

**AN ASSESSMENT OF FACTORS INFLUENCING THE PERFORMANCE OF
METALLIC ARTISANS AT KAMUKUNJI ENTERPRISE CLUSTER, NAIROBI
COUNTY, KENYA**

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DECLARATION

This thesis is my original work and has not been presented for any degree in any other university.

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DEDICATION

I dedicate this thesis to my parents, my husband Edward Kaptunwo and my little babies Melania Chepkesis and Lucky Towett. Thank you for being there for me and God bless you all.

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LIST OF ABBREVIATIONS AND ACRONYMS

ANOVA	:	Analysis Of Variance
BSC	:	Balanced Scorecard
CBD	:	Central Business District
GDP	:	Gross Domestic Product
GOK	:	Government of Kenya
GPS	:	Global Positioning System
ILO	:	International Labour Organization
KIA	:	Kamukunji Informal Association
KNBS	:	Kenya National Bureau of Statistics
KNFJKA	:	Kenya National Federation of <i>Jua Kali</i> Association
KU-ERC	:	Kenyatta University Ethics Review Committee
MDGs	:	Millennium Development Goals
NACOSTI	:	National Commission for Science, Technology and Innovation
NGOs	:	Non-Governmental Organizations
OSH	:	Occupational Safety and Health
SACCOs	:	Saving and Credit Co-operative Societies
SD	:	Standard Deviation

SDGs	:	Sustainable Development Goals
SMEs	:	Small and Medium Enterprises
SPSS	:	Statistical Package for Social Sciences
SSA	:	Sub-Saharan Africa
SWOT	:	Strength, Weakness, Opportunities and Threats
TVET	:	Technical and Vocational Education and Training Authority
WB	:	World Bank
WHO	:	World Health Organization

OPERATIONAL DEFINITIONS OF KEY TERMS AND CONCEPTS

- Business Financial Position:** The term is used to refer to monetary status of the business. In this study, business financial position is used to show the cash flow in kamukunji *Jua Kali* businesses
- Fabricators:** Persons making items by skilled art. In this study, the word fabricators are used to refer to metallic artisans who make items from metals.
- Formal sector:** Employees working in well -organized firms and earning regular income. They also pay taxes to the government. In this context, the word is used to refer to workers in the government and well organized NGOs.
- Informal sector:** Refers to the economy that is not taxed and is not organized in anyway. In this context, informal economy refers to businesses done by metallic artisans.
- Jikos* :** It is a metallic or clay container used for cooking. In this study, *jiko* is used to refer metallic container made by *Jua Kali* artisans used for cooking purposes.
- Jua Kali:*** In this study *Jua Kali* is used to refer to the informal sector.

Metal fabrication: It is the process of changing the value of the metals into the state of usefulness. In this study, metal fabrication is used to refer to the processes in which the artisans change the metals into useful products such as spade, hoe, *jiko*, spoons and *sufurias*.

Metallic products: Products produced from the metals. In this study the metallic product refers to items produced by the artisans.

Sufuria: An African name for a cooking pot.

Performance: It is doing something successfully; it is the act of using knowledge to achieve a set goal. Further performance is the rating of the work force of a particular group. In this context performance was used to rate the work of *jua kali* artisans

Vikundi: Is a Swahili name for groupings.

ABSTRACT

The informal sector (*Jua Kali*) is significant to the developments of many countries. Its importance is reflected in terms of employment generation, interlink between various firms and contribution towards the Gross Domestic Product (GDP). However, besides the *Jua Kali* sectors importance, its survival has been susceptible by numerous obstructions that impede their growth. Thus, the studies main objective was to assess the factors influencing the performance of *Jua Kali* artisans' businesses at Kamukunji enterprise cluster in Nairobi County. The specific objectives of the study were; to determine the economic factors influencing the performance of *Jua Kali* metallic artisans' businesses at Kamukunji enterprise cluster, to identify the social factors affecting the performance of Kamukunji enterprise cluster metallic businesses and to establish how the institutional and individual based strategies influence the performance of *Jua Kali* metallic artisans businesses at Kamukunji enterprise cluster. The study utilized descriptive research design. The target population was 4,500 registered *Jua Kali* metallic artisans and the sample size of the study was 181 *Jua Kali* artisans and 3 officials from the selected institutions. The questionnaires were administered to 181 randomly selected metallic artisans, interview schedules were administered to the 3 officials from each of the following; Kamukunji Informal Association (KIA), Kenya National Federation of *Jua Kali* Association (KNFJKA) and Nairobi County ministry of trade. Global Positioning System (GPS) was used to identify the spatial distribution of the sampled respondents. The collected data was analyzed using Statistical Package for the Social Sciences (SPSS) Version 21.0 to generate percentages, frequencies and measures of central tendency. In addition, tables, graphs and pie charts were used to present the results for ease of reference and understanding. The research adopted Regression Analysis and Chi-Square in determining the degree of relationship among the variables. The study findings showed that accessibility to finances by the artisans, availability of managerial skills and education, market competition and digital social platforms are key factors influencing the performances of Kamukunji enterprise cluster businesses. From the research findings, the pseudo-R-squared was 0.0367. The socio-economic factors that were utilized include; market competition, infrastructure, level of education Accounting and trainings, usage of digital social network and work conditions encountered which explained about 3.67% of the probability of rating a business performance good. The *Jua Kali* artisans should be encouraged to attend further trainings on management and entrepreneurship to enhance their skills. The financial institutions should be flexible in their terms required for loans awarding so that they can attract the *jua kali* entrepreneurs. The study also recommends that Kamukunji *Jua Kali* metallic artisans should adopt the theoretical models like the Balanced Scorecard (BSC) Theory and the Resource Based View Theory (RBV) in their need to improve the performances of their businesses.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

According to Kinyanjui, (2019) the *Jua Kali* businesses are invisible to the government and their work is poorly paid and precarious. The sector does not pay income tax and value added tax (VAT) to the government because it falls below the threshold set by many countries (King, 2019). Although the *Jua Kali* sector is often taxed, this is done through numerous types of charges and licensing costs (Elgin, 2021). However, these charges fail to take accounts of one another leading to overlaps. Such charges include; market taxes and fee levied on market stalls (Elgin, 2021). According to ILO, (2020) the *Jua Kali* operations are conducted either in the open air market, under temporary shelter and kiosks. These are areas set by the government under the ministry of planning and devolution for *Jua Kali* operations (Elgin, 2021). The major activities carried out in the informal sector include; wood work, metal work, glass work, sale of second hand clothes, food vendors and soft furnishings (Amonoo-Parker, 2020). The establishment of sufficient formal sector enough for the people is very hard to many nations (Amonoo-Parker, 2020). This has forced many states, non-governmental organizations (NGOs) and individuals to back their interest on the *Jua Kali* sectors as the only option to achieve the national economic growth (ILO, 2020). According to King (2019), the *Jua Kali* sector is currently termed as the main source of employment to the rapid population growth especially in the urban suburb. This has also been promoted by many societies via comprehensive involvement in the NGOs undertakings (Polese *et al.*, 2017). Just like

other sectors, the *Jua Kali* sector requires protection for its stability and security (World Bank, 2019). Such protections include; business registrations, incentives from the governments, reduction in licenses fees and provision of affordable health cover e.g., NHIF (World Bank, 2019). In Latin America, the *Jua Kali* sector explanations for slightly more ½ of the total population which is around 140 million workers (ILO, 2020). According to ILO (2020), the developed countries have 85% of their population in the *Jua Kali* sector is occupied with informal employment greater than 85%. Unlike in other regions of the world such as Sub-Saharan countries, informal employment in developed countries is high both among employees and own-account workers, in normal circumstances; informal employment is highest among own-account workers in developed countries (ILO, 2020). Moreover, economically, the enterprises boast the economic status of countries worldwide, for instance, in the USA; it accounts roughly about twenty nine percent of the totals Gross Domestic Product (Bureau international du travail, 2018). Despite the fact that this research focused on *Jua Kali* sector in southern American countries, it overshadowed other issues affecting the *Jua Kali* sector such as challenges and coping strategies that are key in improved performance of any enterprise. Nevertheless, in most Sub-Saharan Africa countries the *Jua Kali* sector creates job opportunities massively compared to the well-structured form of employment (King, 2019). In the Sub-Saharan African countries, the sector accounts for about forty one percent total Gross Domestic Product (King, 2019). The *Jua Kali* sector avails products to people at affordable prices and also provides Gross Value Added which fluctuates from fourteen percent to fifty percent depending on a country (ILO, 2020). According to Beegle & World Bank, (2016), the Kenyan *Jua Kali* sector consists of approximately

eighty six percent of the total jobs. The sector employs untrained persons and trainees from technical and tertiary colleges (Filmer *et al.*, 2014). The *Jua Kali* sector the GDP comprises of about eighteen percent and ninety percent are enterprises operating in Kenya (Government of Kenya, 2016). However, besides the massive contributions of the *Jua Kali* sector to the economy of Kenya, its growth to high-tech enterprise is hindered by several factors. For instance, the growth of new established *Jua Kali* enterprises is in limbo since majority of them end their operations within a few months of their set-up (Kinyanjui, 2019). Moreover, from the five newly established *Jua Kali* businesses, approximately three unsuccessfully do not continue with operations a few months after their operation (Kinyanjui, 2019). In addition, Kenya as a third world country has a high unemployment rate standing at approximately 12.7% (Jāhāna & UNDP, 2016). The solution of the increased unemployment rate in Kenya resides in establishment of more *Jua Kali* enterprises and initiating proper strategies that supports their survival to high-tech enterprises. However, regardless of many dynamics distressing proper functioning of the *Jua Kali* sector, it still contributes towards the country's economic growth, thus should be promoted (Beegle & World Bank, 2016). In Nairobi County, many studies (Nyangala, 2017; Karanja, 2015; Lydia, 2018; Daniel, 2017) have been done concerning factors affecting *Jua Kali* sector in the County and its environs. The studies utilized different objectives, they were generalized, they focused on challenges and they used different models to test the hypothesis. Kamukunji *Jua Kali* enterprise is traced back in 1963 currently it has artisans over 5,000 (ILO, 2017). The enterprise cluster is specialized in making commodities such as popcorn makers, trolleys, boxes, *sufurias*, Wheelbarrows, *jikos*, chips warmers, hoe, slashes and chips cutters (Kinyanjui, 2019). The sector is of

great importance to the Kenyan nation at large because it provide employment to over 5000 citizens, it also provide agricultural products and home-made products at a relative cheaper price and it contributes towards the country's GDP (Kinyanjui, 2019). The government of Kenya has set some policies whose goal is to initiate the growth of *Jua Kali* sector. However, Imposing new laws and regulations to the informal sector businesses affects their competitiveness (Packard, *et al.*, 2012). Such laws and regulations may impose high cost and inflexibilities to the businesses which in return frustrates their performances (Packard, *et al.*, 2012).

1.2 Statement of the Problem

The *Jua Kali* sector is significant to in the Kenyan economy; its significance is reflected in the income generation, production and employment creation. The sector has realized a gradual growth for decades. For instance, the wage employment recorded an increase of 2.5 % with an average earning at current price growing by 8.1 % in 2019 compared to 2018 which recorded wage employment of 2.4% and average earning of 7.6% (KNBS, 2020). The sector has registered a steady employment growth over the last five years. In 2019, the citizens working in the informal sector went up by 5.4% which was approximately 15.1 million citizens compared to 14.2 million in 2018. However, this was a lower growth compared to the 5.5% registered in 2018 (KNBS, 2020). Regardless of increment in the number of informal sector in Kenya, its growth is not well defined. Most of the informal businesses don't operate within few months of establishment. Nonetheless, the informal sector is counted as a strategic ladder in the country's industrial sector as anticipated in the Vision 2030 and attainment SDGs. Hence it was vital for this

research to be carried out carry out. The study was significant to the government especially in coming up with policies employment creation and reduction of poverty. Holistically, understanding the Kamukunji *Jua Kali* enterprise cluster including its characteristics, challenges and socio-economic factors was crucial. The adoption of needed procedures and action planning to trigger the best performance at Kamukunji enterprise cluster and Kenya at large. This study was vital because it gives reasons why the growth of the *Jua Kali* sector at Kamukunji enterprise clusters in stagnation. There was also need to know why established new *Jua Kali* enterprises fail to pick up a few months after establishment.

1.3 Objectives of the Study

1.3.1 Main Objective

The main objective of the study was to establish the factors influencing the performance of *Jua Kali* artisans' businesses at Kamukunji enterprise cluster in Nairobi County.

1.3.2 Specific Objectives

To achieve the main objective, the following specific objectives were designed to guide the study:

- i. To determine the economic factors influencing the performance of *Jua Kali* metallic artisans' businesses at Kamukunji enterprise cluster.
- ii. To identify the social factors influencing the performance of *Jua Kali* metallic artisans' businesses at Kamukunji enterprise cluster.

- iii. To establish how the institutional and individual based strategies influence the performance of *Jua Kali* metallic artisans businesses.

1.4 Research Questions

The researcher in the study sought to answer the following questions:

- i. What are the economic factors influencing the performance of *Jua Kali* metallic businesses at Kamukunji enterprise cluster?
- ii. What are the social factors influencing the performance of *Jua Kali* metallic businesses at Kamukunji enterprise cluster?
- iii. How do the institutional and individual based strategies influence the performance of *Jua Kali* metallic artisans businesses?

1.5 Research Hypotheses

The following hypotheses were used in the research to determine the relationships among various variables:

H₀₁ There is no relationship between the economic factors and the performance of *Jua Kali* metallic enterprises at Kamukunji enterprise cluster.

H₀₂ There is no relationship between the social factors and the performance of *Jua Kali* metallic enterprises at Kamukunji enterprise cluster.

1.6 Justification and Significance of the Study

The manufacturing sector in Kenya is a key contributor towards economic development. The sectors contribution ranges from national output, exports and job creation. This research focused on metal manufacturing sector specifically the metallic *Jua Kali*

artisans. This is because of the massive economic contributions of the sector towards GDP, creation of jobs, skills enhancement and linkages among firms. Research has been carried out concerning *Jua Kali* enterprises and the operations in Kenya (John & Mathew, 2015; Mote, 2015; Joseph, 2014). However, the said research displayed conceptual gap contextual gap. These researches dwelt in different areas using different respondents thus existence of contextual gap; also the objectives utilized in these researches were different from what the research study used hence conceptual gap. Kamukunji *Jua Kali* cluster in Nairobi, Kenya was preferred due to its size and being busiest cluster of tinsmiths in Kenya (McComick 2016). According to McComick (2016) Kamukunji enterprise cluster provides good and services for many low-income earners in Nairobi County and its environs. Even though, the clear route on supply and delivery of goods from the cluster is not well-known. However, Kamukunji *Jua Kali* cluster encounters major challenges and thus the research outcomes can be applicable to other smaller clusters in the country. Kamukunji *Jua Kali* cluster creates employment opportunity; hence the need to support its growth might change the rate of unemployment in the country. The study outcome is expected to be of significance in policy- making in the country from national to county levels. It is also expected to assist the artisans and other individuals who have interest in the informal sector. The research findings are also expected to have an addition on already available literature.

1.7 Scope and Limitation of the Study

The study was limited to one eighty one artisans situated at Kamukuji *Jua Kali* cluster. It was also restricted to three officials from the selected institutions. The study was also narrowed to economic factor and social issues that affect artisans. It also focused on the

strategies used in coping with the challenges encountered. Geographically the study was restricted to Kamukunji *Jua Kali* enterprise cluster in Kenya. The study area was selected due to many people engaging in metal work (KNBS, 2017). In respect to limitation, the respondents were distrustful in giving information on business finances. To overcome this challenge, the researcher gave a word of trust; the research was made for the purposes of academic. Also, the researcher reviled the privacy and confidential of the study findings to the respondents. In cases where the owners of the enterprises that were not available, the researcher went an extra mile to get their contacts from their neighbors and organized with them on how the questionnaire were to be filled.

CHAPTER TWO

LITERATURE REVIEW, THEORETICAL AND CONCEPTUAL FRAMEWORK

2.0 Introduction

This chapter presents a discussion on literature review, theoretical framework and conceptual framework that supports the research study.

2.1 *Jua Kali* Sector

According to Kings, (2019) the artisans are known for their capability to produce everything on demand. The term “*Jua Kali* sector” was popularized in 1972 (ILO, 1972). According to ILO, (1972), *Jua Kali* sector was characterized by severe conditions that affect small entrepreneurs and their employees. The unstructured sector emerged since the formal sector was unable to absorb new entrants (Kings, 2019). The *Jua Kali* sector is characterized by workers who have limited financial assistance, inadequate knowledge about the market and unfavorable conditions (Kings, 2019). Initially, the *Jua Kali* sector was applied mainly on artisans only but today, it includes; some professions like auto mechanics and market vendors. The major activities carried out in the *Jua Kali* sector include; wood work, metal work, glass work, sale of second hand clothes, food vendors and soft furnishings (Amonoo-Parker, 2020). The availability of raw materials in developed nations boasts the level of production in the *Jua Kali* sector (Duus, *et al.*, 2018). This has enabled the *Jua Kali* sector in developed countries to boast the amount of production in the global labour market (Duus, *et. al*, 2018). It has enabled the developed countries to a competitive advantage worldwide by producing of quality, quantity and variety fabricated metallic goods. Despite the fact that there is skill diversity among the

Jua Kali artisans in Sub-Saharan African countries, their accesses to raw materials has been a hindrance to the growth of the industry (Duus, *et.,al* ,2018). Most developing countries like Kenya depend on imported raw materials which are expensive and scrap metals. This has limited the Sub- Saharan countries from being competitive in international markets. In Uganda artisan's accesses to new technological skills is limited in terms of finances, practical skills and access to new markets (Kwagala, 2016). Ugandan *Jua Kali* Sector has low technological skills due to low level of educational system and training. Mostly, artisans acquire skills through on job experience in the sector (Kwagala, 2016). This has made the *Jua Kali* sector in developing nations less competitive in the global market (Kwagala, 2016). According to Wanjohi (2009), Kenya *Jua Kali* sector has proven to be the key factor in boosting economic growth and employment. The sector obtain it's raw materials such as aluminum, cadmium, copper, lead, zinc, tin and iron mainly from imports and scrap metals obtained locally (McKay et al, 2015). However, due to shortage in finances, the informal sector artisans finds it hard to purchase empty barrels from industrial area thus where forced to purchase them from Tanzania at a cheaper price (McKay et al, 2015). *Jua Kali* sector is on the forefront in creating innovative growth, exchanging from outdated sector into a high tech one, creating employment (Kings, 2019). Nevertheless, *Jua Kali* enterprises are vital for sustaining the growth of most economies. According to (Amonoo-Parker, 2020), failure in the operation of the sector causes a great negative effect to the economies especially in developing nations with limited capital. Accessibility to capital, accessibility to information and accessibility to stable market are key factors affecting the developing

countries (Kings, 2019). The operations of *Jua Kali* businesses are active and dominant in many nations. According to Akinyoade, (2017).

2.2 Economic Factors Influencing the Performances of Informal Sectors

Economic factors are fundamental aspects that affect the performances of any business. Scholars interested in the excellence performance of the business enterprises ought to put into consideration various economic factors in their aim to determine the current and expected future of the business. In this study, economic factors included; accessibility to financial institutions and credit facilities, accessibility to proper infrastructure, government laws and policies and market competition.

2.2.1 Accessibility to Financial Institutions and Credit Facilities

Inadequacy of finances and limited access to credit facilities by the informal entrepreneurs has been identified as a key challenge that affects the enterprises performances (Nichter & Goldmark, 2009). Previous studies (Dinh, Mavridis, & Nguyen, 2010; Williams & Nadin, 2012), have confirmed that lack of adequate financing is a real challenge hindering the growth of many informal enterprises. In Latin America, accessibility to loans from banks by the informal enterprises is one of the main constraints restricting the informal sector from growth and export capacity. The challenge of accessibility to finances is pronounced more in developing countries compared to the developed nations (Dinh, Mavridis, & Nguyen, 2010). This is because the traditional financial organizations such as banks are reluctant to advance loans to the informal entrepreneurs because the institutions are constrained by the legal and regulatory environment (Ukuku, 2012). The financial institutions prefer to give loans to well-

established enterprises. For instance the introduction of micro-finance banks in many Sub-Saharan African countries for the purposes of benefiting the *Jua Kali* sector, contrarily many of the micro- finance charge high interests per month rendering them unfavorable to the informal sectors' businesses (Ukuku, 2012). Financial challenges inhibit the growth of the informal sector, hence causing its stagnation and collapsing of some of the businesses (Dinh, Mavridis, & Nguyen, 2010). In Kenya, the informal sector encounters serious financial challenges (Mwania, 2011). According to Mwania, (2011), the lending conditions such as collaterals requirements make it even harder for the informal entrepreneurs to access the financial assistance. Consequently, some of the entrepreneurs resort to other alternatives such as borrowing from friends and relatives (Mote, 2015). However, the financial assistance that the informal enterprises get is inadequate to cater for their growth (Mote, 2015). Due to limited finances, the artisans opt to use cheap and outdated technologies which are inappropriate sometimes. (Mwau, 2009). Many studies (Timothy, 2013; Mary, 2014; Muli, 2019) have been done in Kenya on the financial challenges affecting the informal sector. The research findings showed that finding capital to start an enterprise is the hardest thing and sustaining the business growth is another challenge. Although these studies focused of financial availability to the informal sector, the findings from Timothy (2013) focused mostly on lending conditions such as collateral requirements by banks ignoring the fact that we have other lending intuitions such as SACCOs. Mary (2014), focused on the governmental financial support to the informal sector ignoring other financial institutions such as SACCOS, mobile apps and shylocks. Muli (2019), focused mostly on SACCOs as a lending factor in the informal sector. Therefore, this research sought to utilize the effects of banks,

SACCOs, shylocks and mobile apps as lending institutions to the Kamukunji *Jua Kali* enterprise.

2.2.2 Infrastructure Accessibility

Good road networks initiate excellent business performances either big or small; it is related to smooth flow items (Nteere, 2012). In appropriate structures related to poor business performances which constrain the profitability of business enterprises. It is linked to poor planning for both urban setups and rural setups. In appropriate infrastructure are related to; double land allocations, existence of blackouts, impassable roads and crowded areas (Nteere, 2012). Good performance of the business is related to good and availability of infrastructural services which reduces the production cost (Fay, et al., (2017). According to Fay, *et al.*, (2017), Developed nations have the best infrastructure network compared to other developing countries. In Sub-Saharan African countries, despite the infrastructure being the key element in the growth and excellent performances of the businesses, its construction is not yet to date (Straub, 2011). This has lowered many businesses performances and their output being static (Straub, 2011). In Kenya scenario; the government has invested billions in developing of good road networks to join major cities and towns. Although the road connections within business enterprise cluster are not well defined; this has resultant poor results among many businesses (Republic of Kenya 2013). Further, in presences of physical infrastructure is a leading reason why there are low investments and little outputs from Kenyans Informal sectors. Hence it was crucial to carry out this research on influence of infrastructure on metallic artisans businesses.

2.2.3 Government Laws and Policies

The purposes of the government to formulate policies are to protect the *Jua Kali* sectors. The policies can promote the stability and security of the *Jua Kali* sector (World Bank, 2019). According to World Bank, (2019) economically, well established legal framework that promotes economic growth. According to Collins (2011), in Northern America, the authorities have come up with ease ways for the informal sector to establish their businesses. Such ways includes; reduction of the lengthy and complicated procedures in registration of the businesses, reduction of the licenses fees and giving incentives to the informal sector. Similarly, the Chinese government discovered that promoting *Jua Kali* sector, is the only way to curb the problem of unemployment among its growing population. The shanghai municipal government has created favorable policies and a regulatory environment for promoting the informal economy (Swider, 2015). The Indian National Commission on Labour was established in 1999 and its role was to develop national laws to protect their informal sector and also try to implement the laws (Finkin, & Mundlak, 2015). In Sub-Saharan African, a successful *Jua Kali* policy ought to be formulated to incorporate the artisans in city-planning processes (Banik, 2011). According to Kenya & International Monetary Fund, (2010) the Kenyan government regulation in the informal sector includes; tax laws, law on wages and law on licensing. The government initiated this to promote the growth of the *Jua Kali* sector. However, Imposing new laws and regulations to the informal sector businesses affects their competitiveness worldwide (Packard, *et al.*, 2012). Such laws and regulations may impose high cost and inflexibilities to the businesses which in return frustrates their

performances (Packard, *et al.*, 2012). According to Packard, *et al.*, (2012) in Latin American countries and Caribbean, high income tax has resulted to a decrease in the informality in the region. This is because high taxes make it hard for provision of public goods. In Sub-Saharan African countries like South Africa, the informal sector has been affected largely by the new laws. For instance, the lengthy procedure in acquiring legal requirements for the business operations interferences with the business sector by racism (Fourie & Skinner, 2018). This has seen many informal sectors in South Africa collapse or stagnates after a period of time (Fourie & Skinner, 2018). In Kenya, the development and growth of informal sector are inhibited by lengthy and cumbersome laws and regulations which keep on changing yearly (Kirkpatrick & Parker, 2007). The entrepreneurs are also affected by excessive discretionary powers from officials which also create a loophole to corruption (Kirkpatrick & Parker, 2007). According to Watihaka, & Majeni, (2012) today, many informal sector entrepreneurs in Kenya no longer bother to follow the regulations and procedures making them encounter problems with authorities such as harassments eviction and conviction thus forcing some of them to close down their businesses. However, the Kenyan national government new SMEs external policies ought to gear the sector in creating more jobs opportunities. Such policies include; exempted from taxation during the first five years of operations, subsidies, polices to discouraging importation of manufactured goods and encouragement of entrepreneurial activities (Mpapale, 2014). Studies have been done in Kenya regarding the challenges of new laws and regulations on the *Jua Kali* sector (Ouma, 2010; Ouma *et., al.* 2012; Mpapale, 2014). However, the research concentrated on government laws

and policies in specific area, this study focused on effect of government laws and policies metallic *Jua Kali* artisans.

2.2.4 Market Competition

The informal enterprises are usually small, operate with obsolete technology and are part of households (Faghih, 2019). According to Faghih, (2019), thus, anti-competitive practices which includes; over and underpricing, abuse of supremacy and collusive pricing by formal firms can eliminate the informal enterprises from the market. For example, small and median enterprises in developed nations also encounter competition from well- established sectors that monopolizes the global market. Also, and most importantly informal competition affects negatively competitive process (Faghih, 2019). The informal sector in Cameroon comes upon market rivalry especially from big enterprises and dealing with similar produce (Achua, 2014). Similarly, informal sector in West Bengal and Jharkhand has shown that the sector is affected by discounts offered by big firms on items sold (Faghih, 2019). In African countries, the informal sectors face market competition both locally and nationally especially areas with same customers (Fourie & Skinner, 2018). *Jua Kali* sector also encounters rivalry amongst themselves; more so those found in the bottom part of the business structure (Mendi & Costamagna, 2015). It is hard to study competition among informal businesses in Kenya because of their unique characteristics (Ali & Najman 2015). Although studies have been done in Kenya concerning informal sector market competition, Njunguna, (2014), focused the study on market flow among the informal workers in Nairobi County at large. These

studies focused on Informal sector in Nairobi at large. The study concentrated on competition among metallic *Jua Kali* artisans.

2.2.4.1 Markets for the Informal Sectors Products

Developed countries like USA, Japan and China have a wide market for their metallic products. Economic partnership between Sub-Saharan Africa countries and developed countries has been increasing over years (Ahn, 2020). According to Ahn, (2020) the trade has accelerated from \$9 B in 2005 to \$166 B in 2019, this has made some of the developed nations like China to strengthen the trade between it and African countries thus increasing the market for their products. Moreover, the informal sector in Sub-Saharan African countries has small economic structures that make them hard to compete in the market with the highly established firms. It even makes it harder for them to access the global markets in which the higher and larger income groups dwells (Ahn, 2020). The small economic structure also makes it difficult for the sector to procure inputs as they are expected. This has made the informal sectors in African countries to suffer from diseconomies of scale. External forces play a key role in limiting the market performance (Ahn, 2020). According to Ahn, (2020), Iron, steel, metallic products and plastics are among major products on Kenyan market from other countries like, India, China, South Africa, Saudi Arabia, United States of America and Japan. Kenya has been ranked position eighty one importation country globally. Kenya imports iron and steel mostly from China, these two minerals are crucial in the *Jua Kali* sector; in 2020 Kenya imported US\$163.39 (Abegunrin & Manyeruke, 2020). It's importation in 2019 was \$18B compared to \$10.8B in 2009 registering a percentage increase of 10.8%. China has

continued cementing its position as the largest source of Kenyan imports followed by India and United States of America (USA) (Abegunrin & Manyeruke, 2020). Therefore, the study concentrated on market competition both local and international competition among the *Jua Kali* artisans.

2.3 Social Factors Influencing the Performances of Informal Sectors

Business performance is greatly affected by social factors, which have great importance in the performances of any business enterprises (Baráth, Nazir, & Andre, 2017). The society where the businesses operate is not static; it changes depending on the changes in social factors (Baráth, Nazir, & Andre, 2017).

2.3.1 Accessibility to Managerial Skills and Experience

Many entrepreneurs in the informal sector have inadequacy of managerial knowledge and skills (Ndemo & Weiss 2016). According to OECD, (2014a) Latin American countries informal sector are characterized by low-skilled artisans. For instance, educational systems in Latin American countries do not provide business courses with the human resources art that is required for the growth of the business. Employers throughout the Latin American countries find it difficulty in finding qualified applied for the position needed (OECD, 2014b). 42% reports were reported in 2015 and 34% reports in 2010 on the unavailability of the required human resource personal (OECD, 2014c). In African countries like Nigeria, the informal sectors' managers or owners have inadequacy of managerial skills. Most of them opt to establish own management approach which is not proven to be efficient (Akinyoade, 2017). However, this approach is even risky because businesses can't be sustained using a trial and error technique (Akinyoade, 2017).

Furthermore, most of the persons operating the informal sectors' businesses lack educational background (Akinyoade, 2017). According to Akinyoade, (2017), lack of educational background disadvantages the entrepreneurs in carrying out the managerial roles of their businesses. Professional skill, entrepreneurship and management are important factors influencing many aspects of business enterprise (Ndemo & Weiss, 2016). According to Polese *et al*, (2017) skilled workers are significant in productive and sustainability of the *Jua Kali* sector. In Kenya, the entrepreneurs in the *Jua Kali* sector are not equipped well on the issues of education and management skills (Wanjohi & Mugure, 2017). Previous studies (Caroline, 2013; Samuel, 2014; Gatukui, *et al*, 2014) shows that informal entrepreneurs who have been trained are likely to perform in the Kenyan informal sector than those who haven't. Although informal businesses tend to perform in the Kenyan market, entrepreneurs ought to be trained on how to become managers (Caroline, 2013). Good managerial skills call for proper planning and organization of a business enterprise (Samuel, 2014). In Kenya, research has been done on effect of accessibility to managerial skills and experience; Patrick, (2015) did a study on effect of managerial skills to the operations of *Jua Kali* artisans in Kenya. Although the above studies dwelt on managerial skills and experience, they were researched in different areas. Therefore, this research needed to find out on the effects of education and management experience in the *Jua Kali* sector businesses.

2.3.2 Digital Social Networks

Digital Social Networks revolution has changed the lives of societies with extraordinary speed and scale in delivering massive market opening (Donner, 2018). New technologies

are important in contributions towards the Sustainable Development Goals (SDGs) (Donner, 2018). In Latin America for instance, the informal entrepreneurs use new social platforms such as online marketing platforms which have opened markets openings for both local and international trade (IMF, 2019a). Moreover, expanding accessibility of markets to consumers through global online marketing (IMF, 2019a). In California, the *Jua Kali* sector uses social platforms in advertising their products; this has improved the sales of many products (Humphreys, 2015). Likewise in African countries like Tanzania, Kenya and Rwanda, the informal sector has adapted to digital platforms for advertising purposes (Meagher, 2015). In Kenya, social networks have increased marketability of products produced by the entrepreneurs (Meagher, 2015). Researches has been carried out on the importance of social platforms to business sector Kinyanjui, 2010 ; Khamis, (2018) Although these studies concentrated on applications of social media on business performance, this study needed to know the effects of social digital platforms on Kamukunji metallic artisans.

2.3.3 Working Conditions

The *Jua Kali* sector is characterized by poor working conditions; it is associated with entrepreneurs operating mostly in non –waged environment which is disorganized and workers carry out their activities in precarious conditions and labour arrangements (Aloyce, 2020). The *Jua Kali* sector is unregulated and unregistered and it fall outside regulation and control more so those related to OSH and social protection (Levy, 2017). The entrepreneurs in the sector are not protected exposing them to vulnerable situation (Aloyce, 2020). Most of the *Jua Kali* workers encounter work-related jeopardies which

include precarious shelters, inadequacy drinking clean water, compromised hygiene and basic health services (Levy, 2017). They are also vulnerable to diseases due to poor living conditions and gender inequality is prevalent (Levy, 2017). Other factors includes; poorly designed work space, poor ventilations, excessive noise, poor lighting and poor fire management (Rom & Markowitz, 2016). These factors have affected the performance and productivity of many business enterprises (Rom & Markowitz, 2016). It is associated with For instance, in Central America, during the 1980s structural adjustment programs that were adopted during the economic crisis that was meant for opening-up economies to external markets caused a lot of changes in the labor market which included de-regulation of the high-tech sector; the changes led to poor working conditions especially in the Jua Kali sector (Leon, 2013). The Informal sector Central America also was affected by numerous poor working conditions such as; poor health and lack of social security (Leon, 2013). According to Rom & Markowitz, (2016), informal sector in Latin America is noted to have significant health inequalities emerging from working and environmental conditions. In Sub-Saharan African countries like Rwanda, the poor working conditions are even worse (Bridge & O'Neill, 2017). The artisans are exposed to poorly designed work space, inadequacy of lighting and poor ventilations (Bridge & O'Neill, 2017). Similarly, the Kenyan informal sector also encounters poor working conditions like noise, poor work space and inadequate lighting (Levy, 2018). Aloyce, (2020) did a research on assessing the efficacy in regulations of recreational noise pollution in emerging urban centers in Kenya. These study (Aloyce, 2020) dwelt mostly on noise pollution yet we have other conditions that affect the working of metallic artisans. This study therefore, sought to consider factors like poorly designed work space, poor

ventilations, excessive noise, poor lighting, poor fire and any other factors that will be mentioned by the respondents at the study area.

2.4 Institutional and Individual Based Strategies

Previous literature (Aliyev, 2017; Meyer & Edward, 2020 and Franklin & Cohn, 2014) denoted that the informal sector uses various strategies to adapt to various challenges they encounter while in operation. The informal entrepreneurs have come up with different surviving tactics subject to the nature of the challenges encountered (Meyer & Edward, 2020). This is because the strategies are not accessible to all the entrepreneurs in equal measure (Franklin & Cohn, 2014). There are several strategies the informal sector and other sectors use. The strategies are discussed: -

2.4.1 Institutional Based Strategies

The institutional based strategies refers to strategies facilitated by the organizations or government to a group of individuals or companies (Franklin & Cohn, 2014). The institutional based are categorized as follows physical planning strategy, social protection strategy and regulatory regime incentives and formalizations.

2.4.1.1 Physical Urban Planning Strategy

According to Franklin & Cohn (2014), the provision of well-designed work space for the informal sector operators can improve their performances. Good working space is the best way to ensure efficient operation of the informal sector and can address some pertinent challenges that hinder the productivity and even threatening their existence (Franklin & Cohn, 2014). According to Meyer & Edward, (2020) good planning would

not only allow efficiency in the operations amongst the informal entrepreneurs but also it reduces the conflicts that arise between the authorities and the informal workers. Planning also reduces environmental problems and transforms the quality of the informal sector operations (Franklin & Cohn, 2014). Urban planning should incorporate the informal sector entrepreneurs and should focus mostly on accessibility to good basic needs provision and improving infrastructure to allow mobility of goods and services (Ray, *et al.*,2015). According to Ray, *et al.*, (2015) the informal sector in India have received basic infrastructure services from the government to improve the entrepreneurs working environment. The vendors on the streets have been given working site by the municipalities and wastes are collected by contractors from the local municipality. In South Africa and Zimbabwe, the informal entrepreneurs received infrastructure and technical support from the government (Moyo & Gumbo, 2021). In Kenya several studies have been done regarding physical planning for instance; The study by Murgor, (2016) the study findings showed that weak policy frameworks for managing the informal sector in urban areas, inefficiency of development institutions in the urban areas to direct or guide the progress and manage their externalities, inefficiency of the *Jua Kali* sector in terms of service delivery and sustainable wealth creation. According to Kinyanjui, (2019), study findings showed that poor urban planning has restricted isolated and marginalized the informal traders rather than accommodating them. The urban planners have been affected by the dominant economic models which limits their performance. Thus, this study needed to know how physical urban planning affects the artisans at Kamukunji enterprise cluster.

2.4.1.2 Social Protection Strategy

Social protection is a state led approach for supporting the informal sector from the challenges they encounter (Aliyev, 2017). The government of East Asia ought to pursue social protections such as insurance and social assistance like cash transfer to protect the informal sector from the challenges they encounter (Taylor *et al.*, 2018). In Sub-Saharan Africa countries like Uganda social protection is a necessity in protecting the informal sector from eventualities (Franklin & Cohn, 2014). According to Franklin & Cohn, (2014), in Zambia, the informal sector needs specific mechanisms such as social insurance and social assistances to cope with the challenges they encounter. In Kenya, social protection has been executed in different forms over decades and various programmes have been created in response to the predicaments (Kinyanjui, 2014). According to Hope, (2017) the formation of the NSSF in 1965 and the National Social Security Fund (NHIF) in 1966 was part of the Kenyan government's efforts to cushion workers against future vulnerabilities. The Kenyan government and other non-governmental organizations have come up with various social protections with an aim to protect the informal entrepreneurs which includes; social assistance, social security and health insurance (Hope, 2017). The study wanted to find out the assistances of social protection strategies to the Kamukunji enterprise cluster's artisans.

2.4.1.3 Regulatory Regime Incentives and Formalizations

Regulatory Regime is major factor that determines the growth of the informal sector (Ann *et al.*, 2016). According to ILO (2015), both the public region and the value of services from public, good power, administrative privileges and other recognized features

that influences the performance of the informal sector. The government initiatives to curb the challenges encountered by the informal sector through provision of incentives, encouraging players to register and submitting to the recognized governing rule is vital (Anuradha *et al.*, 2015). For example, developing countries, like South Africa and Zambia have tried a good combination of good governance and regulations to improve the performances of the informal sector (ILO, 2015). Therefore the research needed to find out the influence of regulatory regime incentives, formalizations on the operations of the artisans at Kamukunji enterprise cluster.

2.4.2 Individual Based Strategies

2.4.2.1 SWOT Analysis

Developing a competitive advantage is considered to be critical in the good performance of business ventures (Stokes *et al.*, 2010). A successful competitive advantage should enable sustainability of the business for a long period of time (Stokes *et al.*, 2010). According to Jager & Sathe, (2014) in Latin American most SMEs use SWOT analysis to look into internal and external forces on their business. This has enabled the businesses to be able to establish appropriate ways such as improving the quality of the products and being keen with online advertisement to increase the sale scope (Jager & Sathe, 2014). The Sub Saharan Africa countries (SSA) such as Uganda, Zimbabwe, Mozambique and Tanzania, encounters various challenges in there day to day operations (Adeleye & Esposito, 2018). Many informal sectors have tried out some strategies such as lowering the prices of the commodities, offering the delivering services but still the challenges are present (Adeleye & Esposito, 2018). In Kenya, the informal sector is at large affected by

internal and external competition (Evers & Seale, 2015). According to Evers & Seale, (2015) most informal sector have tried various strategies such as lowering the prices of the commodities, offering free delivery of goods, road side display of their commodities and even giving credit facilities to some of their clients but still they encounter the challenges in the urge to improve the business performances. Although the cited literature dwelt on SWOT analysis adopted by the informal entrepreneurs in the urge to improve their business performance, the research needed to find out how the artisans uses the SWOT analysis to cope with the challenges they encounter in their business operations with an aim to improve the business performance.

2.4.2.2 Income Diversification

Previous studies (Polese *et al.*, 2017; Kashyap & Tomar, 2016; Mwanja, 2011 & Mel *et al.*, 2012) noted that financial accessibility is the main challenge that hinders the growth of the *Jua Kali* businesses. The entrepreneurs in the informal sector have tried various strategies to curb the financial problems their enterprises encounters. According to Peng, (2012), the informal businesses in Latin America manage cash flow efficiently by using the forecast to project the sales and expenditure to cope with financial problems. The informal sector in Latin America also uses the merry- go- round amongst them to obtain some cash for their business (Peng, 2012). The financial systems in Latin America are structured to enable the SMEs businesses to obtain loans at a reasonable rate (Peng & Meyer 2016). In Sub Saharan Africa countries (SSA), like Uganda, Tanzania, Zimbabwe and Nigeria inaccessibility to finances is a critical challenge that the informal sector businesses encounter (Adams *et al.*, 2013). The entrepreneurs in the sector have

developed strategies like merry-go- rounds facilitations, joining Saving and Credit Co-operative Societies (SACCOs) so that they can obtain loans to advance their businesses operations but still the sector remains in stagnation mode (Adams *et al.*, 2013). According to Olorunтова & Muchie, (2019), the Kenyan informal sector also encounters financial challenges which are controlled using trial techniques like merry – go- rounds, planning for the available finances and borrowing from friends and relatives to boost the businesses. Although the cited literature dwelt on the income diversification as coping strategies to the challenges encountered by the informal entrepreneurs. Therefore, the study aimed to determine how the Kamukunji metallic *Jua Kali* artisans use the income diversification to cope with various challenges they encounter in their daily operations.

2.5 Empirical Review on Factors Affecting the Performances of SMEs in Kenya.

The table below shows a summary of the reviewed literature related to the study, it points out the research gap in the studies.

Table 2.1: Empirical review of related studies

Author	Topic
Nyang'ori, (2010)	Factors Influencing the Performance of Micro and Small Enterprises: A case of Kisumu City Bus Park -Kenya
Bramuel , (2013)	Factors Influencing the Growth and Development of Small and Medium Enterprises in Kenya, a case of Huruma Division, Nairobi County.
Lydia , (2018)	Factors Influencing the Performance of Micro and Small Enterprises in Kenya A Case of Kiambu County, Kenya
Obel, (2018)	Factors influencing the Performance of Small and Medium Enterprises: A Case of Auto Garage Businesses in Langata Constituency of Nairobi County, Kenya.
Henry, (2015)	Factors Influencing the Growth of Small Businesses: A case Study of Nakuru Town.
Francis (2015)	Factors Influencing the Growth of Small and Microenterprises in Nairobi Central Business District
Ephraim, (2015)	Factors Affecting growth of SMEs: A Case of <i>Jua Kali</i> Motor Garages in Shauri Moyo, Nairobi, City County
Anne , (2014)	Factors Affecting the Performance of Small and Medium Enterprises in the <i>Jua Kali</i> Sector in Nakuru Town, Kenya.
Nyangala, (2017)	Factors Affecting Growth of Small and Medium Enterprises Owned by the youth in Nairobi.
Mbugua (2014)	Factors Affecting the Performance of Small and Micro Enterprises in Limuru Town Market of Kiambu County, Kenya

Source: Source: Researcher conceptualization

2.5.1 Research Gap

Research has been done pertaining the factors affecting the performances of SMEs, Rose (2018); Karanja (2015); Abel, (2018); Anne, (2015); Nyangala, (2017) and Lydia (2018).

These researches had been done in specific areas using specific objectives. The research

was also generalized to all the SMEs businesses yet every business has its own challenges it encounters. Similar studies have focused on the challenges faced by SMEs traders but this study will concentrate on what affects their performance. The impact of economic factors, social factors and coping strategies were researched on. The study concentrated mainly on an assessment of factors influencing the performance of metallic artisans at Kamukunji Enterprise Cluster in Nairobi County, Kenya. The scarcity of reliable data on *Jua Kali* metallic artisans continues to be one of the key obstacles in understanding the small businesses in Kenya. This study ought to help in building on the locally scarce available data.

2.6 Theoretical Framework

Theoretical framework is a structure that explains why the research problem exists (Balboni, 2018). The theory was formulated with an aim to explain and understand the subject under study (Balboni, 2018). The study therefore, adopted the Resource Based View Theory (RBV) as the main theory and the balance scorecard theory (BSC).

2.6.1 The Resource Based View Theory (RBV)

The RBV theory of the firm was formulated by Wernerfelt, (1984). The theory came into limelight in 1980s and 1990s (Barnely & Clark, 2007). The theory emphasizes on availability of resources within the firm and the capability of a firm to utilize the available resources (Barnely & Clark, 2007). It is the main theory that the research is based on.

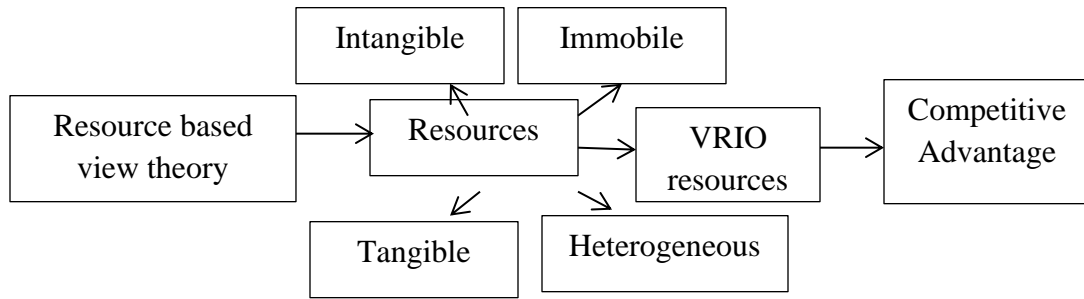


Figure 2.1: The Methodology of the resource based view theory

Source: Adopted from Wernerfelt, (1984).

According to Cabrera, (2017) the problem encountered by organizations today is no longer just the need to obtain competitive advantages but the need to obtain sustainable competitive advantages. Alongside the dynamic capabilities of innovation, the resource-based view has acquired great relevance and diffusion in recent decades in the field of strategic management (Cabrera, 2017). RBV theory seeks to achieve superior and sustainable performance for organizations (Cabrera, 2017). According to Zegarra (2016), Latin American studies concerning business performance using the RBV, the study compares the performance of RBV theory and results are limited. Sustainable competitive advantage of any firm is found in internal and external processes of the organization (Zegarra, 2016). According to Augier, & Teece, (2018), the theory views the resources available within the firm and aims at developing a competitive advantage over its competitors. The theory analyses and interprets internal resources and the capabilities of the entrepreneurs to formulate strategies that aim at achieving a sustainable competitive advantage (Augier, & Teece, 2018). According to Augier, & Teece, (2018), resources are

ideas that allow an enterprise to perform their duties effectively. Inside assets, strategies chosen by the firm and the choices made by the firm determines the firm's global competing environment (Barnely & Clark, 2007). Although this RBV theory is widely used, it has encountered some criticism from various scholars for instance according to Dagnino, (2017), criticized the theory that there is no specific context within which the theory is applied. Based on resource based view theory, through specialization, Kamukunji metallic *Jua Kali* artisans can decide to specialize on products they are best in and perfect on them this will give them a competitive advantage over their rivals and competitors in the market. This can be achieved through recruiting the best personnel in the area or training the artisans to specialize in an area. The artisans also ought to identify the tangible and intangible resources so that they can be able to utilize them accordingly.

2.6.2 The Balanced Scorecard Theory (BSC)

The Balanced Scorecard theory was formulated by Robert Kaplan and David Norton in 1990s (Kaplan & Norton, 1997). The theory involves both financial and non-financial measures in one operating system. According to Grants & Osanloo, (2014), the main objectives and measure of the balance scorecard theory are derived from the institutional strategy and vision. The theory provides managers with a wide-ranging framework that translates the institutional strategies and vision into consistent institutional performances (Grants & Osanloo, 2014). According to Kaplan & Norton (1997), the balanced scorecard theory allows both monitoring of the present organization performance and also captures information on the future performance. Moreover, the theory has grown to become a core management tool, in that it assists the managers to manage the company's performance

strategies (Grants & Osanloo, 2014). However, some intellectuals have raised doubts to the theory especially its conception and applicability (Kraaijenbrink, 2015). Although the theory is used by big companies, it may also be applicable to small enterprises. This is because the aspects in the theory such as finances, customers, internal processes and learning and development are crucial for the growth of the enterprises. This study sought to find out the applicability of the balance scorecard theory on the performance of Kamukunji metallic *Jua Kali* artisans. The Figure 2.2 shows the methodology of the balance scorecard.

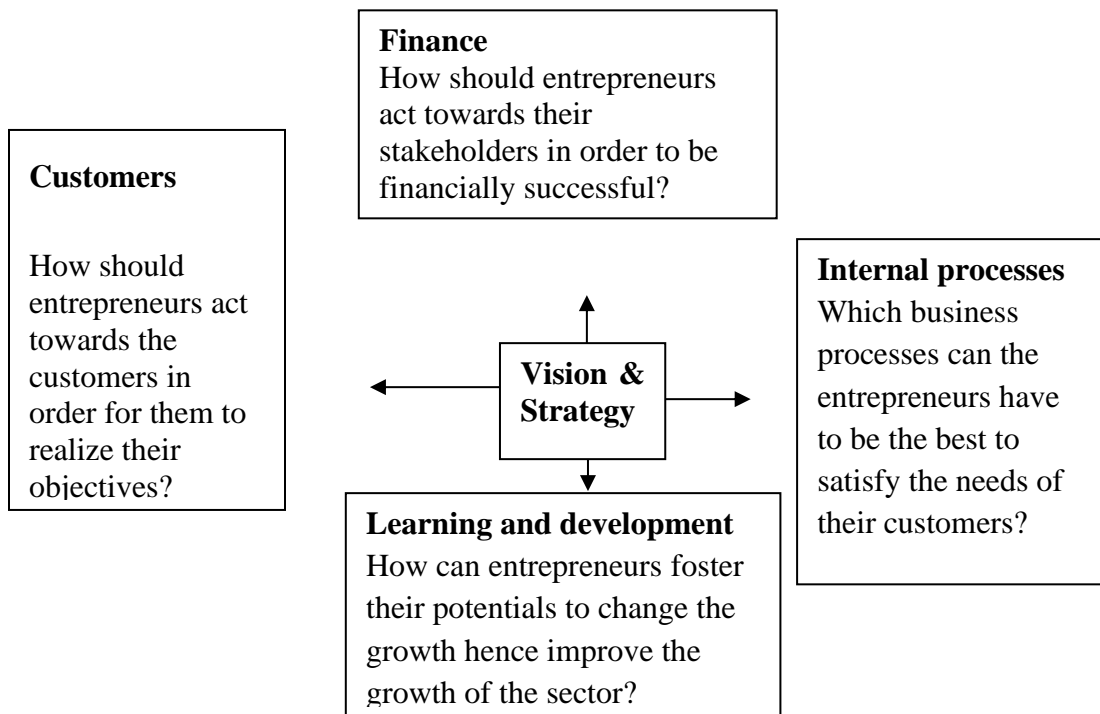


Figure 2.2: The Methodology of the Balance Scorecard

Source: Adopted from Kaplan and Norton, 1997

2.6.3 Combination of Resource Based View Theory and Balanced Scorecard Theory

In conclusion, the research sought to combine the two theories. Resource based view theory focuses more on the availability of the resources to the business enterprises and utility to enhance its competitive advantage. The balance scorecard theory focuses on the availability of consumers, learning processes and development, financial accessibility and internal process. A combination of the two theories will be able to accelerate the performance of an enterprise. For instance, resources need financial availability to be utilized. The resource also needs learning and development for them to be utilized. The customers are supposed to consume the finished products and lastly the internal processes are needed to facilitate the whole cycle.

2.7 Conceptual Framework

The study considered both independent variables and dependent variables. The independent variables were purposively controlled in order to “see” the effects they have on the study subject. The independent variables in the study included; the economic factors and the social factors affecting the performance of *Jua Kali* metallic artisan’s businesses. The dependent variable depends on the independent for example changes like (increase in finances to the metallic artisans) that occur in the independent variable may affects the dependent variable either positively or negatively. The aim of the study was to create an environment that will trigger the good performance of the *Jua Kali* metallic sector at Kamukunji enterprise cluster. Therefore, the dependent variable of the study is excellence performance of Kamukunji enterprise cluster. The relationship of the variables was displayed in figure 2.3.

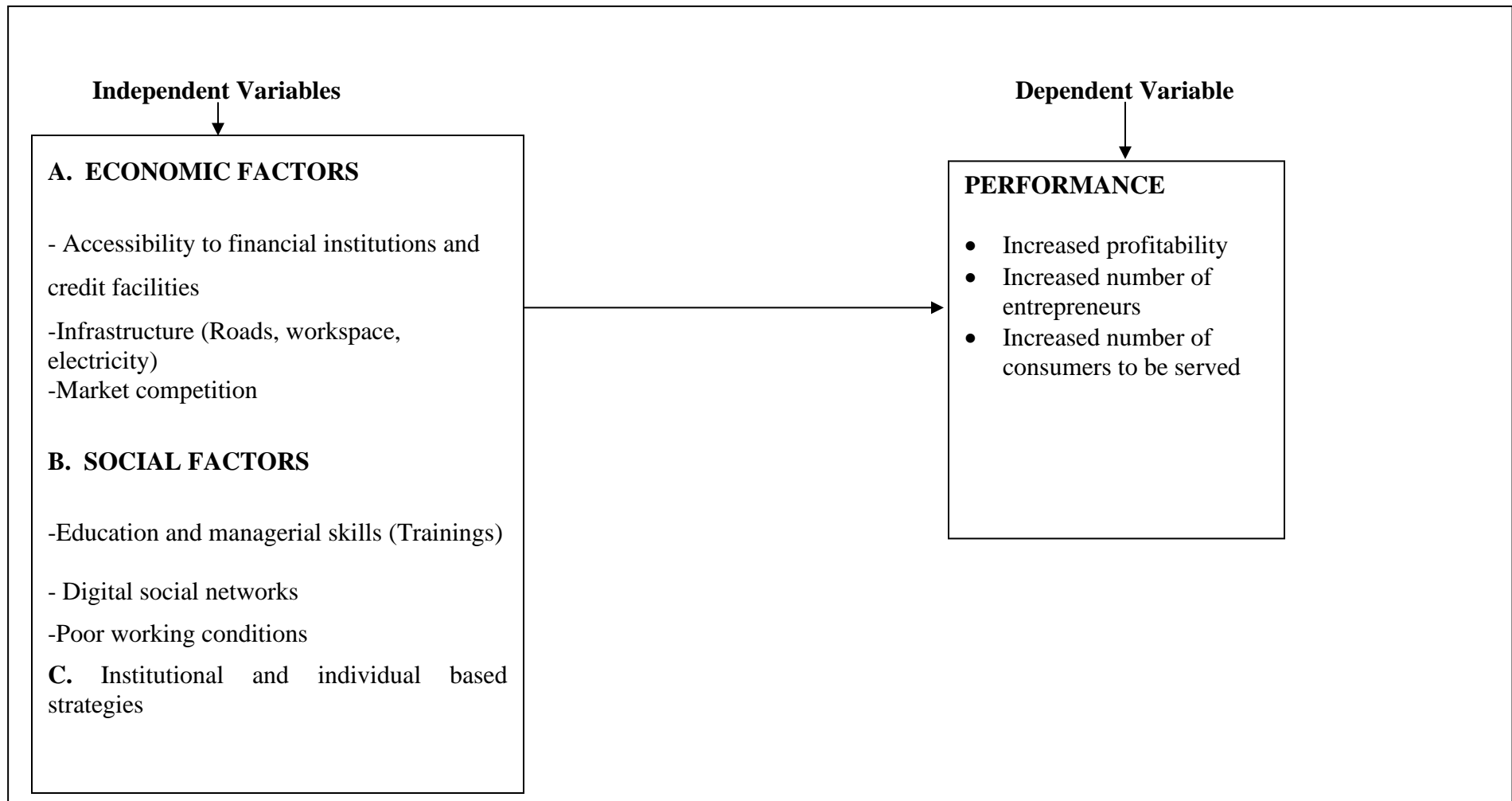


Figure 2.3: Conceptual Framework

Source: Adopted and modified from: Ravitch, & Riggan (2016)

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter presents the research methodology that was used in conducting the study to achieve the set study objectives. The chapter was designed into the following; study design, population size, collection of data tools and analysis of data methods.

3.1 Research Design

Descriptive research design was utilized in this study. This is because it describes the distributions of one or more variables in the field (Creswell, 2015). It enables one to know the characteristics of various features in the study (Creswell, 2015). The design was used to enable the study to know the behavior of the respondents and measure the data trends, conduct comparisons and validate existing conditions (Miksza & Elpus, 2018). The design is used for analysis especially for qualitative data. It has likelihood for observing the occurrence as they occur in space and one has a chance to manipulate the data both in statistical and non-statistical form (Miksza & Elpus, 2018).

3.2 The Study Area

This research was conducted at Kamukunji *Jua Kali* enterprise cluster shades, located in Pumwani Division, Kamukunji Ward and Nairobi East Sub-County in Nairobi City County. Kamukunji *Jua Kali* enterprise cluster lies within latitude 37° East and Longitude 1° South with an elevation 1684Km above sea level (Figure 3.0). Kamukunji constituency has a population of 211,991 people as per 2009 census (Government of

Kenya, 2010). According to Kamukunji *Jua Kali* Association, (2019), the cluster has an estimated population of over 5,000 artisans out of them 4,500 are registered. Kamukunji enterprise cluster is traced back in 1963; the cluster's founding entrepreneurs were highly skilled workers moving from the formal sector (ILO, 2012). After sometime, the cluster was also occupied with unskilled laborers giving rise to Kamukunji's apprenticeship system and its reputation as an informal training center. Due to the inadequacy of machinery, skills have narrowed down over years (ILO, 2012 ε is the constant value where the line of regression passes the axis. Statistically, ε is the dependent variables mean where the self-determining variables in the model are at zero). The artisans in the cluster uses scrap metals and other imported metals such as aluminum, steel and iron to produce commodity such as boxes, *sufurias*, Wheelbarrows, *jikos*, chips warmers, chips cutters, popcorn makers, and trolleys see figure 3.0.

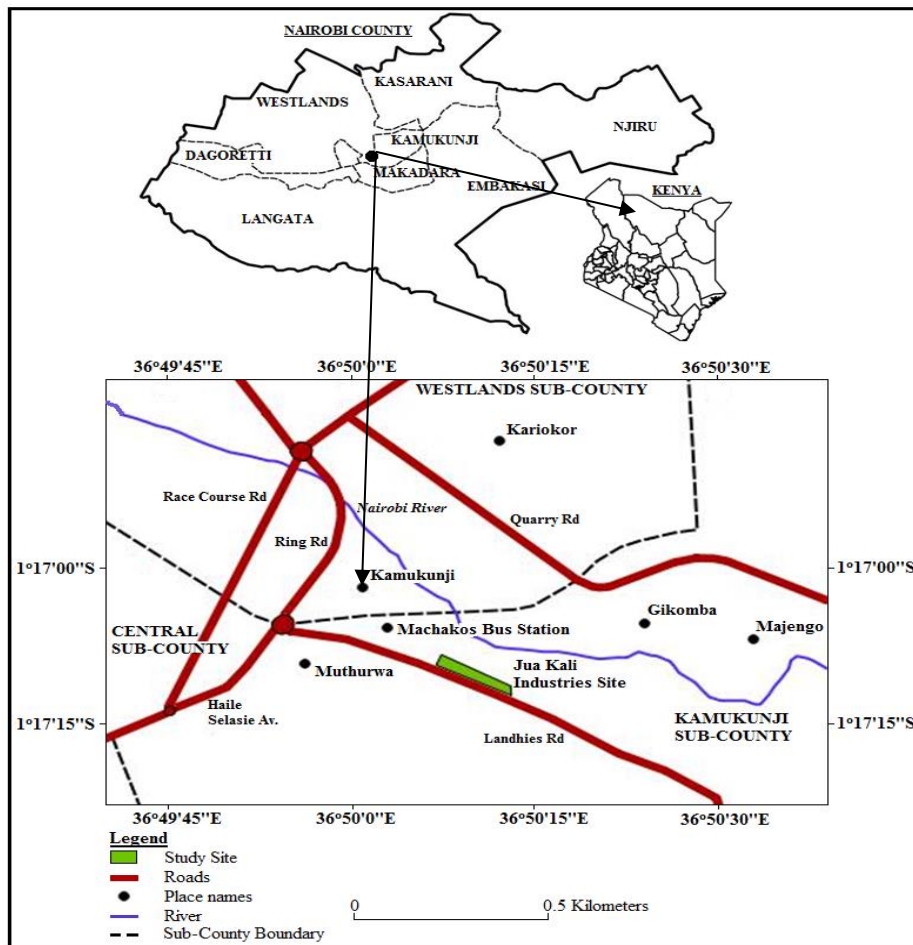


Figure 3.0: Location of the Study Site in Kamukunji Sub-County, Nairobi County

Source: Nairobi County Integrated Development Plan, (2018)

3.3 Target Population

All the 4,500 enumerated metallic artisans at Kamukunji *Jua Kali* cluster were considered as the target population (Kamukunji *Jua Kali* Association, 2019).

3.4 Sampling Techniques and Sample Size

Sampling techniques are methods used in picking the elements in the sampled population and sample size is a subset of the target population the research study was carried on (Ryan, 2013).

3.4.1 Sampling Techniques

The metal artificers were selected using simple random sampling method. The study obtained 181 metallic artisans from a target population of 4,500 registered artisans. Numbers were assigned from 1 to 4,500. An excel computer program was utilized to generate the random numbers where 181 artisans were selected, random number table. This method enables every member in the sampled population to an equivalent gamble to be nominated. The study also utilized purposive sampling method in selecting one official from four institutions. Purposive sampling was used because the sample size is known.

3.4.2 Sample Size

A subset of the target population that is of interest to the researcher in the study is known as the sample size (Ryan, 2013). It is the population in which the study is based on. Therefore, the study utilized statistical formula by Ryan, (2013) was adopted in determining the sample size. The formula that was used is; $n = \frac{NZP(1-P)}{e^2(N-1)+ZP(1-P)}$

Assuming that, N= Target population which is 4,500,

Z= Z score on z table which is 1.96,

e= error margin which is 0.01

P = Standard deviation for normal distribution at a level confidence of 95% which is 0.05

$$n = \frac{4500 \times 1.96 \times 0.05 (1-0.05)}{0.01^2 \times 4500 - 1 + 1.96 (1-0.05)} = \frac{418.95}{2.3119} = 181 \text{ metallic artisans}$$

Purposive sampling was adopted in picking one officials from the selected institutions making the total respondents to be 184.

3.5 Data Collection Instruments

The questionnaires and interview schedule were used in collecting primary facts. Administering questions to the respondents was the best option since they collect data that one can't see such as moods and sprits, achievements , insolences and individual's experiences (Monette *et al.*, 2012). Questionnaires and interview schedules are advantageous because they are less costly and use less time in field data collection (Monette *et al.*, 2012).

3.5.1 Questionnaire

The questionnaires were formulated according to the study objectives. The study utilized Simple random sampling in administering questionnaires to 181 randomly selected *Jua Kali* metallic artisans in the study area.

3.5.2 Interview Schedule

In the study, a list of formulated questions was structured to act as a guide for interviewers. The questions were structured depending on the study objectives. The interviews were administered on the officials from the selected institutions (Appendix 2,3 & 4).

3.5.3 Global Positioning System (GPS)

Global Positioning System was utilized in the field to pinpoint the spatial distribution of the respondent's enterprises. The garget was used to pick the entrepreneurs enterprises location and data points were loaded in Qgis software to produce a map showing the *Jua Kali* industries.. It was also helpful because it showed the locality of the *Jua Kali* industries. The GPS points picked where loaded in Qgis software and a map was created. See figure 3.1.

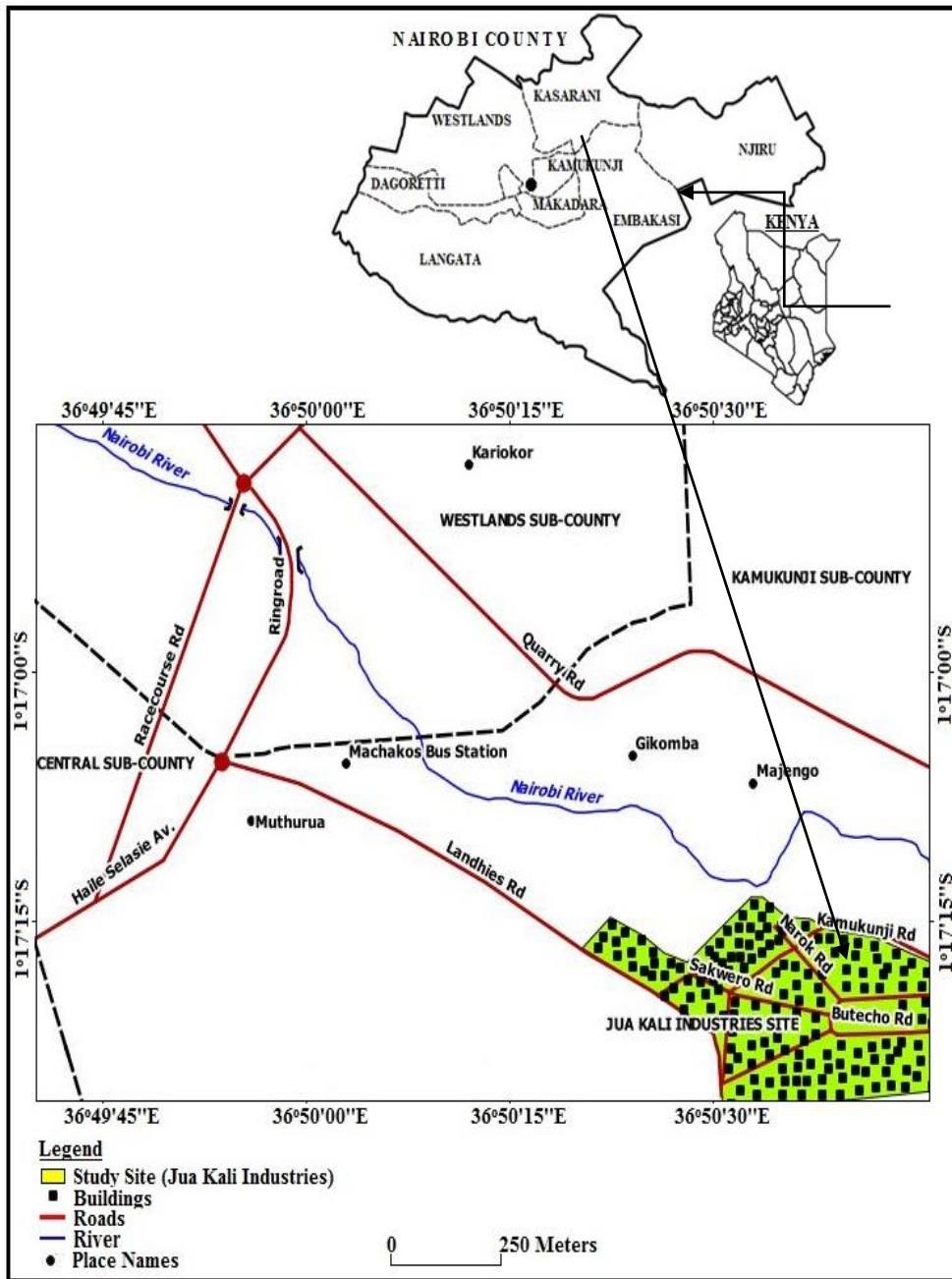


Figure 3.1: Global Positioning System (GPS) Pickings Map

Source: Adopted and modified Nairobi County Integrated Development Plan, (2018)

3.6 Pilot Test Study

The research instruments are used by researchers as a measurement device in collecting data from the field (Kumar, 2017). The viability of the research instruments was determined by testing the validity and reliability of the instrument (Kumar, 2017). Thus the pre- study was done to pretest the reliability and validity of the questions in the questionnaire before carrying out actual research. The researcher administered 18 questionnaires to the randomly selected metallic artisans in Mathare slum at Bondeni cluster. Out of 18 questionnaires, 16 were completed and returned, this represented 88.89 %. According to Remenyi, (2012) 88.89 % of the completed questionnaires are effective for the study. The pilot study took two weeks. The pilot data was used by the researcher to test the validity and reliability of the questionnaires as shown;

3.6.1 Validity of the Questionnaires

The researcher determined both face validity and content validity of the questionnaires. Face validity was determined by issuing the formulated questions to the supervisors who are the experts in the study area to verify them subjectively. Validity index was used to determine the content validity of the questionnaires (Cole, 2016). Both content validity for individual items (I-CVI) and S-CVI were achieved. The experts who are the lecturers analyzed the formulated questions and rated their viability basing on the study objectives. The study utilized a measuring scale in determining the content validity of the questionnaire as shown in table 3.1.

Table 3.1 Pilot Study Likert Scale

1	2	3	4
Not related	Somehow related	Related	Very related
0	0	9	7

Source: Experts questionnaires rating, (2019)

The likert scale results showed that the questions in the questionnaires were relevant to the study research hence they were able to measure the variables in the study. The questions in the questionnaire where structured according to the study objectives. The result was eighty two percent. According to Burton, (2012) seventy percent to ninety nine percent of questionnaires validity is effective for them to determine the results from the study. Although the content rationality index was eighty two percent it makes the questionnaire viable in carrying out of the research, a few questions were amended.

3.6.2 Reliability of the Questionnaires

This was achieved using the method of dividing the questionnaires into two. The piloted results from the field were divided into two, cleaned coded and entered into SPSS version 21 separately. The researcher checked the correlation between the questions loading into the same factor. A Cronbach's alpha formula was used in SPSS version 21.0 in estimating internal consistency of the questions. The results $\alpha \geq 0.767$ was attained thus determined the the questionnaires were efficient to carry out the research. $\alpha \geq 0.805$ is termed as questionnaires of great inner stability (Wilson, 2013).

3.7 Data Analysis and Interpretation

Questionnaires from the field were checked for their completion, because they are raw data, the questionnaires were coded, classified, and tabulated before keyed in the SPSS 2.1 software for analysis. The non-statistical data was re-investigative, grouped and coded according to the study objectives. Data in statistics form was entered into SPSS version 21.0 for the purposes of analysis. After the statistical data analysis, tables, pie-charts and bar-graphs were used for the purposes of data presentations. The summary is shown in the table 3.2;

Table 3.2 Operational of Variables

Objectives	Variables	Data collection methods	Data analysis	Methods of data presentation
To determine the economic factors influencing the performance of <i>Jua Kali</i> metallic artisans' businesses at Kamukunji enterprise cluster	Accessibility to financial institutions and credit facilities	Questionnaires Interview schedules	Mean, Mode, Standard deviation, Percentages and frequencies, Multiple regression analysis and ANOVA	Pie chart
	Access to infrastructure			Tables
	Market competition			Tables Pie chart Tables
To identify the social factors influencing the performance of <i>Jua Kali</i> metallic artisans businesses	Education and managerial skills	Questionnaires Interview schedules	Mean, Mode, Standard deviation, Percentages and frequencies, Multiple regression analysis and ANOVA	Bar graphs Tables
	Digital social networks			Pie charts Tables
	Working conditions			Bar graph Tables
To establish how the institutional and individual based strategies influence the performance of <i>Jua Kali</i> metallic artisans businesses.	Institutional based strategies Individual based strategies	Questionnaires Interview schedules	Mean, Mode, Standard deviation, Percentages and frequencies, Multiple regression analysis and ANOVA	Bar graph Tables

Source: Source: Researcher conceptualization, (2019)

3.8 Hypothesis Testing

The study used Regression Analysis in testing hypothesis. It adopted logical method in which the data in table 3.3 were utilized.

Table 3.3 Measurements of Variables

Objectives	Variables	Measurement Variables
To determine the economic factors influencing the performance of <i>Jua Kali</i> metallic artisans' businesses at Kamukunji enterprise cluster	Financial and credit facilities	1-if entrepreneur had either a bank account, accessed loan from the bank or received government assistance 0-if had not accessed any of the three Rate of business performance 1-if rated good 0-if rated otherwise
	Access to infrastructure	1-if rated good 0-if rated otherwise
	Market competition	Encountered market competition 1-if present 0-if otherwise
To identify the social factors influencing the performance of <i>Jua Kali</i> metallic artisans businesses	Education and managerial skills	Education had the following questions 1-if had gone through primary, secondary, college and university education 0-if had not gone through primary, secondary, college and university education Managerial skills had questions 1-if had undertaken book keeping and business training 0-if had not undertaken book keeping and business training
	Digital social network	1-if uses digital platform 0-if does not use digital platform
	Working conditions	1-if working condition is good 0-if working condition is poor

Source: Source: Researcher conceptualization, (2019)

3.9 Ethical Considerations

The study considered ethics in all the procedures, The introduction letter was obtained from graduate school, Kenyatta University, the researcher sought to obtain a research permit from NACOSTI. It also obtained an acknowledgment letter from educational offices. Data Privacy and concealment of the participants guaranteed. The researcher obtained informed consent from the individual respondents before collecting data. The researcher also observed professional integrity while in the field. Ethical consideration was also considered in citing the sources.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION

4.0 Introduction

In this chapter, the results from the field were analyzed, discussed, interpreted and presented. The data was collected and analyzed using descriptive statistics. Regression Analysis was used to test the hypothesis.

4.1 Demographic Information

Demographic information pertaining metallic artisans at Kamukunji cluster was crucial to the study because it enables one to understand the study area and the sampled individuals (Pontis, 2019). According to Pontis, (2019) demographic information also enables one to create a good relationship with the study subjects. In obtaining demographic information the following were used; gender, age, marital status and years in the business.

4.1.1 Gender

Gender of the respondent at Kamukunji enterprise cluster was established. This is because it is presumed that the path of business success is influenced by gender (Al-Qirim *et al.*, 2015). According to, Al-Qirim *et al.*, (2015), 54% of female in SMEs are more successful when it comes to networking with the right people compared to male in New Zealand. The female entrepreneurs also are advantageous in accessing various banking institutions compared to the male entrepreneurs (Al-Qirim *et al.*, 2015). In Kamukunji enterprise cluster, the male were 67.8 % and only 32.2 % were female. Although the previous literature (ILO, 2012) indicates that informal sector is dominated

by female gender, the results findings from Kamukunji enterprise cluster showed otherwise.

4.1.2 The Age of Respondents

The age of the respondents in the sampled population was established in the study. The results from the study findings were as follows;

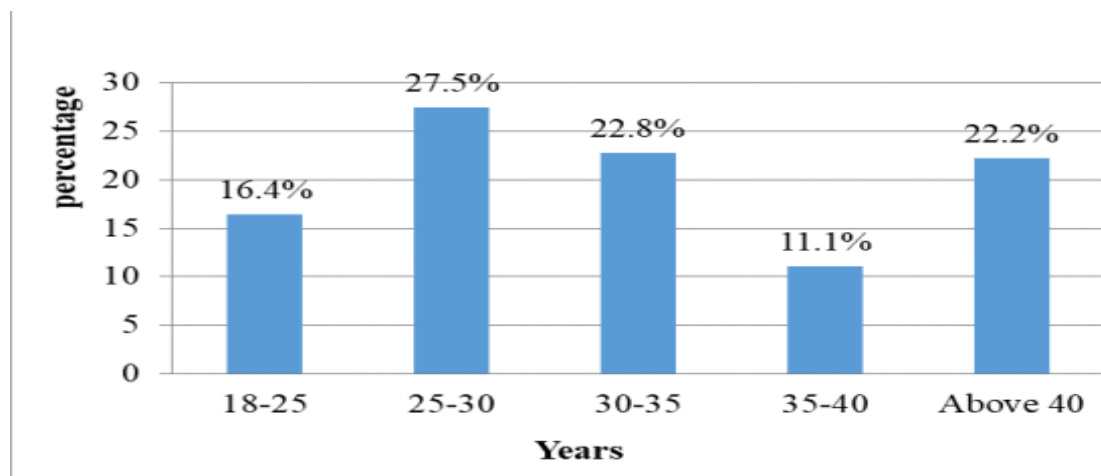


Figure 4.1: Age of Kamukunji Enterprise Cluster Respondents

Source: Author findings, (2019)

The findings from the study showed that most of the workers at Kamukunji enterprise cluster are aged between 25-30 years. The outcomes shows that 27.5% were 25-30 years of age, 22.8% were 30-35 years, 22.2% were above 40 years, 16.4% were 18-25 years and 11.1% were 35-40 years. From the study findings, it shows that most Kamukunji metallic artisans are above 18 years of age. Age is an important aspect in entrepreneurship because many people believe that middle-aged the productive of people is high thus their firms may tend to do well (Jones *et al.*, 2017). For instance, a research

using US census data indicates that majority (70%) of the successful businesses area of middle-aged entrepreneurs (Jones *et al.*, 2017). This correlates the study findings that shows majority (27.5%) of the *Jua Kali* metallic business owners are aged between 25-35 years.

4.1.3 Marital Status of the Respondents

Marital status of the artisans at Kamukunji enterprise cluster was determined. From the study findings, 18.7 % were single, 76.02 % were married 2.9% were divorced and 2.3 % of the respondent were separated as demonstrated in figure 4.2.

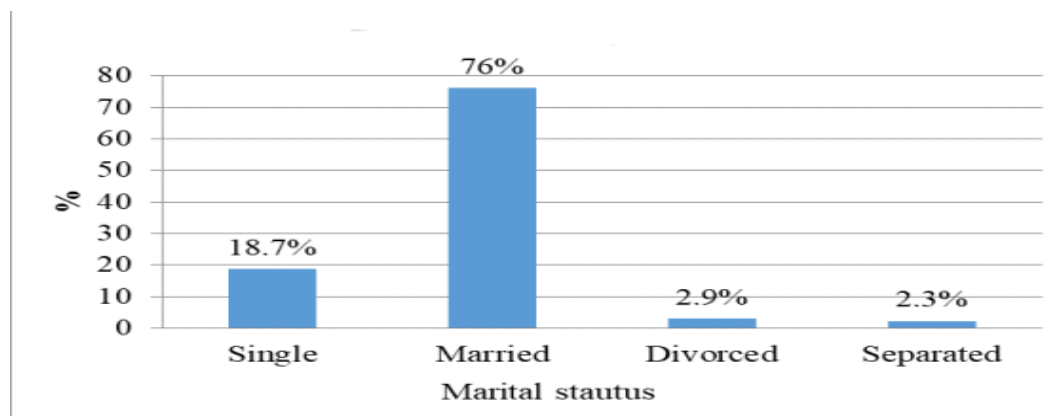


Figure 4.2: Marital Status of the Respondents

Source: Author findings, (2019)

From the study findings, majority (76.0 %) of the artisans at Kamukunji enterprise cluster are family people who have responsibilities to take care of their families using the income they generate from *Jua Kali* metallic activities (Source: Author findings, (2019). These findings comprehends the study by Alimba, (2015) who indicated that (96%) were married, further the findings also showed that only 0.6% were single. According to,

Alimba, (2015) marital status plays a crucial role in business performance, married people seems to focus more on good performance of their business enterprise because of the responsibility they carry.

4.1.4 Years in *Jua Kali* Business

The number of years the respondents have been in *Jua Kali* business was determined and results were as follows;

Table 4.1: Years in *Jua Kali* Business

Years	Frequency (f)	Percentages (%)
Less than one year	7	4.1
One-Two years	24	14.0
Two-Three years	47	28.1
Three-Five years	20	12.3
Over Five years	71	41.5
Total	169	100.0

Source: Author findings, (2019)

From the findings, 41.5 % of the businesses were in operational for five years and above. The study findings correlates the research study, most (42%) of the entrepreneurs have been in the business for more than 10 years (Mbugua, 2014). This is an indication that have enough experience, and have encountered challenges which are known to the thus enabling the data collection procedures extensive.

4.1.5 Source of Encouragement to start the Business

In the study, there was need get information about the persons who encouraged the *Jua Kali* artisans to start the business. The research findings were as in figure 4.3;

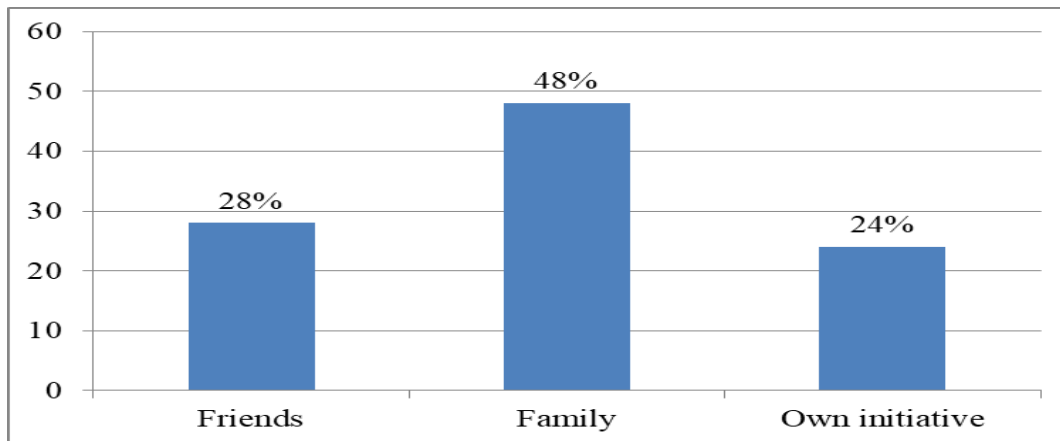


Figure 4.3: Persons who Encouraged *Jua Kali* artisans to start the Business

Source: Author findings, (2019)

The study findings shows that 24% started businesses as their own initiative, 28% were encouraged by friends, while majority of the respondents, 48% were encouraged by family members who operate similar businesses and initially they were working for them. The research finding agrees with ILO, (2012) that *Jua Kali* sector is characterized by family labour who earns casual wages.

4.2 Economic Factors Affecting the Performances of Kamukunji *Jua Kali* Metallic Businesses

For the study to achieve the 1st objective the following variables were tested; accessibility to financial institutions and credit facilities, accessibility to infrastructure and market competition. The results were discussed below.

4.2.1 Access to startup capital

In previous studies, (John & Mathew, 2015: Mote, 2015: Christine, 2017 & Nyangala, 2017) there has been a constant pattern that accessibility to financial institutions among other variables is a major challenge that the most informal enterprises encounter. In Kamukunji enterprise cluster, the study finding shows that sixty percent of the respondents use own savings as the first capital to start their enterprises. It was followed by money borrowed from friends and relatives at twenty eight percent, Savings and Co-operative Societies (SACCOs) at six percent, Bank loans at five percent and two percent from the government agencies. Kamukunji *Jua Kali* artisans also noted that financial constraints are a cute to their businesses because of their small sizes. This shows that big firms access financial institutions easily compared to small firms. The findings from the field showed that besides majority of the respondents 95% having bank account, majority 90% of the artisans do not take bank loans due to the following reasons; the collateral that is required by financial firms is very high and operational business position is small to be able to get loans of the financial institutions. This field study agrees with literature review that shows that 67.2 % of the respondents in Nakuru *Jua Kali* enterprise reported that SMEs lacked collateral requirements to obtain the bank loans (John & Mathew, 2015).

The research findings also has a similarity with a research by Mote, (2015) that shows that 68% of the respondents in Nyeri town indicated that lack of securities and collaterals hinders them from accessing the financial institutions. The research findings also showed that financial inaccessibility is a major setback that prohibits the expansion and stability of the metallic *Jua Kali* sector at Kamukunji enterprise cluster. Majority of the artisans (80%) indicated that their businesses are in stagnation due to limited accesses to financial institutions. Majority (95 %) of the artisans also indicated that financial assistance from government agencies is negligible. This was backed up by the three officials who were interviewed from Kamumkunji Informal Association, “Financial inaccessibility is the major obstacles in the growth of the informal sector at large.” Nairobi County ministry of trade, “The *Jua Kali* sector has had a slow growth because of lack of finances.” Kenya National Federation of *Jua Kali* Association, “Requirements for loans especially from banks and other financial institution has been a major setback for the growth of SMEs.” The results are shown in the pie chart 4.4;

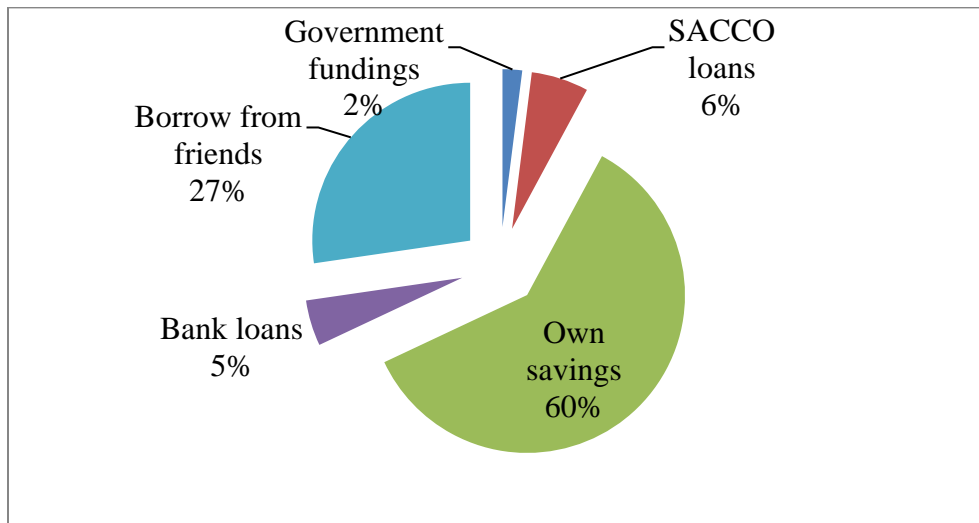


Figure 4.4: Accessibility to startup capital by Kamukunji Enterprise Cluster Artisans

Source: Author findings, (2019)

4.2.2 Access to Business Infrastructure

The study tested effects of infrastructural accessibility on informal enterprises cluster was tested in the field. Infrastructural services are important economic factor that accelerates the economic growth. The infrastructural inaccessibility would reduce the cost of production thus improving the performance of Kamukunji enterprise cluster. The study findings show that fifty percent of the artisans encounter problems with inaccessibility to infrastructural services. Twelve percent noted inefficient of work space, twelve percent noted problems with electricity and eighteen percent note impassable roads. The research findings are similar to the literature review by Mwau, (2009). However, Kamukunji enterprise cluster enjoys the street lights from the Central Business District (CBD) although the criminal activities are also high in the area due to increased unemployment

rate (Samuel, 2016). Ministry of trade official said that improved infrastructural services will trigger excellent performance of the informal sector at Kamukunji cluster. It will also improve marketability of products both locally and internationally. See the study findings in Table 4.2

Table 4.2: Access to business Infrastructure

Infrastructure	Frequency (f)	Percentage (%)
Enough work space	30	17.44
Accessibility to internet facilities	20	11.88
Accessibility to electricity	21	12.30
Nature of roads	30	17.44
Any other factor	70	40.94
Total	171	100.00

Source: Author findings, (2019)

In the study findings, seventeen percent of the artisans indicated encounter problems proper work space and impassible roads. Forty one percent of the artisans noted different factors such as limited storage space and problems associated with communication. Furthermore, the informal artisans are limited to storage facilities and this limits their level of production. The artisans agreed that the storage facilities available are few compared to their production. These research findings were also emphasized by the official from the Kamukunji Informal Association, “The *Jua Kali* metallic artisan’s encounters infrastructural challenge especially communication barrier and storage problems. This has forced the artisans to extend their products on roads due to inadequate space.”

4.2.3 Market Competition

The study researched on effects of market competition to the *Jua Kali* businesses. The results are shown in figure 4.5;

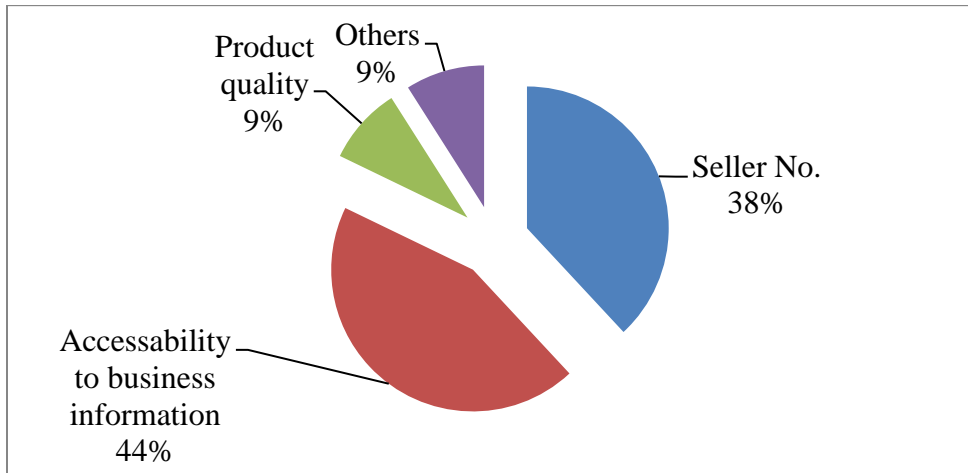


Figure 4.5: Market Competition

Source: Author findings, (2019)

From the study findings on market competition, forty four percent of the respondents showed that lack of business information hinders them to compete the market. These research findings are similar to that by Kinyua, (2016) business information is crucial in the growth of any business either big or small, in any case the government wants to accelerate the growth of the informal sector, and it needs to be keen with the development of business information. Eight percent respondents said the produce similar goods, they also indicated that their products are of high quality and nine percent noted other factors like business location and barrier encountered when starting a business.

Further, the research investigated market competition effects on the informal businesses. The respondents denoted that they are affected by both local and international competition as denoted in the figure 4.6;

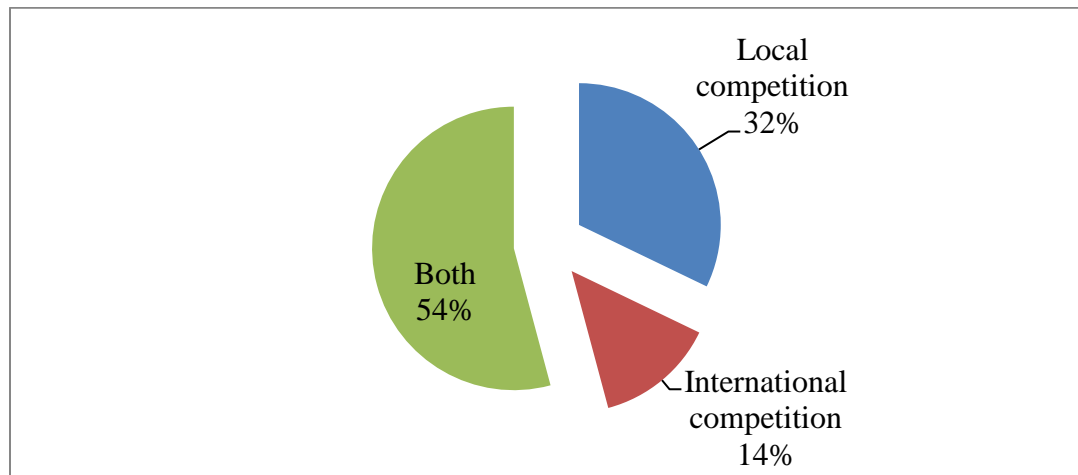


Figure 4.6: Types of Market Competition Encountered by Kamukunji Jua Kali Artisans

Source: Author findings, (2019)

In the research findings, 79.53% said, the products produced are market competitive. The artisans also noted that inadequacy of sophisticated machinery and inadequacy of finances are the main factors that affect the businesses. The study results contradict the study findings; looking at Kenyans market competition especially in the informal sector is not easy due to its uniqueness (Ali & Najman 2015). This is reflected in the findings (79.53%) of the respondents are affected by market competition. More so, the competition is visible in the market arena and it brings about a healthy entrepreneurship.

Table 4.3: Economic Factors

Statements	F	Mean	SD
The business position of the business	50	4.14	0.227
Business financial position affects my business performance	45	4.08	0.246
I get financial assistance from the government	8	1.79	0.232
Infrastructural accessibility affects my business performance	10	2.41	0.254
Infrastructural accessibility affect market of my business	10	2.41	2.41
I keep records for my business daily	48	4.11	0.152

Source: Author findings, (2019)

From the findings, mean of 4.14 the respondent showed that their business position affects their performance. A mean of 4.08 indicated that business financial position affects their performance. The mean of 4.11 showed evidence of keep records for their businesses. Further, pertaining infrastructural accessibility, the respondents didn't agree

that it affects their business performance with a mean 2.44, effects of infrastructure on marketability of the business was indicated by a mean of 2.41. Further, mean of 2.28 inability of buyers accessing the businesses and lasting getting governmental assistance was indicated by a mean of 1.79.

4.3 Social Factors

It was important for the study to look at the societal issues in the field that affects the artisans. The results are shown below;

4.3.1 Education and Managerial Skills

Level of education and managerial skills are a social factor that the study was concerned with in the field. The study was interested in the level of education of the metallic artisans as shown in the figure 4.7;

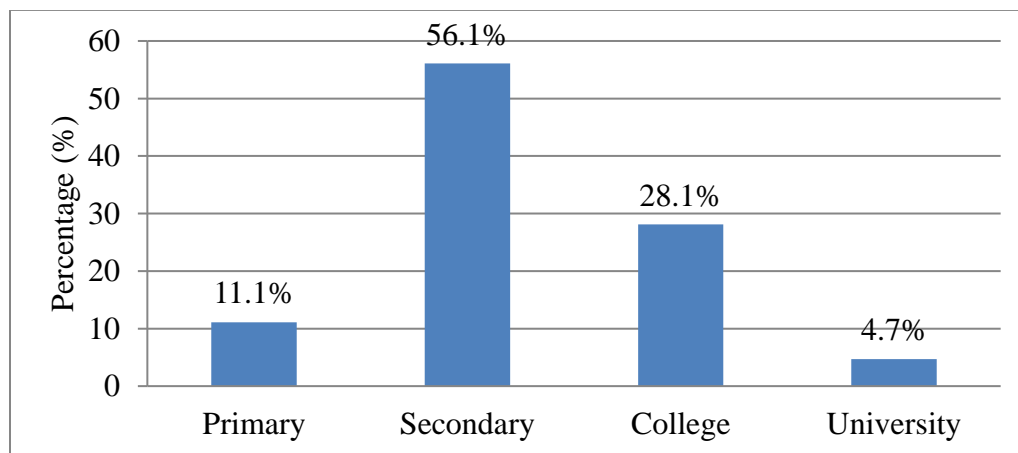


Figure 4.7: Level of Education

Source: Author findings, (2019)

Fifty six percent of the artisans were secondary graduate, twenty eight percent college graduates, eleven percent were primary graduate and 8 percent were graduates from university. Educational and managerial experience of an individual is crucial in the performance of the business enterprise. Managerial skill enhances good business operations especially in quality decision making. This study finding corresponds with literature review (Okwang'a, 2015). Thus, managerial skills are key to the growth of informal sector. In addition, the study needed to find out if the artisans attend training when called upon. Only a few thirty percent indicated the attend meeting especially using their own money. The core areas covered in the meetings includes; book keeping, capital and consumer service. The study findings also indicated seventy nine percent of the artisans have problems with book keeping.

The research findings are presented in the figure 4.8. The respondents who denoted others suggested factors like; difficulties in tracking the records and loss of data. The entrepreneurs at Kamukunji enterprise cluster noted that fostering digital entrepreneurship has been relatively low due to the following reason; the accessibility to speedy internet and improved technologies has been limited. The official from Kamukunji Informal Association (KIA) insisted that boasting *Jua Kali* entrepreneurs to digital technologies will improve the sectors performances.

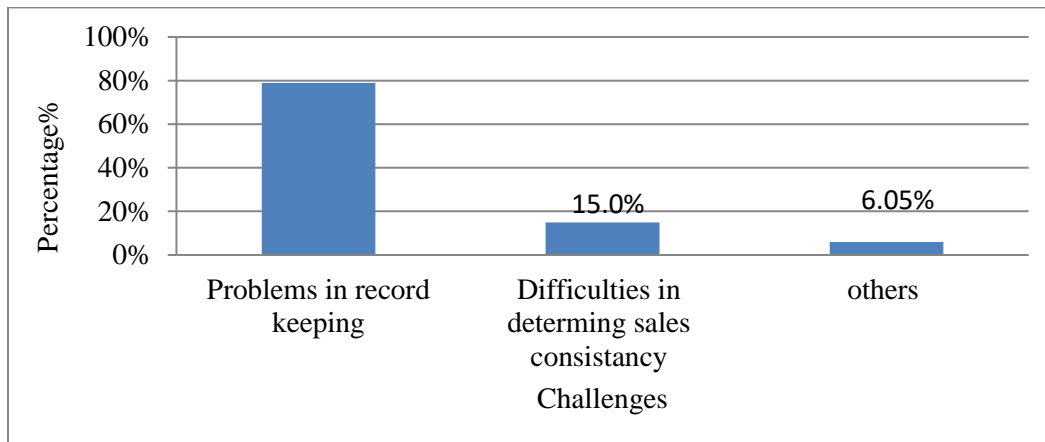


Figure 4.8: Managerial Knowledge and Skills

Source: Authors findings, (2019)

The researcher also sought to find out if *Jua Kali* artisans attend training and seminars when called upon. The finding from the study shows that majority (70.18 %) of the artisans don't attend training and seminars. The research findings correspond to globally many entrepreneurs in the informal sector have inadequacy of managerial knowledge and skills (Ndemo & Weiss, 2016). Most of the respondents (75.44 %) noted that their business performance is moderate.

4.3.2 Digital Social Network

The social platforms influence the performances of the businesses. The study finding indicates fifty three percent of the metallic artisans are ok with most social platforms. They use the social platforms for marketing their finished products. This study finding is similar to (Meagher, 2015). See figure 4.9

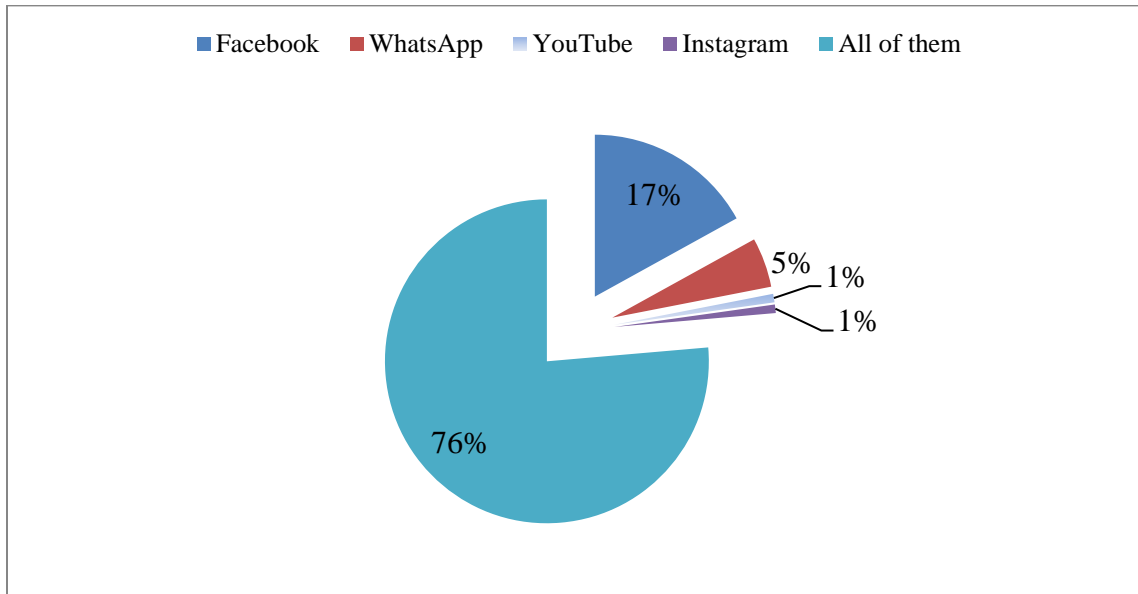


Figure 4.9: Familiarity of Social Networks by the Kamukunji Artisans

Source: Author findings, (2019)

In the study findings, seventy six percent of the respondents are conversant with the social platforms. Seventeen percent are acquainted with Facebook, five percent WhatsApp, one percent YouTube and Instagram respectively. Perversely to the study findings, Simelab Africa (2019), most Kenyans use social media entertainment and educational purposes. Furthermore, (64%) of Kenyans are familiar with Facebook, (80%) WhatsApp, Messenger (30%), and Telegram (9.4%) are used for social issues. Others like (8%) TikTok, (56%) YouTube and (8%) Vimeo are commonly used for entertainment.

Table 4.4: Use of Social Networks in Advertisement

Social network	Frequency	Percentage (%)
Facebook	78	45.6
Whatsapp	91	53.2
Instagram	2	1.2
Total	171	100

Source: Author findings, (2019)

The study shows that 45.6 % indicated they only use Facebook, 53.2 % use WhatsApp, and 1.2 % use Instagram. This shows that the *Jua Kali* metallic artisans aren't badly off when it comes to digital social media. All that is needed is to educate them on how to use the social media to better their business performance.

4.3.3 Working Conditions

The study findings showed that 73.68% of the artisans noted that their businesses indeed are affected by the working conditions. The field results showed that 52.63 % of the artisans are affected massively by noise pollution which sometimes affects their sense of hearing. 47.37 % of the respondents noted that they are affected by most of the factors namely; noise pollution, inadequate working space, poor lighting and lack of fire extinguishers. The respondents also indicated that they face uncomfortable working conditions ranging from harassment from the city council enforcement officers to lack of flexibility at work place (Author findings, 2019). This contradicted the research

findings, South African informal sector, the working conditions is relatively flexible with well- organized city council (Wills, 2009).

Table 4.7 shows the statements relating to social factors influencing the performance of Kamukunji enterprise cluster.

Table 4.5: Social Factors

Statements	F	Mean	Standard Deviation
I attend regular trainings and seminars to help improve my business performance	20	2.38	0.371
Trainings have assisted in the management of my business	36	3.60	0.692
The digital social network has improved my business performance	60	3.95	0.292
I use the digital social network for marketing my finished products	55	3.76	0.230

Source: Author findings, (2019)

From the study findings, mean of 3.95 indicated that the social platforms have improved their business performance. The artisans also noted that they use the social platforms for marketing purposes as shown by a mean of 3.76 and a mean of 3.60 indicated that the artisans attend trainings when called upon. They however did not agree that the trainings has accelerated to business achievements of 2.38.

4.4 Institutional and Individual based strategies influence the performance of *jua kali* metallic artisans businesses

The Institutional and Individual based strategies used by *Jua Kali* metallic artisans businesses in coping with the challenges they encounter in their business operations are presented in Table 4.9. This section shows overall results of the 3rd objective.

Table 4.6: Coping Strategies with the Challenges Faced by *Jua Kali* Metallic Businesses

Strategies for poor working conditions	Mean	Standard deviation
Usage of hearing devices	0.34	0.242
Making more products to sale in case of blackouts	4.20	0.209
I use dustbins to dispose the wastes	4.03	0.211
Usage of portable toilets	3.98	0.219
Strategies for market competition challenges		
SWOT analysis	3.61	0.261
Diversification of products produced	3.09	0.232
Formation of alliances to obtain a common market for the products	3.43	0.257
Strategies for managerial knowledge and skills problems		
Usage of excel spread sheets	2.88	0.233
Seeking experts help	2.84	0.245
Short interval sales recordings	4.12	0.121

Strategies for financial inadequacy challenges		
Initiating merry go rounds amongst ourselves	4.19	0.172
Own savings	4.17	0.234
Obtaining loans from banks and SACCOs	3.99	0.255

Source: Author findings, (2019)

Majority of the respondents cope with poor working conditions by producing more products to continue selling even if their might be a blackout as indicated by a mean of 4.20. A mean of 4.03 of the respondents indicated that they use dustbins to dispose of the wastes from the production. The respondents disagreed that portable toilets is not the option because of their large number. Most of the respondents do not use hearing devices because they are costly. This findings correspondent with that of official from Kamukunji Informal Association (KIA) who insisted that poor working conditions is the key cause of low performance in the *Jua Kali* sector. Comparing the coping strategies used by Kamukunji metallic *Jua Kali* artisans to those in India, it is ‘seen’ that the Indian informal sector receives basic infrastructure services from the government thus improving the entrepreneurs working environment (Ray, *et al*, 2015). The vendors on the streets have been assigned working site by the local governments and wastes are collected by contractors from the local municipality (Ray, *et al*, 2015). Although the Kamukunji *Jua Kali* metallic artisans’ use some methods like the production of more goods to sale even if there is a blackout, they are still faced by the problem ranging from structural planning to accessibility of essential goods such as water, electricity and proper way of disposing the wastes.

The study further sought to reveal how the respondents cope with market competition problem. Majority (mean =3.61) of the respondents indicated that they cope through the usage of strength, weakness, opportunity and threats (SWOT) analysis. The formation of alliances to obtain a common market for the products (mean=3.43) and diversification of products produced (mean=3.09). This research finding were also insisted by the official from of the ministry of trade who said that it is important for the metallic artisans to know their strength and weakness for them to be able to crab the opportunities in the markets. The official also insisted that it is very important for the metallic artisans to diversify the production of goods so that they can access a wider market. This research study findings corresponds to the research, Jager & Sathe, (2014) that acknowledged that in Latin American most SMEs use SWOT analysis to observe internal and external forces on their business. This has enabled the businesses to be able to establish appropriate ways such as improving the quality of the products and being keen with online advertisement to increase the sale scope.

The study sought to also establish how the respondents cope with managerial knowledge and skills challenges in their operations. Majority (mean = 4.12) of the respondents indicated that they use short interval recording sales, Usage of excel spreadsheet and seeking help from experts wasn't the option to the respondents as it was denoted by mean of 2.88 and 2.84 respectively. The official from Kamukunji Informal Association (KIA) said that managerial knowledge and skills for the artisans is very crucial. The officials also noted that Kamukunji Informal Association (KIA) management would be creating awareness to the artisans to increase the attendance in seminars and training sessions.

The study also needed to know how the artisans cope with financial inadequacy challenges in their enterprises. A mean of 4.19 cope with financial inadequacy challenges in their business through initiating merry go rounds amongst themselves , own savings was at mean = 4.17 and obtaining loans from banks and saving and credit cooperative societies (SACCOs) was at 3.99. This study findings corresponds with the previous literature for instance, Peng, (2012), found out that the informal businesses in Latin America manage cash flow efficiently by using the forecast to project the sales and expenditure to cope with financial problems. The informal sector in Latin America also uses the merry- go- round amongst them to obtain some cash for their business (Peng, 2012). Differently to African financial institutions, the financial systems in Latin America are structured to enable the SMEs businesses to obtain loans at a reasonable rate (Peng & Meyer 2016). Although the respondents use different strategies to cope with the challenges they encounter, they still insist that the performances of their businesses still encounters the challenges. The official from Kenya National Federation of *Jua Kali* Association noted that actual financial inadequacy is a major challenge that affects the performance of Kamukunji Enterprise cluster. Although there are some institutions that can give loans to the artisans, the artisans are still limited when it comes to the requirements of acquiring the loans.

4.5 Effects of New Laws and Regulations on the Performance of Kamukunji Metallic Artisans Businesses

Government new laws and regulations may pose challenges metal fabricators. From the study findings majority (88%) of the respondents said they are actually affected by new

government laws and regulations. Only 12% indicated that they are not affected by the new law and regulations. The researcher asked the respondents to indicate how new laws and regulations prohibit the growth of the enterprises and findings are as follows.

Table 4.7: Effect of Laws and Regulations

Laws and regulations	Frequency (f)	Percentage (%)
Affected by taxation on products	100	64.24
Affected by liberalization of the economy	13	7.60
Government funds support	29	16.96
Provision of trainings and development	29	16.96
Total	171	100.00

Source: Author findings, (2019)

Majority (64.24%) of the respondents are affected by taxation, 16.96% are affected by government support funds and provision of trainings and development and only 7.60% of the respondents are affected by liberalization of the economy. The official from the Ministry of trade noted, “actually government laws and regulations are necessary to control the businesses operations in Kenya.” “However, imposing the laws abruptly to the business people is likely to affect their performances.” More so, there is need to have laws and regulations but its adoption needs to complement by effective enforcement and appropriate capacity-building among lawmakers and some members of the judiciary.

4.6 Performance of Kamukunji *Jua Kali* Enterprise Cluster

After an overlook of the coping strategies used by the metallic artisans, the respondents were requested to rate their enterprise performance as followings ; good, moderate or bad.

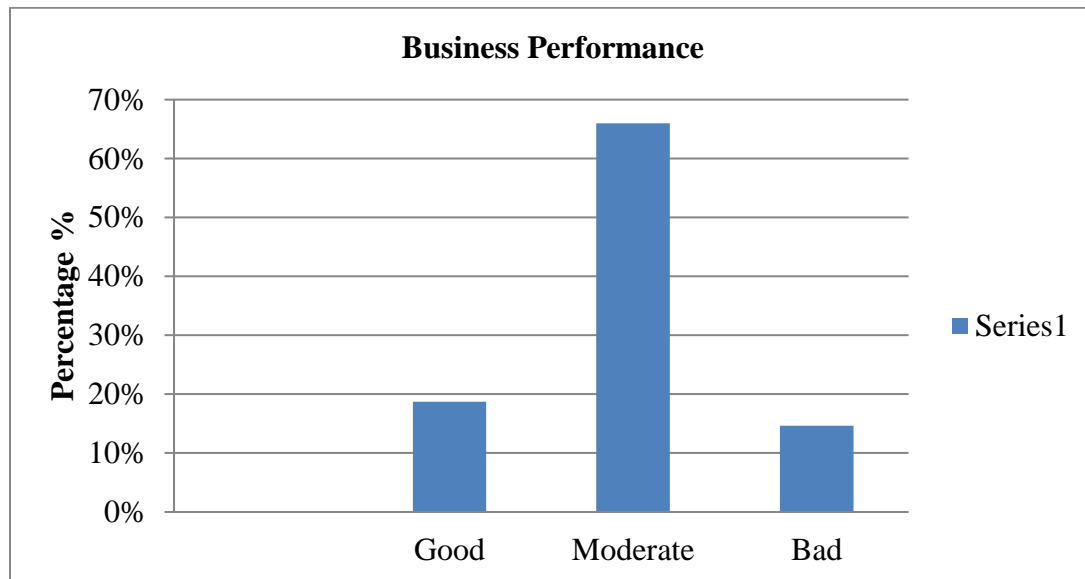


Figure 4.10: Business Performance Rating

Source: Author findings, (2019)

From the study findings, most of the respondents were of the opinion that their business was moderate in terms of performance. 18.70% indicated the business was good and 14.63% indicated that the business was bad. This shows most of the businesses were performing moderately. The respondents were further requested to indicate their levels of agreement on statements relating to achievements of businesses.

Table 4.8: Statements Relating to the Performance of the Enterprise

Statements	F	Mean	Standard deviation
Expansion of my business enterprise is limited by capital access	36	4.08	0.64
Managerial skills have enabled me manage the enterprise	10	3.67	1.21
I have accessible alternatives of capital sources if needed	5	2.41	0.49
I am satisfied with the growth of net-income of my enterprise	8	3.54	0.87
Digital networks have increased my customer base	40	4.11	0.32
The enterprise has grown its market share	28	3.98	0.67
Poor infrastructure has derailed the performance of my business enterprises	24	3.86	1.04
Competition from imported products limits the growth of the enterprise	20	3.75	0.59

Source: Author findings, (2019)

From the study findings, majority of the respondents agreed that digital networks have increased their customer base as shown by a mean of 4.11. The finding is consistent with that of (Zolait, 2017) that digital social networks like Facebook, Instagram, YouTube and WhatsApp have become popular among many business enterprises as a means of advertising their finished products. The respondent's agreed that expansion of their business enterprise is limited by capital access as demonstrated by a mean of 4.08 and that the enterprise has grown its market share as depicted by a mean of 3.98. The respondents further agreed that un availability of infrastructure affects their business by mean of 3.86, that competition from imported products limits the growth of the enterprise as shown by a mean of 3.75 which is consistent to the establishment of Evers and Seale (2015) that the informal sector is at large affected by internal and external competition in Kenya. The respondents agreed that managerial skills have enabled me manage the enterprise as demonstrated by a mean of 3.67. They also agreed that they are satisfied with the growth of net-income of their enterprise as illustrated by a mean of 3.54 but disagreed that they have accessible alternatives of capital sources if needed as demonstrated a mean of 2.41. The analyzed data reflects that a combination of economic and social factors is vital for good performance of any business either big or small.

4.7 Hypothesis Testing

The hypothesis testing was done using regression analysis and the results are shown below;

Table 4.9: Regression Coefficients

note: encountermarketcompetition != 1 predicts failure perfectly
 encountermarketcompetition dropped and 4 obs not used

Iteration 0: log likelihood = -94.183626
 Iteration 1: log likelihood = -90.730074
 Iteration 2: log likelihood = -90.723831
 Iteration 3: log likelihood = -90.723831

Probit regression
 Number of obs = 167
 LR chi2(6) = 6.92
 Prob > chi2 = 0.3283
 Pseudo R2 = 0.0367
 Log likelihood = -90.723831

ratebusinessperformace	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
Economicfactors	.206707	.2591976	0.80	0.425	-.301311	.7147251
encountermarketcompetition	0	(omitted)				
infr	.1123083	.237474	0.47	0.636	-.3531322	.5777488
levelofeducation	.011567	.0051947	2.23	0.026	.0013856	.0217485
Accountingandtrainings	-.1898735	.2931667	-0.65	0.517	-.7644697	.3847227
usageofdigitalsocialnetworl	-.120763	.2338938	-0.52	0.606	-.5791864	.3376603
workconditionsencountered	.2057497	.2338214	0.88	0.379	-.2525318	.6640311
_cons	-.8389943	.337028	-2.49	0.013	-1.499557	-.1784315

. mfx

Marginal effects after probit

$$y = \text{Pr}(\text{ratebusinessperformace}) \text{ (predict)}$$

$$= .2461068$$

variable	dy/dx	Std. Err.	z	P> z	[95% C.I.]	X
Econom~s*	.0675805	.0875	0.77	0.440	-.103922 .239083	.221557
infr*	.0348466	.07246	0.48	0.631	-.107178 .176871	.694611
levelo~n	.0036451	.00165	2.21	0.027	.000411 .006879	14.515
Accoun~s*	-.0623908	.09996	-0.62	0.533	-.258308 .133527	.844311
usageo~l*	-.0374631	.07136	-0.53	0.600	-.177321 .102395	.317365
workco~d*	.0666815	.07768	0.86	0.391	-.085566 .218929	.287425

(*) dy/dx is for discrete change of dummy variable from 0 to 1

Source: Author findings, (2019)

4.7.1 Interpretation of the Regression Coefficients table

In hypothesis testing, the study combined social and economic factors; hence, the pseudo-R-squared was 0.0367. The socio-economic factors that were utilized include; market competition, infrastructure, level of education Accounting and trainings, usage of digital social network and work conditions encountered which explained about 3.67% of the probability of rating a business performance good.

Furthermore, holding, entrepreneurs with either a bank account, access to loans from bank or government assistance constant it increases the probability of rating business performance good by 0.0675 compared to those entrepreneurs without any access to the three. Thus, economic factors are not statistically significant.

Moreover, holding, the following factors constant, businesses with good infrastructure increases the probability of rating its performance good by 0.0349 compared to those without good infrastructure. Thus, infrastructure is not significant.

Business that embraces the art of book keeping and attends business trainings reduces the probability of rating business performance good by 0.0624 compared to those businesses without, *ceteris paribus*. In conclusion, accounting and training are not significant.

Holding all other factors constant, businesses using digital platform reduces the probability of rating business performance good by 0.0375 compared to those businesses without. Use of digital platform is not significant.

Businesses with good working conditions increases the probability of rating business performance good by 0.0667 compared to those businesses without good working conditions, *ceteris paribus*. Working condition is not significant.

An increase in level of education by one year increases probability of rating business performance good by 0.0037 holding all other factor constant. Level of education is statistically significant

On average, there was a 0.2461 chance of rating a business performance good if we consider all the variables of the study, while other probabilities are misclassified

The value of Prob > chi2 is 0.3283, thus the model is not statistically significant

Market competition was omitted to avoid multicollinearity problem.

From these statistical models, the study adopts the positive hypothesis **H₀₁** There is relationship between the economic factors and the performance of *Jua Kali* metallic enterprises at Kamukunji enterprise cluster and **H₀₂** There is relationship between the social factors and the performance of *Jua Kali* metallic enterprises at Kamukunji enterprise cluster.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents a summary of the findings from chapter four, conclusions and recommendations of the study based on the study objectives.

5.1 Summary of the Findings

In the study, descriptive design was used; data collection was administered using questionnaires and interview schedules. The data collection from the artisans was done using questionnaires and interview schedule was administered to four purposively sampled officials from the selected institutions. A sample size of 181 informal artisans were the study target of which 171 questionnaires were filled and returned making the response rate of 88%. The analysis was done through descriptive and inferential statistics and the study findings were as summarized as shown;

5.1.1 Economic Factors Influencing the Performances of Kamukunji *Jua Kali* Businesses

This was the first objective of the research study; the study findings show that sixty percent of the artisans use own savings as beginner capital to start their businesses. Further, the findings shows that in spite the *Jua Kali* artisans having bank account, ninety five percent avoid bank loans due to reasons like; the collateral requirements is very high and their business financial position doesn't enable them to qualify for loans. The study findings indicate that the infrastructure inaccessibility by the artisans lowers the

production cost hence reducing the business operations. However, it was also noted that forty one percent of the artisans experiences difficulty in accessing the infrastructural services. Moreover, 44% the findings showed that the artisans have difficulties in accessing the market due to inadequacy of business information. It was also indicated that 38 % of the artisan's deals with similar products thus the products they produce are competitive in the market. The artisans also noted that inadequacy of sophisticated machinery and inadequacy of finances are the major hindrance to the marketability of their products.

5.1.2 Social Factors Affecting the Performances of Kamukunji *Jua Kali* Metallic Businesses

Fifty six percent of the informal artisans are secondary graduates. The study findings also showed that thirty percent of the artisans go for trainings and uses own funds. The findings indicate that majority (78.95%) of the artisans have a problem with record keeping . 53.21% of the entrepreneurs at Kamukunji enterprise cluster noted that fostering digital entrepreneurship has been relatively low due to the following reason; the accessibility to speedy internet and improved technologies has been limited. The finding from the study shows that majority of the artisans don't attend training and seminars. Over half of the artisans (76%) are familiarized by most of the social platforms which they use for marketing purposes. The findings reveal that 60 of the respondents agreed that the digital social network has improved their business performance. The research findings also indicated that majority (73.68%) of the respondents are affected massively by noise pollution which sometimes affects their sense of hearing.

5.1.3 Institutional and Individual Based Strategies

It was established that to cope with poor working conditions, the artisans produce more products to continue selling even if their might be a blackout and use dustbins to dispose of the wastes from the production this was reflected by a mean of 0.420 and 4.03 respectively. To cope with market competition problem the artisans use strength, weakness, opportunity and threats (SWOT) analysis, they form alliances to obtain a common market for the products and diversification of products produced this is shown by a mean of 3.61 and 3.43 respectively. To cope with managerial knowledge and skills challenges in their operations the artisans use short interval recording sales as shown by a mean of 4.12. Majority (mean of 4.19) of the respondents cope with financial inadequacy challenges in their business through initiating merry go rounds amongst themselves and own savings.

5.1.4 Hypothesis Testing

In testing the hypothesis, the pseudo-R-squared from regression was 0.0367. The economic and social factors that were utilized include; market competition, infrastructure, level of education Accounting and trainings, usage of digital social network and work conditions encountered which explained about 3.67% of the probability of rating a business performance good.

The probability rating of business performance was increased by 0.0675 when the study held constant the entrepreneurs that have bank account, access bank loans and gets assistance from government agencies compared to those without.

The probability rating of the business performance was increased by 0.0349 when the business with good infrastructure was held constant compared to those without.

The probability rating of business performance reduced by 0.0624 when the study held book keeping and attending of business training constant compared to entrepreneurs who do not. In conclusion, the model shows that the economic and social factors were not significant.

On average, there was a 0.2461 chance of rating a business performance good if we consider all the variables of the study, while other probabilities are misclassified

The value of Prob > chi2 is 0.3283, thus the model is not statistically significant

Market competition was omitted to avoid multicollinearity problem.

5.2 Conclusion

The study concludes that accesses to finance, availability of infrastructure, market competition are key economic factors affecting the performance of businesses in Kamukunji enterprise cluster. Economic factors significantly and positively influenced the performance of businesses in Kamukunji enterprise cluster. Managerial skills and experience, digital social platform and working conditions are some of the social factors affecting the performance of businesses in Kamukunji enterprise cluster. Social factors significantly and positively influenced the performance of businesses in Kamukunji enterprise cluster. These factors if improved they have potential of improving the performance of the businesses at Kamukunji enterprise cluster.

However, the research found out that if the metallic *Jua Kali* artisans opt to use strategies like formation of alliances to obtain a common market for the products, diversification of products produced and usage of Strength, weaknesses, Opportunities and Treats analysis (SWOT) they may curb some challenges they encounter.

5.3 Recommendations

The study found out that most Kamukunji enterprise cluster artisans prefer to use personal savings and contributions from friends and relatives. This is because the artisans find it difficult accessing loans form financial institutions like banks due to strict requirements such as collateral security and high interest costs. Therefore, the study recommends that loan giving institutions should have flexible rates to attract SMEs.

The study found out that most Kamukunji enterprise cluster artisan's products encounter competition mostly from cheap Chinese products and local enterprises that produce similar products. Therefore, the study recommends that the artisans improve on their production so that their products are competitive in the market. The policies set by the government should the attractive to SMEs but not frustrative. The study also recommends that the government should restrict importation of products produced in the country. The study further recommends the utilization of social media platforms which boosts their performance. The study also recommends the encouragement of the spirit of trainings anamong the artisans which is crucial for good performance businesses positively among the artisans which is crucial for their performance. The study found out that poor working conditions effect the performances of Kamukunji enterprise cluster businesses at a moderate extent. Majority of the artisans admitted that noise pollution affects them and

thus risks their health. Therefore, the study recommends that the County government through ministry of health should provide hearing protection devices to the *Jua Kali* artisans at a reasonable price.

The study also recommends that Kamukunji *Jua Kali* metallic artisans should adopt the models that can enhance efficient usage of the available resources such as financial resources, learning resources, marketing and consumer relationships in their need to improve the performances of their businesses.

5.4 Areas for Further Research

The following areas are recommended for further studies; a comparison study among the enterprises that access financial aid for bank and other government agencies and those that do not.

A research on factors affecting metallic *Jua Kali* artisans in other towns so that the study can come up with conclusions

A research should be done on effects of social platforms on business enterprises

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APPENDICES

Appendix 1: Questionnaire

Hello, my name is **Pauline Angerlyline Wamalwa** a Masters student of Urban and regional planning at Kenyatta University. I am carrying out a research on “**Factors Influencing the Performance of *Jua Kali* Metallic artisan’s Businesses at Kamukunji Enterprise Cluster in Nairobi County, Kenya.**” The information you give will be used exclusively for academic purposes and treated with utmost confidentiality.

Section A. General Information (Tick Appropriately)

1. Gender? Male Female

2. How old are you?

Under 18 years- 18 - 25 25 - 30 30 - 35

35 – 40 Above 40

3. What is your marital status?

i) Single ii) Married iii) Divorced iv) Separated

4. How many years have you been in the *jua kali* metallic business?

a) Less than one year b) One – two years c) Two- three years

d) Three – five years e) Above five years

5) Who encouraged you to start the *jua kali* business?

.....
.....

Section B. Questions on economic factors influencing the performance of Kamukunji metallic *jua kali* artisan's businesses.

1) What was your source of capital to start the business?

.....
.....
.....

2) Explain the method used when saving?

.....
.....
.....

3) Do you have a bank account? YES NO

3a) If yes, do you get loans from the bank?

.....
.....

3b) If you obtained a bank loans, how much money did you borrow?

.....
.....
.....

4) Do you get financial assistance from the government agencies? YES

NO

4a) If YES, state the assistance awarded to you?

4b) If NO, give the possible reasons why you don't get financial assistance from

Governmental

agencies.....

5) Does the financial assistance given by financial institutions influence the business

performance? YES NO

Explain

.....
.....

6) Do you encounter financial challenges in your business? yes no

6a) What challenges did you encounter when applying for a loan from the bank?

.....
.....
.....

7) After obtaining a bank loan what problems are you encountering while repaying the loan?

.....
.....
.....

8) What is the biggest hindrance you encounter while trying to access financial assistances from financial institutions?

.....
.....
.....

9) How do you cope with financial inadequacy challenges in your business?

.....
.....
.....

10) Does infrastructure influence the business performance? YES NO

10a) If yes, explain?

- a)
- b)
- c)
- d)

11) How do the business affected on the market?

.....
.....
.....

12) How does the quality of products affect its marketability?

.....
.....
.....

13) Do you get accessible to business information? YES NO

13a) If NO, what is your effort in getting the required business information?

.....
.....
.....
.....

14) Do you think the products produced are competitive in the market?

Yes NO

15) What kind of competition do your products encounter?

.....
.....
.....

16) How do you cope with market competition problem?

.....
.....

Section C. Questions on social factors influencing the performance of Kamukunji

metallic *jua kali* artisan's businesses.

17) What is your educational level?

.....
.....
.....

18) Have you attended any form of training in business management?

YES NO

18 a) If yes, please explain the core areas that were covered.

.....

.....

.....

.....

19) Who was the sponsor of the training?

.....

.....

20) Do you evaluate the performance of your business?

YES NO

20a) If yes, how often?

.....

.....

21) Do you use the digital social network in your business? YES NO

22a) If YES, what do you use the digital social network for?

.....
.....
.....

23) Has the digital social network improved your business performance? YES

NO

23a) If YES explain

.....
.....

24) Does poor working condition affect your business performances? YES NO

25) What strategies do you use to curb the poor working conditions challenges?

.....
.....
.....

26) Do you have a problem with record keeping? YES NO

27) Do you attend seminars when called for? YES NO

28) What are some of the challenges you encounter in managing your business?

.....
.....
.....

29) What are some of the coping strategies you use to curb the managing challenges?

.....
.....
.....
.....

30) Do new laws and regulations affect your business? YES NO

31) What are the new some of new laws and regulations that affects your business ?

.....
.....
.....
.....

32) Does poor working condition affect your business performances?

YES NO

33) What strategies do you use to curb the poor working conditions challenges?

.....
.....

34) Do you have a problem with record keeping? YES NO

35) Do you attend seminars when called for? YES NO

36) What are some of the challenges you encounter in managing your business?

.....
.....
.....

37) What are some of the coping strategies you use to curb the managing challenges?

.....
.....
.....
.....

38) Do new laws and regulations affect your business? YES NO

39) What are the new some of new laws and regulations that affects your business ?

.....

.....

.....

Section D. LIKERT SCALE

40) Using the following scale, please tick the one that best describes your opinion in relation to the statements on the effect of socio- economic factors affecting the performance of the enterprise. Where 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree

Statements	1	2	3	4	5
Business financial position affects credit acquisition for my business					
My business performance is affected by limited accessibility to financial institutions					
I get financial assistance from the government					
Infrastructural inaccessibility limits the number of potential buyers to accessing the business					
Infrastructural inaccessibility limits affects marketing of the business					
I keep records of day to day activities in my business					
I attend regular trainings and seminars to help improve my business performance					
Trainings have assisted in the management of my business					
The digital social network has improved my business performance					
I use the digital social network for marketing my finished products					

41) Using the following scale, please tick the one that best describes your opinion in relation to the coping strategies that enable you to cope with the challenges you encounter in your *jua kali* businesses. Where 1= Strongly Disagree, 2= disagree, 3= Neutral, 4= Agree, 5= Strongly Agree

Coping Strategies	1	2	3	4	5
I cope with poor working conditions problem in my business enterprise through;					
Usage of hearing devices					
Making more products to sale in case of blackouts					
I use dustbins to dispose the wastes					
I use portable toilets					
I cope with the market competition challenges through;					
Strength , weakness opportunity and threats (SWOT) analysis					
Diversification of products produced					
Formation of alliances to obtain a common market for the products					
I cope with managerial knowledge and skills problem through;					

Usage of excel spread sheets					
Seeking exerts help					
Short interval sales recordings					
I cope with financial inadequacy challenges in my business through;					
Initiating merry go rounds amongst ourselves					
Own savings					
Obtaining loans from banks and SACCOs					

Section E. Questions on the rating of the performance of Kamukunji metallic *jua kali* artisan’s businesses and the coping strategies

1) How do you rate your business performance?

	Agree	Strongly agree	Neutral	Disagree	Strongly Disagree
Good					
Moderate					
Bad					

Using the following scale, please tick the one that best describes your opinion in relation to the performance of the enterprise. Where 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree

Statements	1	2	3	4	5
Access to capital has expanded my enterprise					
Managerial skills have enabled me manage the enterprise					
I have accessible alternatives of capital sources if needed					
I am satisfied with the growth of net-income my enterprise					
Digital networks have increased my customer base					
The enterprise has grown its market share					
Poor infrastructure has derailed the performance of my business enterprises					

Appendix 2: Interview schedule (Target group is *Jua kali* Informal Association)

Hello, my name is **Pauline Angerlyline Wamalwa** a Masters student of Urban and regional planning at Kenyatta University. I am carrying out a research on “**Factors Influencing the Performance of *Jua Kali* Metallic artisan’s Businesses at Kamukunji Enterprise Cluster in Nairobi County, Kenya.**” It would be a good idea to interview you and hope this information will be used to better the performance of *jua kali* sector. The interview will take about 10 minutes. Will you be available to respond to some of the questions and at what time?

- 1) What role does your institution play in *jua kali* sector?
- 2) In your own opinion how do you rank the performance of *jua kali* sector?
- 3) Is financial accessibility a major obstacle affecting the *jua kali* sector?
- 4) What are some of the obstacles *jua kali* artisans encounter when trying to access loans?
- 5) How can the financial challenges be curbed in the *jua kali* sector?
- 6) Can ease accessibility to finances improve the performance of *jua kali* sector?
- 7) Does infrastructure accessibility affect the performance of *jua kali* sector?
- 8) Does the *jua kali* artisans access the basic infrastructures accelerates their performances?
- 9) What is your organization doing to ensure that the *jua kali* artisans gets required infrastructure?
- 10) How environmental hazard do affects the performance of *jua kali* sector?

11) What is your organization doing to protect the *jua kali* artisans from the environmental hazards?

12) In your own opinion can reduction in environmental hazards improve the performance of the *jua kali* sector?

Appendix 3: Interview schedule (Target group is Kenya National Federation of *Jua Kali* Association)

Hello, my name is **Pauline Angerlyline Wamalwa** a Masters student of Urban and regional planning at Kenyatta University. I am carrying out a research on **“Factors Influencing the Performance of *Jua Kali* Metallic artisan’s Businesses at Kamukunji Enterprise Cluster in Nairobi County, Kenya.”** It would be a good idea to interview you and hope this information will be used to better the performance of *jua kali* sector. The interview will take about 10 minutes. Will you be available to respond to some of the questions and at what time?

- 1) What role does your institution play in the *jua kali* sector?
- 2) What is your opinion regarding the performance of *jua kali* metallic sector?
- 3) How do managerial skills influence the performance of the *jua kali* sector?
- 4) How do the artisans obtain their artisans skills?
- 5) Can education level influence the performance of *jua kali* sector?
- 6) Do *jua kali* artisans attend trainings when called upon?
- 7) Who are the organizers of the trainings?
- 8) Given that *jua kali* sector artisans are equipped with necessary skills, can the performance of the sector improve?
- 9) Are you aware of the digital social platforms for marketing?
- 10) Can you advise the artisans to use the digital platforms in marketing?
- 11) Can digital platforms improve the performance of *jua kali* sector?

Thank you: your contribution has been greatly appreciated

Appendix 4: Interview schedule (Target group is Ministry of Trade Nairobi County)

Hello, my name is **Pauline Angerlyline Wamalwa** a Masters student of Urban and regional planning at Kenyatta University. I am carrying out a research on **“Factors Influencing the Performance of *Jua Kali* Metallic artisan’s Businesses at Kamukunji Enterprise Cluster in Nairobi County, Kenya.”** It would be a good idea to interview you and hope this information will be used to better the performance of *jua kali* sector. The interview will take about 10 minutes. Will you be available to respond to some of the questions and at what time?



- 1) What role does your institution play in the *jua kali* sector?
- 2) What is your opinion regarding the performance of *jua kali* metallic sector?
- 3) How does market competition affect the *jua kali* sector?
- 4) Do the products produced by *jua kali* sector competitive?
- 5) What can be done to make the products competitive in the market?
- 6) What are some of the government policies that govern the performance of *jua kali* sector?
- 7) Do the available policies enhancing good performance of the sector?
- 8) What is the government doing regarding the congested structures at Kamukunji enterprise cluster?


- 9) What is the government doing regarding the insecurity at Kamukunji enterprise cluster?
- 10) What is the government doing regarding the accessibility of finances to the *jua kali* artisans?
- 11) What is the government doing regarding the importation of similar goods produced in Kenya?
- 12) How can the government help the *jua kali* artisans to market their products globally?

Thank you: your contribution has been greatly appreciated

Appendix 5: Research license from National commission for science technology and innovation

THIS IS TO CERTIFY THAT: **Permit No : NACOSTI/P/19/65223/30279**
MS. PAULINE ANGERLYNE WAMALWA **Date Of Issue : 23rd May,2019**
of KENYATTA UNIVERSITY, 633-52 **Fee Received :Ksh 1000**
NAIROBI,has been permitted to conduct
research in Nairobi County
on the topic: SOCIO-ECONOMIC
FACTORS AFFECTING THE
PERFORMANCES OF JUA KALI METALLIC
ARTISANS IN KAMUKUNJI ENTERPRISE
CLUSTER , NAIROBI COUNTY
for the period ending:
23rd May,2020



Director General
National Commission for Science,
Technology & Innovation


Applicant's
Signature

Appendix 6: Research Authorization letter from National commission for science technology and innovation



**NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION**

Telephone: +254-20-2213471,
2241349, 3310571, 2219420
Fax: +254-20-318245, 318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No: **NACOSTI/P/19/65223/30279**

Date: **23rd May, 2019**

Pauline Angerlyline Wamalwa
Kenyatta University
P. O Box 43844-00100
NAIROBI

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "*Socio-economic factors affecting the performances of Jua Kali Metallic Artisans in Kamukunji Enterprise Cluster, Nairobi County*" I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for the period ending **23rd May, 2020**.

You are advised to report to **the County Commissioner and the County Director of Education, Nairobi County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.


BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Nairobi County.

The County Director of Education
Nairobi County