisan, Craft, Technician and Technologist offered by some Universities. Ouma (1970), tourism industry needs a high degree of professional skills and experience due to the high demand for manpower training and various skills taught at TVCs, however, the variety of jobs in the tourism sector makes easy other labour market from other sectors to join tourism industry (Szivas *et al.,* 2003).

The government (GoK, 1991: Ipara, 2006) graduates from TVCs lack certain skills among others needed in the tourism industry, although, over the years, the institutions have also fulfilled the significant role of relieving the universities of pressure on student admission, by absorbing a sizable number of secondary school leavers. According to MoE (2010), for example out of the more than 400,000 students who sat for KCSE every year only about 30,000 get admission to public universities. The cost of training in these TVCs is relatively affordable, between Kshs.10, 000 and Kshs. 30,000 a year (GoK, 2010). Graduates from these institutions easily secure jobs as compared to University graduates since they are exposed to scientific and technological trends and critical thinking besides preparing them for university education. In this regards some students admitted to universities for general degrees opt to join these TVCs. According to Economic survey (GoK, 2013), the number of TVET institutions has risen from 701 in 2011 to 748 in 2012 as well as increased enrollment of students. They offer a varied programs with a strong bias towards engineering, technology, architecture, computer, textiles, pharmacy, electrical and electronics, business accounts, human resource, hospitality and tourism, among others, by offering training courses leading to certificate, diploma and higher diploma awards. It is expected that the rapid progress can be made within a short time by harnessing the potential of TVCs institutions, like South Korea, Malaysia, Finland, Ireland, China and Chile.

Tourism training

Training for the tourism industry varies globally due to an interplay of various factors among them nature, quality and adequacy of training facilities, attitudes of students, trainers and employers, the needs in the tourism industry and the nature and contents of the curriculum to be used in training among others. However, in German, they have well established vocational training (Cooper *et al.,* 1996), like the one offered by TVCs in Kenya. However, In Kenya, tourism training starts at post-secondary level and there is no clear tourism-training directory. Although, according to the National Tourism Policy (MoTW, 2006) tourism was to be incorporated into the national curriculum from primary to secondary school.

The effect of training on stakeholders is that training improves trainee's/employees performance as it meets the objectives of the organization (Bhatti & Kaur, 2010).

Tourism training institutions in Kenya

The number of fully registered Technical, Industrial, Vocational, Entrepreneurship Training (TIVET) institutions rose from 180 in 2009/10 to 411 in 2011/12. Consequently, total enrolment in TIVET programmes increased from 36,586 in 2009/10 to 79,114 in 2010/11 (GoK, 2011). The recent elevation of 17 colleges into full-fledged universities by the

government brought the number of chartered public universities to 24 and private universities to 29 (Universities Act No. 42 of 2012) (GoK, 2012). This has increased opportunities to further tourism training in management levels (University Education) which reduces the middle level training manpower that are key to providing services to the tourism sector Despite the expansion in formal schooling in the country, issues of capacity for effective management, sustainable financing, increasing demand for schooling and relevance of the curriculum to meet the demands of Vision 2030 and labour market needs must be addressed both at national and county government levels (KIPPRA, 2013).

Enrollment of students in Technical and Vocational Colleges in Kenya

According to the Economic Survey (GoK, 2007), KUC has trained 29,000 graduates since inception. Out of 3,8403 graduates by 2009, TU-K's Strategic Plan 2010-2015 shows that there were 365 students in the School of Hospitality and Tourism Management comprising of 1.2% males and 68.8% females. KUC and TU-K have dominated tourism training for manpower development in Kenya and most of the trainees are females (Table 2.6).

Table 1: Student Enrolment in TIVET in Institutions by gender between 2006 and 2012

	2006		2007		2008		2009		2010	
TVCs	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
NP	12,914	7,581	13,189	8,095	13,822	9,098	10,385	6,082	9,743	6,224
TI	9,925	8,731	10,818	9,517	12,132	9,876	12,514	9,923	12,908	9,705
IT	4,961	4,104	5,407	4,473	5,807	4,768	5,920	4,813	6,035	4,858
YP	8,741	14,210	9,528	15,489	12,154	17,543	13,222	18,122	14,384	18,720

Key**:** NP=National Polytechnics, TI=Technical Training Institutions, IT=Institutes of Technology, and, YP=Youth Polytechnics

Source: Economic survey of Kenya (GoK, 2010)

Table 2: Trainees in Technical and Vocational Colleges (2005 – 2010)

Year	Number of Youth Polytechnics	Number of trainees in Youth Polytechnics	Number of TVCs	Number of trainees in TVCs
2005	543	22,887	49	70,512
2006	563	22,951	49	71,167
2007	574	25,017	49	76,516
2008	705	29,697	51	85,200
2009	754	31,344	51	71,513
2010	756	33,104	51	82,843

Total	**3,139**	**131,896**	**51**	**374,908**

Source: GoK (2007 and 2010)

Trainers attitudes towards tourism training

Training in tourism industry, front line personnel and supervisors are high school and technical school's trainees/graduates who are in contact with the tourists (WTO, 1997; Table 3).

Table 3: Survey results of tourism employee education and qualifications

Institutions	Front line Personnel	Supervisors	Mid-level managers	High level managers
High school	36	34	12	6
Technical school	36	36	14	6
College or university	24	25	62	47
Post graduate institution	5	6	13	42
TOTAL	101	101	101	101

Source: Adapted from World Tourism Organization (1996)

The perceptions of enjoying what is taught differ from one level to another because of development differences among groups (Subramaniam & Silverman, 2007). Despite this, it is argued that all trainees can learn, and it is the responsibility of trainers to make sure that trainees believe what they are learning. Trainers value parental input and involvement towards trainees which facilitates home-college communication (Brown & Medway, 2007). In private TVCs, there are no clear curricula on training skills since they have their own syllabi besides that from KNEC and foreign institutions. Therefore, they are irrelevant to the country because this affects the number of trainees in relation to the employment sector (WTO, 1997). In both private and public institutions, finances hinder knowledge dissemination and acquisition since the purchase of different teaching materials like equipment is expensive hindering quality tourism training. Sindiga (1994) noted that tourism jobs are often viewed as menial and low level.

Murphy (1985), states that, individual attitudes towards tourism are positive when the community is involved. Owning a business creates employment to the community, leading to a positive impact on the attitudes of tourism professions. Further, the type of school the graduates attended prior to college entry affects the trainee's certificate or diploma class admitted by TVCs. This assists the trainer to know the entry behavior of the leaner so that the trainer can know where to start from when teaching. The starting entry point will also influence the learner to like the unit or not depending on the learners' background of educational qualification. Trainees who feel supported socially by teachers in TVCS tend to exhibit a greater likelihood of competence (Patrick *et al.,* 2007).

Conceptual framework for the study

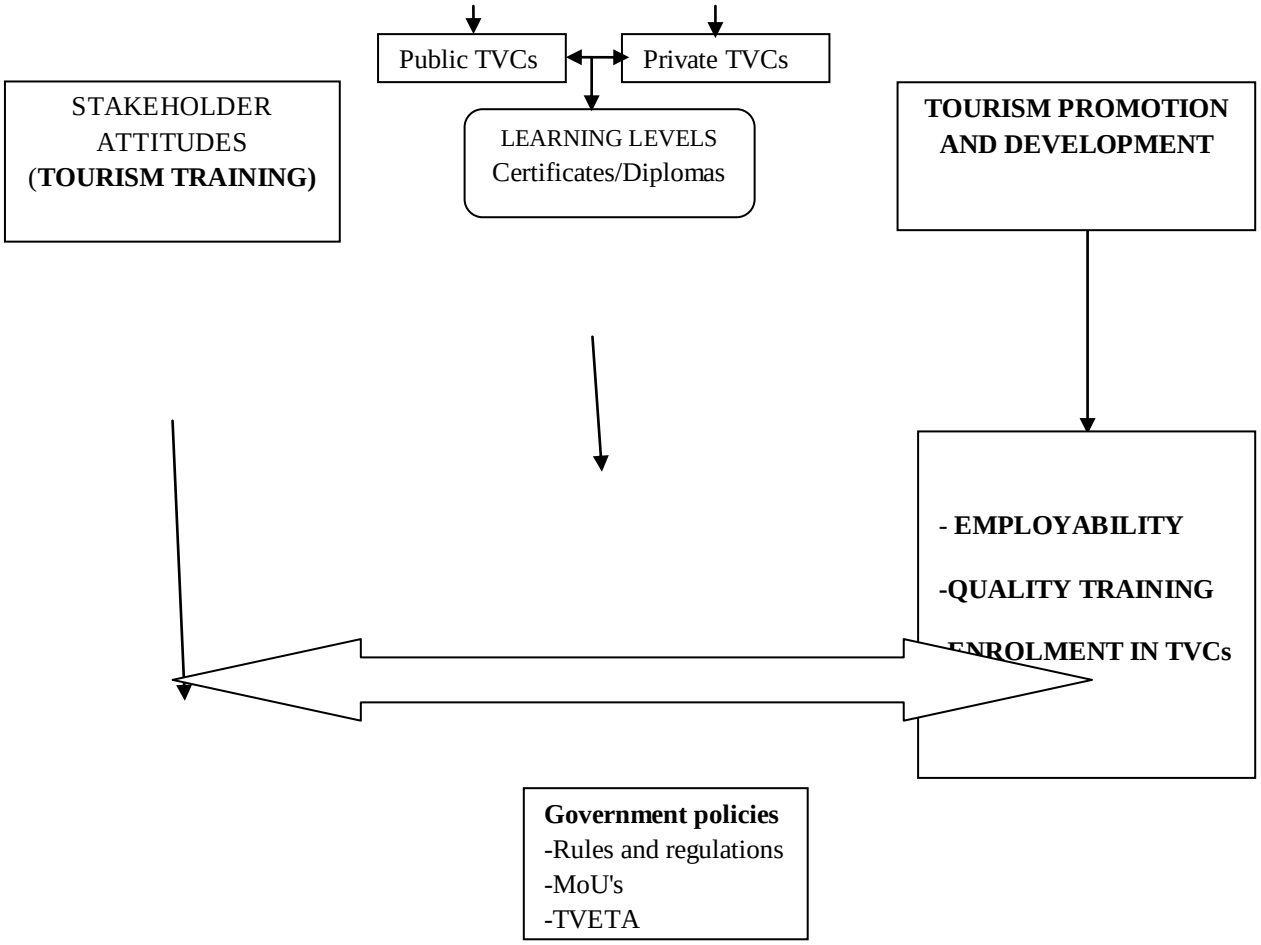
The Expectation - Disconfirmation Theory (EDT) is important in the service sector and can be used to predict and explain consumer satisfaction, is a consumer behavior model which is found appropriate in explaining relationships between the independent and dependent

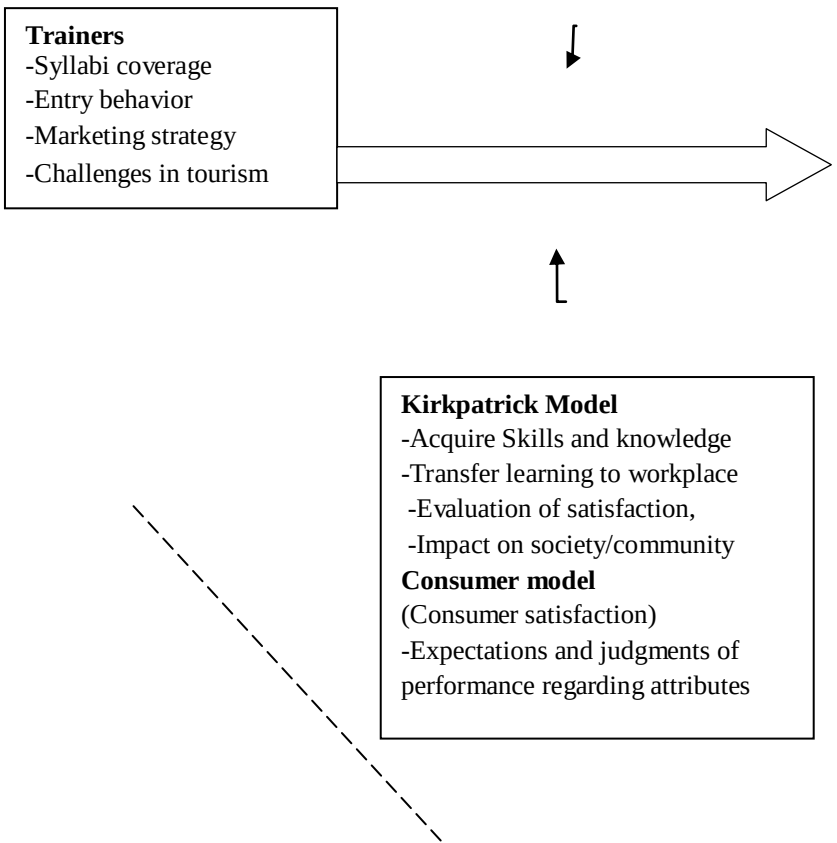
variables in this study as illustrated in Figure 1. In this figure relationships between certain cognitions about trainer's attitudes towards tourism training, promotion and development. Kirkpatrick's model was used to evaluate satisfaction, skill and knowledge acquired by trainees through training in different TVCs.

The attitudes of trainers within the tourism industry play a key role in determining the quality of training and influences on the promotion and development of tourism. Different studies have been conducted elsewhere to determine whether training influences satisfaction on education and training (Robbins, 998), experience (Pizam *et al.,* 1993) and satisfaction (Patterson *et al.,* 1997) which have revealed that these variables influence performance and satisfaction, while curricula, programmes and equipment do not influence (GoK, 1988).
Although, tourism sector is one of the drivers of the (http://www.kenyaembassy.com, 2018), the benefits cannot be realized without training through the TVCs by aligning the curriculum to the industry needs.

In summary, figure 1 shows that the tourism industry has Technical and Vocational Colleges as providers of tourism training. Kirkpatrick's model underscores the need for quality tourism training which is dependents on different variables among them the attitudes of trainers. The attitudes of trainers as independent variables may not necessarily lead to tourism promotion and development in Nairobi County due to the influence of intervening variables such as government policies and legal requirements, industry requirements and also moderating variables such as talent/individual effort of students, and facilities/learning equipment.

TOURISM SECTOR
seINDUSTRY
TECHNICAL AND VOCATIONAL COLLEGES (TVCs)


Public TVCs
Private TVCs
STAKEHOLDER ATTITUDES (TOURISM TRAINING)
LEARNING LEVELS Certificates/Diplomas
TOURISM PROMOTION AND DEVELOPMENT
- EMPLOYABILITY
-QUALITY TRAINING
ENROLMENT IN TVCs
Government policies
-Rules and regulations
-MoU's
-TVETA


Trainers
-Syllabi coverage
-Entry behavior
-Marketing strategy
-Challenges in tourism
Kirkpatrick Model
-Acquire Skills and knowledge
-Transfer learning to workplace
-Evaluation of satisfaction,
-Impact on society/community
Consumer model
(Consumer satisfaction)
-Expectations and judgments of performance regarding attributes

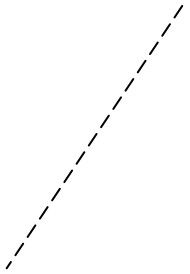


Figure 1: Conceptual Framework for the Study **Feedback Loop**

Source: Research (2018)

The attitudes of trainers as portrayed by their qualifications, reward schemes and tutor-student ratio if aligned with the government policies and regulations and industry requirements using the appropriate facilities and equipments on brilliant or hard working student will lead to tourism training and development. The curriculum/syllabi through the trainers will facilitate knowledge and skill delivery. The curriculum equips trainees with the necessary skills and knowledge needed to serve tourism sector efficiently and professionally in different tourism product destinations whereby if the attitudes are positive, then more tourists will visit the destination.

METHODOLOGY

The study was done in Nairobi County, selected Technical and vocational colleges (TVCS): the capital city of Kenya with a population of 4,556,000 according to Kenya Population and Housing Census (KPHC, 2019). The large numbers of TVCs are concentrated in Nairobi because there is high population of youth who require the services of TVCs.

Technical and vocational colleges offering tourism training in Nairobi County

Nairobi County has over five main public Technical and vocational college (TVCs) namely, Kenya Utalii College, Nairobi TVCs, Kabete (NP), Kinyajui TVCs, Karen TVCs and Railways TVCs. Private TVCs are mainly located in the Central Business District and in the

estates, they offer certificates and diploma courses after which trainees proceed to a degree level training in Tourism. TVCs in Nairobi and its environs offering tourism courses at the time of this study are shown in Table 4,

Research design

The study utilized both the descriptive designs which describe the nature and characteristics of a particular variable in tourism training and is applied both in qualitative and quantitative variables to determine the associates between the variables.

Target population

The target population consisted of 189 trainers teaching in TVCs in Nairobi County for the selected 200 TVCs

The study targeted TVCs because of their daily contact with TVC graduates who after studies work with hotels and interact with tourists. The Tourism Fund list for the year 2010 consisted of 507 TVCs located in Kenya (GoK, 2010). However, a preliminary survey to establish the presence of registered TVCs in Nairobi region revealed that only a few are active in training due to competition, hence, there was a mismatch between the registered colleges and actual numbers on the ground. The TVCs are supposed to be registered and are licensed by Tourism Fund. In order to ensure all TVCs are given equal opportunity for being selected, purposive sampling method by Kothari (2010) was used to select both private and public colleges. Hence, an equal number of private and public TVCs located in Nairobi were targeted. The Tourism Fund registration list was used as the sampling frame for targeted TVCs.

Out of 200 TVCs registered in Nairobi County with Tourism Fund, only 20 comprising of 10 private and 10 publics were registered and licensed by the Ministry of Higher Education, Science and Technology (MOHEST) and the Tourism Fund office in Nairobi County (Table 4). The 20 were thus selected for the study. Four TVCs consisting of 2 private and 2 publics out of 20 were used for piloting leaving 16 (80%) colleges for the actual study comprising 8 for both private and public TVCs.

The study used convenient sampling methods to select 200 TVCs and purposive sampling to select the trainers.

Selection of trainers in Technical and vocational colleges

The study targeted all the 189 trainers who teach tourism courses in the selected TVCs within Nairobi County with the aim of establishing their perceived attitudes towards TVCs programmes (Table 4). According to CTDLT (2010), there are about 60 trainers in private colleges and 129 in public TVCs giving a total of 189. It was noted, however, that majority of the trainers were not fulltime employees, and only came to college when they had lessons. This brought a mismatch between fulltime employees and part-time trainers. Simple random sampling technique (Kothari, 2010) was used to select 45 out of 129 trainers in public colleges for equal non-bias representation and the entire population (60) from Private TVCs. Hence, a total of 105 trainers involved in tourism training were sampled for the study by filling questionnaires. Ten percent (10%) of the sample (105) was selected for piloting using

simple random sampling technique. This adequately represented the population attached in Table 4 of this study.

Table 4: **TVCs registered by Tourism Fund, programs offered, trainers and trainees in Nairobi County**

Institutions	G/P	Diplomas	Certificates	Trainers/ Teachers	Trainees/ Students
1. Air Travel and Related Studies.	P	✓	✓	8	216
2. Premier Institute of professional Studies	P	✓	✓	6	114
3. Regional Institute of Business Management.	P	✓	✓	5	96
4. Dima College	P	✓	✓	3	74
5. Kabete Technical training Institute	G	✓	✓	2	88
6. Graffins College	P	✓	✓	6	112
7. Karen Technical Training for the Deaf	G	✓	✓	2	34
8. Kenya Institute of Professional Studies	P	✓	✓	7	243
9. The Technical university of Kenya (Kenya Polytechnic)	G	✓	✓	22	421
10. Kenya Utalii College	G	✓	✓	58	2966
11. Kenya school of Monetary Studies	G	✓	✓	2	20
12. Zetech college	P	✓	✓	5	55
13. National Youth Service Catering College	G	✓	✓	2	95
14. Nairobi Aviation College	P	✓	✓	7	254
15. Nairobi Technical Training Institute	G	✓	✓	3	198
16. Ricatti Business College of EastAfrica	P	✓	✓	5	143
17. Kenya School of Government	G	✓	✓	2	102
18. Skytech Aviation College	P	✓	✓	8	122
19. Kinyanjui Technical	G	✓	✓	3	110

Training Institute					
20. Railways Training Institute-Nairobi	G	✓	✓	33	76
TOTAL		17	19	189	5539

Key: G=Government institution, P=Private institution

Source: Ministry of Tourism – CTDLT (2010)

RESULTS AND DISCUSSION

Influence of student's entry behaviors on trainers' tourism training in TVCs

The trainers interviewed were asked if the student entry behavior influence their choice of college. Out of the 105 trainers interviewed, 66.7% were influenced by student entry behavior while 33.3% were not and this significantly differed between the trainers interviewed ($\chi2$=43.241, df = 1, p = 0.001, Table 5). Majority (93.3%, n=45) of the trainers interviewed from public colleges were influenced by student entry behavior as opposed to 6.3% and this differed significantly ($\chi2$=2.104, df = 1, p = 0.003). However, in private colleges, 46.7% of the trainers interviewed considered the student entry behavior while 53.3% (n=60) did not and this did not differ ($\chi2$=1.614, df = 1, p = 0.063). Chi-square test for student's entry behavior between public and private colleges showed significant difference among trainers ($\chi2$ =25.2, df = 1, p = 0.000).

Adequacy of tourism training in Kenya

Regarding adequacy of tourism training in Kenya, out of 105 trainers interviewed 74.3% felt the training was adequate while 25.7% felt otherwise and this significantly differed between the interviewed ($\chi2$=48.140, df = 1, p = 0.001, Figure 2). Majority (93.3%, n=45) of the trainers interviewed in public colleges felt the training was adequate while only 6.3% felt otherwise, with 60% (n=36) who felt training was adequate compared to 22.9% (n=40) who felt that tourism training was inadequate in private colleges and this differed significantly ($\chi2$=2.131, df = 1, p = 0.027). Chi-square test for adequacy of tourism training in public and private colleges showed significant difference ($\chi2$ =14.957, df = 1, p = 0.000, Table 5).

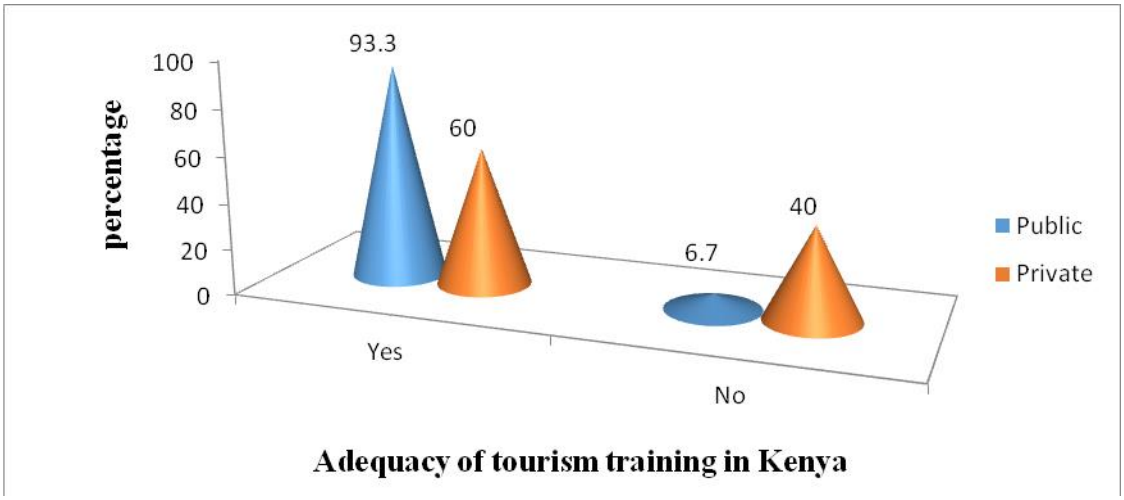


Figure 2: Adequacy of tourism training in Kenya

Table 5: Trainers attitudes towards tourism training in TVCs

Question	interviewed	Public		Private		$\chi 2$	df	p-value
		f	%	f	%			
Finish the syllabus on time as required	Yes	45	100	55	91.7	3.938	1	0.047*
	No	0	0.0	5	8.30			
Teach in any other institution	Yes	39	86.7	35	58.3	9.921	1	0.002*
	No	6	13.3	25	41.7			
Terms of service influences you	Yes	36	80.0	39	65.0	2.835	1	0.092
	No	9	20.0	21	35.0			
Equipment/facilities influences	Yes	9	20.0	20	33.3	2.287	1	0.130
	No	36	80.0	40	66.7			
Students entry behavior influences	Yes	42	93.3	28	46.7	25.2	1	0.000*
	No	3	6.70	32	53.3			
Bonuses given by administrations influences you to teach tourism	Yes	13	28.9	25	41.7	1.818	1	0.178
	No	32	71.1	35	58.3			
Lack of teachers influences you to teach tourism	Yes	30	66.6	28	46.7	4.16	1	0.041*
	No	15	33.3	32	53.3			
College environment influences trainers	Yes	17	37.8	25	41.7	0.162	1	0.687
	No	28	62.2	35	58.3			
Economic needs influences	Yes	26	57.8	47	78.3	5.128	1	0.024*
	No	19	42.2	13	21.7			
Training tourism adequate	Yes	42	93.3	36	60.0	14.957	1	0.000*
	No	3	6.70	24	40.0			

***Significant level at 0.05**

Inferential Statistics

Correlation Analysis

This section presents correlational analysis results conducted on Trainers attitudes towards tourism training in TVCs. The correlation results indicate that there is a Strong positive relationship between Syllabus Coverage and tourism training in TVCs as indicated by a Pearson correlation coefficient of .753**. A Pearson correlation coefficient of .611** indicate a strong and positive relationship between tourism training and Teaching in multiple institutions. Moreover, the relationship between equipment / facilities, terms of services on trainers' , students' entry behavior's and tourism training as indicated by a Pearson correlation coefficient (.433** .651** .735**).is positive.

Furthermore, there is a positive relationship between bonuses from College Administration and tourism training as indicated by a Pearson correlation coefficient of .402**. Additionally, the relationship between lack of teachers on trainers 'college environment. economic needs and tourism training as indicated by a Pearson correlation coefficient (445*, *645*, *788**) is positive. Lastly there is a Strong positive relationship between Adequacy of tourism

training and tourism training in TVCs as indicated by a Pearson correlation coefficient of .608**. This relationship was found to be statistically significant as the significant value was less than 0.05 in all cases

Table 6: Summary of the Pearson correlation (PC) Findings

Tourism Training In TVCs	PC	1									
	Sig. (2-Tailed)	-									
	N	105									
Syllabus Coverage	PC	.753**	1								
	Sig. (2-Tailed)	.000	-								
	N	105	105								
Teaching in Multiple Institutions	PC	.611**	.522**	1							
	Sig. (2-Tailed)	.000	0.000	-							
	N	105	105	105							
Equipment / Facilities	PC	.433**	.312**	.413**	1						
	Sig. (2-Tailed)	.000	0.003	.000	-						
	N	105	105	105	105						
Terms of services on trainers	PC	.651**	.480**	.563**	.501**	1					
	Sig. (2-Tailed)	.000	.000	.000	.000	-					
	N	105	105	105	105	105					
Students' Entry Behaviour's	PC	.735**	0.511**	0.325**	.229**	.295**	1				
	Sig. (2-Tailed)	.000	.000	.000	.000	.000	-				
	N	105	105	105	105	105	105				
Bonuses From College Administration	PC	.402**	.380**	.453**	.105**	.441**	.215**	1			
	Sig. (2-Tailed)	.000	.000	.000	.000	.000	.000	-			
	N	105	105	105	105	105	105	105			
Lack Of Teachers On Trainers'	PC	.445**	0.324**	.415**	.441**	.595**	.252**	.305**	1		
	Sig. (2-Tailed)	.000	0.003	0.002	.000	.000	0.004	.000	-		
	N	105	105	105	105	105	105	105	105		
College Environment	PC	.645**	0.432**	.351**	.341**	.315**	.152**	.125**		1	
	Sig. (2-Tailed)	.000	0.003	0.002	.000	.000	0.002	.000	.000	0.00	
	N	105	105	105	105	105	105	105	105	105	
Economic needs	PC	.788**	0.384**	.315**	.201**	.395**	.202**	.105**	0.222**	0.231**	1
	Sig. (2-Tailed)	.000	0.003	0.002	.000	.000	0.004	.000	.000	.000	-
	N	105	105	105	105	105	105	105	105	105	105
Adequacy of tourism training	PC	.608**	0.334**	.350**	.281**	.435**	.102**	.105**	0.332**	0.131**	0.322	1
	Sig. (2-Tailed)	.000	0.000	0.001	.000	.000	0.003	.000	.000	.000	.000	-

	N	105	105	105	105	105	105	105	105	105	105	105

**. Correlation is significant at the 0.01 level(2-tailed) Source: Research data (2019)

Regression Analysis

To establish the individual effect of independent variables (syllabus coverage, teaching in multiple institutions, terms of services on trainers, equipment / facilities, students' entry behaviors, bonuses from college administration, lack of teachers on trainer's college, economic needs and adequacy of tourism training) on the dependent variable (tourism training), the study conducted a regression analysis as the is results summarized in tables 7, 8 and 9.

The coefficient table 6.1.3 shows the constants and coefficients of the regression equation.

Table 7: Coefficients

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.152	.121		1.767	.0341
	Syllabus coverage (X1)	.246	.077	.251	5.472	.000
	Teaching in multiple institutions (X2)	.314	.059	.178	4.116	.000
	Equipment / facilities (X3)	.205	.063	.202	3.222	.003
	Terms of services on trainers' (X4)	.235	.052	.098	4.671	.000
	Students' entry behaviors (X5)	.191	.055	.256	3.444	.002
	Bonuses from college administration (X6)	.270	.055	.099	5.276	.001
	lack of teachers on trainers' (X7)	.373	.061	.405	6.153	.000
	College environment (X8)	.552	1.721	.767	.0341	.000
	Economic needs (X9)	.312	0.321	.361	3.315	.002
	Adequacy of tourism training (X10)	.309	0.402	.291	3.264	.001
a. Dependent Variable: Tourism training						

Source: Research data (2019)

Holding other factors constant then tourism training would be .152. A unit change in Syllabus coverage results to a 0.246 unit change in tourism training, holding other factors constant. A unit change in teaching in multiple institutions results to a 0.314 change in tourism training, a unit

change in equipment / facilities results in a 0.205 unit change in tourism training. A unit change in Terms of services on trainers', while results to a 0.235 unit change in tourism training.

A unit change in Students' entry behaviors, while results to a 0.191 unit change in tourism training. A unit change in Bonuses from college administration, while results to a 0.270 unit change in tourism training. A unit change in lack of teachers on trainers', while results to a 0.373 unit change in tourism training., a unit change in college environment results to.552 unit change in tourism training holding other factors constant. a unit change in economic needs results to.312 unit change in tourism training holding other factors constant. Finally a unit change in Adequacy of tourism training results to.309 unit change in tourism training holding other factors constant Table 7 also indicates that all the predictors are statistically significant at $\alpha=0.05$ since p values are less than 0.05.

Model Summary

The model summary table 8 indicates an R^2 of 0.852. This implies that 85.2% of the variations in the dependent variable (tourism training) are explained by the variations in the independent variables (syllabus coverage, teaching in multiple institutions, terms of services on trainers, equipment / facilities, students' entry behaviors, bonuses from college administration, lack of teachers on trainer's college, economic needs and adequacy of tourism training). This means that they can be used to predict tourism training, and therefore a multiple regression model is an efficient predictor.

Table 8: Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.923[a]	.852	.901	.15946
a. Predictors: (Constant), syllabus coverage, teaching in multiple institutions, terms of services on trainers, equipment / facilities, students' entry behaviors, bonuses from college administration, lack of teachers on trainers college, economic needs and adequacy of tourism training)				

Source: Research data (2019)

ANOVA

The ANOVA table 9 reports an F test value of 81.133 which is significant at p value 0.00<0.05. This means that the independent variables have a significant effect on the dependent variable.

Table 9: ANOVA Table

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	275.85	10	27.455	81.133	.002[b]
	Residual	32.3	95	.034		
	Total	308.15	105			
a. Dependent Variable: Tourism training						
b. Predictors: (Constant), syllabus coverage, teaching in multiple institutions, equipment / facilities, students' entry behaviors, bonuses from college administration, lack of teachers on trainers and college environment.						

Source: Research data (2019)

Discussions

Trainers have an important role to play in the tourism industry because of the challenges facing the industry need a well-educated, well-trained, innovative, energetic and entrepreneurial workforce, which understands environmental concerns the demand of sophisticated consumers, and advancing technology. Trainers will develop a high quality of human resources to allow enterprises to have a competitive edge over other enterprises in the service delivery. Trainers provide different types of programs and courses in relation to skills and knowledge needed. Employees must be provided with the skills required to meet tourist needs at all levels, in order to attract tourists. Negative attitudes towards tourism can reduce a learner's motivation and harm tourism learning, whereas positive attitudes can do the opposite.

It is the trainer to motivate the learner using integrative and instrumental motivation, in order to stabilize the attitudes in the trainee's minds. Integrative motivation is where learners are attached or/placed to tourism or related firms. In improving the overall quality in teaching, trainers should define good practice as well as better planning and delivery in course content In such a case TVC trainees should be attached to hotels and display their skills and knowledge to tourists. A positive learning environment also influences trainers attitudes, towards learning. This makes trainers feel comfortable and have the belief that they are competent In socially supportive and caring school, environment has more positive attitudes towards academics].

This study agrees with Murphy (1985), who states that, individual attitudes towards tourism are positive when the community is involved. Owning a business creates employment to the community, leading to a positive impact on the attitudes of tourism professions. However, according to Hanushek (1998), there is no strong or consistent relationship between school inputs and trainees performance. Trainees' performance depends on other variables like the trainee's own ability and support provided by parents. Further, the type of school the graduates attended

prior to college entry affects the trainee's certificate or diploma class admitted by TVCs. This assists the trainer to know the entry behavior of the leaner so that the trainer can know where to start from when teaching. The starting entry point will also influence the learner to like the unit or not depending on the learners' background of educational qualification. Trainees who feel supported socially by teachers in TVCS tend to exhibit a greater likelihood of competence (Patrick *et al.,* 2007).

According to Ryan and Patrick (2003), work generates leisure behavior, which in turn determines travel behavior. According to Ryan's hypothesis, holiday making is a way to compensate for stress and boredom in everyday life. The assumption is that work associated with a high routine level, especially if it is machine-dictated, generates a pattern of automated holiday making, and this too is a major boom of package tours. However, interesting work also generates heightened interest in leisure activity, and therefore participation becomes more attractive than passiveness in travel behavior (Ryan & Patrick, 2003).

Study contribution to theory

The theory identified tourism training as an independent variable which is concerned with trainers whereby the dependent variables, tourism promotion and development depends which is the pivot on which the service hangs by maintaining e.g. natural parks, hotel, museums, such that tourists get the best-value of their money. On the other hand, it will increase college enrolment; quality training offered by TVCs, the trainees will be able to be absorbed in various tourist destinations, such that the employers/tourists will be satisfied with the services offered by the trainees from TVCs.

The theory identified research gaps which the research tried to fill. The gaps incudes, since, very little attention is given to quality human resource training hence, poor professional training in tourism. Consequently, a high rate of unskilled labour is finding their way into the tourism and hospitality sector, with updated technological shifts, there is need to train qualified personnel, the tourism sector requires a review of tourism curricula in the tourism industry, and, finally, the findings will guide stakeholders on improvement, diversify, and enrich curricula in order to promote and develop tourism industry.

Conclusions

From the research findings the researcher concludes that trainer's attitudes influences tourism training positively. With key focus on specific variable the researcher ranked the them based on the relationship and influence other dependent variable and concludes that economic needs strongly influenced tourism training in TVCs preceded by the students' entry behavior's, syllabus coverage, terms of services on trainers, college environment, teaching in multiple institutions, lack of teacher's trainers and finally equipment / facilities had the least influence on tourism training in TVCs. Therefore, tourism training should include courses that focus on: sociology, economics, psychology, education, business, marketing, agriculture and recreation

management-parks and recreation. Based on the foregoing broad based curricula, it can be inferred that such training produces broad based and quality graduates competent in hotel and tourism industry.

Recommendations

From the research findings the researcher recommends that for tourism training in TVCs to be enhanced, economic conditions of trainers are sufficient by timely paying of salaries and allowances, put in place guidelines on student behavior and conduct and the government to ensure that terms of services on trainers are met and are within the international standard.

Quality TVCs training in tourism is a prerequisite for quality standard of living, quality manpower skills and knowledge, and economic development of the country. Therefore, Tourism training policy strategy has been identified and its implementation is as indicated in figure 3. Training in tourism is expected to start from primary level of education system, whereby the pupils are to appreciate and have positive perceptions towards the surrounding environment, educational trips and be aware of historical/tourist/geographical/physical areas in the country.

Although, tourism fund is a professional body but government controls, especially finance which cripples its operations. The tourism fund is expected to market itself nationally and internationally for the stakeholders to have faith in its operation assuming they have to mark-bench with other organizations. In such a case individual to be members of the profession and give subscriptions annually which will cater for its budget. To remove such baggage's, tourism is expected to have a professional body – Tourism Professional Studies (TPS) and have a model structured like other professions- KASNEB - to award Diploma in Tourism Studies (DTS), which is a professional diploma in tourism but not academic. The profession is to regulate tourism training and instill discipline in the tourism sector not only to TVCs but also to individuals who are members. Secondly, whoever starts a tourism training college or tourism destination must be professionally qualified by having studied DTS. To undertake DTS, one has to undergo a diploma or certificate in tourism as a prerequisite. TPS, as a professional body is to be involved in curricula development at all levels of the education system and be affiliated to international associations so that they blend the local and foreign syllabi to suit a tourist's perceptions towards tourism destinations. The curricula for diplomas/certificate in tourism from TVCs is expected to include among others educational trips, historical sites, cultural events, attachments/internship, exchange programmes within colleges and visiting major tourist attraction in the country. All examinations offered by TVCs in tourism training, to be examined by one national body and attachment reports to be forwarded to the examining body for grading. Employers are expected to employ professionally qualified manpower through the advice of TPS. These are some of the gaps within the tourism fund which TPS can look into after its existence.

Finally, if the policy is to be implemented by the relevant ministry with the stakeholders in tourism, it will increase specialization in tourism training, increase employability for trainees/graduates, increase enrollment of trainees in TVCs, improve partnership between TVCs trainees and the tourism industry and will bring professionalism to the industry which is a key issue to tourists.

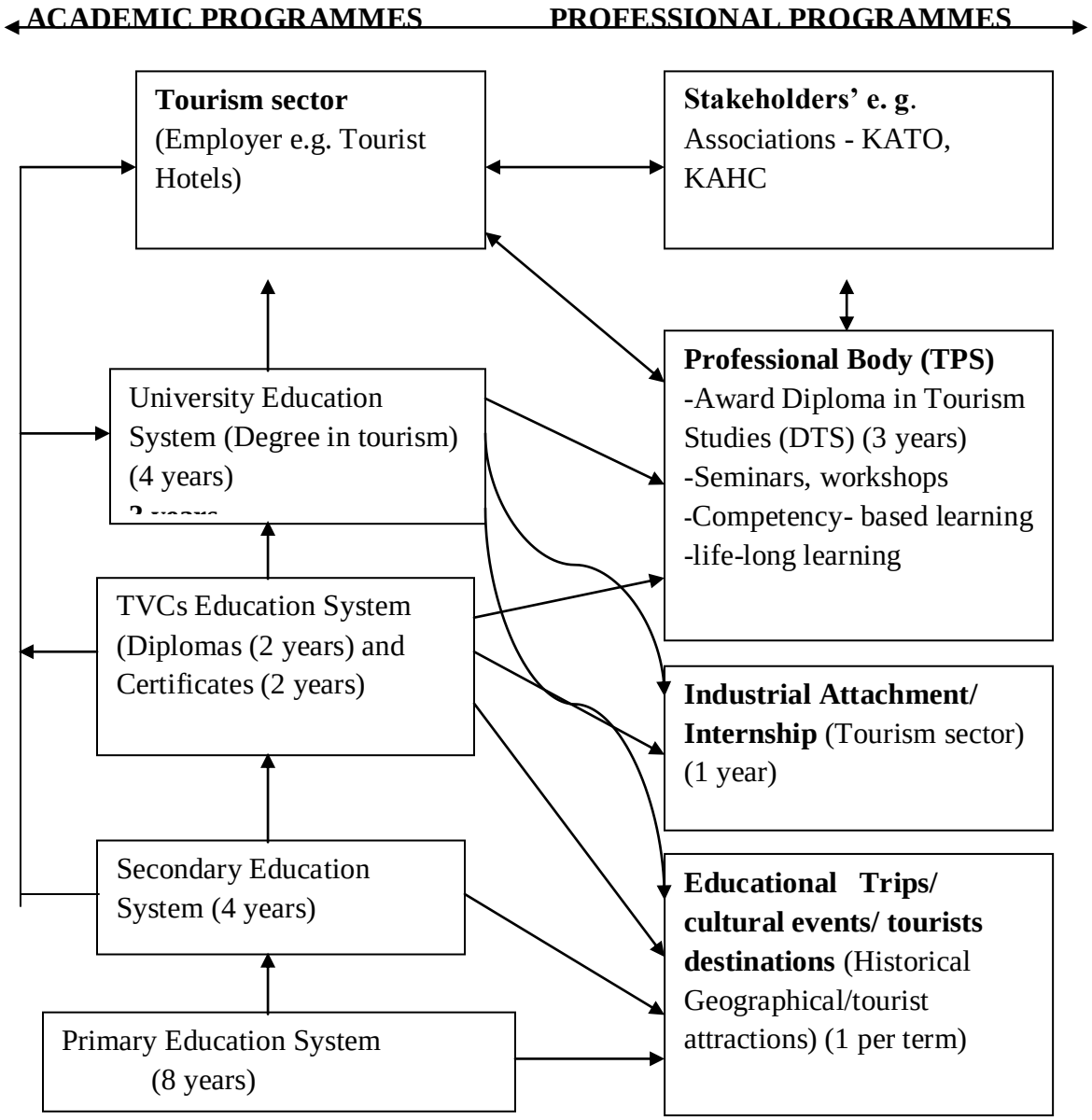


Figure 3: Tourism training policy strategy framework

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54. Microcredit Services and Performance of Women owned Enterprises in Kilifi County, Kenya

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ABSTRACT

Although women owned enterprises play an important role in ensuring the growth of an economy, most of these businesses face challenges including limited access to credit facilities and limited skills among women owners. Commercial banks have consistently remained reluctant to advance credit facilities among low income earners who mostly comprise of these women owned enterprises. Majority of the women owned enterprises are still at micro level with limited ability to transact in larger profitable firms because of limited access to financial resources. The main economic activities that the youth and women are engaged in Kilifi County include small scale business/trade, mining industry, bodaboda business, Mnazi tapping, Casual labour and commercial sex. Despite this, the youth and women are faced with a myriad of challenges which include poor/low pay, exploitation, health Complications, unwanted pregnancies, HIV infections. Some of the ways in which these challenges facing women engaged in business in Kilifi County can be managed include; capacity building/education, government financial support, enforcement of laws of child labour, guidance and counseling and creation of employment. There has been a rise in the number of women owned enterprises in the County

with the advent of county government system. The County Government of Kilifi has given opportunities and credit to youth, special needs group and women to start or expand their businesses and also get procurement opportunities. However these women owned enterprises have had challenges with sufficient financing especially from microfinance institutions in the County. The study sought to bridge the gap by establishing the effect of Microfinance Services and performance of women owned enterprises in Kilifi County, Kenya. The study was guided by the following objectives; to establish the effect of loan facilities, saving services, influence of financial literacy and convenience and reputation of credit institutions on performance of women owned enterprises in Kilifi County, Kenya. The study was anchored on the following theories; Resource based view theory and Social Learning theory. The study used descriptive research design. The population of the study was 1281 women owned enterprises. The study applied stratified random sampling technique. The sample size was therefore296 women owners of registered enterprises in Kilifi County. The collected data was be qualitative and quantitative in nature. To analyze qualitative data, content analysis was employed. For quantitative data, the researcher employed both descriptive and inferential statistics for analysis that covered means, standard deviations and regression analysis. The study established that microfinance services had a positive effect on the performance of women owned enterprises in Kilifi County. The study concluded that there were significant microfinance services provided by MFIs in Kilifi County for women-owned enterprises in Kilifi County. The study concluded that microfinance services offered by MFIs positively and significantly influenced the performance of women-owned enterprises in Kilifi County. It was concluded further that some of the enterprises were not aware of the microfinance services offered by MFIs in Kilifi County. The study recommends that the women-owned enterprises need to be sensitized on the available microfinance services and how to access them. The study recommends that the enterprises need to improve their saving culture to enhance their capital base and financial performance.

Key Words: *Microcredit Services and Performance of Women Owned Enterprises in Kilifi County, Kenya*

1. Introduction

Women play an important role in the growth of the economy and thus require empowerment by ensuring that they can access credit facilities conveniently for supporting their businesses. The key pillar of success and ultimate performance of women owned businesses is their accessibility to credit facilities required for running the day to day affairs (Ul-Hameed, Mohammad&Shahar, 2018).The story of most successful and developed countries can be attributed to small businesses (some of which are women owned) which are so innovative in the changing business environment. An assessment of the influence of micro credit on growth of women owned enterprises in Kenya by Mamun (2016) revealed that about 3 million small businesses are supported by microfinance sector. It was further noted that accessibility to micro credit positively impacts on growth and performance of enterprises especially those owned by women.

Microfinance services are particularly useful to low income earners involving women who are financial secluded from accessibility to financial services offered by commercial banks. In fact, microcreditservice is one of the avenue and policy mechanism used by governments to empower women and thus reducing gender based violence. In most of the countries, the financial needs of low income earners have not been fully and effectively attained by commercial banks because of strict baseline demands and requirements (Hameed, Hussin, Azeem, Arif&Basheer, 2017). Additionally, low income earners are perceived to have low credit worthiness by commercial banks arising from limited assets ownership to be pledged as collaterals. To fill these gaps, Microfinance Services have significantly gained attention as these services are aligned to the financing needs of women owned enterprises (Garg&Agarwal, 2017).

2. Statement of the Problem

Although women owned enterprises play an important role in ensuring the growth of an economy, most of these businesses face challenges including limited access to credit facilities and limited skills among women owners. Commercial banks have consistently remained reluctant to advance credit facilities among low income earners who mostly comprise of these women owned enterprises. Majority of the women owned enterprises are still at micro level with limited ability to transact in larger profitable firms because of limited access to financial resources (Geleta, 2016).

Although the government has made several efforts including formulation of effective policies and regulations and creation of a suitable operating environment, these efforts however have beard insignificant results as far as women owned enterprises is concerned. For instance, in 2016, the CBK passed the interest capping regulation that was meant to lower the cost and affordability of access to credit facilities among commercial banks hence the growth in women owned enterprises (CBK, 2017). This regulation however has yielded little fruits as most of the women owned enterprises are still faced with a challenge of accessibility to credit. According to Lock and Lawton Smith (2016), Microfinance Services are the only avenues that the government can use as policy mechanisms of ensuring that more women owned enterprises access credit for better performance.

A number of studies have been carried out to explore Microfinance Services and financial performance, although in different contexts. For instance, Alhassan, Hoedoafi and Braimah (2016) looked at how microfinance influences profitability among women owned enterprises in Ghana. The key finding was that microfinance influences performance of women owned enterprises. This study however focused on Ghana and not Kenya. While focusing on women owned SMEs in Tamale Metropolis, Alhassan (2016) assessed how microfinance influences their performance and a positive relationship was established. This study was however not conducted in Kenya hence creating a research gap.

In Tanzania, Monge (2016) examined Microfinance finance and how it influences performance of SMEs. The key finding was that Microfinance positively influences performance of the firm. The study however was done in Tanzania and not in Kenya. In Kenya, Kanyare and Mungai

(2017) looked at determinants of Microfinance and how they influences performance of Wajir County SMEs. It was established positive link between savings, accessibility to credit and training services and performance of SMEs. This study however focused on SMEs as a whole and not specifically on women owned enterprises.

Thus, in as much as studies have explored Microfinance and financial performance, most of these studies however focused in different contexts in terms of countries. Other studies were done among SMEs as a whole and not specifically women owned enterprises. Other studies were done in different counties including Wajir. This created research gap which the current study sought to fill by examining the effect of Microfinance Services and performance of women owned enterprises in Kilifi County, Kenya.

3. The objectives of the study

The general objective of the study was to investigate the effect of Micro-credit finance Services and performance of women owned enterprises in Kilifi County, Kenya.

Specific objectives of this study were:

i. To assess the effect of loan facilities on performance of women owned enterprises in Kilifi county, Kenya
ii. To determine the effect of savings services on performance of women owned enterprises in Kilifi county, Kenya
iii. To investigate the influence of financial literacy services on performance of women owned enterprises in Kilifi county, Kenya
iv. To establish the effect of convenience of credit institution on performance of women owned enterprises in Kilifi county, Kenya.

4. Theoretical framework

The study was guided by the following theories: Resource based view theory and the social learning theory.

4.1 Resource Based Theory

The theory was formulated by Barney (1991) to explain how firms can leverage on resources to gain competitive advantage and thus performance. There are different varieties of resources in an organization which can include financial, human and technological. For sustained competitive advantage in an organization, the theory argues that the resources in place should be rare and difficult to imitate and be copied by competitors (Xie&Lv, 2016).

The theory indicates that an organization gains competitive advantage by employing a bundle of resources in its stock. The theory particularly focuses on internal resources, the strategy of the organization and the overall performance. Studies linking accessibility to microfinance consider RBV as an anchorage to identify and analyze resources at the disposal of the firm and this influences financial performances (Alvarez& Barney, 2017).

Resources in an organization can either be tangible or intangible and they can be taken through a system to be transformed into outputs. Thus, resources in an organization can be used as inputs of generation of revenues. The theory argues that the internal dynamism of the firm is an important factor when it comes to access to credit facilities from lending institutions. However, in the intermediation role played by any lending institution, there is always information asymmetry that affects the transactions (Inman, 2016).

However in order to clearly understand the credit worthiness of borrowers, most financial entity collect information of borrowers. This helps in reduction of the credit risk and thus performance of an institution (Kyalo&Kiganane, 2018).This theory is relevant to the study because access to loans and savings can be taken as resources that help in attaining optimal performance among women owned enterprises. In other words, performance of women owned enterprise depends on resources which are best supplied by lending institutions.

4.2 Social Learning Theory

This theory was formulated by Bandura (1977) to describe how individuals learn given behavior. The theory argues that people learning by strictly observing what other do or how they behave in a social setting. In other words, people use role model as benchmarks to learn by observing what they do or how they behave. This theory is increasingly used as a component of natural resource management and on the promotion of desirable behavioral changers.

This theory was developed on the idea that every organization learn from others in terms of social set up. This is basically done by observing the behavior of others by doing so people develop similar behaviors. Other observation of the behavioral changes people simulates, imitate what other people are doing. This observation is more profitable when they are positive or there is reward to observe the behavior at the end. According to Bandura, imitations may involve the actual reproduction of observed motor activities (Rotter, Chance&Phares, 1972).

This theory has become the most influential theory in micro financial institutions. It is basically rooted in the tradition basic concept of learning theory. This theory have been often call bridge between behaviorist learning theory and cognition learning theory because it incorporates attention, memory and motivation on this concept Burundi identified that reinforcement could not account for all types of learning. From this argument, he added a social element that people can generally learn new ideas and believe on them by watching other people (Krumboltz, Mitchell, & Jones, 1976). According to the element of this theory there are several principles of learning which observation, imitation is and modeling. This theory is relevant to the study because it link financial literacy which aims at imparting skills on owners of business.

5. Conceptual Framework

This concept illustrates the relationship between independent and dependent variables. The independent variables were loan facilities, saving services, financial literacy services and

convenience of institutions whereas the dependent variable is the performance of women owned enterprises.

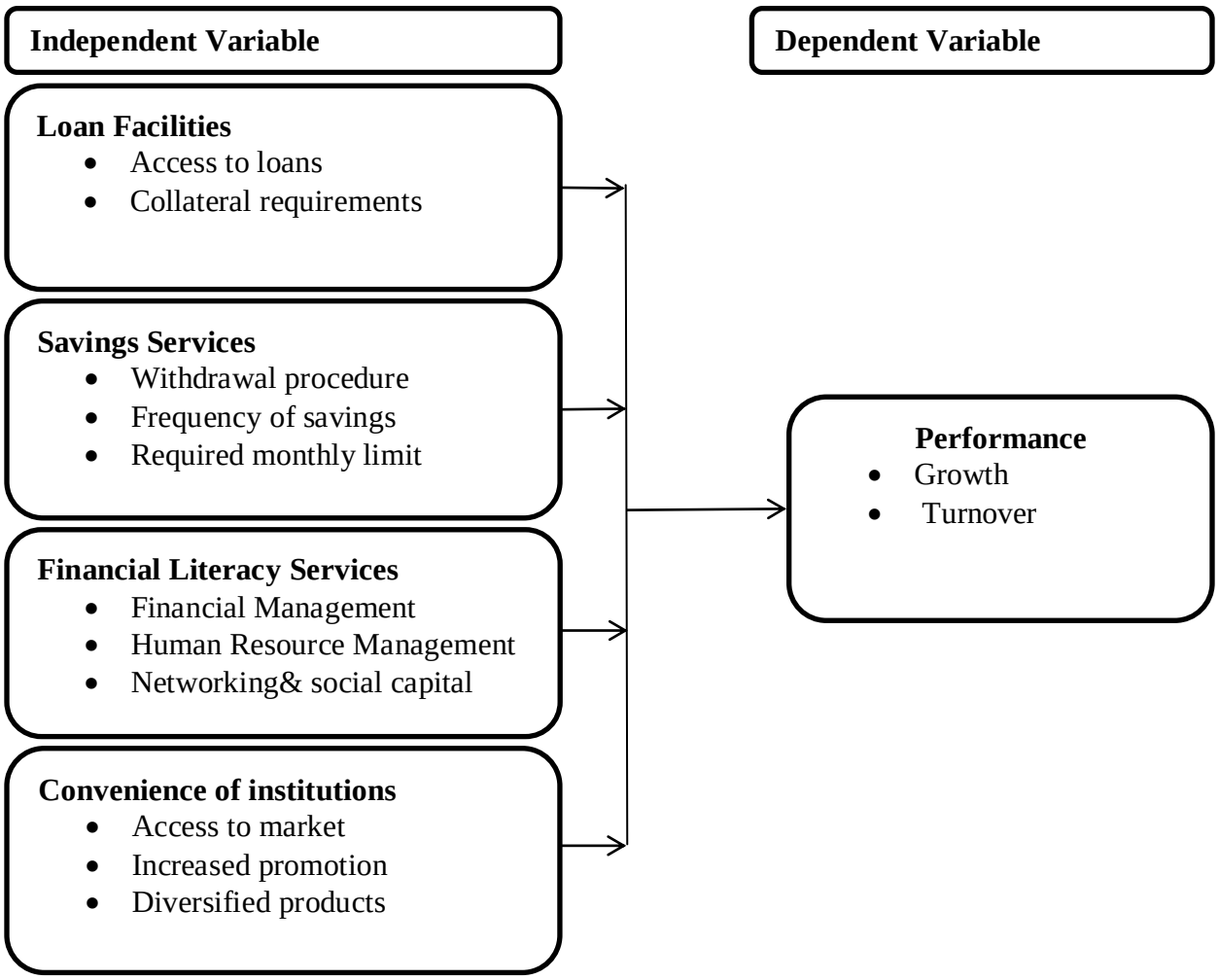

Figure 1 Conceptual Framework
Source: Researcher (2020)

6. Research Methodology

The study employed a descriptive research design Yin (2017) argues that a description design is useful in giving an account of the way things are and exist in their original state. The design helps to answer questions of how, when, why and where about a given event. The population of the study was1281 women owned enterprises in Kilifi County. The respondents were women owners of these enterprises.

The study collected primary data with the help of questionnaires. The questionnaires were semi-structured comprising of open and close ended questions. The questionnaires were divided into sections based on the study objectives. The collected data was qualitative and quantitative in nature. To analyze qualitative data, content analysis was employed. For quantitative data, the researcher employed both descriptive and inferential statistics for analysis that covered means, standard deviations and regression analysis. This was done with the help of the Statistical Package for Social Sciences (SPSS) version 24.

7. Data Analysis Results

Model Summary

The findings of coefficient of determination and coefficient of adjusted determination are as shown in Table 4.8.

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.877[a]	.863	.851	1.51223

Source: Field data, 2020

The findings found out that coefficient of correlation R was 0.877, an indication of strong positive correlation between the variables. Coefficient of adjusted determination R^2 was 0.851 which changes to 85.1% an indication of changes of dependent variable can be explained by (loan facilities, savings services, financial literacy services and convenience of credit institutions). The residual of 14.9% can be explained by other factors beyond the scope of the current study.

ANOVA

The study carried out an ANOVA at 95% level of significance. The findings of $F_{Calculated}$ and $F_{Critical}$ are as shown in Table 4.9.

Table 2: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	832.104	35	23.774	14.0583	.000[b]
Residual	321.311	190	1.6911		
Total	1153.415	225			

The findings show that $F_{Calculated}$ was 14.0583 and $F_{Critical}$ was 6.5241, this show that $F_{Calculated} > F_{Critical}$ (14.0583>6.5241) an indication that the overall regression mode was significant for the study. The p value was 0.000<0.05 an indication that at least one variable significantly influenced performance of women-owned enterprises in Kilifi County, Kenya.

Coefficients of Regression

The study used coefficient of regression to establish the individual influence of the variables to firm performance. The findings are indicated in Table 4.10.

Table 3: Coefficients of Regression

	Unstandardized Coefficients		Standardized Coefficients		
Model	**B**	**Std. Error**	**Beta**	**T**	**Sig.**
(Constant)	6.245	0.721		2.781	.000
Loan facilities	0.828	.142	.134	9.155	.000
Savings sources	0.811	.134	.204	11.379	.000
Financial literacy services	0.797	.120	.261	10.419	.000
Convenience of credit institutions	0.806	.171	.247	11.275	.000

The resultant equation was

$$\mathbf{Y= 6.245+ 0.828X_1 + 0.811X_2 + 0.797X_3 + 0.806X_4}$$

Where: X_1 = Loan facilities

X_2 = saving sources

X_3 = financial literacy services

X_4 = convenience of credit institutions

The study found out that by holding all the variables constant, performance of the women owned enterprises in Kilifi County will be at 6.245. A unit increase in loan facilities when holding all the other variables constant, enterprise performance would be at 0.828. A unit increase in saving sources while holding other factors constant will increase performance of women owned enterprises by 0.811. A unit improvement in financial literacy services while holding other factors constant, performance of the enterprises would be at 0.797. A unit increase in convenience of credit institutions while other factors are held constant, enterprise performance would be at 0.806.

The findings pointed out that loan facilities, savings services, financial literacy services and convenience of credit institutions had a p value of $0.000<0.05$ an indication that the microfinance services significantly influenced performance of women-owned enterprises in Kilifi County. This is supported by Mori (2016) who noted that the selected microfinance services significantly influenced the performance of enterprises.

8. Summary of the Findings

The study established that loan facilities had a positive influence on the performance of women owned enterprises in Kilifi County. It was established that to a significant extent that the microfinance institutions in Kilifi County are flexible to issue loans to them using their cash flow from business, loans from the institutions have helped them increase their stocks, sales revenue and growth of their businesses. The study established that savings sources positively influenced the performance of women owned enterprises in Kilifi County. The study established that

financial literacy services significantly influenced the performance of women owned enterprises in Kilifi County. The study established that convenience of credit institutions positively influenced performance of women-owned enterprises in Kilifi County.

9. Conclusions

The study concluded that there were significant microfinance services provided by MFIs in Kilifi County for women-owned enterprises in Kilifi County.

The study concluded that microfinance services offered by MFIs positively and significantly influenced the performance of women-owned enterprises in Kilifi County.

It was concluded further that some of the enterprises were not aware of the microfinance services offered by MFIs in Kilifi County.

10. Reccommendations

The study recommends that the women-owned enterprises need to be sensitized on the available microfinance services and how to access them.

The study recommends that the enterprises need to improve their saving culture to enhance their capital base and financial performance.

The study recommends further that the government and other regulatory agencies need to come up with policies and regulations that are favorable in promoting the microfinance sector and growth of women owned enterprises.

11. Suggestions for Further Research

More studies need to be done on the other microfinance services apart from the four discussed in the study. The main objective of the study was to establish the effect of microfinance services on the performance of women-owned enterprises in Kilifi County, future research should be carried out on other players. The coefficient of adjusted determination R^2 was 0.851; therefore, the residual of the study was 14.9% and can be explained by other factors beyond the scope of the current study that future scholars should focus on.

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55. Assessment of Financial Stability among Commercial Banks in Kenya: An Evidence of Fragility Index Measure

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Abstract

Fluctuations rate of the fragility index were characterized by the increasing rates of non-performing loans in commercial banks, bank runs among the commercial banks and increase in foreign liabilities from commercial banks in Kenya. The study was carried out between years 2011 to 2018. Evidently, there was a sharp increase and fluctuation in the fragility index from the end of 2014 and the beginning of 2015 to 2018; it was within this period that Dubai Bank, Chase Bank and Imperial Bank were put under receivership. Fragility index in this study has emerged to be a robust measure of early warning signal to financial stability of commercial banks in Kenya. The study recommends that going forward, fragile commercial banks should divest a way towards merging to ensure they are financially stable.

Keywords: *Fragility Index, Credit Risk, Liquidity Risk, Foreign Exchange Risk, Kenya.*

Introduction

Financial stability has been described into two categories; first, as an interconnection among financial institutions whereby a crisis of one institution can induce uncertainty, resulting in bank failures in the financial sector. Second, when a shock influences many financial institutions and causes subsequent failures, that destabilizes the entire economy (Anatolyevna & Ramilevn, 2013). Alawode and Mohammed (2008) describe financial stability as the smooth task of the divisions of money-related intermediation forms among government, households and firms through a scope of financial institutions supported by a many financial framework. However, a debate on a specific or particular definition of financial stability is still a point of contention (Mohamed, Abouch, Saidi, Abdessamad, Firano & Zakaria, 2012). Nonetheless, financial stability can be described as the firmness of banking system towards banking crisis.

Financial stability is a broader discipline. Chant (2003) categorizes it into three ranges of possibilities namely financial crisis, instability and fragility. However Chant does not bring out the measurement of the respective possibilities. Financial crisis, instability and fragility can collectively be expressed as the vulnerability of the banking sector towards a shock. The current study extended this research from the fragility index developed by Kibritçioglu, (2002). Whose indicators can be traced from the IMF staff papers (Gonzále, Berjooosillo, 1996: González-Hermosillo, Brenda, Ceyla Pazarbasssıoglu, & Billings, 1997). Fragility is the degree to which small economic shocks have disproportionately enormous adverse effects on the financial bodies (Allen & Gale, 2008). On the other hand, Loloh (2014) points out fragility as the vulnerability of a monetary system to a banking crisis. Fragility index as a proxy of financial stability has been employed by a number of studies (Loloh, 2014; Ahmad & Mazlan, 2015).

Many studies have employed Z score as a proxy of financial stability (Laeven & Levine, 2009; Cihak & Hesse, 2010; Karim & Abuduh, 2016; Ameni, Chaibi, & Omri, 2017; Alphonse, Michael & Luc, 2018; Musau, 2018). However, the Z score measure has been criticized as it measures risk in a single period; it does not reflect the probability of a series of negative profits which might underestimate the banking risk, (Beck & Laeven, 2006; Diana & Tomas, 2015). Furthermore Z score looks at each financial institution separately, potentially overlooking the risk that a default in one financial institution may cause loss to other financial institutions in the system (Cihak & Hesse, 2010). Gudmundsson *et al*. (2013) employed ROE and ROA as an outcome variable of financial stability; however ROE and ROA are employed when ascertaining the profitability level of commercial banks and not how fragile they are to banking crisis as noted by fragility index in this study.

Financial stability has been a critical point of concern by policy makers internationally since the Financial Crisis of 2007-2009 (Beck, 2009). The 2007-2009 Financial Crisis was engineered by the collapse of an asset price bubble in the housing market in the US (Zywicki & Okloski, 2009). The collapse of the Lehman Brothers investment bank was immediately followed by a credit crunch that translated into liquidity and solvency crises, resulting into a global recession (Mutuku, 2010). Developed countries were first hit by the fundamental banking crisis in the U.S and Europe. Capital streams, cross border financial linkages and exchange rates were the main avenues through which emerging markets with well-developed financial systems were affected (Sin, 2016). The developing countries were drawn into the global financial crisis because of the portfolio outflows that hit hard the developing countries to the extent that some economies took time to recover from the shock (Diery, 2010).

1.2 Commercial Banks in Kenya

Commercial banks play a crucial role of consolidating savings from surplus unit and funding deficit units in the economy (Obiero, 2010). Banking stability as an economic pointer can be

utilized to decide if an economy is strong enough to withstand both the interior and external shocks (Sopan & Dutta, 2018). Commercial banks in Kenya are governed by the CBK through various banking acts and prudential regulations. The acts and prudential regulations are geared towards achieving the goals of the Kenya's Vision 2030 that advocates for a vibrant and well-functioning sound, efficient and stable financial system (CBK, 2016). To ensure that banks achieve the objective of financial stability, the CBK has traditionally adopted the CAMEL model which comprises key firm characteristics (Beck, 2009). Despite the initiative by the regulator, the banking sector in Kenya has experienced challenging moments that have seen some commercial banks collapse e.g Union bank Trust bank, Charter house bank and Dubai bank and some put under receivership e.g Chase bank and Imperial bank (CBK, 2018).

As a result of the high cost of credit from the money-related organization in Kenya as viewed by the public, the interest capping law had to be implemented as a way to lower cost of credit and increase access to credit to a large portion of the populace (CBK, 2017). However, this has not been the case, as a result of the cap on lending at 14% banks had to run away from lending to unsecured loans to treasury bills at 15% which is risk free; it is sure of no defaults risks; the move violated the sole objective of the cap and banks existence. For instance, out of the 3.2 million Kenyans who had connected for credits from commercial banks in May and June 2016, just 1.1 million advances were endorsed (Kenya Banker Association, 2017). This is yet another signal that financial stability of the commercial banking sector in Kenya is fragile.

This study employed fragility index as a composite measure of financial stability that comprises three major indicators namely; credit risk, liquidity risk and foreign exchange risk. Fragility index is preferred for this study since it gives an early warning signal of financial healthiness of an institution (Loloh, 2014). Credit risk is measured by the real value of NPLs in the banking sector, liquidity risk is measured by the real amount of deposits a bank has at a given point that is able to generate more income; foreign exchange risk is measured by the real foreign liabilities of a bank (Allen & Gale, 2008). Foreign exchange risk comes about when a bank holds liabilities and assets in foreign currencies and impacts the earnings and capital of bank due to the variations in exchange rates (Sabri, 2011). Fragility can also be described as advanced financial cracks within the financial system which if not repaired, can lead to instability of a commercial bank and eventually the bank collapses, thus fragility index is a pillar of financial stability (Aykut, 2003, Amoah, 2014).

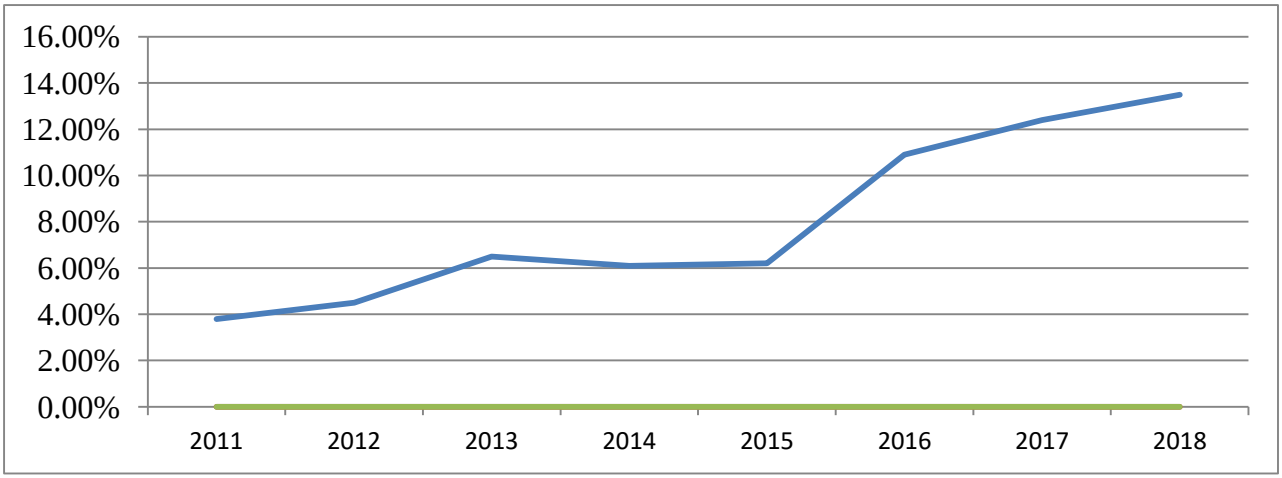

Figure 1.1: Non Performing Loans Trends in Commercial Bank, Kenya

Source: Cytonn Banking Sector Report, (2018)

As illustrated in Figure 1.1, the rate of NPLs in commercial banks in Kenya has been on an increasing trend since 2011; this is a concern to the stability of commercial banks in Kenya. Currently, the NPLs in Kenya were trending at 13.5% as at April 2018; this is way above the recommended standards threshold of 5% (Dayong, Jing, David, Dickinson & Kutan, 2016). This is a signal of financial instability in the banking sector in Kenya. The real value of NPLs was the proxy of credit risk which is one of the indicators that constitutes fragility index.

When default rates are on the increasing rate amongst commercial banks, this erodes the profitability of the commercial banks; in return, they are not able to meet their commitments when they fall due. With reduced profitability and by extension liquidity problems, this directly affects the financial stability of the commercial banks at large.

Table 1.1 Deposit Trends in Commercial Banks, Kenya

Years	2014	2015	2016	2017	2018
Percentages	6%	14.3%	6.4%	11.7%	9.4%

Source: Cytonn Banking Sector Report (2018)

As illustrated in Table 1.1, some of the commercial banks in Kenya show fluctuating deposit growth trends over time. This shows an aspect of bank runs by customers within a particular bank. Bank runs occur when customers withdraw their deposits from a particular bank that is perceived to be fragile to banks that are perceived to be more stable (Cytonn, 2018). Fluctuating deposit trends

result from bank runs, exposing a commercial bank to liquidity risk. Liquidity risk is the likelihood that over a particular timespan, the bank will become unable to settle commitments with promptness (Drehmann & Nikolaou, 2009).

Liquidity risk is a threat to the financial stability of any financial institution. Bank runs is a vital phenomenon that is increasable, happening in modern banking sectors. The US, Russia, Mexico, Asia and Argentina are among the developed economies that have been affected by bank runs, leading to closure of the affected banks (Kasri, Arundina, Inruswari & Preasetyo, 2017). Bank runs in themselves are a threat to stability of the banking sector; the banks are interconnected and a closure of one could affect the other banks through the risk of contagion.

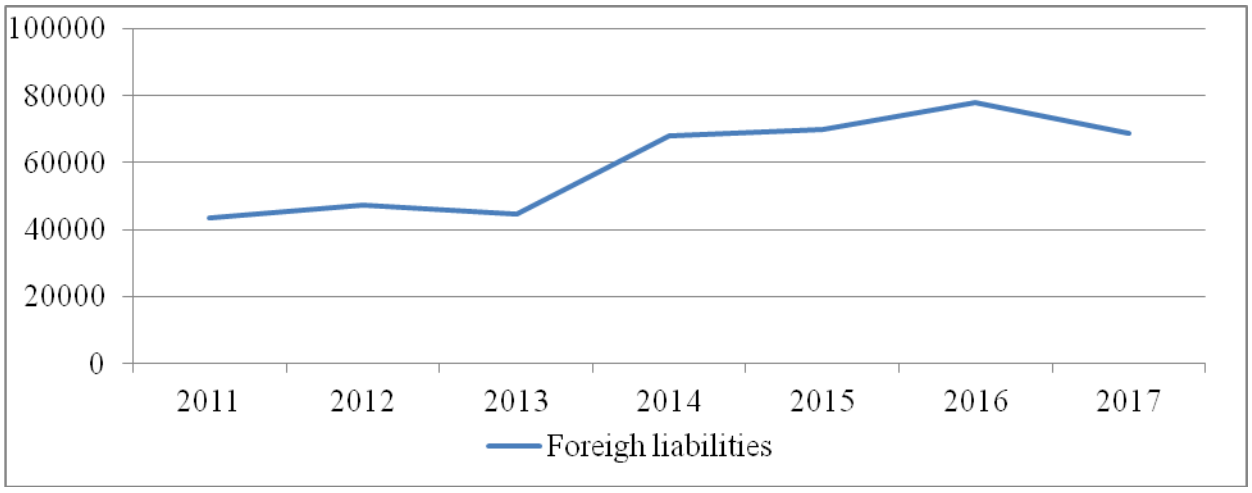

Figure 1.2: Foreign liabilities trends in commercial banks, Kenya

Source: Bank supervisory report (2017)

As illustrated in Figure 1.2, the increasing trend of foreign liabilities in the banking sector is of great concern. The more foreign liabilities are acquired by commercial banks, the more they are exposed to foreign exchange risk that is mushroomed from the fluctuations of the exchange rate. Foreign exchange risk comes about when a commercial bank holds more of foreign liabilities; this impacts on banks due to the variations in the exchange rates (Sabri, 2011). With the fluctuations of exchange rates, this increases operating costs. This impact on the efficiency of the financial institution, hence pushing the efficiency ratio to undesirable heights. In the long run, it will affect the financial stability of the banks.

1.3 Statement of the problem

Financial stability of a commercial bank is the backbone of the entire financial system as banks assume a focal role in the economic growth (Hussein, 2010). However, the banking segment in Kenya has experienced a number of challenging moments that has seen many banks collapsing, with some put under receivership which has occurred in four waves since 1984 to 2018 (CBK,

2018). The first wave of banks that collapsed in 1984 -1989 before the passing of the 1989 Banking Act, were mainly family, community owned post-independence financial institutions as a result of liquidity problems (Musau, Muathe & Lucy, 2018). Due to the first wave of collapsed banks, the CBK increased the minimum capital requirement for commercial banks to hold and deposit insurance was a mandatory. Notwithstanding the regulation, the banking industry faced another second wave of bank collapsing between 1993 and 1995 (Matete, Ndede & Ambrose, 2014). The third and fourth waves occurred between years 2007 to 2015 and 2015 to 2018 respectively. The fourth wave saw Dubai Bank collapse while Imperial Bank and Chase Bank put under receivership (CBK, 2016). This is a signal of fragile banking sector in Kenya. Hence need a rose to determine the fragile commercial banks in Kenya.

1.4 Main Objective of the Study

(i) To determine the fragile commercial banks in Kenya based on the fragility index.

2.2 Literature Review

Loloh (2014) sought to determine the banking sector fragility for an early warning system in Ghana. The study was carried out between years 2000 to 2014 among commercial banks in Ghana. The study employed fragility index as a measure of banking sector fragility. The study further examined the constitutes of fragility index as credit risk proxied by non-performing loans, liquidity risk proxied by bank deposits and foreign exchange risk measured by the foreign liabilities and asset held by a commercial bank. The study found out that commercial banks in Ghana were highly fragile during the political disturbances periods and that it was one of the key factors causing fragility of the banking sector in Ghana. Furthermore the study found out that increase in nonperforming loans, bank runs and episodes of foreign liabilities were triggers to the fragility of the baking sector in Ghana.

Ahmad & Mazlan (2015) Sought to determine the banking fragility sector index and determinants as a comparison between local based and foreign based commercial banks in Malaysia. The main objective of the study was to track the trend of the fragility of local based and foreign based commercial banks in Malaysia using the banking sector fragility index. The study was carried out between 1996 to 2011. From the finding the study found out that local based commercial banks were more fragile as compared to foreign based commercial banks in Malaysia. Furthermore the study observed that local banks were highly affected by internal factors as compared to foreign based commercial banks.

3.0 Methodology

Kibritcioglu (2002) developed the fragility index model which comprises three leading indicators of banking sector crises: private sector credits, bank deposits and foreign liabilities. The model has been used by Aykut (2003): Loloh and Amoah (2014), Ahmad and Mazlan (2015), to measure how fragile a banking industry is. By extension, it measures the financial stability of the

banking sector through ascertaining the degree of stability that an individual bank is operating at. To arrive at the fragility index, the basic model is as shown in equation 3.1. The study focused on the fragile commercial banks. This is because they are perceived risky and vulnerable to financial crisis; they are also based on Basel accords requirements that commercial banks should embrace the risk based approach to ensure financial stability of the banking sector at large.

The basic model;

$$FI_{it} = \frac{(r\,NPL - \mu\,SC)}{\delta NPL} + \frac{(r\,DEP - \mu\,DEP)}{\delta DEP} + \frac{(r\,FL - \mu\,FL)}{\delta FL} \quad \text{.....3.1}$$

3

Where

FI_{it} = Fragility Index of a commercial bank i at time t

μ = Arithmetic Mean/Min value of NPL, DEP and FL of the banking sector

δ = Standard Deviation of NPL, DEP, and FL of the banking sector

r = Real Value of NPL, DEP and FL of a commercial bank i at time t

NPL= Non performing loans of a commercial bank i at time t

DEP = Banking Sector Deposits of a commercial bank i at time t

FL = Foreign Deposit Liabilities of a commercial bank i at time t

A fragility index of a mean of 0 up to 0.5 signifies a stable and healthy banking sector; any deviations from the threshold and above 0.5 indicate risk-taking activities by an individual commercial bank which is termed as fragile stage (Loloh & Amoah, 2014). Fragile commercial banks do not necessarily imply that an individual commercial bank is collapsing; rather, it signals how vulnerable the banking system is to systematic risk (Kibritcioglu, 2002).

4.0 Presentation of Fragility Index Outcome

4.1 Trend in Fragility Index

Financial stability in this study was measured by fragility index which comprised three components: credit risk, liquidity risk and foreign exchange risk. Credit risk was measured by the absolute value of non-performing loans of commercial banks in Kenya. Liquidity risk was measured by the absolute values of customer deposits of commercial banks in Kenya. Foreign exchange risk was measured by the absolute values of foreign liabilities held by commercial banks in Kenya. The combined measures resulted to a fragility index as a proxy to financial stability of commercial banks in Kenya. This section presents the trend of the fragility index, summarized in Figure 4.1.

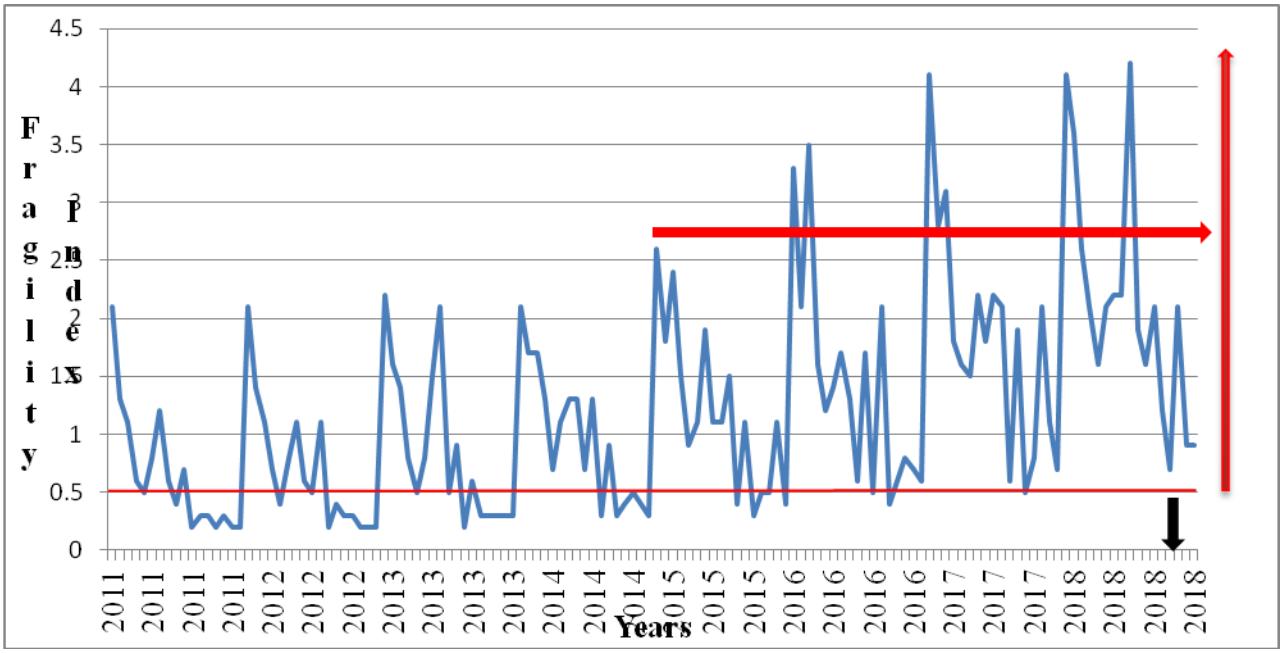

Figure 4.1 Trend of Fragility Index for the Year 2011 to 2018

Source: Study Data (2019)

Figure 4.1 documents the fragility index trend for the fragile commercial banks for the years 2011 to 2018. The fragility index comprised credit risk proxied by non-performing loans. Liquidity risk was measured by the customers' deposits. Foreign exchange risk was measured by the foreign liabilities. A higher fragility index shows how vulnerable the banking sector is to shocks; a lower fragility index below 0.5 indicates a stable state of a commercial bank. The trend indicates that the fragility index of the commercial banks under study had been fluctuating, moving from stable to fragile state. Fragility index below 0.5 indicates the years that some of the commercial banks were stable and then moved to fragile state above 0.5. The fluctuations rate of the fragility index were characterized by the increasing rates of non-performing loans in commercial banks, bank runs among the commercial banks and increase in foreign liabilities from commercial banks in Kenya. Evidently, there was a sharp increase and fluctuation in the fragility index from the end of 2014 and the beginning of 2015 to 2018; it was within this period that Dubai Bank, Chase Bank and Imperial Bank were put under receivership.

4.2 Findings of the Study

The study found out that out of the 38 commercial banks under study, between years 2011 to 2018, 17 commercial banks turn out to be fragile based on the computation of the fragility index as noted in equation 3.1. The 17 commercial banks were characterized by the increasing trends of non-performing loans, bank runs among the commercial banks and developments of foreign liabilities among these commercial banks under study. The three indicators namely non-

performing loans, bank runs and foreign liabilities brought about the fluctuations in the fragility index among commercial banks in Kenya under the study period. The higher the fragility index the more fragile a commercial bank is towards banking crisis as well as eternal factors whose controls are beyond the banks management.

5.0 Conclusion and Recommendations

The study concludes that through the use of fragility index as a proxy to financial stability immensely contributes to the banking sector, in the sense that the fragility index was able to separate the fragile commercial banks from the stable counterparts. Out of the 38 commercial banks under study, fragility index identified 17 commercial banks that were fragile under the study period. Among these 17, two of them as at 2019 merged and that is CBA and NIC commercial banks to form NCBA Bank. One has been acquired and that is National Bank due to financial difficulties it was going through. Consequently, they had to come together and form a synergy that would ensure they do not collapse in the near future. The study observed that most of the commercial in Kenya that have been put under receivership and those that have collapsed have a common denominator. Commercial banks are interconnected and a collapse of one will defiantly affect other commercial banks through the systematic risk.

Fragility index in this study has emerged to be a robust measure of early warning signal to financial healthiness of an institution. Going forward, fragile commercial banks should find a way towards merging to ensure they are financially stable. More so, mergers and acquisition of commercial banks in Kenya has been echoed by a number of stakeholders as a way to ensure stability of the banking sector in Kenya. Comparing some developed counties in Africa like South Africa and Nigeria, Kenya is overbanked. Kenya has one bank for every one million residents; South Africa has one bank for every three million residents while Nigeria has one bank for every ten million residents thus a call for more mergers and acquisitions among the commercial banks in Kenya. Furthermore tier one commercial banks in Kenya control 80 percent of the Kenya's population cash thus raising concerns of the liquidity of their counterparts, thus mergers and acquisitions will be the best strategy for the banking sector in Kenya if they are to achieve the vision 2030 that advocates for well-functioning, efficient and stable financial system.

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56. Entrepreneurial Decision Making Styles and The Growth Of Small Medium- Sized Manufacturing Enterprises In Nairobi, Kenya.

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ABSTRACT

Small and Medium Enterprises are recognized as important drivers of economic growth, productivity, innovation and employment and are widely accepted as key aspect of economic growth. Despite the considerable attention paid on SMEs growth, to date no theories have been able to adequately explain why some SMEs grow while others fail. Research has suggested that entrepreneurial decision making styles could be a contributing factor but this line of thought has not been investigated empirically. This study investigated the effect of entrepreneurial decision making style and the growth of small medium-sized manufacturing enterprises in Nairobi, Kenya. The objective was to determine the associations between intuitive and analytical decision styles and growth of manufacturing SMEs in Nairobi County. The study adopted descriptive research design and it targeted 34 manufacturing SMEs in Ruaraka Sub County. The participants were owner managers and assistant managers. Population census was used to get the study

participants. Questionnaires were used to collect data. Data were analyzed using descriptive statistics, and correlation analysis with the aid of SPSS. Regression analysis was done with the help of basic regression model. The results showed that there was a strong positive relationship between the intuitive decision making style and the growth of SMEs. That there was a weak relationship between the analytical decision making style and the growth of SMEs. The study concluded that entrepreneurial the intuitive decision making style has a positive effect on the growth of manufacturing SMEs in Nairobi. The study recommended that providers of business development services (BDS) should include decision making style in their training programs to assist entrepreneurs in focusing on critical decision making styles. The entrepreneurs should be made aware of their own decision making styles' strengths and weakness, this can assist in the growth of SMEs.

Key Words: Decision Making Style, SMEs, Growth of businesses

Background of the study

Decision making style is a pattern in which individuals approach decisions that are important. It involves different processes which include; combining activities or perception, information, analysing and problem solving (Al Jassim, 2014). Decision making style of an entrepreneur depends on personality and approach towards solving a problem. These styles are critical in the growth and development of enterprises. Every entrepreneur has his own decision making style depending on his abilities, experience and background (Organ and Freherty 2016). According to Anita and Jasmina (2017) there are four entrepreneurial decisions making style, analytical style, conceptual, behavioral and directive. People disagree in two areas when it come to decision making style this include the individual way of thinking and persons tolerance for uncertainty. When it comes to uncertainty decision making style can be state as directive, conceptual, behavioral and analytical.

Entrepreneurship has been seen as the procedure and decision making activities used by owner managers or managers of small medium enterprises that lead to the support of business growth (Al Jassim, 2014). It is additionally observed as way in which organization make entrepreneurial decision which leads to growth (Wiklund & Delmar, 2013). According to Estalami & Nejad, (2018), it is essential to know the process of business growth, especially to understand how entrepreneur's decision making style shape growth, how entrepreneurs get access to resources and configure them to achieve growth.

According to Opinya (2015), the growth of the future economy of any given country will be as a result of small and medium enterprises (SMEs) growth. In less developed countries research indicates that SMEs have failed to progress into medium sized firms. A study by Kenya National Bureau of statistics (2018) state that 400,000 SMEs die before they reach their second birthday and only a few reach fifth year. This leads to concerns of how this sector can be sustained, and decision making styles could be one of the possibilities of great concern.

Small and Medium Enterprises in Kenya have played a big part in the development of the economy. SMEs are the key source of job opportunities for both the skilled and unskilled workers as well as a supply of income for the country (Mong'are, 2017). According to the study

by Kenya Economic Report (2017), the contribution of SMEs in the GDP is above 60 percent. About 95 percent of manufacturing firms are SMEs and they contribute about 20 percent of sectors gross domestic product. However over the years the manufacturing sector have experienced decline in total GPD. It has decreased from 11.8 percent in 2011 to 9.2 in 2016 (KNBS, 2017). In 2016 the growth of the sector decreased from 7.2 percent in 2011 to 3.5 percent in 2016 which is against the Vision 2030 (UNIDO, 2015). To secure the sector there is a need to develop competitive manufacturing SMEs to enhance growth of the manufacturing industry (KAM, 2017). Over the years many interventions have been implemented not so quite well but none has addressed entrepreneurial decision making styles.

Problem Statement

Despite of existence of many interventions to stimulated SMEs growth, research on SMES growth indicate that most small businesses do not grow (KNBS, 2017). Empirical evidence shows that 43.3 percent of the businesses that close do so during the first year of operation, 9.5 percent closed within the first 3 years while 11.2 percent closed between 6 and 10 years. In total 67% of SMEs fail to grow due to many factors; however Schreier et al, 2018; Namusonge, 2014 suggested that entrepreneurial decision making styles could be a contributing factor but this line of thought has not been investigated empirically.

The objective of this study was to determine the relationship between entrepreneurial decision making style and the growth of small medium-sized enterprises in Nairobi City County. The study was guided by the following specific objectives;

i. To investigate the association between intuitive decision style on the growth of manufacturing SMEs in Nairobi, Kenya.
ii. To establish the association between analytical decision making style on the growth of manufacturing SMEs in Nairobi, Kenya.

The study was guided by the following research questions.

i. How does intuitive decision making style affect growth of manufacturing SMEs in Nairobi, Kenya?
ii. How does analytical decision making style affect growth of manufacturing SMEs in Nairobi, Kenya?

The study will be of significance to policy makers it will guide them in making policies that will enhance SMEs growth. The results will act as a future reference for the academicians and researchers and it will add new knowledge and contribute to the empirical research on the entrepreneurial decision making styles and business growth.

On the scope of the study; the study investigated the effect of entrepreneurial decision making style and business growth focusing on manufacturing SMEs that employ between 2 and 50 employees in Nairobi, Kenya. The study was conducted on 34 manufacturing SMEs focusing on owner manager and assistant mangers.

Theoretical Review

The study was anchored on three theories which include; Rowel and Mason model of decision making (1987), general decision making style theory and Churchill and Lewis Theory (1883). The Rowel and Mason Model of Decision Making (1987), states that individuals act under the preponderant influence of the left hemisphere or of the right hemisphere of the brain. In analytical thinking the left hemisphere is dominant while in intuitive reasoning right hemisphere is dominant. The model came up with four decision making styles: analytical, behavioral, conceptual and directive.

The general decision making style theory was developed by Scott and Bruce (1995). They proposed five decision making styles; rational, intuitive, spontaneous, avoidant and dependent. The styles capture specific characteristics on individual differences in approaching and managing decision making. The individuals who use rational style rely on wide information before making any decision. On the other hand individuals with intuitive style they are inclined to feeling and guts. Individuals with spontaneous style they do not waste a lot of time while making decisions hence their decisions are made quickly. Avoidant individuals, they avoid making decision while individual with dependent style they mostly like changing the tasks of making decision to others. Majority of Researchers have used GDMS since it is reliable (Raffaldi, Iannello, Vittani & Antonietti (2012).

The Churchill and Lewis theory (1883), the model is commonly used for small businesses and it help to understand the stage that the business is in. When the entrepreneur understands the stage which the business is, he is able to know how to allocate his resources and plan for growth of his business. The model states that the five stages of business development are: existence, the survival, success stage, the take off stage and finally the resource maturity stage.

Empirical Literature

Intuitive Decision Making Style

Intuitive in entrepreneurship can be defined as a psychological behavior consisting of decision process mainly guided by intuition in which experience has more weight than formation, especially in the early stages of business development (Alvarez, Arango and Corudas, 2013). Many successful business owners credit their prosperity to using the intuitive decision making style. Some of the world top entrepreneurs such as Steve Jobs, and Bill Gates, among the prestigious and effective business people have perceived that their prosperity was because of using intuitive decision making style among other factors (Mill, 2012).

Schreier, Udomkit and Macchi (2018), found that the decisions made by SME's owner managers and culture intelligence profile will end up having a higher intuitive intelligence leaders and higher level of cultural intelligence. The study by Umukoro and Okurane (2017), found that there was a decrease in value of career achievement and coaching support on entrepreneurial intuition. This ends up limiting the natural potential of business people, it was prescribed training on entrepreneurship should be included in all categories of post-secondary institutions.

Alvarez et al (2013) found that intuitive decision making style of entrepreneur depends on leadership ability and skills to motivate others. Intuitive style is more visible in startup stage and

it does not have any positive relationship on the previous experience of the entrepreneurs. As per Elbanna et al (2014), the moderating role of external environment should not be left out since they have an impact on decision making style. It was also found that the link between conflict and the use of intuition in decision making is positively influenced by market uncertainty turbulence.

Analytical Decision Making Style

Analytical decision making style is associated with entrepreneurs who have tolerance for ambiguity for work. People with analytical decision making style have a lot more prominent resilience for uncertainty and more psychological complex identity. They require more data and thought for choices since they center around specialized choices. (Jamian, Sidhu & Aperapar (2011). The study by Lejarraga and Martinez-Ros (2014), found that for firms to increase in size they rely on analytical decision making style for innovation.

Allison and Hayes (2012), in their study they discovered that analytic thinkers show a noticeable orientation towards careful routines with a high structural degree and strong logical characteristics. Analytical thinking is strength within the stage of business growth process. According to Kickul, Gundry, Barbosa &Whitecananck, (2009), People with analytical decision making style they have high entrepreneurial self-efficacy for arranging, marshaling of assets, and usage phases of the endeavor creation process. Their innovative aims are persuaded by their self-adequacy convictions with respect to their ability to do those exercises of arranging the new business persuading others to put resources into it, and dealing with its development.

Business Growth

Business grow by receiving diverse systems, for instance they may embrace innovation to increase growth. Growth comes as a result of good management of resources which is dependent on decision making styles. These resources may include information acquired, finances and assets among others (Coad, Frankish and Storey (2013). Small and medium enterprises which experienced growth show positive increase in sales, employment return on assets and increased market share and eventual growth (Federico and Capellaras, 2015). When an enterprise is launched, the entrepreneur expects it to grow. The growth can be rapid or slow and often involves an expansion of organization scope and the size of the operations (Gakobo, 2013).

Several studies have been conducted on SMEs growth. The study by Donvito, Acuti, Mazzoli and Grazzini (2016) stated that; age and size are factors to consider for the growth of young SMEs; however they are less important for the growth of old SMEs. The study by Hunjira, Iftikhar, Mehmood and Ullah (2018), found that financial determinants of profitability, leverage and innovation have a positive and significant impact on firm growth in Pakistan context.

The study by Shibia and Barako (2017) indicates that positive entrepreneur perception of the fairness and affordability of the courts, access to formal credit, connections to utilities, and lower incidences of crime, entrepreneur education and experience positively affect SMEs growth. The study by Coad et al (2018) found that sales growth for new ventures is characterized

by positive persistence and then it turns negative as firms grow old. Young firms can experience two alternate periods of positive growth, new firms experience an early sustained growth while older firms have more consistent growth paths.

The study by Maliranta and Numi (2019) on how the owner's characters and employees are related to business growth. The study found that previous experience in a high-productivity firm strongly predicts high productivity and survival for entrepreneur's new venture and that business owner's high education in technical field is positively related to firm growth. The study by Campbell and Park (2017), found that resources such as social capital, intellectual capital, entrepreneurial orientation and strategic management of community as a stakeholder has a positive significant effect on the growth of businesses.

Independent Variables

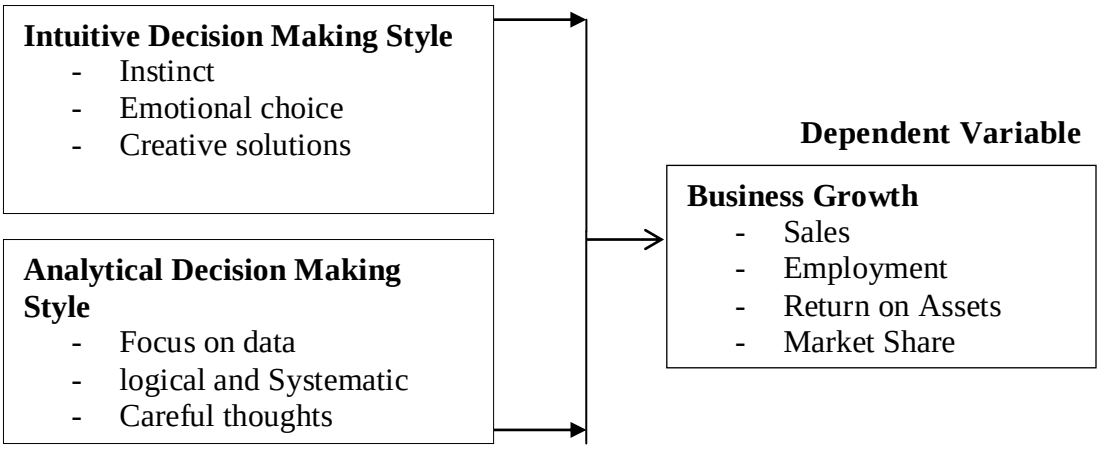

Figure: 1.1 Conceptual Frame Work

Source: Author (2018)

Methodology

The study adopted descriptive research design and it targeted 34 manufacturing SMEs in Ruaraka Sub County. The participant of the study included owner managers and assistant managers. The researcher used population census as a sampling technique since the population was small. Data was obtained through the use of questionnaires. To measure intuition and analytical styles ten questions from Scott and Bruce (1995) questionnaire on general decision making style were adopted. Scott and Bruce (1995) reported high levels on internal consistency and face validity. They stated that the internal consistencies of the scale ranged from 0.50 to 0.80. Lejarraga and Martinez-Ros (2014) supported the instruments validity.

To measure the cognitive style scientific questionnaire Cognitive Style Index (CSI) by Allison and Hayes (1996) was used. According to Allison and Hayes (2000), the internal consistency and test-retest reliability of the CSI is well established. Evans, Cools and Charles worth (2014) reviewed most influential style models and concluded that the CSI had the best evidence for reliability and validity

Data collected was edited, coded and then analysed using descriptive statistics and correlation analysis with the aid of SPSS. Regression analysis was calculated with the help of basic regression model. On ethical considerations the researcher got permission from the University and a research permit from National Commission for Science, Technology and Innovation.

The Results

The general information on the demographic features of respondents it was found that the sample of the study comprised of 68 respondents out of 68 questionnaires 50 were duly filled and returned. According to Mugenda and Mugenda (2003), a response rate of 50% would be considered adequate. On the gender the study indicated that 76% are operated by males while 24% are operated by females. The study agree with the study by Njeru et al (2012), which found that males are more likely to be involved in business than females. On the age of the respondents 35.3% fell between the age brackets of 30 to 39 years, 31.4% were aged between 40 - 49 years and 15.7% were aged between 20 - 29 years and 15.7% were aged above 50 years. The study agreed with the study by Gimmon et al (2018) that, the highest rate of enterprise growth and success comes from the entrepreneurs who are in middle age. On the level of education of the respondents, the study showed that 39.2% of the respondents had a University degree, 45.1% had gone up to college, and 13.7% had gone up to secondary. This agreed with a study by Gielnik et al (2018), that there is significant relationship between entrepreneurial education and business growth.

Entrepreneurial Decision Making Styles

The study sought to know how entrepreneurs in small medium enterprises go about making important decisions. The findings are presented below;

Table 1.1 Intuitive Decision-Making Style

	N Statistic	Mean (M) Statistic	Std. Deviation Statistic (SD)
When making a decision, I rely upon my instincts	50	3.36	1.509
When I make decisions, I tend to rely on my intuition	50	3.52	1.233
I generally make decisions that feel right to me	50	3.84	1.376
When I make a decision, it is more important for me to feel the decision is right than to have a rational reason for it	50	3.60	1.429
When I make a decision, I trust my inner feelings and reactions	50	3.98	1.301

Overall mean aggregate	**50**	**3.66**	**1.370**

Source: Survey data (2019)

According to table 1.1 mean of 3.36 and standard deviation of 1.506 implies that respondents neither agreed nor disagreed that when making decision they rely upon instincts, a mean of 3.52 and standard deviation of 1.233 implies that the respondents somewhat agreed that when making decisions they rely on intuition, mean of 3.84 and standard deviation of 1.376 implies that respondents somewhat agreed that they generally make decisions that feel right for them, mean of 3.60 and standard deviation of 1.429 implies that respondents somewhat agreed that when making decision it is more important for them to feel the decision is right than to have a rational reason for it. Lastly a mean of 3.98 and standard deviation of 1.301 implies that respondents trust their inner feelings and reactions when making entrepreneurial decision. With the overall aggregate of 3.66 and standard deviation of 1.370 the study showed that most of the respondents somewhat agreed that they use intuitive decision making style when making important decision on business growth. The study agreed with Organ and O'Flaherty (2016) that intuitive decision making style has a positive effect on the growth of an enterprise.

Analytical Decision Making Style

The researcher sought to find out how entrepreneurs go about making important decision on business growth using analytical decision making style. According to table 1.2 below the study found that, respondents strongly agreed (M=4.60, SD=0948) that they double check their information sources to be sure that they have the right facts before making a decision, Mean of 4.56 and standard deviation of 0.787 implies that the respondents strongly agreed that they make decisions in a logical and systematic way, mean of 4.60 and standard deviation of 0.948 implies that respondents strongly agreed that decision making requires careful thought, mean of 4.62 and standard deviation of 0.805 implies that respondents strongly agreed that when making decision they consider various options in terms of a specific goal. Lastly, mean of 4.38 and standard deviation of 0.967 implies that respondent explore all options before making a decision.

Table 1.2 Analytical Decision Making Style

	N	Mean (M)	Std. Deviation(SD)
	Statistic	Statistic	Statistic
I double-check my information sources to be sure I have the right facts before making a decision	50	4.60	.948
I make decisions in a logical and systematic way	50	4.56	.787
My decision making requires careful thought.	50	4.60	.948
When making a decision, I consider various options in terms of a specific goal.	50	4.62	.805
I explore all of my options before making a decision.	50	4.38	.967
Over all mean aggregate	**50**	**4.55**	**0.891**

The study showed that the total aggregate mean is 4.55 which imply that the respondents strongly agreed that they use analytical decision making style to make decisions on business growth. It was also found that analytical style is the highly used than intuitive decision making style by SMEs in manufacturing sector in Nairobi County. This concurred with Lejarraga and Martinez-Ros (2014) that firms that had developed in size mostly use analytical decision making style to enhance growth.

Small Business Growth

Data was sought on small and medium sized enterprises growth. This was done so as to determine whether the manufacturing SMEs had experienced growth over the period under study. The findings are presented as follows;
According to number of years the firm had been in business it was found that 5.9% of businesses are less than one year old 31.4% are 2 to 5 years old, 21.6% are 5 to 10 years old, while 39.2% are more than 10 years old. The result showed that most of the businesses had been in operation for more than 10 years. This agreed with the study by Coad et al, (2018) that age is a factor to consider for the growth of young SMEs. According to the number of employees in 2018 to date the study indicated that 49% had less than 10 employees, 25.5% had 10 to 50 employees while 26.5% had above 50. This was an indication of that the firms experienced growth in employment. On the measures of growth 62.7% of the sampled population uses sales to measure growth, 2% use employees, while 29.4% use assets and lastly 3.9% uses market share. This indicated that the majority of sampled businesses use sales to measure growth. On new investment the results showed that 92% have made new investment or expenditure intended to growth while 8% had not made any new investment. This indicates that sampled businesses had experienced growth in areas of investment or expenditure.

The extent to which intuitive decision making style affects measures of growth

The study sought to find out the extent in which intuitive decision making style affects measures of growth. The results indicates that the respondents were neutral (M=2.76, SD = 1.164) on whether intuitive decision-making style causes an increase in sales, they were also neutral (M=2.64, SD 1.225) that intuitive decision making causes employment growth. M=2.7, SD =1.216 implies that respondents were neutral that intuitive decision-making style causes an increase in assets. M = 2.72, SD=1.161 implies that the respondents were neutral on whether intuitive decision-making style causes an increase in market share. This showed that the respondents were not sure whether intuitive decision making style affects measures of growth. The overall aggregate of 2.72 and standard deviation 1.191 implies that the respondents neither agreed nor disagreed that intuitive decision making style affects measures of growth. The study agrees with the study by Umokoro and Okurume (2017), that there is a decrease in the use of intuition among the entrepreneurs.

Table 1.3: Intuitive decision-making style and measures of growth

	N Statistic	Mean Statistic	Std. Deviation Statistic
Analytical decision-making style causes an increase in sales.	50	3.48	1.199
Analytical decision-making style causes employment growth.	50	3.36	1.290
Analytical decision-making style causes an increase in assets.	50	3.50	1.298
Analytical decision-making style causes an increase in market share.	50	3.72	1.107
Over all aggregate	**50**	**3.52**	**1.233**

The extent to which analytical decision making affects measures of growth

The study sought to find out to what extent does analytical decision making style affects measures of growth. The results showed that to a large extent (M = 3.48, SD = 1.199) analytical decision-making style cause an increase in sales, the respondents were neutral (M= 3.36, SD= 1.290) on whether analytical decision-making style causes employment growth, to a large extent (M= 3.50, SD=1.298) analytical decision-making style causes an increase in assets and lastly respondents indicated that to a large extent (3.72, SD=1.107) analytical decision-making style cause an increase in market share. The overall aggregate of mean of 3.52 and standard deviation of 1.233 it implies that the respondents somewhat agreed that analytical decision making style affects measures of growth. This study support the study by Lejarraga and Martinez-Ros (2014) on the size, research and development productivity and decision making style carried out on Spanish firm that discovered that for firms to increase in size they rely on analytical decision making style.

	N	Mean (M)	Std. Deviation (SD)
	Statistic	Statistic	Statistic
Intuitive decision-making style causes an increase in sales.	49	2.76	1.164
Intuitive decision-making style causes employment growth.	50	2.64	1.225
Intuitive decision-making style causes an increase in assets.	50	2.70	1.216
Intuitive decision-making style causes an increase in market share.	50	2.72	1.161

Table 1.4: Analytical decision-making style and measures of growth.

Overall aggregate	**50**	**2.705**	**1.191**

Source: Survey Data (2019)

The extent which intuitive decision-making style has contributed to the growth of the firm.

The study sought to find out the extent to which intuitive decision-making style had contributed to the growth of the firm. The findings are presented below.

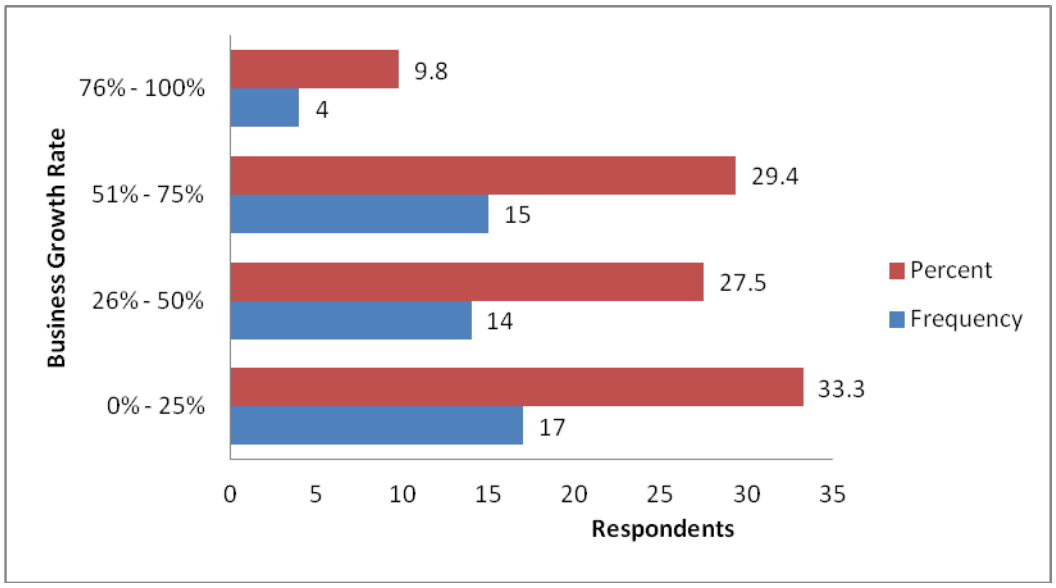

Figure 1.2: The extent which intuitive decision-making style has contributed to the growth of the firm.

Source: Survey Data (2019)

According to table 1.3 the results showed that 33.3% of respondents indicated that intuitive decision making had contributed 0 - 25% of the firm growth, 27.5% stated that it had contributed 26 - 50%, 29.4% indicated that it had contributed 51 – 75%, 9.8 % indicated that had contributed 76 -100% of the firm growth. The study showed that majority of respondents (33.3%) stated that the intuitive decision-making style had contributed 0 - 25% growth of the firm which showed a limited growth. The study concurred with the study by Alvarez et al (2013) which stated that intuitive behavior of entrepreneurs is moderate and that it is more commonly used at early stages of business growth.

The extent which analytical decision-making style has contributed to the growth of the firm.

The researcher further sought to find out the extent to which analytical decision-making style had contributed to the growth of the firm. The findings are presented below:

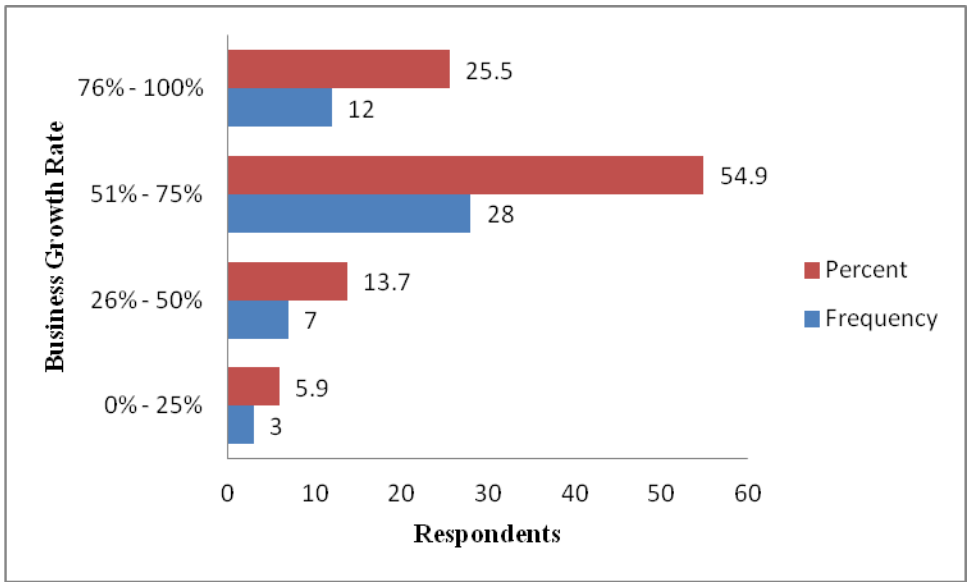

Figure 1.3: Extent to which analytical decision making style has contributed to the growth of the firm

Source: Survey Data (2019)

The study found that 5.9% of the respondent stated that the analytical decision-making style had contributed 0 - 25% of the growth of the firm, 13.7% stated that it had contributed 26 -50% of firm growth, 54.9% stated that it had contributed 51- 75 %, lastly 25.5% stated that it had contributed 76 - 100% of the firm growth. Majority of the respondents agreed that analytical decision making style had contributed 51 – 75 percent of the growth of the firm. The study concurred with the study by Martinez-Ros (2014) that stated that firm that increase in sized they rely on analytical decision making style.

Regression Analysis

Table 1.5:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.961[a]	.923	.942	.271

a Predictors: (Constant), Intuitive decision making style, and Analytical decision making style

According to table 1.5 the coefficient of determination (R^2) was 92.3% which implies that the two variables in this study i.e. intuitive decision making style, analytical decision making style accounted for 92.3 percent.

Test of Analysis of Variance (ANOVA)

ANOVA was used to assess whether statistical model could be fitted to a data set from which the data were sampled**.**

Table 1.5: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	126.225	3	27.860	311.67	.007
	Residual	14.579	42	0.691		
	Total	143.804	45			

a. Dependent Variable: Business Growth

b. Predictors: (Constant),Intuitive Decision Making Style, Analytical Decision Making Style

Source : Survey Data (2019)

According to the table 1.5, $F_{(3.42)}$ with p-value of 0.007 which was less than 0.05 significant level was used in this study. This implies that the regression model was statistically significant and therefore could be relied to answer the research objectives.

Table 1.6: Determinants of Coefficients

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-204	.016		-1.593	0.008
	Intuitive Decision Making	1.016	.019	0.178	2.987	.002
	Analytical Decision Making	.461	0.014	0.031	2.874	0.017
a. Dependent Variable: Business Growth						

Source: Survey Data (2019)

According to table 1.6 the two independent variables and their corresponding t-statistics and p-values are indicated. The significance level (0.05) was compared with the p-values to determine whether a given variable was statistically significant or not.

$Y = 0.204 + 1.016X_1 + 0.461X_2 + e$

The first objective of the study was to determine the effect of intuitive decision-making style on the growth of manufacturing SMEs in Nairobi County. From the findings the regression coefficient and p value were (β =1.06, P= 0.002<0.05) respectively which shows that intuitive decision making style had a positive statistically significant effect on business growth of SMEs in Nairobi County.

The second objective of the study was to determine the effect of analytical decision-making style on the growth of manufacturing SMEs in Nairobi County. From the findings the regression coefficient and p value were (β =0.461, P=0.017<0.05) respectively which shows that analytical decision making style had a positive statistically significant effect on business growth of SMEs in Nairobi County.

Conclusion

The study concluded that, intuitive decision making style had a positive and statistical significant effect on the growth of small medium- sized manufacturing enterprises in Nairobi County. Analytical decision making style had a positive and statistical significant effect on the growth of small medium-sized manufacturing enterprises in Nairobi County. The results showed that there was a strong positive relationship between the intuitive decision making style and the growth of SMEs and a weak relationship between the analytical decision making style and the growth of SMEs.

The researchers recommended that the government should come up with sector specific policies that will enhance the growth of small medium-sized manufacturing enterprises. It also comes up with specialized training, seminars and workshops on entrepreneurial decision making style. This is to equip the entrepreneurs with more knowledge and skills to make them more productive.

The entrepreneurs should be made aware of their own decision making styles. This will make them aware of their preferences styles and the strengths and weakness of their approaches. The entrepreneurs will be able to seek to develop those areas where they are weaker and/or work with others who exhibit styles that are complementary to their own. The study focused on the three entrepreneurial decisions making style (intuitive, analytical and cognitive). Further research should be conducted to include other entrepreneurial decision making style.

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57. Mobile loans: A poverty trap disguised as financial deepening among households in Kenya.

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Financial inclusion and deepening have been singled out as a way of reducing poverty sustainably in third world countries. In pursuit of financial deepening, the concept and metrics of credit have evolved with time. Technological disruptions in Telecommunication and Financial industry have led to evolution of mobile phone technology helping in financial inclusivity for the unbanked and poor households. Risk assessment of creditors using loan apps and mobile money lending platforms is not well defined. Currently in Kenya, the systems offer loans with no collateral, and are less regulated. Borrowers are willing to give away any kind of information and access rights to their private information in exchange for loans. Several effects have been suspected to negatively impact households who take these loans. The loans are suspected to contribute to a rise in depression, stress levels and causing suicidal deaths among borrowers. The owners are said to use threats, listing on CRB, social pressure and even calling any contacts in the borrower's phone contacts to demand for loan payments. However, there is little academic research and existing literature to elaborate on these suspected negative effects of mobile money lending platforms. This paper explores the impacts of the mobile lending Apps among households in Kenya, and the need for regulation.

Keywords: *Digital credit, mobile money, loan apps, regulation.*

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58. Causes and Deterrents of Public Service Vehicles Insurance Underwriting under New Transport Regulations, Evidence from Kenya

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ABSTRACT

Insurance of Public Service Vehicles is mandatory in Kenya, which ideally translates to a ready market for insurance firms in addition to providing protection to passengers and distribution of risk to vehicle owners. However, many insurance firms in Kenya have shied away from providing insurance cover to public service vehicles plying for hire (commonly referred to as Matatus). Out of 38 insurance firms that are licensed for general risks business, only 3 firms (16%) are underwriting insurance for this class of vehicles. Since 1990's the number of public service vehicles in Kenya has been on the increase, which has necessitated issuance of several regulations by the ministry of Transport to curb the rising road carnage that has been on the rise. Similarly over the same period, insurance firms underwing Public Service Vehicle Cover have declined, with some being put under receivership while some have ceased Underwriting Public Service Vehicles insurance Covers. Creation of National Transport Safety to regulate the Public Service Vehicles would have endeared insurance firms underwrite this class of assets, which is contrary to the practice. This study sought to identify the causes and deterrents of Public Service Vehicles insurance underwriting and secondly to identify necessary ingredients to increase Public Service Vehicles Insurance Underwriting. The study adopted a cross sectional research

design with a target population of thirty-eight insurance firms underwriting general insurance in Kenya. Primary data was collected by use of questionnaire having structured and open-ended questions addressed to business development manager or their equivalents in each of the insurance firms. Findings indicate that vehicle capacity, usage of the vehicle and mandatory insurance cover are the main deterrents of insurance underwriting from the regulations perspective. Insurance fraudulent claims, integrity requirement of the *matatu* crew were also ranked the highest inhibitors. In order to increase the number of insurers that underwrite Public Service Vehicles insurance, insurance firms should have centralized motor insurance data system, tighter anti-fraud systems, and implement strong internal controls.

Key Words: Insurance underwriting, Insurance Fraud, Regulations, Matatu Crew, Public service Vehicles

Introduction

Insurance industry is highly vulnerable to the market dynamics partly due to intangibility of its products coupled with changes in technology, human behaviour and the environment. Whereas life insurance is highly affected by demographic characteristics and changes in technology, general insurance (non –life) is affected by regulation, competition in the market among other factors (Kibet, 2016). Nevertheless, the non-life insurance sub sector that consists of motor vehicle, fire and other property damage and accident can experience different rates of growth and could offset one another in terms of the overall level of premium growth.

Motor insurance is exceedingly important in developing countries in that not only does it occupy a dominant position in terms of total premium income, but it is also a major source of insurance cash flows. The steadiness of this income enables insurers are able to meet their normal obligations and also finance expansion in new fields of activity. Mwangome (2012) notes that unlike other classes of insurers, motor vehicle insurance does not require proportional re-insurance except in cases of very high liability limits. Thus major parts of the premium generated by this class remains with the direct insurer, becoming a major source of investment earning.

The number of motor vehicles in developing countries has been increasing yearly. Lotuiya, (2014) observes that in 1970, the total motor fleet in developing countries was 7.9 % of total world fleet, which increased to 11.9% in 1980 representing a real growth in the rate of motorization, rather than vehicle replacement. Increase in motorization in developing countries has accelerated development by facilitating transport of people and merchandise. However, it has also produced a heavy toll in accidents, which have taken a toll on the economic and social life of communities. Although insurance can compensate for such losses, the society largely bears the brunt of such losses. McKnight and McKnight (2003) find that irrespective of the fewer motor vehicles in developing countries in comparison with developed countries, high accident rates exist in developing countries that can be attributed to poor road conditions, inappropriate

use of vehicles, poor maintenance and aged vehicles on the roads and sometimes-careless drivers.

Motor insurance underwriting in most developing countries has not been favourable. This is in spite of the fact that motor insurance industry is compulsory for third party liability. Wekesa (2010) notes that the price of compulsory insurance has a decisive effect on the ability of insureds to purchase other covers. The higher the cost of the compulsory cover, the less the client is likely to purchase other covers. Un-like other insurance products, motor insurance underwriting expenses should be low since this activity does not require highly specialised underwriting knowledge. Furthermore, acquisition costs should be low compared with other forms insurance products that may call for aggressive selling campaigns.

The history of the Public Service Vehicles (PSV) plying for hire insurance in Kenya is best looked at from the point of view of the history of the insurance industry as a whole. The PSV insurance covers can be said to have begun in Kenya around 1950s with the inception of commercial vehicles on Kenyan roads (Lotuiya, 2014). Unlike the current case in Kenya where risk cover is classified, commercial vehicles were covered for general risks and as a result, the insurance companies incurred great losses. This led to increase in premiums charged by the insurers which affected the affordability of PSV insurance cover and therefore many vehicles were left uninsured (Kiragu, 2014).

The government of Kenya has made several initiatives aimed at streamlining the PSV sector and the Insurance industry. For instance, government directed vehicle owners to create a motor pool in 1975 whose collapse led to creation of another in 1985. The Insurance (Motor vehicle third party risks) Act, 1979 requiring all mechanically propelled vehicles on roads to be insured against third party risks was enacted (Kiragu, 2014). This was in response to grievances of injured who had no recourse in cases of uninsured PSV operators. To enhance self-regulation of insurance, Association of Kenya Insurers (AKI) was established in 1987 and registered under the Society Act Cap 108 of Kenyan law, to act as a consultative and advisory body to insurance companies. In 2006, Insurance Regulatory Authority (IRA) created through an Act of parliament replaced the department of insurance (IRA, 2007). Despite the sustained interventions, the increased number of accidents led the government in 2003 to gazette Legal Notice Number 161 popularly referred to as “Michuki” rules. Up to 2012, road safety was managed by various Government Ministries and departments: Transport Licensing Board, Registrar of Motor Vehicles, Motor Vehicle Inspection Unit, the Traffic Police and the Ministry of Roads, among others. In order to address road safety challenges and harmonize management of Kenya’s road transport, the Government formed the National Transport and Safety Authority (NTSA) through National Transport and Safety Act Number 33 of 2012 (Lotuiya, 2014). The Authority has been given more powers by the new Kenya 2010 Constitution to address the

challenges and harmonize road transport at the county levels through creation of transport and safety committees in the counties.

Growth in the motor industry and more specifically in the PSV sector has been tremendous in both revenue and in the numbers of vehicles in the last two decades. As at 2012, the number of PSV vehicles stood at 93,343, in comparison with 61,886 as at 2008 (KNBS, 2013). The number of Matatus with a maximum capacity of 14 seats, licensed by the National Transport and Safety Authority (NTSA) increased to 37, 382 from 17, 926, a growth of 108.54% in 2016. This constituted 69.62% of the 53, 692 PSVs licensed in 2017. The number of mini buses with a sitting capacity of 15-33 passengers almost halved to 4,246 in 2017 from 8,213 a year earlier, while that of buses of more than 33 seats rose by 67.32% to 12,064 in 2017 from 7,210 in 2016 (KNBS, 2019). All of these vehicles are by law required to procure motor vehicle insurance cover as is required for both private and commercial drivers. Failure to do so is a legal offence and may cause drivers to incur huge penalties or have their driving licenses revoked. Despite this growth, we observe that the PSV insurance industry has not equally grown to enjoy the full benefits of this expansion

Motivation of the Study

Growth in the motor industry in Kenya and more specifically in the PSV sector has been tremendous in both revenue and in the numbers of vehicles in the last two decades. As at 2012, the number of PSV vehicles stood at 93,343, in comparison with 61,886 as at 2008 (KNBS, 2013). The number of matatus with a maximum capacity of 14 seats, licensed by the National Transport and Safety Authority increased to 37, 382 from 17, 926, a growth of 108.54% in 2016. Likewise, the buses with a seating capacity of more than 33 seats rose by 67.32% to 12,064 in 2017 from 7,210 in 2016.

Several regulations and reforms aimed at reducing PSV related accidents, improving commuter safety, stamping out illegitimate drivers and restoring, have been introduced through Legal Notice 161 and the Traffic Act (Cap. 403). Fixing of the minimum age and working hours of PSV drivers, a monthly salary of PSV crew and requirement of PSV operators to belong to a Savings and Credit Cooperative Society (SACCO) or company before applying for a PSV license have been crucial in reducing fatalities.

Despite this growth of PSV industry and the mandatory third party cover requirement, the PSV insurance industry covering public services vehicles plying for hire has not equally grown to enjoy the full benefits of this expansion. With a profit motive behind their establishment, it would be expected that PSV underwriting would definitely contribute to the firms' profits. Some insurance companies namely, Amarco Insurance Company Ltd and Gateway Insurance Company Ltd have ceased underwriting PSV insurance business (IRA, 2016), while Kenya National Assurance, Access, Stallion, Lakestar, United, Invesco, Standard, and BlueShield among others

previously underwriting PSV insurance have been liquidated or placed under statutory management by the Insurance Regulatory Authority (IRA). The question that begs to be answered is why only three insurance companies (16 %) out of the possible thirty-eight companies are underwriting the PSV plying for hire business in Kenya.

At this rate, the future of PSV transport would be at risk if the three remaining companies; i.e. Invesco Assurance Company Ltd, Xplico Insurance Company Ltd and Directline Insurance Company Ltd would collapse or cease providing PSV insurance business. It is in this regard that this study to examine the causes and deterrents of PSV underwriting while at the same time seeking the way forward towards enhancing PSV underwring in Kenya.

Literature and Empirical Review

The field of insurance is known to have considerable legal consequences after a loss occurs. Insurance laws and contractual provisions govern the amount of cover and inherent compensation. As is the case with all markets, information asymmetry exists in insurance underwriting where there is disequilibrium in the information between the insurer and the insured, resulting in adverse selection and moral hazard issues. It is on basis of information asymmetry, that basic principles of insurance that regulate the motor industry were formulated.

In a bid to avoid surprise claims, a set of fundamental legal principles guide the insurance industry (Rejda & McNamara, 2017) which are; insurable interest, utmost good faith, proximate cause, contribution, subrogation and indemnity. First, the insurer of a PSV must have a financial or pecuniary interest in the vehicle that is insured. They must be in a position to suffer financial loss if the insured incident takes place. In motor insurance, this financial interest rises from two areas: firstly, the policyholder's monetary interest in the insured and secondly, the loss ascending from the damage.

Utmost good faith, from the Latin term *uberrimae fidae*, means that each party is permitted to trust on the representations of the other and that each should have a realistic expectation that the other is acting in good faith without attempts to conceal or deceive (Yeasmeen, 2015). Whereas the PSV owners have all the facts on hand, the insurer is disadvantaged in that he cannot examine all aspects of the proposed risks.

Proximate cause means the active, efficient cause that activates a series of events, which brings about some outcome, without the involvement of any force started and working actively from a new and independent source (The Chartered Institute of Loss Assessors, 2016). This simply seeks to identify how the loss occurred and if it was because of the insured act. In motor insurance, the insurer seeks to establish whether the accident was simply an accident, or was because of negligence by the driver.

Indemnity is a mechanism by which insurers deliver financial reparation to the insured, in the event that the insured activity occurs. This compensation shall not exceed the actual amount of the loss, meaning that the insured shall not make a profit from their loss (Mose & Koluba, 2013). For example, if a vehicle is damaged, the insurer can indemnify the insured by mending or replacing the vehicle or by giving a cash sum, in lieu of the former (AKI, 2007). This cash sum is determined by the vehicle's value at the time of the accident.

Subrogation is the right of the insurers to implement, for their benefit, all the rights and remedies that the insured holds against third parties in respect of the subject matter (Gulshan, 2006). In underwriting, subrogation only applies where the contract is one of indemnity like motor insurance, where there is a clause giving the insurer subrogation rights. The insured is required to provide all assistance the insurers require in negotiating the claim and effecting recovery where that right exists.

In a case where a PSV owner assumes a right to recover loss from two or more insurers with whom he has affiliated policies, the principle of indemnity prevents the insured from being more than fully indemnified by each by way of contribution. Contribution applies only to contracts of indemnity including motor insurance. Contribution is the right of an insurer to call upon others similarly, but not necessarily equally liable to the sum insured to share the cost of an indemnity payment (Kibet, 2017).

In underwriting, contribution is applicable if a claim is made under a policy and there is another policy, which covers the same risk. Here, the insurer will only pay his share of the claim because the contribution condition reiterates the common law position that, if more than one policy is in force, the liability of the insurer is limited to their proportion of the loss (Wekesa, 2010).

Aside from these legal principles, there exist two additional principles that affect the insurers' general selection criteria. Akerlof (1970) observed that markets greatly suffer from informational asymmetry, which affects one party in a trade, ex-ante and ex-post. Borrowing from Akerlof, Auronen (2003) observes that in a market set up, the buyer has no way to ascertain whether the car is a plum or a lemon until they have purchased and used it. This is due to *information asymmetry*, which exists between the buyer and seller.

Informational asymmetry results in two major problems; adverse selection and moral hazard. Adverse selection, adequately defined by Rejda and McNamara (2017), is the predisposition of persons with a higher chance of loss to seek insurance at standard rates. Unless this is controlled, great loss will be incurred. This is a primary reason for pre-screening of insurance applicants. However, even with appropriate filtering methods, the insurer still faces the risk of loss, through

the insured's activities after the policy is taken out. The ex-post activities, which may increase the severity of the loss, is known as moral hazard which insurers attempt to control this through policy provisions, such as waiting periods and deductibles.

Contracts of insurance can be best explained through agency theory developed by Fama (1980) which stipulates existence of principal-agent relationship where the agent undertakes to undertake principals' activities for some consideration. The tripartite situation in the PSV industry complicates the agency problem further. The PSV crew who are employees of the PSV owner may act for their own benefits, while at the same time the PSV owner may lodge claims for non-existent calamities, which may be compensated by insurance firms knowingly or unknowingly. Edwin (1939) theorises a white- collar crime as those violations of law to which penalties are attached and where the violators use their positions of economic power, influence, or trust for the purpose of illegal gain, or to commit an illegal act for personal or organizational gain. Kibet (2017) reports that individuals who are likely to defraud an organization are the ones who live beyond their means. The researcher notes that of all factors that may contribute to fraudulent activities, organizational opportunity remains the main determinant aspect of white-collar crime.

The insurance firms that ceased underwriting PSV insurance may have been informed by the poor performance. In this paper, we can take a position that the firms that are not underwriting PSV insurance though they have a general cover licence may have been deterred by the frauds and poor performance in the industry. Kiragu (2014) observes that the incentive problem existing in the insurance market, may attempt the insurance firm managers act for their personal advantage.

The PSV insurance subsector has several players in some forms of agency relationships, who may take advantage of claim process (IRA, 2011). According to Lotuiya (2014), the entire process of claims reporting, claim screening and claim processing presents an opportunity that has been exploited by the fraudsters. The fraud triangle theory coined by Cressey in 1950 looks at perceived opportunity, rationalization and pressure. Accordingly, fraudulent opportunity arises when the fraudsters sees a way to use their position of trust to solve the financial problem by justifying themselves as ordinary, honest people who are caught in a bad situation. The theory is criticized by (Dominey, Fleming, Kranacher, & Riley, Jr, 2012) who argues that the model cannot solve the fraud problem alone because two sides of the fraud triangle, pressure and rationalization cannot be easily observed. The drivers and conductors in *matatu* PSV sector have an opportunity to defraud the *matatu* owners in that they collect revenue on behalf of the owner, The owner has no fool proof means of verifying daily collections by the *matatu* crew. In their fraudulent activities, the *matatu* crew rationalize that the *matatu* owner is earning from other businesses or employment since they are working for his/her benefit, they should earn more than the current remuneration.

The fraud Scale theory by Albrecht mainly looks at three factors, situational pressures, perceived opportunities and personal integrity as ingredients of fraud. The situational pressures considers immediate environmental conditions like personal debts or losses. Where the pressure is high, there is likelihood of high fraud and likewise where the opportunities are high because of poor controls the fraud is high. There is also a likelihood of high fraud where the personal integrity is low. It was not until the year 2003 when the certificates of good conduct were made mandatory for *matatu* crew with an aim of integrating and ensuring integrity among the players in the industry.

In this study, we have demonstrated that information asymmetry in both the insurance sector and the public transport sector exists that leads to problems of moral hazard and adverse selection. This scenario therefore creates demand for information and because the information that individual and firms would produce privately will not equal the demand of principals, regulation therefore becomes necessary. Public Interest Theory by Pigou (1938) emphasizes that regulation should maximize social welfare. The objective of regulation should be to mitigate the impact of significant market imperfections (or market "failures") compared to the ideal of a perfectly competitive market (Niehaus & Harrington, 2005). Regulation of insurance industry in Kenya has been under the commissioner of insurance until was creation of Insurance Regulatory Authority through the Insurance (Amendment) Act of 2006. While several insurance firms had ceased or gone bankrupt before the establishment of IRA, insurance firms have continued to shy away from PSV insurance underwriting (Irungu, 2015).

Insurance companies are heavily regulated to protect policyholders from the threat of an insurer's insolvency. If the company goes bankrupt, policyholders may lose much of their investment in promised insurance benefit (Muriuki & Mutugi 2017). In Kenya, IRA monitors insurance companies to ensure that they are solvent enough to pay off claims. Claims paid lead to customers gaining trust of the insurance industry and therefore more confidence in spending on insurance products (Jus, 2013). In their regulatory role, the IRA have enacted price controls and fraud management mechanisms that have negatively affected insurance penetration in the country. The IRA price regulation framework, although intended to create competitive markets and lower premiums, have not served their intended purpose, for the overall insurance sector

Regulations in the transport sector have too been established ranging from mandatory third party insurance, tighter requirements on the motor vehicle crew, and sitting capacity of the vehicles among others. In 2003, the new government introduced reforms to PS operation through Legal

Notice 161 whose aim was to reduce PSV related accidents, improve commuter safety, stamp out illegitimate drivers and restore order to the PSV sector (Macharia, 2017).

Additional amendments have been made since 2003. The Traffic Act (Cap. 403), which focusses on the law relating to road traffic lays out the minimum age and working hours of PSV drivers. Further, the crew is to be paid a monthly salary by the PSV owner, as per Section 103A (6) of the Traffic (Amendment) Act No. 37 of 2012. PSV operators must belong to a SACCO or company before applying for a PSV license. This last amendment has been crucial in reducing fatalities, as NTSA regularly suspends the licenses of SACCOs whose members frequently commit traffic offenses (Macharia, 2017).

Motor vehicle insurance covers in Kenya fall under three categories: third party, third party fire and theft and a comprehensive cover. Third party cover that ranks in the lowest tier is the minimum legal cover that every car must have to be legally on the road (Kibet, 2017). It should be noted that, whereas the cover protects a car owner from the liabilities that may arise from third parties if the car is involved in the accident, it does not protect the car owner from personal liabilities meaning that and if there are any repair costs to be met, the car owner must meet them himself. Third party fire and theft, the second tier cover encompasses three focal risks; first, third parties who may suffer injuries or losses as a result of the owner's car being involved in an accident, Secondly the vehicle owner in the event that their vehicle catches fire and is destroyed and finally liabilities associated with the theft of your car. This cover ensures that the owner's car will be replaced by the insurance company in case it is lost or stolen.

Lastly, the comprehensive cover regarded as the top tier cover takes care of a wide range of risks that a motorist may suffer in the process of using the vehicle. The cover provides all the benefits of the third party, fire, and theft cover and in addition, it covers car owners from liabilities arising from accidental damage to their car (IRA, 2018). Currently the motor vehicle insurance is governed by the Motor Vehicle (Third Party Risk) Act, Cap 405 which provides for compulsory insurance for all vehicles and whose main objective is to protect third parties. IRA (2014) confirms that all the vehicles that are financed by banks and other asset financing firms are required to have a comprehensive insurance cover.

Rejda and McNamara (2017) highlight the following reasons for government regulation; to maintain insurer solvency, to compensate for inadequate customer knowledge, to ensure reasonable rates for both premiums compensation and to make insurance available to the general public. The Kenyan Government plays a regulatory role in this sector through the Insurance Regulatory Authority (IRA). The (IRA) was created by the Insurance (Amendment) Act of 2006 with the mandate of regulating, supervising and developing the insurance industry (IRA, 2017). Ramadhan (2009) studied the effect of the enactment of Legal Notice 161 of 2003 in respect to underwriting of claims in the PSV sector. This law, famously known as the 'Michuki rules' required, among others, that PSVs have speed governors, seatbelts and permanent crew

members. The law was found to have brought about less significant emphasis on driver-associated issues. Nevertheless, fraud was a challenge in this sector, due to the issuance of forged motor vehicle inspection certificates, which increased the insurer's adverse selection.

In terms of the government's role in regulating the insurance sector, Kihara (2014), in analysing the strategies used by the IRA to safeguard compliance in the industry, found that there were challenges in their implementation on PSV insurance. PSV insurance is taken to be high risk, necessitating high capital requirements. This requirement, although crucial in mitigating insolvency, deters insurers from this field.

It is important to note that the government's actions have had a positive impact in the insurance sector. According to Kihara (2014), these regulations have promoted ethical behaviour, controlled the level of market undercutting and restored order to the sector, by restricting entry and exit of insurance firms

Frimpong (2016) argues that factors associated with the vehicle such as year of manufacture, value of vehicle, colour of vehicle, engine rating, vehicle sitting capacity, usage of the vehicle among other features of the vehicle influence the insurance premium. Several rating that insurance firms consider when determining the premiums, which encompass demographic characteristics of the policy holder, the vehicle itself and factors relating to policy type.

Demographic characteristics of the policy holder relating to age, occupation, and gender among others play a significant role in insurance underwriting and the premium itself. (Mcknight & Mcknight, 2003), noted that young individuals are risk takers. This means that they are more likely to take higher risks compared to the rest of the population. This can be explained by lack of driving experience. Braver and Temple (2003) study exhibited higher accident tendencies for young and elderly drivers. Their analysis resulted to a U shape curve for loss against age.

Most public hire vehicles, which carry less than nine passengers, charge lower premium rates. For buses and coaches defined as vehicles with a seating capacity of more than twelve including the driver, rating is based on the number of passengers which each vehicle may carry and the district in which it is being used. Account will have to be taken for those bus and coach operators covering large parts of the country or operate nationwide. Coaches are operated under a public service vehicle license, which is dependent upon annual inspection. Coaches used for the transportation of supporters for various sports teams can be subject to malicious damage and vandalism and therefore attract higher premiums.

Those firms or organizations who operate small buses (defined as having between 9 and 16 passenger seats) may produce adverse consequences from a risk perspective. In order to justify its purchase a small bus company may be utilized to the greatest extent possible. There may also be a tendency for young and less experienced drivers to be used and servicing and maintenance may be kept to a minimum and be performed by less reputable garages (Canner, 2007).

Few empirical studies have been conducted in the field of PSV insurance in Kenya. Kamau (2007) found insurance fraud to be a reason for avoiding the PSV asset class. The sampled firms struggled to distinguish fraudulent claims from the genuine ones, due to corruption in the judicial system. As a result, many chose to cover PSVs that operated in organized fleets, which had internal control mechanisms. This locked out many 14-seater PSVs, which did not belong to such fleets.

Fraudulent claims are also cited as a reason by Wekesa (2010), who studied the challenges facing the underwriting of PSVs in Kenya. By sampling insurance companies that already insured motor vehicles, this study found that fraudulent claims, weaknesses in the judicial system and weak enforcement of traffic laws deterred them from this venture. These reasons contributed to the companies forming an overall PSV avoidance policy.

The lack of an insurance data sharing system has also cost the insurance companies heavily. Many fraudulent claimants have taken advantage of this loophole to drive these insurance companies into underwriting losses by launching several claims during the insurance period and benefiting from multiple insurance companies. The car insurance rates for private motorcars stands at roughly 3.5 – 4.5 % of the value of the car from most car insurance companies in Kenya. Jubilee insurance and APA insurance offer different insurance rates depending on the age and value of the vehicle but the majority of the industry still offers flat rates for all vehicles. While the IRA in Kenya had earlier mandated insurance companies to offer motor insurance covers in the range of 7% of the value of the vehicle, stiff competition and under cutting has led to the price decline to present levels.

Research Methodology

The study adopted a cross sectional survey design and a structured and open-ended questionnaire to collect data from Business development managers or their equivalent from all firms having general business risk cover as at 2018. Therefore, the study population consisted of thirty-eight insurance companies that were registered by IRA and operating in Kenya as at 2018. These are companies operating and providing various motor products and services in Kenya. Data pertaining to determinants of PSV insurance underwriting was collected from business development managers, risk officers, underwriters. The respondents were also purposively selected since they were deemed conversant with the insurance products and service of the firms and were in positions of agents of the shareholders. They gave a balanced insight across the insurance sector in Kenya.

The questionnaire contained four sections; the first section focused on information about the respondents such as age, gender, the number of years that the respondents have worked in the organisation and the number of years that the company has been in operation. The second section focused on the types of covers that are offered to Matatus and to what extent they are offered. In

addition, it focused on the factors that insurers consider when underwriting Matatus. This was structured with regards to the two main factors that is Insurance industry and regulatory reforms in the PSV sector. The level of relevance of these factors is brought out using a Likert scale where '5' represents very important, 1 represents 'not important' and intermediate rating of '3' as important, '2' as slightly important and '4' as fairly important. The third section concentrated on the main inhibitors to underwriting Matatus with respect to industrial, regulatory and shareholder's interests. A Likert scale was used for this section as well while last section mainly considered mechanisms that would increase uptake of Matatu insurance. The forth section focussed on factors that would enhance the likelihood of Underwriting PSV insurance. The research questionnaire was tested for internal consistency using the Cronbach Alpha Coefficient. Internal reliability was measured by calculating the Cronbach's Alpha. The Cronbach's Alpha of the questionnaire was 0.78, which confirmed reliability of the instrument.

Descriptive analysis was used to summarize and describe the collected data, which included bar charts and frequency tables to give an overview of the responses obtained in line with the study objectives. It also captured the similarities and/ or differences across the two different groups that is those who insure matatus and those who do not. The descriptive statistics also analysed responses on the questionnaire i.e. what proportion ranked what preference with regards to Likert Scale information. Principal component analysis (PCA) was also done to show the most important factors within each of the study objectives that influence uptake of PSV underwriting in Kenya.

Inferential statistics were applied to determine how the probable solutions in the matatu insurance sector would affect uptake of matatu insurance. This is done through a principal component analysis (PCA) and a regression model using the variables that contribute the largest to the principal components. A principal component analysis was used to extract the important information from this multivariate data set. It usually reduces the number of variables of a data set while preserving as much information as possible. Following the identification of the insurance industry factors and government regulatory factors that weighed heavily on the principal components a logistic regression was performed. Two independent logistic regressions are performed to determine the likelihood of underwriting PSV insurance given a set of certain regulatory factors and insurance industry factors. The logit model for each of set of factors that would lead to increase in PSV underwriting is given as follows

$$logit = log \frac{P}{1-P}$$

$$ln \frac{P}{1-P} = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$$

$$Y = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$$

$$\frac{P}{1-P} = e^{\beta+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+\beta_4 X_4}$$

$$P = \frac{e^{\beta+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+\beta_4 X_4}}{1+e^{\beta+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+\beta_4 X_4}}$$

The LHS represents the logit: log of odds ratio

Where;

P represents the probability of observations with an outcome 1. In this case 1 represents underwriting of Matatu insurance.

1 – P represents the probability of an outcome 0. 0 represents lack of matatu underwriting by insurance firms.

β Represents the y coefficient.

$X_1 \ldots X_4$ Represents regulatory and insurance industry Factors.

Results and Discussion

The study obtained a response rate of 92 % (n = 35) from all the 38 insurance firms that were considered. Majority of the respondents had considerable experience in the insurance thus their responses appropriate.

The first objective examine that government regulations favour and deter firms to underwrite PSV insurance. Results are presented in the Table 1 and Table 2 respectively.

Table Responses on government regulatory factors by firms underwriting PSV (*matatu*) insurance

	Slightly important	Important	Fairly important	Very important
Introduction of PSV SACCOs	0	0	1	2
Mandatory third party insurance	0	0	0	3
Anti-fraud systems	1	0	0	2
Stringent traffic rules (speed limits.)	0	0	0	3
Maximum limit of third party liability	0	0	2	1
Existence of a regulatory body	0	1	0	2

With regard to government regulations, the study found that those insurance firms, which underwrite PSV insurance, take the ready market provided through the mandatory third-party cover and the stringent traffic rules as the main reasons for underwriting. Underwriting of PSV insurance is consistent with the Motor Vehicle (Third Party Risk) Act, Cap 405 that was instituted in 1979 whose main objective is to protect the third party. The stringent traffic rules have to do with wearing of uniforms, installation of seat belts and speed governors in the matatus. These two factors are pivotal prior to underwriting matatus

Table 5: Responses on government regulatory factors by firms not underwriting PSV (*matatu*) insurance

	Not at all	Small extent	Some extent	Moderate extent	Great extent
Existence of regulator	46.9%	25.0%	0.0%	18.8%	9.4%
Fire/ restricted passenger capacity	43.8%	18.8%	12.5%	6.3%	18.8%
Mandatory Insurance cover	50.0%	21.9%	9.4%	9.4%	9.4%
Stringent traffic control (safety belts, speed limits)	34.4%	31.3%	6.3%	18.8%	9.4%
Controlled insurance premiums	40.6%	21.9%	12.5%	6.3%	18.8%
Public service vehicles inspection	43.8%	18.8%	12.5%	6.3%	18.8%
Integrity requirement for vehicle crew (good conduct)	34.4%	6.3%	12.5%	12.5%	34.4%
The proposed bus rapid transport system	59.4%	21.9%	6.3%	3.1%	9.4%
Introduction of NTSA	62.5%	21.9%	3.1%	9.4%	3.1%
Establishment and existence of Traffic Police Department	62.5%	12.5%	9.4%	9.4%	6.3%
Third Party Risk	34.4%	12.5%	6.3%	18.8%	28.1%
Mandatory PSV saccos/ companies	53.1%	18.8%	12.5%	3.1%	12.5%

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nsurance firms that do not underwrite PSV insurance regard integrity requirement for the vehicle crew and the third-party risk as the greatest deterrents.. Lack of integrity by the matatu crew is vividly explained by smith (1999), who purports that matatu drivers drive recklessly as their income and job security is dependent upon daily passenger loads yielding the daily profit mark set by the matatu owners. To achieve this, they break traffic laws; weave in and out of traffic, cut off other vehicles while using sidewalks to bypass traffic, which endangers the lives of the pedestrians. This factor negatively affects the uptake of insurance underwriting on public vehicles plying for hire in Kenya.

The second objective was to examine the effect of insurance industry factors on PSV underwriting. Results are presented in the Table 3 and Table 4.

Table 6: Responses on insurance industry factors by firms underwriting PSV (*matatu*) insurance

	Not at all	important	Fairly important	very important
Usage of vehicle	0	1	0	2
Area of operation	1	1	1	0
Vehicle seating capacity	1	0	0	2
Type of cover (TPO,TPO& T)	0	1	0	2
Driver details(age, experience..)	1	0	1	1
Manufacturer log book vehicle details (Year, type)	1	1	0	1
Level of fraud in the industry	1	0	0	2
Level of competition	0	1	1	1
Vibrant agents/brokers	0	0	2	1
Strong internal controls in the insurance firm	0	0	1	2

Table 3 shows that the usage of the vehicle, the seating capacity, the type of cover issued the level of fraud in the industry and strong internal controls in the insurance firm are the most important factors considered in underwriting PSV insurance. The seating capacity is important because public hire vehicles that carry less are charged lower premiums. The type of cover issued is also considered when calculating premiums thus would consequently affect the uptake of matatu underwriting by insurers.

Table 7: Responses on industry factors by firms not underwriting PSV (*matatu*) insurance

	Not at all	Small extent	Some extent	Moderate extent	Great extent
Fradulent claims	0.0%	0.0%	3.1%	12.5%	84.4%
Amount of damages awarded by courts in case of claims	0.0%	0.0%	12.5%	18.8%	68.8%
Enforcement of traffic rules	12.5%	9.4%	28.1%	25.0%	25.0%
Experience and competence of psv (matatu driver)	3.1%	12.5%	0.0%	15.6%	68.8%
Competition in the industry	31.3%	25.0%	21.9%	12.5%	9.4%
Condition of the vehicles	3.1%	9.4%	15.6%	25.0%	46.9%
Insurance Premiums by the vehicle owners	12.5%	28.1%	6.3%	12.5%	40.6%

Table 4 show that fraudulent claims, amount of damages awarded by courts and the experience and competence of PSV, experience and competence of Matatu crew as the greatest factors that deter many insurance firms from underwriting PSV insurance. Lotuiya (2014) states that the entire process of claims reporting and claim processing presents an opportunity that has been exploited by the fraudsters.

The third objective was to examine from the insurers perspective on what mechanisms should be employed to enhance insurance uptake. Principal component analysis (PCA) was carried to determine the most important factors that would inhibit or enhance the uptake of PSV (matatu) underwriting. Using the Eigen value criterion (Kaiser, 1960) which asserts that the most important components are those whose Eigen value is greater than 1, the study considered,

restricted access of PSVs to town centres, introduction of the BRT system, restricted limit of number of matatus operating as PSVs, Withdrawal of 14-seater vehicles and non- registration of matatus on the part of the proposed government regulations . On the insurance industry factors, mergers of PSV insurance underwriters, Centralized data systems in the insurance industry and Strong internal controls were considered as factors that would enhance PSV underwriting. These factors explain 78.7% of the cumulative proportion which are enough to explain how insurance industry practice together with government regulation influence the uptake of matatu insurance by insurers.

Two independent logistic regressions conducted and results are shown in Table 5 and Table 6.

Table 5: Logistic regression Results for Government Regulations

Coefficients					
	Estimate	Odds Ratio	Std error	Z value	Pr(>|z|)
Intercept	2.066	7.893	3.341	0.618	0.536
Restricted access of PSVs to towns	0.177	1.194	0.674	0.263	0.792
Introduction of BRT system	0.143	1.153	0.734	0.194	0.846
Withdrawal of 14 seater vehicles	-0.983	0.374	1.169	-0.841	0.401
Non-registeration of 14 seater vehicles	-0.178	0.837	0.904	-0.197	0.844
Restricted Limit of number of matatus operaring as PSVs	-0.748	0.473	0.734	-1.020	0.308

Table 5 shows that if the government were to restrict the access of PSVs to town centres then the odds in favour of matatu underwriting by insurers would be 1.194 times larger. In the same breadth, the odds in favour of matatu underwriting given that the BRT system is implemented would be 1.153. On the contrary, if the government were to facilitate the withdrawal of 14-seater vehicles the odds in favour of underwriting matatus by insurers would reduce by 0.374. Non-registration of these matatus would also have a similar effect or reducing the odds in favour of matatu insurance by 0.837. Lastly, by restricting the limit of number of matatus

Operating as PSVs the odds in favour for matatu underwriting would decrease by 0.473.

Table 6: Logistic regression results for Insurance Industry Practices

	Estimate	Odds Ratio	Std error	Z Value	Pr(>|z|)
Intercept	-91.850	0.000	19110.000	-0.005	0.996
Mergers of PSVs insurance underwriters	0.014	1.014	0.753	0.019	0.985
Creation of mutual insurance companies	-1.059	0.347	0.893	-1.185	0.236
Centralized motor insurance systems	0.692	1.997	44.710	0.000	1.000

Table 6 shows that insurance industry factors that would increase the odds of matatu underwriting if implemented are merging of PSV underwriters and having a centralized motor data system by 1.014 and 1.997 respectively. On the other hand, creating of mutual insurance companies would lead to a decrease in the odds favouring matatu underwriting by 0.347.

Conclusion and Recommendations

While a ready market exists for PSV insurance firms courtesy of mandatory third party insurance, stringent traffic rules are a primary issue in the transport industry due to incessant flouting of these rules by matatus drivers and conductors, which leads to enormous cases of road accidents, and hence increasing liabilities to insurance firms.

In order to enhance PSV underwriting, a centralized motor insurance system would aid in disseminating information of the unruly matatu drivers or the ones who are highly likely to register fake claims thus leaving the insurance firms to deal with the non-dubious matatu drivers. Thus, a centralized motor insurance system will mitigate the fraud cases that have come up as an issue in this sector. Moreover, implementing of strong internal controls in insurance firms to eradicate fraud claims would enhance increased PSV underwriting in Kenya. In addition to this, it is important for the regulators to ensure that the matatu crew and especially the drivers are experienced drivers who are of age.

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59. Strategic Thinking and Performance of Small and Medium Sized Dairy Processing Firms in Kenya

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Abstract

In spite of the crucial role played by the dairy sector in economic growth and development in Kenya, many firms in the sector, especially the small and medium sized, continue to face performance challenges related to unregulated informal milk market, accessing markets and high industry barriers among others. Whereas strategic thinking has received a lot of attention both in practice and scholarly, its effect on the performance of small and medium sized dairy processing firms remains uncertain. This study sought to determine the effect of strategic thinking and performance of small and medium sized diary processing firms in Kenya. The study was anchored on the Leidtka Model. Positivism research philosophy was adopted. Descriptive and explanatory research designs were used. A census survey was conducted and primary data was collected from the chief executive officer, finance manager, marketing manager and production managers. Descriptive statistics such as mean and standard deviation were used to explain data characteristics, while multiple regression was used to test the effect of the study variable on firm performance. The results showed that strategic thinking has a positive significant effect on performance of small and medium sized dairy processing firms in Kenya, thus it was perceived that strategic thinking aids creation of a path for what the firm wants to become through focusing on their intent, systems, timely thinking and research. The study contributes to the body of knowledge by filling contextual, empirical, and conceptual gaps identified earlier in literature and establishing a nexus of strategic thinking and performance of small and medium sized dairy processing firms in Kenya. Enhance strategic thinking particularly by using research to inform their decision making and practice quick decision making to mitigate or exploit opportunities and thinking of possible solutions to unexpected challenges.
Keywords: *Strategic thinking, Firm performance, Small and medium sized dairy processing firms*

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60. Influence of Liquidity on Financial Performance of Insurance Companies in Kenya

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ABSTRACT

Liquidity is the capacity of accompany to meet its current financial obligations when and as they fall due (Demirgüneş, 2016). A firm may incur extra costs if it fails to honor short term financial obligations as and when they fall due. The research embraced a coorrelational research style. A correlational study design is carried out to discuss the relationship in between variables (Saunders, Lewis & Thornill, 2009; Bryman & Bell, 2007; Cooper & Schindler, 2006). The target population for this study was the fifty-three insurance companies in Kenya (Source IRA)

who were operational in 2018. The insurance companies which had undergone any form of consolidation were 21 while 32 had not engaged in any M & A activity. A correlational study design was carried out to discuss the relationship in between variables. This study planed and used additional data acquire both quantitative and qualitative for evaluation. The study found that 61.9% of variations in financial performance is due to changes in liquidity. The study concludes that greatest threat to liquidity may occur in an insurance company during a *catastrophe when a large number of claims are received at once or there may be prospects of a significantly large claim and that insurance companies should have optimal liquidity for such situations. The study recommends that Insurance firms should monitor liquidity in their firms and adopt corrective actions in instances of high liquidity risk.*

Key Words: Liquidity, Financial performance

Introduction

Liquidity is the capacity of accompany to meet its current financial obligations when and as they fall due (Demirgüneş, 2016). Holding assets in liquid form enables the firm to be able to comfortably meets its short-term financial obligations. However, liquid assets have an opportunity cost since they provide very little returns (Akenga, 2015). On the other hand, not holding enough liquid assets may put the firm in a position that it would be challenged to settle its short-term financial obligations effectively. This may be costly to the firm due to penalties or the need to turn illiquid assets to cash, within a short time. The firm, therefore, need to balance between the benefits and cost of holding liquid assets. Having the optimum liquidity will have a positive influence on the firm's financial performance. Having too much or too little liquid assets may be costly to the firm and hence have a negative effect on its financial performance (Nyamao, Ojera, Lumumba, Odondo & Otieno, 2012).

Statement of the Problem

Financial performance in the insurance sector in Kenya has been poor with the total growth rate either stagnating or dropping on yearly basis since year 2012 (IRA (2018). According to IRA (2018), penetration of insurance remains low at 2.8 percent in 2017 measured using gross premiums as a percentage of Gross Domestic Product. Moreover, IRA (2018) indicates that the insurance sector reported a decline in ROE and ROA to 8.29% and 1.36% from 14.36% and 2.69% respectively in the year 2017. Additionally, 31.8% of the insurance companies posted losses while 68.2% posted profits. This hence indicates a sector where the sustainability of insurance companies is not guaranteed. This is despite the various M&As that have been

conducted in the sector to consolidate and enhance success and sustainability of insurance companies.

The performance of insurance companies continues to be poor, yet the industry has undergone various improvement and consolidations over the years. In Kenya, various insurance companies have been placed under administration in the last twenty years. Invesco Guarantee Firm was positioned under receivership in 2008. In 2009 Typical Assurance and in 2011 Blue guard insurance firm was placed under statutory administration. According to Mudaki and Wanjere (2012), the others which collapsed previously on consist of Kenya National Guarantee Business, United Insurance Company, Lake Celebrity Assurance Company, Access Insurer as well as Stallion Insurance. As of 2013, Concord Insurance Company came to be the 9th insurance company to collapse. According to IRA (2013), the company failed to meet its obligation to the shareholders.

Various studies have investigated the effect of various internal factors on the financial performance of companies. Pervan and Višić (2012) assessed the effect of firm size on financial performance of non-financial firms in Croatia and established that firm size plays a significant positive role in influencing firm performance. This study however considered only firm size and overlooked other critical internal factors such as liquidity, capital structure and operational efficiency. Moreover, this study was conducted on non-financial firms in a country with different regulatory and economic environment from Kenya. Siro (2013) studied how financial performance of firms listed at the NSE is influenced by capital structure. The results revealed an inverse association between financial performance and capital structure of listed firms in the NSE. This study only included capital structure and ignored other key internal factors such as operational efficiency, liquidity and firm size. Moreover, the study included all firms listed in the NSE which are from different sectors with different operational and regulatory requirements. Further, the study did not apply panel data model which was appropriate for the data collected but applied OLS regression.

Kingóo (2015) on a study on commercial banks listed in the NSE, assessed the influence of internal factors on financial performance. This study considered size of the bank, capital adequacy, operational cost efficiency and liquidity and established that all of them had significant influence on financial performance of the commercial banks. This study, however, was on commercial banks while the current study will be on insurance companies. Further, though the study used panel data, it did not apply panel data model, but utilized ordinary least squares (OLS) regression which is not robust for panel data. In another study on commercial banks listed in the NSE, Njigo, Oluoch and Ndambiri (2018) studied the effect of internal factors on profitability. Internal factors considered in this study included cost of deposit, asset quality,

Herfndahl Hirschmann Index (HHI) and debit ratio. The study did not include liquidity, firm size and operational efficiency which are vital internal factors that may influence performance.

In the insurance sector, Ejigu (2014) investigated the internal factors influencing financial performance of Ethiopian insurance companies. The findings indicated that management competence index, liquidity ratio, company size, company growth rate and leverage ratio significantly affected financial performance. This study was conducted in Ethiopia which has key social, economic, financial and regulatory environment that Kenya. Another study by Mulchandani, Sitlani and Mulchandani (2018) investigated the influence of internal factors on profitability of the life insurance sector in India. The internal factors considered in this study included age, capital, foreign holdings, growth rate and reinsurance. The study ignored key internal factors such as liquidity, size and operational efficiency. Moreover, the study only focused on life insurance companies. Additionally, the study applied OLS regression instead of the more appropriate panel regression model. Further, this study was conducted in India which has different macroeconomic factors from Kenya. The reviewed studies have contextual, methodological and conceptual gaps that the current study seeks to fill. Therefore, this study sought to fill the existing gaps by investigating the influence of liquidity on financial performance of insurance companies in Kenya.

Research objective

To establish influence of liquidity on financial performance of insurance companies in Kenya

Research Hypothesis

$H0_{1:}$ Liquidity has no significant influence on financial performance of insurance companies in Kenya.

Literature Review

Liquidity and Financial Performance

Adebayo and Olalekan (2012) studied the implication of M&A's on the profitability and other performance measures on commercial banks in Nigeria by looking at 10 commercial banks that emerged from the consolidation in 2006 through a survey study. They used a simple percentage for the analysis and tested hypotheses using correlation coefficient and t-test. The study found that there was a significant relationship between the capital base of the commercial banks and their profitability before the merger and after the merger. Further, they found out that M&A's led to the increased capitalization of commercial banks which was confirmed by the changes in the ownership structure, changes in the lending rates of the banks and the increase in the cost of the services offered by the banks. However, the study found out that there was significant difference

in the ROE before the merger and after the merger. This indicated that the merger had enabled the firms to be more successful.

Chen (2014) observes that the liquidity management concept is explored with the measurement of account payables, account receivables and inventory days which are the components of working capital. Ogada and Achoki (2016) established that the cash conversion cycle was related to financial success of firms. They noted that shorter the cash conversion days the more liquid a firm is and hence survival. Apuoya (2010) studied the connection between working capital administration plans and profitability of companies estimated at the NSE making use of an example dimension of 19 companies for a period of 5years utilizing regression analysis. He determined that firm's profitability boosts with dimension, efficiency in functioning funding administration and with lower aggressiveness in possession management. Kaguri (2013) additionally studied the connection between capital administration as well as earnings of business detailed on the Nairobi Stock Market for a sample of 24 companies for period of 6 years from 2001 to 2006. She recognized that managers might create revenues for their firms by taking care of correctly the cash money conversion cycle as well as maintaining each different part of working resources administration (balance dues, accounts payables as well as stock) at an optimal degree.

Greene and also Segal (2014) revealed that liquidity risk requirement is determined based on financial space. Financial institution managers mostly presume core deposits as stable source of funds which can completely finance the supply of banking finances. Normally, core deposits are considered as car loan resources with the least expense and also hence bank put in place strategic measures on growth of costs for functions of liquidity monitoring. Poor liquidity monitoring might result to economic distress which affects negatively on the shareholders' returns.

Liquidity describes the readily available money for the future, after taking into consideration the financial commitments representing that duration. It is the quantity of capital (Cash money, debt as well as equity) that is offered for financial investment as well as investing (Qasim & Ramiz, 2011). An illiquidity of a company indicates that it can not get sufficient funds, either by enhancing obligations or by transforming possessions without delay, at an affordable price. In periods throughout which the firms do not appreciate sufficient liquidity, they can not satisfy the needed sources from debt without conversion the possession into liquidity by practical expense.
Working capital monitoring entails choosing of the amount as well as make-up of current assets and also the financing of these possessions (Ehrhardt & Brigham, 2011). Further, Eljelly (2004) noted that reliable working capital monitoring entails planning and also controlling existing assets as well as present obligations in a fashion that removes the risk of failure to meet due short-term obligations on the one hand and prevent extreme investment in these assets on the various other hand. Bawa as well as Chattha (2013) better observed that excessive degrees of

existing assets might have a negative effect on the company's profitability whereas a reduced degree of current properties may result in reduced level of liquidity resulting challenges in returns repayment. Working Capital Monitoring has been determined as a key component of monetary efficiency which consequently affects the stock return of a firm. Therefore, through their studies researchers such as; Ebenezer and Asiedu (2013) while utilizing money conversion cycle, account payable days and stock days as independent variables as well as Internet operating earnings as the reliant variable determined that they have a substantial impact on profitability of firms that effects on the dividend pay.

In a research in Jordan, Almajali (2012) developed that in order to manage liquidity, an establishment must have a management information system in place that is sufficient to produce the info needed to make reasonable development and also liquidity projections. The findings of a neighborhood research study by Maaka (2013), revealed that earnings of the commercial banks in Kenya is adversely influenced by boost in the liquidity gap and utilize. Therefore, with a substantial liquidity void, the banks may need to obtain from the repo market even at a greater rate thus rising the price of financial institutions and also this will certainly impact their economic efficiency.

According to Moro and Anderloni (2014), there is an unfavorable connection in between liquidity as well as productivity that inevitably affect the shareholders wide range. It for that reason ends up being a predicament for managers to balance both thus the demand for a tradeoff in between high quantities of internet working capital and also making the most of productivity. This is described as the liquidity-profitability trade-off. This predicament would be a consequence of the reality that high worths utilized in current assets often tend to generate costs for maintenance, not straight including value to the company and also consequently generating earnings.

According to Banafa et.al, (2015), the significant indicators of financial performance of corporate entities are liquidity, solvency and success. Liquidity as well as solvency management are very crucial for every company that suggests to pay existing and long-term obligations of the company. The current repayment responsibilities include operating and monetary expenses that are short term whereas long-term responsibilities consist of the long period financial obligations. Liquidity and solvency can impact the efficiency of a firm. This is explained by the truth that stakeholders have an interest in liquidity and solvency ratios of firms, so they respond in different ways when the proportions reveal increasing threats.

Materials and Methods

The research embraced a correlational research style. A correlational study design is carried out to discuss the relationship in between variables (Saunders, Lewis & Thornill, 2009; Bryman & Bell, 2007; Cooper & Schindler, 2006). The target population for this study was the fifty-three

insurance companies in Kenya (Source IRA) who were operational in 2018. The insurance companies which had undergone any form of consolidation were 21 while 32 had not engaged in any M&A activity. This study planed and used additional data acquire both quantitative and qualitative for evaluation. To determine the patterns revealed in the data accumulated relating to the selected variables, information analysis will certainly be assisted by the objectives as well as purposes of the research study and also the dimension of the data collected.

The regression model of the independent variables against the dependent variable adopted was:
$Y_{it} = \beta_0 + \beta X_{it} Z + e_{it}$
Where:
Y = the value of the dependent variable of success (ROE, ROA)
{β; i=1,2,3,4,5} = The coefficients for the various independent variables
X_{it} for; = Liquidity (predictor variable)
i = insurance companies (1 – 21)

t = time period (2001 – 2017)

Z = Consolidation status (whether the company has been involved in M&A) (moderating variable)

e is the error term which is assumed to be normally distributed with mean zero and constant variance.
Y = Financial performance

Hypothesis

Liquidity has no significant influence on financial performance of insurance companies in Kenya.

5.0 Results and Findings

Model Summary

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.787(a)	.619	.604	.65341

Predictor: (Constant), Liquidity
Dependent Variable: Financial Performance
Table 1 has a summary of the regression parameters namely, R, R^2, adjusted R^2 and standard error. R^2=0.640 suggesting that 61.9% of variations in financial performance is due to change in capital.

Table 2: ANOVA

Model		Sum of Squares	D.f.	Mean Square	F	Sig.
	Regression	61.144	2	14.321	24.224	.000(a)
	Residual	31.312	18	.513		
	Total	92.276	20			

Predictors: (Constant), Liquidity

Dependent Variable: Financial Performance

ANOVA findings in table 2 F ratio is significant (F =24.224, $p<0.05$). This implies that regression model fits the data and thus is appropriate for use in this study.

Table 3: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	2.378			1.432	.104
	Liquidity	.238	.042	.213	2.104	.001

Dependent Variable: Financial Performance

Using the values of the coefficients (b) from the regression coefficient table 4.3 the established simple linear regression equation takes the form of;

Y= 2.378+0.238X

Where;

Constant = 2.378; when value of the independent variables are zero, financial performance would take the value 2.378

X= 0.238; one unit increase in liquidity results in 0.238 increase in financial performance.

The study therefore rejects the hypothesis that liquidity has no significant influence on financial performance of insurance companies in Kenya. Since the study found that there exists relationship between liquidity and financial performance.

Conclusions

The study concludes that the greatest threat to liquidity may occur in an insurance company during a catastrophe when a large number of claims are received at once or there may be prospects of a significantly large claim. For these situations, they have risk management

processes in place, such as reinsurance cover and alternative risk transfer methods. In some cases, the full amount is not paid for a period after the event until the losses are fully adjusted, giving additional time to liquidate the assets, avoiding a liquidity crunch in the short run.

Overall, catastrophic events are rare and general insurers largely concentrate on managing the vulnerability to such events. Thus, these firms view their exposure to liquidity risk as being a consequence of a major catastrophe and so the risk is usually contained within insurance, investment or credit risk.

The study also concludes that liquidity in a life insurance company is considered as less threatening than in some other institutions because of higher frequency of money exchange takes place in banking industry compared to life insurance industry. However, liquidity is equally important in life insurance because of interconnection of financial system leading to cash crisis and secondly liquidity risk may prove very expensive to insurer due to meeting the cost of liquidity and also impacting the Assets and Liability mismatch.

Recommendations

The study recommends that insurance firms have a duty to have optimum liquidity for smooth operations of the business. Monitoring liquidity without an appropriate action plan is incomplete. When the liquidity risk level is too management must be aware of the tools that it has available with which to lessen the risk, and it must be willing to use them when necessary.

The liquidity management of an insurer should include the characteristics of the organization's assets and liabilities, its internal structure, and market behavioral factors. Close management and careful fine-tuning of the liquidity risk framework are essential to help the firm survive in extreme stress and optimize assets without undue strain in less stressed conditions.

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61. Brand Communications and Loyalty among Household Consumers of Laundry Detergents in Nairobi City County, Kenya

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In recent times, the importance of building relationships in marketing has greatly increased with the main point of focus being on the relationship between companies and their customers. In many markets, particularly in fast moving consumer goods market, relationships between consumers and brands also plays a key role. However, empirical studies that focus on these brand relationships are scarce, even though such relationships often form a foundation for more comprehensive consumer-brand relationships, and may have a significant influence on loyalty. In addition, even though brand relationships are a key area of research, they have not been a topic of many empirical studies in developing countries, especially in Kenya. As a key dimension of brand relationship, brand communication has emerged as a salient construct in the study of brand relationship as it links consumers and brands together and creates strong relationships which play a key role in building brand relationships and consequently loyalty. Therefore, to fill this gap, this study sought to investigate the effect of brand communication on loyalty among household consumers of laundry detergents in Nairobi City County. This research adopted the positivistic philosophy and the explanatory research design in conducting the study and was cross-sectional in nature. A sample of 400 households were selected using cluster and simple random sampling. The Kish grid was utilised in selecting the respondents at the household level. Primary data was collected using a self-administered questionnaire based on a five-point Likert scale. Descriptive statistics summarised the data's properties while inferential statistics were utilised in testing the research hypotheses and in drawing conclusions. The quantitative data analysis was done using SPSS 25.0. Based on the data analysis, brand communication was found to have a positive effect on loyalty of household consumers of laundry detergents in Nairobi City County. The study thus concluded that brand communication has a positive influence on loyalty among household consumers of laundry detergents. The research findings have important theoretical, managerial and policy implications on the marketing of laundry detergents in Kenya.

Keywords: Brand Communications, Brand Relationships, Loyalty, Consumer goods

62. University Graduates' Employability in Kenya: Views from Graduates and Employers

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As an outcome of a research carried out in Kenya on Entrepreneurial Universities in Kenya, this paper focus on university graduates' employability in Kenya. The paper documents how universities in Kenya have advanced with regard to providing skills to attract graduates to chosen jobs, for initiating creative and for innovative ventures at the workplace. It concentrates on the

skills gained, the opportunities and resources available in the universities and the preparedness of the graduates for employability, innovation, entrepreneurship and creativity. The views of graduates and employers have been considered for this paper. Stratified sampling was used where the main Kenya Vision 2030 clusters of the economy were used as a basis of different strata. It was found that by and large, universities have played a substantial role in the enhancement of entrepreneurship training for employability, innovation, and entrepreneurship and creativity skills but that several gaps are still apparent in this endeavour. One of the major recommendation is a plan to develop students' employability as part of their degree programmes, from the beginning of their studies including tasking each student to embark on a 4 year project culminating into a business plan or idea or even a physical enterprise. The project should aim at solving an existing societal problem and clearly document its intended outcome. This calls for programmes to be redesigned in such a way that employability is integrated seamlessly into curriculum and assessment process.

Keywords: *Development, Entrepreneurial, Innovation, Creativity, Dynamic Skills, Preparedness*Board Characteristics and Financial Distress of Listed Commercial Banks in Kenya

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Abstract

Commercial banks have pivotal role in economic development. They not only create wealth but also, the custodian of resources mobilization and allocation. Global business environment has amplified the need for effective corporate governance which maximizes shareholder wealth and minimize possibilities of financial distress. Corporate governance aids with the protection of investors' interest against stakeholders and management exploitation. Board members have critical role in enhancing clarity on their role in company's management through monitoring and advising chief executive officers. Successful governance is reflected in quality of financial and non-financial performance. Investment confidence is dependent on financial health situation of a firm. The specific objectives for the study were: to determine the relationship between ownership structure, board structure, audit committee and independent directorship and financial distress of commercial banks listed at Nairobi Securities Exchange, Kenya. The study was based on agency theory, information asymmetry theory and signalling hypothesis. Correlation research design was adopted. A Census study of 11 listed commercial banks was adopted. Secondary data was collected for the period 2011 to 2018. Panel regression analysis, correlation analysis and descriptive statistics were used to analyse data which was presented in tables, graphs and figures. The study found a positive and significant relationship between ownership structure and financial distress (β = 0.458, p-value = 0.000). Board structure had a positive and significant relationship with financial distress (β = 0.054, p-value = 0.00). Moreover, the study established a positive and insignificant relationship between audit committee structure and financial distress (β = 0.021, p-value = 0.086). The study further found a positive and insignificant relationship between independent directorship and financial distress (β= 0.216, p-value = 0.078). The study recommends that the government (through the relevant

regulatory agencies) should regularly update listed company's guidelines on governance to enhance transparency. Current and potential investors should be guaranteed of sustainable investment opportunity through healthy corporate governance practices. Since their goals differs and may be attributed to demographic characteristics and behavioral attributes calls for exercise of caution on issues that may trigger financial distress.

***Key Words**: Financial distress, ownership structure, board structure, independent directorship, audit committee and Nairobi Securities Exchange.*

Introduction and Background

Though financial system comprises of heterogeneous players such as insurance and investment banks, commercial banks have pivotal contribution in achievement of their goals and objectives (Olalekan & Adeyinka, 2013). In addition, they argued that healthy commercial banks are congruent to sustainable and stable economic development. Poudel (2012) posited for development of robust risk management strategies which would aid in achievement of high performance and boost in investor's confidence due to decline in cases of bank panic and run. Board characteristics causality with corporate governance has a fundamental value. According to Bredart (2014), board of directors have value contribution on sustainability and survival chances of corporate entities since they are delegated to oversee their operations. Corporate governance principles must be fully adopted to mitigate possibilities of financial distress. According to Fernandes (2005), corporate policy documents should be aligned with acceptable governance principles which eliminate likelihood of financial distress. This mirrored conclusion by Eyenubo (2013) who argued that appointments of board of governance in corporation minimized agency costs and was contingent to decreased chances of accounting malpractices which was dominant in institutions with weak governance.

Board characteristics are unique characteristics describing those mandated in management of corporate entities. They include age, education qualifications, gender, board structure like board size, gender diversity and board tenure (Mwengei & Kosgei, 2017). Empirical scholars have documented that these features have an impact on corporation performance (Breadart, 2014). Despite there being several board characteristics, the current study limited its investigation on relationship between ownership structure, board size, audit committee structure and independent directorship. The ownership structure was represented by the shareholding owned by top ten shareholders (Ayoola & Obokoh, 2017). The average of board tenure in listed banks was employed to represent the board structure (Bredart, 2014). Audit committee structure was operationalized as the average attendance of meetings per annum by audit committee members of listed commercial banks (Muhama, 2015). Independent directorship was the proportion of non-executive directors (Witiastuti & Suryandari, 2016).

Financial distress refers to the inability of a corporation to pay financial dues as they fall due or meeting them with challenges such as delays, or alteration of credit terms and conditions (Miglain, 2014). Financial distress can be examined using different credit default models which have been developed empirically, the most dominant are the Altman's Z score (1968) and UK based model by Agarwal and Taffler (2008) who predicted model failure using hazard model

approach, Campbell *et al.* (2005). The justification for their use is based on their ability to capture variations on chances of financial distress which can act as a benchmark against which variations in stock expected returns can be explained (George & Hwang, 2009).

Kenya has 40 commercial banks and 13 microfinance banks being regulated by the CBK and those that are listed are also oversighted by capital market authority (CBK Annual Report, 2017). Compared to other countries like Nigeria and South Africa with their respective population, Kenya has more banks in relative terms. Over the recent years, Kenya has witnessed growth and failure of banks. The growth may be linked to liquidity ratio that rose over the statutory requirement. As at 2013, commercial bank in Kenya reported an increase of 20% in profit while non-performing loans (NPL) grew by 13.3% to 61.6 billion shillings (Irungu, 2013). Based on the Cytonn report for the year 2015 credit risk, as assessed by NPL, has continued to increase despite reporting profits. Loans being the greatest source of credit risk signifies a worrying trend since credit risk threaten not only the highest degree of loan losses but even bank failure (Odunga, 2016). In this regard, CBK has developed risk management guideline and supervision strategy approaches for the financial institutions.
The banks performance could be attributed to insider lending, giving loans to high risk borrowers and macroeconomic instability (Gathigia, Waweru & Muturi, 2016). As last kicks, some of banks opted to sell off government securities to cover cash shortfalls signalling financial distress that banks were facing. As aforementioned, at least three commercial banks have been either liquidated or placed under receivership due to financial distress by the CBK. From Gathigia *et al.,* (2016), it has been suggested that economic factors could be contributing to the bank's poor performance.

Research Problem

Commercial Banking sector plays a pivotal role in economic development of Kenya. The sector not only creates wealth but it remains key in effecting resource mobilization and allocation. Commercial banks achieve this by forming capital through consolidation of scattered small savers resources; these institutions create credit which amplifies production, sales, employment and prices, channel funds to profitable and optimal project, aid in identification of appropriate industries to invest in at a given time and finance the government through treasury bills and bonds and entrepreneurs through loan facilities (Kaplana & Rao, 2017). Global business environment has amplified the need for effective corporate governance, this will not only maximize shareholder wealth but also minimize possibilities of financial distress. Through corporate governance, investors' interest will be fully protected against stakeholders and management exploitation. Board members have a critical role in enhancing clarity on their role in company's management through monitoring and advising chief executive officers (CEOs). Successful governance is reflected in quality of financial and non-financial performance (Wei *et al.,* 2017).

Listed commercial banks are mandated by their stakeholders to maximize their wealth through profit generation (Bredart, 2014). The situation is not guaranteed since there are upward and downward trends in commercial banks profitability. Distressed situations will hamper business

community negatively and erode economic development gains. Long-term financial distress in developing economies has led to liquidation of commercial banks for example Imperial and Chase banks in Kenya. Cases of them collapsing locally necessitate empirical investigation on causality between board characteristics and financial distress of listed in Kenya. It is anticipated that conceptualized model would shed insights on measures to be undertaken to protect investment in Kenyan commercial banks (Kaplana & Rao, 2014).

Empirical enquiries have reported inconsistent findings with some positive, negative and others not significant. For instance, Rahani, Kamarun, Rohaida and Zarina (2013) applied logistic regression in Malaysian listed companies and found positive influence of ownership on financial distress. The study failed to examine diagnostics prior to fitting the model. Ayoola and Obokoh (2018), documented a positive influence of board size and management shareholding on financial distress in Nigeria but they applied ordinary least squares model. Salloum, Azoury and Azizi (2013) used binary logistics in Lebanon and documented insignificant influence of CEO duality, percentage of women in board, inside directorship and financial distress. Bredart (2014) documented inverse board size influence on financial distress and used binary logistics in the study of US quoted firms. Hence, the aforementioned empirical gaps formed a good basis for this study.

Objectives of the Study

The specific objectives of the study were:

i. To determine the relationship between ownership structure and financial distress of listed commercial banks in Nairobi Securities Exchange, Kenya.
ii. To evaluate the relationship between board structure and financial distress of listed commercial banks in Nairobi Securities Exchange, Kenya.
iii. To establish the relationship between audit committee structure and financial distress of listed commercial banks in Nairobi Securities Exchange, Kenya.
iv. To find out the relationship between independent directorship and financial distress of listed commercial banks in Nairobi Securities Exchange, Kenya.

Significance of the Study

Government agency could be provided with guideline for controlling operations of Nairobi Securities Exchange, Kenya by coming up with an effective governance structure to be adopted by commercial banks sector to mitigate against financial distress. Specifically, capital market authority (CMA) could be assisted in implementation of governance initiatives. Through CMA, they could examine possibilities of conflicts which may emerge due to increased shareholding amongst board members. To enhance investors' confidence there is need to ensure that their investments are secure. This would be achieved through documentation of the role of board characteristics on financial distress. There is need for development of measures geared towards examination on sustainability of listed companies. Even though, there are only 11 commercial banks listed their financial distress status will act as yardstick for evaluating non-listed commercial banks. The results and findings of the study could enable prospective investors to acquire tools which are aimed at evaluating financial health status of listed corporations. Further, the causal effect of board characteristics on financial distress could be empirically

explored. Academically, the study creates demand for further empirical investigation. Also, empirical foundation for exploration of corporate governance could be important to other researchers.

Literature Review

The section reviews key theories (which anchor the study) as well as empirical studies linked to the study variables.

Theoretical review

The study was anchored on agency theory, information asymmetry theory, signalling theory and wrecker's theory of financial distress and have been summarised below:

Agency theory was documented by Jensen and Meckling (1976) and explained the benefits and conflicts arising from delegation of authority in a company by the principal, the business owners and the agents who are the managers of the firm. Due to the different interests of the parties that make up a company, agency costs may arise. Therefore, the shareholders employ monitoring tools at their own cost to inhibit further deterioration while on the other side managers have incurred bonding cost to convince the principals that no harm that would emerge owing to their activities and decisions. The theory is appropriate for the study since board characteristics provides avenue for agency costs management. Successful, board and audit committee operations deters management from undertaking investments which are detrimental to optimal profitability and also attract costs associated with preparations of meetings and facilitation of reports which may be used to guide on possibilities of financial distress.

Information asymmetry theory was developed by Akerlof (1970). The theory argues that decision making in an organization are dependent of market statistics information available. There is contrasting degree of information access between buyer and seller of goods and services. The former has limited information as compared to the later. This inhibits pricing of goods and services and places the seller in a disadvantaged position. Board of management is perceived to be custodian of market statistics and they should ensure there is low likelihood of information asymmetry. The theory is relevant for the study since there is need for listed commercial banks to cluster and disseminate information to members of the public and bridge information gaps. Failure to provide information amongst current and potential investors would increase possibilities of listed commercial banks experiencing financial distress and erode investor's wealth and confidence. Information asymmetry can be minimized by board members through frequent attendance of their board meetings and audit committee deliberations to identify possibilities of information asymmetry for remediation.

Signalling theory was documented by Arrow (1972) and Spence (1973). The theory supports generalization of economic based information. It is argued that information transmitted by listed companies is anticipated to create value amongst different stakeholders. Dissemination of positive information signals good performance while negative information is an indicator of underperformance. Information asymmetry alters inequality of transaction costs. This theory supports the study since disclosure of ownership structure, board structure, audit committee structure and independent directorship is anticipated to maximize shareholder wealth. Despite

disclosing profitability, there is need for detailed analysis on status of financial distress of listed commercial banks.

Empirical Review

Empirical studies on ownership structure and financial distress have revealed mixed results based on various sectors and countries. Bredart (2014) investigated the effect of financial distress on corporate governance for US quoted firms. Board size negatively affected financial distress. Though, board independence had negative effect it was not significant. The results were similar to studies undertaken in developing and emerging countries. Mwengei and Kosgei (2017) who investigated the effect of board composition and financial distress of 39 firms listed in Kenya from 2004 to 2013 documented that board independence inversely affected financial distress. This was corroborated by Rahani, Kamarun, Rohaida and Zarina (2013) whose study documented inverse causality of independent directorship, executive directorship, family ownership, foreign ownership and financial distress.

Salloum, Azoury and Azizi (2013) studied the effect of board of directors on financial distress of family owned enterprises in Lebanon. The effect of outside directorship, CEO duality, insider equity ownership, women directorship, tenure of board members, debt value, number of employees, percentage of outside directors on financial distress was evaluated. Findings indicated positive and non-significant effect between inside directors and financial distress. This was confirmed by Udin, Khan and Javid (2017) who investigated the effect of ownership structure on likelihood of financial distress in Karachi securities exchange for period 2003 to 2012 for 146 companies. Government ownership positively affected financial distress. This was justified by government and private entities conflicting interest whereby government is meant to solve social needs as opposed to shareholders' wealth and profit maximization.

Rohani, Kamarun, Rohaid and Zarina (2013) investigated ownership structure and financial distress in Malaysia. Logistics regression model was fitted on secondary data gathered from 2004 to 2009. Study findings documented positive effect of board ownership and leverage on financial distress. Further, it was inversely affected by independent ownership and executive directorship. The findings mirrored Murhadi, Tanugara and Sutejo (2018) who assessed the influence of good corporate governance on financial distress of listed companies in Indonesian Securities Exchange. Panel data was gathered from 2011 to 2015 among 337 firms. Logistics regression model was fitted. Study findings documented that financial distress was affected by good corporate governance, audit opinion and ownership type. Post-hoc analysis would have been carried out to evaluate robustness of fitted model.

Alba, Montserrat and Elena (2014) investigated the relationship between corporate governance and accuracy of financial distress prediction models among companies listed in Spanish securities exchange. Study findings documented positive and non-significant effect of ownership concentration, CEO duality and financial distress. There was an inverse and non-significant relationship between board ownership, board size and financial distress of listed companies. The study should have presented post hoc analysis so as to evaluate robustness of the model. The

study contradicted Khurshid, Sabir, Tahir and Abrar (2018) who investigated the impact of corporate governance on likelihood of financial distress of non-financial companies in Pakistan. Particularly, the study examined the effect of board composition, ownership structure, audit quality, board size, CEO's duality, board independence, insider's directorship, institutional investment and financial distress. Binary logistics model was fitted on secondary data gathered from 2009 to 2016. Study findings documented that there was significant negative impact on likelihood of financial distress between board size, insider director's ownership and audit quality.

Mahama (2015) analyzed the effect of financial distress on companies listed in Ghana for period 2007 to 2013. Secondary data of listed companies was collected for the period from annual financial statements. Univariate and multivariate methods were used to analyse the data. It was documented that prudent financial and working management policies amongst listed companies minimized possibilities of financial distress. Since the study fitted binary logistic there was need to fit post-hoc test so as to examine model stability. Further, Dissanayke, Somathilake, Madushanka, Wickramasighe and Cooray (2017) assessed the effect of board configuration on financial distress of listed firms in Colombia securities exchanges. Bivariate methods analysed the data. Study findings established non-significant relationship between CEO duality and financial distress. Though, classical modelling analysed the data, no diagnostic test was executed thus there were high chances of drawing biased conclusions. In addition, it was appropriate to adopt panel data analysis instead of fitting ordinary least squares regressions. Thirdly, Colombia securities exchanges is at different stage of economic and technological development consequently it may be better placed on data and information gathering as compared to Nairobi Securities Exchange.

Methodology

The study adopted correlation research design. Sekaran and Bougie (2013) supports this design as it is appropriate whenever the researcher seeks to explore causality between variables under examination. Secondary data for eight years was gathered through use of data collection sheet for eleven commercial banks listed in the Nairobi Securities Exchange, Kenya.

The data was collected using a document review guide. The data collection sheet and was cleaned and coded to make inferences using descriptive, Pearson's correlation and panel regression analysis. Consequently, the data was analysed using STATA software. The Altman's z-score model adopted to measure financial distress is captured below;

$$Z_{it} = \beta_0 + \beta_1 BO_{it} + \beta_2 BS_{it} + \beta_3 A_{it} + \beta_4 ID_{it} + v_i + \varepsilon_{it}$$

With the following areas of discrimination; $Z > 2.6$ 'safe' zone, $1.1 < Z < 2.6$ 'grey area' and $Z <$ 1.1 'distress' zone.

Where:

Z_{it} - financial distress (as measured using Altman's Z score for bank i at time t)

BO - Ownership structure
BS - Board structure
A - Audit committee meetings
ID - Independent directorship

$\beta's$ - coefficients of explanatory variables

v_i - unit-specific residual that differs between individual banks but for any bank i, its value is constant

ε_{it} - normal error term that is assumed to have a mean of zero and constant variance.

Results and Findings

Descriptive Statistics

Descriptive statistics is meant to provide distribution of variables under examination. Descriptive statistics included mean, skewness, kurtosis and standard deviation. These results are in Table 4.1 where the analysis and interpretation are given.

Table 4.1 Descriptive Statistics

	Z Score	Ownership Structure	Board structure	Audit Committee Structure	Independent Directorship
Mean	5.9	0.7	8.8	0.8	0.7
Median	5.5	0.7	8.6	0.7	0.8
Maximum	11.5	0.9	18	0.9	0.9
Minimum	2.9	0.3	4	0.6	0.4
Std. Dev.	1.8	0.1	2.3	0.1	0.1
Skewness	0.9	-1.1	1.4	-0.2	-0.6
Kurtosis	3.7	5.9	11.6	2.1	2.5
Sum	518.3	64.8	776.9	67.3	64.1
Sum Sq. Dev.	297.7	0.9	454.7	0.6	1.3
Observations	88	88	88	88	88

Source: Study Data, (2020)

As shown in Table 4.1 the average distress score for listed commercial banks is 5.9, with a maximum of 11.5 and 2.9. This indicated that most listed commercial banks are stable since they fall in stable region as documented by Altman's Z score. These findings concur with Githira, Muturi and Nasieku (2019) who found that most companies listed at Nairobi Securities Exchange were not in financial distress. The findings also confirmed Gitau (2016) findings

which indicated that most of listed companies in Nairobi Securities Exchange were financially stable.

The average ownership structure of listed commercial banks was 70%, which indicated that the highest percentage of shareholding was owned by first ten shareholders in order of shareholding proportionate. This would ease decision making process since they can easily ratify decisions which are meant to save the corporation from financial distress. Average board structure was approximately nine years, with a maximum of 18 years and minimum of 4 one amongst those who were newly recruited. This indicates most board members have served for long in their respective companies and this would aid them in understanding business trends and performance in their respective listed commercial banks. The mean audit committee structure was 0.8 (80%), which indicates commendable attendance of audit committee meetings. This should be recommended so as to aid in identification of loopholes that may lead to spillage of resources and financial distress. The average independent directorship was 0.7, which indicates availability of an opportunity to benefit from heterogeneity of skills provided by independent directors.

Board composition complied with stewardship theory since it had heterogeneous skills hence it could allow nurturing of quality board room discussions due to diversity of skills. This was in agreement with Atosh (2017) who supported the need for gender diversity, board independence, executive directorship and ownership concentration as yardsticks for eliminating odds for corporate financial distress. Moreover, Montserrat *et al.*, (2016) argued in favor of optimization of board size, differentiation of ownership type, independent directorship. Accumulation of appropriate board skills would enhance quality of committees such as audit, human resources and risk management that would be prudent in enhancing continuity of listed companies.

Descriptive Statistics on Financial Distress

Financial distress was estimated using alternative ratios. The ratios examined working capital management, proportion of retained earnings, sales turnover and equity fair value to liabilities. Summary of findings are in Table 4.2. and interpreted

Table 4.2 Descriptive Statistics on Financial Distress

	Working Capital to total assets	**Retained Earnings to Total assets**	**Profit before tax to Total Assets**	**Book value of equity to Total assets**
Mean	0.69	0.20	0.28	0.19
Std. Deviation	0.50	0.10	0.11	0.06
Minimum	0.08	0.1	0.08	0.08
Maximum	0.92	0.37	0.5	0.36
Skewness	1.91	-0.57	0.01	1.16
Kurtosis	4.68	0.42	-0.56	1.97

Source: Study Data, (2020)

From Table 4.2 the average working capital to total assets was 0.69, with a minimum of 0.08 and maximum of 0.92. Since the ratio is positive it indicates listed banks have positive working capital. The working capital has an effect on corporate long-term investment effectiveness and its financial strength to honour financial liabilities. The average retained earnings to total assets was 0.20, this indicates that listed commercial banks retained significant portion of their earnings. This would cushion them against floatation costs when in financial needs and adherence to pecking order theory which is the most optimal decision. On average, listed commercial banks had positive return on their assets as shown by an average of 0.28, on the ratio of earnings before interest and taxation to total assets. This indicates compliance with wealth maximization principle and optimization of profitability. The average of equity par value to liabilities was 0.19, which indicates positive return on borrowed funds invested by listed commercial banks.

Correlation Analysis

Pearson's correlation analysis was carried out to show the strength of variables under examination. According to Baltagi (2005), correlation is measured using correlation coefficient that range from -1 to + 1, negative correlation coefficient indicates an increase in independent variable leads to decrease on dependent and vice versa. Positive correlation depicts co-movement between variables under examination. Correlation coefficients greater than 0.5 are an indication of a strong relationship while those less than 0.5 indicate a weak relationship (Sekaran & Bougie, 2013). Correlation coefficient of -1 indicates perfect inverse relationship and +1 shows perfect positive relationship. Results are in Table 4.3.

Table 4.3 Correlation Analysis

		Z score	Ownership structure	Board structure	Audit Committee Structure	Independent directorship
Z score	Pearson Correlation	1				
Ownership structure	Pearson Correlation	0.723***	1			
	Sig. (2-tailed)	0.000				
	N	88	88			
Board structure	Pearson Correlation	0.765***	0.605	1		
	Sig. (2-tailed)	0.000	0.405			
	N	88	88	88		
Audit Committee	Pearson Correlation	0.558	-0.236	0.156	1	

		Z score	Ownership structure	Board structure	Audit Committee Structure	Independent directorship
Structure						
	Sig. (2-tailed)	0.325	0.327	0.427		
	N	88	88	88	88	
Independent directorship	Pearson Correlation	0.546	-0.209	0.325	.235	1
	Sig. (2-tailed)	0.245	0.423	0.632	0.221	
	N	88	88	88	88	88

Source: Study Data, (2020)

There was a positive and significant relationship of ownership structure and financial distress of listed commercial banks in Nairobi Securities Exchange (*rho* = 0.723, *p-value* = 0.000). Board structure had significant positive relationship with financial distress of listed commercial banks in Nairobi Securities Exchange (*rho* = 0.765, *p-value* = 0.00). Audit committee structure had positive and insignificant relationship with financial distress of listed commercial banks in Nairobi Securities Exchange (*rho* = 0.558, *p-value*=0.325). Independent directorship had positive and insignificant relationship with financial distress of listed commercial banks in Nairobi Securities Exchange (*rho* = 0.546, *p-value* = 0.245).

These findings supported Rahani *et al.,* (2013) who found positive though non-significant influence of ownership structure on financial distress. Further, they concurred with Udin *et al.,* (2017) who found positive effect of ownership structure on financial distress. Ayoola and Obokoh (2018) documented a positive and significant effect of ownership structure on financial distress of listed companies in Nigeria. Bredart (2014) and Mwengei *et al.,* (2017) documented a positive and significant effect of board structure on financial distress of listed companies. Muhandi *et al.,* (2018) and Mahama (2015) documented a positive and significant effect of audit committee structure on financial distress. These was a conflict with Luqman *et al.,* (2018) who documented inverse effect of audit committee characteristics on financial distress.

Regression Analysis

Multiple regression analysis indicates the nature of relationship between variables. Adjusted R squared depicted model explanatory power, F statistics indicated overall significance of the model and T statistics documented the significance of respective board characteristics on financial distress. Model summary is in Table 4.4.

Table 4.4 Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.79	0.6241	0.6134	0.0041

Source: Study Data, (2020)

Regression model summary in Table 4.5 had an Adjusted R-square of 0.6134 that indicates that 61.34 percent of changes in financial distress of listed commercial banks in Kenyan are explained by ownership structure, board structure, audit committee structure and independent directorship while extraneous factors accounted for 38.66 percent.

ANOVA was used to show the overall significance of the model as shown in Table 4.11.

Table 4.5 Analysis of Variance (ANOVA)

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig**
Regression	55.235	4	13.809	22.229	0.000
Residual	51.56	83	0.621		
Total	**106.795**	**87**			

Source: Study Data, (2020)

Results in Table 4.6 indicate that the model overall is significant. Hence, ownership structure, board structure, audit committee structure, independent directorship collectively significantly affected financial distress of listed banks in Kenya, (F = 22.229, p-value = 0.00).

Coefficients of regression model in Table 4.6 shows the nature of relationship between board characteristics and financial distress. T statistics was used to show the significance of the relationship and if it greater than + or – 1.96 then there was significant relationship and vice versa.

Table 4.6 Coefficients

	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig**
	β	**Std. Error**	**Beta**		
(Constant)	2.516	1.134		2.218	0.029
Ownership structure	0.458	0.139	0.215	3.289	0.000
Board Structure	0.054	0.013	0.024	4.274	0.000
Audit Committee Structure	0.021	0.020	0.015	1.027	0.086
Independent Directorship	0.216	0.205	0.241	1.056	0.078

Source: Study Data, (2020)

The beta value (β) gives the nature of the relationship between each board characteristics and financial distress in terms of the ownership structure, audit committee structure, board structure and independent directorship in firm's financial distress levels. Study model is as:

$Y_{i\,t} = 2.516 + 0.458X_{1\,i,t} + 0.054X_{2,\,i,t} + 0.021X_{3,\,i,t} + 0.216IX_{4,\,i,t}$

Where

Y = Financial Distress of bank i at time t

$X_{1,\,i,t}$ = Ownership Structure of bank i at time t

$X_{2, i,t}$ = Board Structure of bank i at time t
$X_{3, i,t}$ = Audit Committee Structure of bank i at time t
$X_{4, i,t}$ = Independent Directorship of bank i at time t

Results shown in Table 4.6 documents that ownership structure has significant effect on financial distress of listed commercial banks. Further, this effect was positive (β = 0.458, t= 3.289, p-value = 0.000). This indicates that unit increase in ownership structure (while holding constant board structure, audit committee structure and independent directorship) increases financial distress by 3.289 units. Since the p-value is 0.000 which is less than 0.05. Hence, an indication that ownership structure has a significant effect on financial distress. Therefore, we reject the null hypothesis that ownership structure has no significant effect on financial distress of listed commercial banks in Kenya. The study therefore shows that ownership structure has significant effect on financial distress of listed commercial banks in Kenya. These findings contradict those of Rahami *et al.,* (2013) who documented positive and not significant effect of ownership structure on financial distress of listed companies. Moreover, the findings concurred with Udin *et al.,* (2017). These findings also concurred with agency theory and confirmed those charged with governance involvement in management of corporation activities.

Board structure has positive and significant effect on financial distress of listed commercial banks in Kenya (β = 0.054, t = 4.274, p-value = 0.00). This indicates that unit increase in board structure while holding constant (ownership structure, audit committee structure and independent directorship) increases financial distress score of listed commercial banks by 0.054 units. Since the p-value is 0.000 which is less than 0.05. Hence, an indication that board structure has a significant effect on financial distress of listed commercial banks in Kenya. Therefore, we reject the null hypothesis that board structure has no significant effect on financial distress of listed commercial banks in Kenya. The study therefore shows that board structure has significant effect on financial distress of listed commercial banks in Kenya. These findings refuted Salloum *et al.,* (2013) who documented positive and not significant effect of board structure on financial distress. Further, the findings confirmed Bredart (2014) and Mwengei *et al.,* (2017) who documented positive and significant effect of board structure on financial distress.

Board structure should act in interest of all stakeholders and minimize likelihood of deteriorating financial performance of their respective corporations. According to Ciampi (2015), company distress is negatively affected by ownership concentration, reduced proportion of independent directors and CEO duality. Also, it was noted that likelihood of financial distress could be evaluated through examination of quality of corporate governance. This was in line with Darrat, Gray, Park and Wu (2014) who argued that there is need to uphold corporate governance principles.

Audit committee structure has a positive and not significant effect on financial distress score of listed commercial banks in Kenya, (β = 0.021, t =1.027, p-value = 0.086). Since the p-value is 0.086 which is greater than 0.05. Hence, an indication that audit committee structure has a significant effect on financial distress of listed commercial banks in Kenya. Therefore, we do not reject the null hypothesis that audit committee structure has no significant effect on financial distress of listed commercial banks in Kenya. Hence, the study shows that audit committee

structure had no significant effect on financial distress of listed commercial banks in Kenya. These findings contrasted Luqman *et al.,* (2018) who reported negative and significant effect of audit committee structure on financial distress. Further, they contradict Muhadi *et al.,* (2018) and Mahama (2015) who reported positive effect of audit committee structure on financial distress.

Independent directorship has positive and not significant effect on financial distress of listed commercial banks in Kenya (β= 0.216, t = 1.056, p-value = 0.078). Since the p-value is 0.078 which is greater than 0.05. Hence, an indication that independent directorship has an insignificant effect on financial distress of listed commercial banks in Kenya. Therefore, we do not reject the null hypothesis that independent directorship has no significant effect on financial distress of listed commercial banks in Kenya. Hence, the study shows that independent directorship has no significant effect on financial distress of listed commercial banks in Kenya. The findings differed with Witiastuti and Suryandari (2016) and Wei *et al.,* (2017) who documented positive and significant effect of independent directorship. The findings also showed that an increase in non-executive board members leads to a decrease in financial distress of listed firms. Non-executive board members enhance governance of the firm thus decreasing the chances of a firm being financially distressed. The findings are consistent with Manzaneque, Priego and Merino (2016) who established that percentage of independent directors has a significant effect on business failure likelihood. The findings are however not consistent with Aggarwal (2013) who found that governance rating has a positive but insignificant influence on corporate profitability of the listed firm.

Conclusions and Recommendations

Based on study findings the following conclusions can be drawn. Since ownership structure has positive and significant relationship with financial distress of listed commercial banks. The study, therefore, concludes that there is need to ensure measures aimed at enhancing investors' confidence and protecting minority investors are instituted among all parties. The study documents significant and positive relationship between board structure and financial distress of listed commercial banks in Kenya. Hence the study concludes that there is need to define measures aimed at limiting the board tenure irrespective of the board members. The study documented positive and not significant relationship between audit committee structure and financial distress of listed commercial banks. In the view of this the study calls for measures aimed at improving quality of audit. Since independent directorship insignificantly affected financial distress listed banks in Kenya, listed commercial banks should have requisite skills composition which aid in capturing and maintaining market share. Through independent directorship listed banks should mix and match their board skills with those that they lack internally.

The management of listed commercial banks should devise measures that are aimed at promoting healthy corporate governance. This can be achieved through creation of information sharing platforms with top shareholders of whom majority are institutions. The government through Capital Markets Authority should regularly update listed company's guidelines on governance. This would alleviate likelihood of conflict of interest and nurture investors' confidence. Additionally, the Central Bank of Kenya should build adequate personnel capacity to enhance monitoring of banks showing signs of distress thus ensuring remediation actions are taken

immediately to prevent further deterioration. Evaluation of the level of governance disclosure would aid in optimization in wealth through investment in companies whose information access is low. Finally, there is need for board of management of commercial banks in Kenya to develop measures geared towards adoption of healthy working capital, increase the asset base and venturing into business opportunities that are profitable.

Contribution to the Knowledge

The study has documented new evidence on the relationship between board characteristics and financial distress of listed commercial banks. The study lays foundation on future research on examination of the influence of ownership structure, board structure, audit committee structure and independent directorship on financial distress of listed commercial banks in Kenya. The study findings support agency and wrecker's theory. In line with agency theory there is need for listed companies to develop measures aimed at enhancing information access among investors. Through increased information access, quality of decision making among investors would be improved and minimize likelihood of financial distress.

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63. Constructs Of Quality Management On Organizational Performance: A Case Of Nakuru Water Sanitation And Services Company In Nakuru County, Kenya

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Abstract

This study investigated the constructs of quality management on organizational performance of Nakuru Water & Sanitation Services Company in Nakuru County. The specific objectives of this study were: to determine whether constructs of strategic planning, training, customer focus and continuous improvement have an influence on organizational performance. The researcher carried out analytical review of relevant literature. The theoretical foundation of this study was the Resource-based view theory and Institutional theory. To achieve the study objectives, the study adopted descriptive survey research design. The target population was 220 employees from Nakuru Water & Sanitation Services Company. Stratified sampling technique was used to select the sample size 142 respondents from all the sections in the company. Semi-structured questionnaire was used as a data collection instrument. A pilot study was conducted in a neighbouring county then the reliability of the instrument was determined through the use of Cronchbach's alpha formula and a coefficient of 0.876 was achieved. Expert judgment was used to test the validity of the instrument. The data collected in the field was analyzed using descriptive and inferential statistics. Data was presented using frequencies, percentages, tables multiple linear regressions and ANOVA. Null hypotheses was tested at $\alpha = 0.05$. The findings from this study revealed that strategic planning, training, customer focus and continuous improvement significantly influenced organizational performance. The NAWASSCO should build upon the weaknesses and strengths of its strategic planning by becoming more effective and efficient. The company should carry out training and career development programs to ensure capacity building and successful business operation. NAWASSCO should also ensure that employees are always upto task in terms of service delivery to its customers. It should constantly and continuously improve their products, services, and processes to remain efficient, productive and competitive. It is hoped that the study may help to develop greater insights into the constructs of quality management for the purpose of improving the organizational performance in NAWASSCO.

Key words*:* ***Constructs of Quality Management & Organizational Performance***

Introduction

The constructs of quality management in any organization is a systematic quality improvement approach for the purpose of improving performance in terms of continuous improvement, training, planning, productivity, customer satisfaction, and profitability (Gharakhani, Rahmati, Farrokhi & Farahmandian, 2013). The implementation of quality management constructs enables firms to improve effectiveness and efficiencies, which is considered competitive in global marketplace. These constructs should be incorporated into the management process of any firm to ensure survival and the future success (Juran, 1995). According to Crosby, (1994) a construct of planning is vital in all practices of management in any firm to succeed. Organizations have adopted various constructs of quality management during the implementation stage in order to

drive the agenda of performance. According to Chandler & McEvoy, (2000) there is a distinct link between strategic quality management dimension and quality management concepts which is drawn from total quality management contribution. The key to competitive success and customer focus in many organizations is emphasizing on service quality and products as a weapon in business performance (Pula, 1994; Krasachol & Guh, 2001). Construct of quality has emerged as an important tool for the success of any organization in the business world (Yong & Wilknson, 2002). To ensure sustainable competitive advantage in a firm, it is imperative to develop efficient and effective quality management constructs that are internationally recognized (Rohitratan & Boon-Itt, 2001).

Literature

Organizational performance comprises of results of an organization as measured against its outputs (or goals and objectives). According to Richard, Devinney, Yip & Johnson, (2009) organizational performance comprises three specific components: financial performance (return on investment, return on assets); market performance (shares, market share); and shareholder return (economic value added and total shareholder return). The primary goal of organizational performance is to increase effectiveness and efficiency of the organization. The biggest challenge to any organizational performance is the external environment: Political, economic, social cultural, environmental and technological (Snider & Rendon, 2001). According to Jang & Lin (2007) who conducted a survey in Taiwan concluded that quality management strategies have a positive relationship with the firm performance. Therefore, this study researched on constructs influencing firm performance. The main aim of constructs of quality management is to provide the pathway for the effective and efficient accomplishment of its goals in an organization (Klefsjo, Bergquist & Edgerman, 2006). Goetsh & Davies (2005) posits that a system of quality management normally consists of all the firms' procedures, plans, policies, processes and resources that are directed at achieving quality services which is consistent with the customer focus and the objectives of the organization. It is a practice of management that harnesses the human resources of a firm in an efficient and effective way in order to achieve the set objectives. This management practice is aim at bearing meaningful and profitable results when a firm recognizes the importance of quality planning (Garvin, 2011). A study done by summers (2006), customer serves as a source of vital information for enhancing improvements to an organization's services and products. Studies done by Ryan, Deane & Ellington, 2001; Gupta, (2008) in different studies agreed that an increased in product quality results in higher productivity and profits, improvement of market share and decreased in costs. There are many constructs of quality management but this study investigated only the following; strategic planning, training, customer focus and continuous improvement.

Kenya's economy depends heavily on its own natural resource on inter-relatedness between land, water and climate. Water as a resource has always played a pivotal role in country's economy.

The main usage for water has been for human consumption, energy generation, agricultural development, industrial growth and livestock. Currently 42% of the Gross Domestic Product (GDP) is derived from natural-resources. The economic growth rate per annum has consistently been lower than the population growth rate from mid 1990s to 2000. The low growth has been heavily linked to droughts, floods and/or rainfall failure (Sessional paper, 2009-2013). With only 647 cubic metres of water per capita against 1000 cubic metres as per the global benchmark, yet the water sector is crucial in terms of production, wealth and prosperity. A study done by Onjala, (2012) indicates that Kenya as a country is water-scarce as compared to other countries. Ministry of Water and Irrigation (MWI) is the lead agency in the Water Sector. The mandate of the ministry is to protect, harness and manage water resources in a sustainable manner to ensure availability and accessibility to drinking water for all. Other sectors such as Health, Agriculture, Livestock, Energy and Tourism – are entirely dependent on water (Owuor & Foeken, 2009).

Nakuru Water and Sanitation Services Company (NAWASSCO) was established under the Companies Act cap 486 in December 2003. It is owned of the County Government of Nakuru. NAWASSCO formation arose from the enactment of the Water Act 2002, which established the institution to manage water resources in the county. The Company provides water and sanitation services to its residents under an agreed framework specified in the Service Provision Agreement (SPA) that ensures adequate, clean, quality supply of water, affordable tariffs, maintenance and improvement of water and sanitation infrastructure. Currently, of the two million residents of Nakuru, only 20 per cent have direct access to piped water. The rest of the population get water from kiosks, rivers; vendors, bore holes, and water harvesting which may be unsafe for human consumption.

Research methodology

This study employed descriptive survey research design to get opinions from employees. According to Mugenda and Mugenda (2003), descriptive survey design is used in collecting data from the members of a population in order to determine the current status under study. This design is deem appropriate because it is an efficient method of collecting descriptive data regarding characteristics of a sample. The organizational performance was taken as the dependent variable while strategic planning, training, customer focus, and continuous improvement were the independent variables. Also, Oso & Onen (2011) confirmed that descriptive survey research design is suitable for extensive research studies where this study falls and thus approving and necessitating the use this design as the most appropriate for this study. In order to eliminate confounding variables in the study, techniques such as matching and random selection of respondents from appropriate population was done.

Location of the study

The location of the study was in Nakuru Water and Sanitation Services Company in Nakuru County. The company is located in Nakuru town which is the headquarter of the County. Nakuru town is located in North West of Nairobi capital city of Kenya. Nakuru County covers an area of 7496.5 square kilometers. It is geographically located between latitude O^0 25.3' North and O^0 53.2' North and longitude 35^0 24·4' East and 36^0 04' East. Nakuru County boarders seven Counties; Kericho to the west, Baringo to the north, Kajiado to the south, Bomet and Narok to the south west, Nyandarua to the east and Laikipia to the north east. Nakuru County has nine sub-counties; Naivasha, Gilgil, Subukia, Nakuru North, Nakuru Town, Rongai, Njoro, Molo, and Kuresoi. Nakuru was chosen as the study area because NAWASSCO is where it is situated.

Sampling technique & sample size

According to Kothari (2014), sampling technique is the specific process by which the entity of the sample is selected. Stratified random sampling was adopted in the study in getting the respondents because the sampling frame is made up of sub-sets. The sampling technique was ideal because it ensured that the respondents are proportional and representative of the whole population. The employees from NAWASSCO were categories into three strata (Top management, staff members and support staff). NAWASSCO currently has 220 employees implying that a formula used by Israel (1992) was appropriate in deriving the required sample size.

$n = N \div 1+N(e^2)$

Where

n= Sample size

N= Total population,

e= is the confidence level which is 0.05

n= $220 \div 1+ 220\ (0.05)^2$

$$\frac{220}{1+ 220\ (0.05)^2}$$

n = 142

Proportionate sampling was used in selecting the respondents from the three categories to make a sample size of 142. Simple random sampling was adopted because it necessitated selecting of staff members and support staff in such a way that each employee had an equal probability of being selected. Each employee was assigned numbers, then the researcher use of the table of random numbers. This was done until the desired sample size was arrived.

Instrumentation

The questionnaire was used in collecting data in this study. A questionnaire was an ideal instrument of collecting data from a large number of respondents from which a lot of information is provided within a short period which facilitated easy coding (Kombo & Tromp, 2013). According to Orodho (2006) questionnaire provides confidentiality thus the respondents provide relevant information without any fear of being victimized or revealed. Kothari, (2014) points out that questionnaire are free from biasness and it provided a more comprehensive view than any other research tool. The questionnaire as indicated in Appendix I was employed to collect data from 142 employees and it adopted a five point Likert scale ranging from strongly agree, agree, undecided, disagree to strongly disagree in response to a particular concept. Section A of the questionnaire entails personal details of the employees and Section B entails items concerning strategic planning, training, customer focus, continuous improvements and organizational performance.

Findings & Discussions

From the study, the following were the findings:

The first research objective sought to establish how strategic planning influences organizational performance in NAWASSCO. The respondents were given a list of statements regarding the influence of strategic planning on organizational performance to indicate the extent to which they agree. The findings are shown in table below.

Strategic planning items on organization performance

	Strongly Agree		**Agree**		**Undecided**		**Disagree**		**Strongly Disagree**	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
Qualified personnel are normally responsible for strategic planning	87	64.0	32	23.5	13	9.5	3	2.2	1	0.8
Strategic planning reduce cost thus improving	88	64.7	23	16.9	15	11	7	5.1	3	2.2

performance										
Strategic planning is the roadmap leading to improve performance	74	54.4	36	26.4	20	14.8	2	1.4	4	3.0
There are clear set targets for the organization	72	52.9	38	27.9	10	7.4	9	6.6	7	5.2
There is quality set objectives in place for the organization	18	13.2	19	14	11	8.1	42	30.9	46	33.8

Source: **Researcher (2020).**

In the table above majority of the employees 87 (64%) and 32 (23.5%) strongly agreed and agreed respectively that qualified personnel are normally responsible for strategic planning. The undecided were 13 (9.5%), disagree were 3 (2.2%) and 1 (0.8%) strongly disagree. This indicated that most of the employees 87.5% believed that personnel who are qualified handled the strategic planning. Majority of the employees 88 (64.7%), 23 (16.9%) strongly agree and agree respectively that strategic planning reduce cost and thus improves performance. The undecided were 15 (11%), agree were 7 (5.1%) and 3 (2.2%) strongly disagree. This indicated that most of the employees 81.6% agree that strategic planning reduces cost and thus improves performance. In the item concerning strategic planning being the roadmap that leads to improve organizational performance; most employees 74 (54.4%) strongly agreed, with 36 (26.4%) agreed, while 20 (14.8%) were undecided, 2 (1.4%) disagreed and 4 (3.0%) strongly disagreed. This indicated that most of the employees (80.8%) agreed that strategic planning is the roadmap leading to improves performance.

Majority of the employees 72 (52.9%) strongly agreed that there are clear set targets for the organization, with 38 (27.9%) agreed, while 10 (7.4%) were undecided and 7 (5.2%) strongly agreed as well 3% agreed. This indicated that most of the employees 78.8% agreed that in their organization there are clear set targets. Majority of the employees 46 (33.8%), 42 (30.9%) strongly disagreed and disagreed respectively, while 11 (8.1%) were undecided and 18 (13.2%) strongly agreed as well as 19 (14%) agreed. This indicated that most of the employees 64.7%

disagreed that there is quality set objectives in place for the organization. Cumulatively, 78.68% of the employees agree that strategic planning improve organizational performance.

Training on organizational performance

The second research objective sought to establish how training influences organizational performance in NAWASSCO. The respondents were given a list of statements regarding the influence of training on organizational performance to indicate the extent to which they agree. The findings are shown in table below

Training items on organizational performance

	Strongly Agree		**Agree**		**Undecided**		**Disagree**		**Strongly Disagree**	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
The organization have regular training for the employees	10	7.3	12	8.8	3	2.2	41	30.2	70	51.5
Training leads to employees motivation and morale.	89	65.4	33	24.3	3	2.2	5	3.7	6	4.4
The organization have relevant policy on training.	94	69.1	40	29.4	0	0.0	1	1.4	1	0.1
Training of employees always improves performance.	86	63.2	36	26.5	2	1.5	6	4.4	6	4.4
Training increase employee satisfaction thus improving	91	66.9	32	23.5	4	2.9	7	5.2	2	1.5

performance.

Source: **Researcher (2020)**

In the table above majority of the employees 70 (51.5%) and 41 (30.2%) strongly disagree and disagree respectively. The undecided were 3 (2.2%), agree were 12 (8.8%) and 10 (7.3%) strongly agree. This indicated that most of the employees 81.7% disagree that organization has a regular training for its employees. Majority of the employees 89 (65.4%) and 33 (24.3%) strongly agree and agree respectively agreed that training leads to employees motivation and morale. The undecided were 3 (2.2%), disagree were 5 (3.7%) and 6 (4.4%) strongly disagree. This indicated that most of the employees 89.7% agree that training leads to employees' motivation and morale thus this improves performance. Majority of employees 94 (69.4%) strongly agreed, with 40 (29.4%) agreed, while 0 (0.0%) were undecided, 1 (1.4%) disagreed and 1 (0.1%) strongly disagreed. This indicated that most of the employees (98.8%) agreed that the organization has existing relevant policy on training.

Majority of the employees 86 (63.2%) strongly agreed that there are clear set targets for the organization, with 36 (26.5%) agreed, while 2 (1.5%) were undecided and 6 (4.4%) strongly disagree as well 6 (4.4%) disagree. This indicated that most of the employees 89.7% agreed that training of employees always improves performance in the organization. Majority of the employees 91 (66.9%), 32 (23.5%) strongly agree and agree respectively, while 4 (2.9%) were undecided and 7 (5.2%) disagree as well as 2 (1.5%) strongly disagree. This indicated that most of the employees 90.4% agreed that training increase employee satisfaction thus improving performance in the organization. In overall, 90.06% of the employees agree that training have a greater impact in improving organizational performance.

Customer focus on organizational performance

The third research objective sought to find out the influence of customer focus on organizational performance in NAWASSCO. The respondents were given a list of statements regarding the influence of customer focus on organizational performance to indicate the extent to which they agree. The findings are shown in table below.

Customer focus on organizational performance

	Strongly Agree		Agree		Undecided		Disagree		Strongly Disagree	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
There are clear sets targets concerning the customers.	80	58.8	35	25.7	7	5.1	6	4.5	8	5.9
Understanding customers' needs increases performance.	96	70.6	27	19.6	2	1.5	6	4.5	5	3.8
Organization carries out customer satisfaction surveys regularly.	74	54.4	30	22.1	5	3.7	17	12.5	10	7.3
Organization regularly organize meet the customer forums.	19	14	16	11.7	8	5.8	36	26.5	57	42
Strong commitment to the customer increases performance	95	69.9	32	23.5	4	2.9	3	2.2	2	1.5

Source: **Researcher (2020).**

In the table above majority of the employees 80 (58.8%) and 32 (25.7%) strongly agreed and agreed respectively that there are clear sets targets concerning the customers. The undecided were 7 (5.1%), disagree were 6 (4.5%) and 8 (5.9%) strongly disagree. This indicated that most of the employees 84.5% agreed that there are clear sets targets concerning the customers. Majority of the employees 96 (70.6%) and 27 (19.6%) strongly agree and agree respectively. The undecided employees were 2 (1.5%), disagree were 6 (4.5%) and 5 (3.8%) strongly disagree. This indicated that most of the employees 90.2% agree that understanding customers' needs increases organizational performance. In the item concerning organization carrying out customer satisfaction surveys regularly; most employees 74 (54.4%) strongly agreed, with 30 (22.1%) agreed, while 5 (3.7%) were undecided, 17 (12.5%) disagreed and 10 (7.3%) strongly disagreed. This indicated that most of the employees (76.5%) agreed that strong commitment to the customers' needs increases organizational performance.

Majority of the employees 57 (42%) strongly disagreed that the organization regularly organize meet the customer forums, with 36 (26.5%) disagreed, while 8 (5.8%) were undecided, 16 (11.7%) agreed and 19 (14%) strongly agreed as well. This indicated that most of the employees 67.5% disagree that the organizations regularly organize meet the customer forums. Majority of the employees 95 (69.9%), 32 (23.5%) strongly agree and agree respectively, while 4 (2.9%) were undecided and 3 (2.2%) strongly disagree as well as 2 (1.5%) disagree. This indicated that most of the employees 93.4% agreed that there is quality set objectives in place for the organization. Cumulatively, 82.42% of the employees agree that customer focus greatly improve organizational performance.

4.7 Continuous improvement on organizational performance

The fourth research objective sought to find out the influence of continuous improvement on organizational performance in NAWASSCO. The respondents were given a list of statements regarding the influence of continuous improvement on organizational performance to indicate the extent to which they agree. The findings are shown in table below.

Continuous improvement on organizational performance

	Strongly Agree		**Agree**		**Undecided**		**Disagree**		**Strongly Disagree**	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**

Organization evaluate the actual performance regularly.	62	45.6	44	32.4	10	7.4	11	8.0	9	6.6
Organization regularly relates the performance against the set targets	50	36.8	26	19.1	18	13.2	26	19.1	16	11.8
Corrective actions are taken regularly thus improving performance.	46	33.8	38	27.9	13	9.6	20	14.7	19	14.0
CI boosts employee involvement and reduces turnover.	89	65.4	38	28	1	0.7	3	2.2	5	3.7
Sections are encourage to learn from each other and rectify their mistakes.	78	57.4	39	28.7	6	4.4	6	4.4	7	5.1

Source: **Researcher (2020).**

In the table above majority of the employees 62 (45.6%) and 44 (32.4%) strongly agreed and agreed respectively that organization evaluate the actual performance regularly. The undecided were 10 (7.4%), disagree were 11 (8.0%) and 9 (6.6%) strongly disagree. This indicated that most of the employees 76.0% believed that organization evaluate the actual performance regularly. Majority of the employees 50 (36.8%) and 26 (19.1%) strongly agree and agree respectively. The undecided were 18 (13.2%), disagree were 26 (19.1%) and 16 (11.8%) strongly disagree. This indicated that most of the employees 55.9% agree that organization regularly relates the performance against the set targets. Most employees 46 (33.8%) strongly agreed, with 38 (27.9%) agreed, while 13 (9.6%) were undecided, 20 (14.7%) disagreed and 19 (14%) strongly disagreed. This indicated that most of the employees (61.7%) agreed that corrective actions are taken regularly in order to improve organizational performance.

Majority of the employees 89 (65.4%) strongly agreed that there are clear set targets for the organization, with 38 (28%) agreed, while 1 (0.7%) were undecided and 3 (2.2%) disagree as well 5 (3.7%) strongly disagree. This indicated that most of the employees 93.4% agreed that continuous improvement boosts employee involvement and reduces turnover. Majority of the employees 78 (57.4%), 39 (28.7%) strongly agree and agree respectively, while 6 (4.4%) were undecided and 6 (4.4%) strongly disagree as well as 7 (5.1%) disagree. This indicated that most of the employees 86.1% agreed that sections are always encouraged to learn from each other and rectify their mistakes. In overall, 74.62% of the employees agree that continuous improvement improve organizational performance. The finding in the study indicates that continuous improvement influences organizational performance.

Organizational performance

The study sought to establish the extent to which constructs of quality management influence organizational performance in NAWASSCO. The findings are shown in table below.

Organizational performance items

	Strongly Agree		**Agree**		**Undecided**		**Disagree**		**Strongly Disagree**	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
Constructs of quality management promote customer satisfaction	95	69.9	29	21.3	5	3.7	4	2.9	3	2.2

Constructs of quality management reduces the financial cost	37	27.2	70	51.5	9	6.6	10	7.4	10	7.4
Constructs of quality management encourages team work among the employees	64	47.1	46	33.8	14	10.3	8	5.9	4	2.9
Constructs of quality management improves employee retention	39	28.7	57	41.9	13	9.6	12	8.8	15	11
Constructs of quality management improve employee motivation and morale.	81	59.6	40	29.4	2	1.5	6	4.4	7	5.1

Source: **Researcher (2020).**

In the table above majority of the employees 95 (69.9%) and 29 (21.3%) strongly agreed and agreed respectively that constructs of quality management promote organizational performance. The undecided were 5 (3.7%), disagree were 44 (2.9%) and 3 (2.2%) strongly disagree. This indicated that most of the employees 91.2% agreed that constructs of quality management promote customer satisfaction. Majority of the employees 37 (27.2%) and 70 (51.5%) strongly agree and agree respectively. The undecided were 9 (6.6%), disagree were 10 (7.4%) and 10 (7.4%) strongly disagree. This indicated that most of the employees 79.4% agree that constructs of quality management reduces the financial cost. In the item concerning the constructs of quality management encouraging team work among the employees; most employees 64 (47.1%) strongly agreed, with 46 (33.8%) agreed, while 14 (10.3%) were undecided, 8 (5.9%) disagreed and 4 (2.9%) strongly disagreed. This indicated that most of the employees (80.9%) agreed that constructs of quality management encourages team work among the employees.

Majority of the employees 39 (28.7%) strongly agreed that there are clear set targets for the organization, with 57 (41.9%) agreed, while 13 (9.6%) were undecided and 12 (8.8%) strongly disagree as well 15 (11%) disagree. This indicated that most of the employees 70.6% agreed that constructs of quality management improves employee retention. Majority of the employees 81 (59.6%), 40 (29.4%) strongly agree and agree respectively, while 2 (1.5%) were undecided and 6 (4.4%) strongly disagree as well as 7 (5.1%) disagree. This indicated that most of the employees 89.0% agree that constructs of quality management improve employee motivation and morale. Cumulatively, 82.22% of the employees agree that constructs of quality management improve organizational performance.

Conclusions

On the basis of the findings of the study, the following conclusions are made:

Based on the discussion of the findings the following conclusions were made: It was revealed that strategic planning, training, customer focus and continuous improvement significantly influence organizational performance in Nakuru Water Sanitation and Services Company. In view of the findings of this study, the following conclusions have been drawn. The strategic planning had an influence on organizational performance which means that strategic planning plays a key role in organizational performance. The effect of training on organizational performance established in this study should inspire the stake holders in the company to formulate training and development programmes that may improve the organization performance. The customer focus significantly influences organizational performance in Nakuru Water Sanitation and Services Company. The company should be able to meet customer expectations all time. Continuous improvement is significant to the provision of water since this dictates any change that takes place in the company should always be on improving provision of services.

Recommendations

This study recommends that:

NAWASSCO should build upon the weaknesses and strengths of its strategic planning by becoming more effective and efficient in leading others. Having this knowledge the managers will gain direction to develop goals and objectives to become better leaders.

NAWASSCO should carry out training programs to ensure successful business operation; do an in-depth understanding of the institution environment, an insight regarding training options and career development approach to weld in employees into organizational effectiveness and knowledge sharing to improve organizational performance.

NAWASSCO should ensure that employees to be great at customer service they create an institution culture focused on caring. It should ensure a good understanding of what their customers want and establish good lines of communication.

NAWASSCO need to continuously improve their products, services, and processes to remain competitive and be able to maintain a work space that is organized and clean, promoting enhanced functionality, efficiency, and productivity.

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64. Changes In Neighborhood, Amenities And Structural Concerns: Do They Significantly Explain Moves By Renters? A Case of Pangani Area, Nairobi County, Kenya

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Abstract

The conventional housing generalization that moves are undertaken to improve housing utility is yet to be extensively confirmed in the market for renters. Empirical evidence has largely attributed such moves to demographics. However, housing studies indicate that short term moves have similarly been linked to changes in neighbourhood characteristics, amenities, structural concerns, budget constraint, changes in income, changes in family, housing search outcome, psychological biases (mainly heuristics and anchoring), changes in jobs, forced moves by government among other factors. However, as households initiate moves, they often invest in extensive search (in terms of search effort and search cost) in order to alleviate information asymmetry and optimize utility arising from their moves. This proposed study builds on empirical evidence from the West including the classical Rossi (1951) study on *Why Families Move*. Pangani area is considered ideal for confirmation of these generalizations due to its proximity its cosmopolitan nature and proximity to the Kenyan Capital City of Nairobi; much of the housing is for renters and the area is equally densely populated. The study adopts a descriptive cross sectional research design. Using cluster sampling, SMART methodology (2012) will be used to sample household heads to fill the questionnaires. Government housing renters will be excluded from the study since their housing is more less 'forced moves'. Descriptive analysis will be adopted mainly using Likert-Type Scales.

Keywords: *Housing moves, Households, Housing utility, Mobility, Search, Asymmetric information and Renters.*

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