EFFECTS OF HANDS ON SKILLS ON ECONOMIC EMPOWERMENT, STUDY CASE: TECHNICAL AND VOCATIONAL TRAINING IN NAKURU COUNTY, KENYA.

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C153/NKU/PT/38666/2017

A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF HUMANITIES AND SOCIAL SCIENCES IS PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTERS DEGREE IN PUBLIC POLICY AND ADMINISTRATION, KENYATTA UNIVERSITY.

NOVEMBER, 2022.
DECLARATION

This research project is my original work and has not been submitted for a degree course or any other award in any other institution of higher learning.

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C153/NKU/PT/38666/2017

This research project has been submitted for examination with my approval as the university supervisor.

Signature ________________________________ Date ____________________

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ABSTRACT

Economic empowerment remains a key milestone for governments globally in their effort to improve the quality of life for their citizens. Governments are determined to formulate policies, have structured transformative blueprints, skilled personnel and great leadership. Agenda four is panacea for economic empowerment to implement affordable homes, steer manufacturing, and create universal health care and a food secure nation. Kenyans and especially the youth that are economically productive, live in abject poverty as a result of lack of employability skills and initial capital for creation of self-employment. In reference to this effort, this study focused on exploring the hands on skills in TVET and their effect on economic empowerment in Nakuru County. The objectives explored the effect of hands on skills on entrepreneurship, evaluated the effect of hands on skills on the economic empowerment of manufacturing industries, assessed the effect of hands on skills on agricultural innovation and looked into effect of hands on skills on the reduction of manufactured imports in Nakuru city county, Kenya. It was carried out in Nakuru County based on 97 subjects (9 TVET heads, 25 tutors, 63 students from 9 selected TVET institutions in Nakuru County) where total response was 92 being 94.8%. Using purposive sampling technique Nakuru County was selected as the study area and employing stratified sampling technique the TVET institutions of 14% Mugenda and Mugenda, (2003) sampling technique was employed on the TVET students. Focus Group Discussion, questionnaires and in-depth interviews used for secondary and primary data, which thereafter was coded and analyzed respectively using (SPSS) version 23. The experts relied upon to test validity and content validity. Test-retest coefficient will be used to evaluate for instrument reliability and a reliability of 0.7 will be acceptable. Discoveries entailed that entrepreneurial skills affect economic empowerment in Nakuru County in ways like hands on skills have led to more job creation under entrepreneurship and promoted better SMEs policies enhancing self-reliance among entrepreneurs. Also, Industrial skills gained from TVET lead to improved production. Hands on skills have supported low cost agricultural equipment, stirred up technology investment through agricultural innovation but research and development programs are not prompted through agricultural innovation. For sure there is more local production due to hands on skills. TVET institutions should strive to inculcate more skills to the technicians rightly because such skills have been found to impact the economic absolutely. Campaigns on promoting local consumption are crucial. Ecosystem to increase demand for skilled labor export. The TVET should aid technology investment through agricultural innovation research and development programs. The government support through grants and bonuses. Other TVET researches to focus on other determinants that affect economic empowerment in other counties and countries.
# LIST OF ABBREVIATIONS AND ACRONYMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>EAC</td>
<td>East African Community</td>
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<tr>
<td>FAO</td>
<td>Food and Agriculture Organization</td>
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<tr>
<td>FDI</td>
<td>Foreign Direct Investment</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>GNI</td>
<td>Gross National Income</td>
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<tr>
<td>GoK</td>
<td>Government of Kenya</td>
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<tr>
<td>GIGO</td>
<td>Garbage in Garbage out</td>
</tr>
<tr>
<td>HKISD</td>
<td>Hong Kong’s Information Services Department</td>
</tr>
<tr>
<td>TACBF</td>
<td>The African Capacity Building Foundation</td>
</tr>
<tr>
<td>TVET</td>
<td>Technical and Vocational Education Training</td>
</tr>
<tr>
<td>ICT</td>
<td>Information Communication and Technology</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
</tr>
<tr>
<td>KNBS</td>
<td>Kenya National Bureau of Statistics</td>
</tr>
<tr>
<td>MSEs</td>
<td>Medium and Small Enterprises</td>
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<tr>
<td>SDGs</td>
<td>Sustainable Development Goals</td>
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<tr>
<td>SMEs</td>
<td>Small and Medium Enterprises</td>
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<td>Acronym</td>
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<tr>
<td>MDGs</td>
<td>Millennium Development Goals</td>
</tr>
<tr>
<td>NACOSTI</td>
<td>National Commission for Science, Technology and Innovation</td>
</tr>
<tr>
<td>UNCTAD</td>
<td>United Nations Conference on Trade and Development</td>
</tr>
<tr>
<td>UNECA</td>
<td>United Nations Economic Commission for Africa</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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<td>WTO</td>
<td>World Trade Organization</td>
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### OPERATIONAL DEFINITION OF TERMS

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
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<tbody>
<tr>
<td>Economic empowerment</td>
<td>This is the ability to control, make decision involving financial resources resulting to improved living standards, high output, high demand for skilled labour, and high return on skilled investment.</td>
</tr>
<tr>
<td>Hands on skills on Entrepreneurship</td>
<td>learning by doing through job creation, self-reliance, SMEs policies, entrepreneurial capacities and mindset and business success level.</td>
</tr>
<tr>
<td>Hands on skills on Manufacturing Industry</td>
<td>physical activities geared towards better production and competitive advantage.</td>
</tr>
<tr>
<td>Hands on skills on Agricultural Innovation</td>
<td>Means doing research and development programs, skilled technical experts, investment on technology and low cost agricultural equipment.</td>
</tr>
<tr>
<td>Hands on skills on Manufactured Imports</td>
<td>psychomotor skills that leads to local production local consumption and demand for skilled labour.</td>
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CHAPTER ONE: INTRODUCTION AND BACKGROUND

1.1 Introduction and Background of the Study

Economic empowerment is multi-dimensional from the growth per capital income to generally to removal of poverty, proper nutrition, higher life expectancy, access to quality sanitation, better health care, decline of infant deaths, increased access to literacy and generally better standard living, Pavlova (2014), Technical and Vocational Education and Training (TVET) remains a key to productivity reinforcement in addition to reduction of poverty in Asia. HKISD (2014) opines that the adoption of creative and innovative strategies for positive empowerment should be enhanced by TVET. The contemporary accelerated performance and fast growing competitive global economies coupled by deliberate attention on the global difficulties caused by environmental degradation, pollution, health, climate change as well as poverty. Heti (2013) notes that China’s rise of the economy was accelerated by TVET geared policy direction. She has undergone a decline in the number of workforce in agricultural by 60% and increased number of skilled employees in the construction, services, manufacturing and tourism. The increase is the range of between 25.2% and 32.7%.

Okoye and Arimonu (2016) studying “Technical and Vocational Education in Nigeria-challenges and issues.” noted that TVET entails technologies, knowledge of science as well as hand on skills, positive attitudes, comprehension and knowledge crucial to job in different areas of economic and social well-being. This was during the 2012, TVET congress in Shanghai, China. It was concluded that, in order to develop a better greener
world and handle global unemployment. TVET is to be choreographed through developing and updating framework and tools to identify futuristic and contemporary hand on skills needed to align to benefits of TVET activities. The ever developing job markets, economies and societies (Bukit, 2012). Globally economic growth and development is the primarily objective of the government(s). They focus on income patterns, growth per capital and generally raising the well-being and social economic capabilities of people everywhere. Hence resources are allocated, disbursed, invested, policies formulated and elaborate plans to achieve the main goal of a developed society GOK, 2005). Economic empowerment nationally opines the state of wellness, ability to buy items in need, captured better by her per capital gross national income (GNI) as well as the gross domestic product that deal with domestically produced income.

Musyimi (2021) notes that since independence, Kenya has witnessed significant milestones in her quest to have quality human capital and by and large TVET reforms have taken the lead. Education Reform policy framework as indicated in the Sessional Paper No. 14 of 2012 that aligns to the Kenya vision 2030 hence projecting Kenya to the apex path of industrialization in the year 2030 timeline. Machingambi (2014) however indicates that despite the tremendous reforms associated with TVET institutions, they continue to be under-equipped and continuously employ old and outdated technology. Several methods of training geared towards having impactful systems have been developed through youth polytechnics ,national youth service ,industrial training institute, Kenya youth education opportunities programme and TVETs that bequeaths skills through hands on training and
apprenticeship. Kenya as a developing economy however, is faced with widening gaps between demand and supply of the human resource.

This research is geared to reduce skills mismatches between training and industry needs through establishing the correlation and effect of hands on skills and economic empowerment of nations.

1.1.1 Economic Empowerment

The need to develop a skilled competitive workforce in the international economic arena and aligning the school curriculum therein towards employability for economic empowerment is inevitable (Republic of Kenya, 2005). In spite of the fact in the competitive nature of the world market is presenting possibilities of growing quality neoliberal policy of an economy that is free market. This underpins a difficult that affects hand on skill formation Balwanz (2012). This is captured by informal workers that rarely benefits from social protection and rights present in the formal sector workers, hence informal sector hands on skills remain not enticing to the youth, King 2009; Hollanderand, 2009 notes that policy makers continue to be obligated to direct their attention towards improvement and maintenance of quality of TVET. The trainings to enrich learners towards attaining necessary hand on skills that; alleviate poverty, rebuild the economy and sustain development. Dunbar (2011) indicates that skills development is a change from focusing on supply-driven systems to embrace the schooling of hand on skills required in the labour market. The Kenyan system of 8-4-4 encompasses a curriculum geared towards industrial and school academic subject prowess. This system however, lacked hands on
skills to help speed up the economic environment (Mwiria, 2002). There has been several assignment done on school programmes and outcomes such as: economic empowerment, social, political and historical factors that shape the stated factors however little has focused on hands on skills and economic empowerment (King, 2005; Okwach and Abagi, 2005)

1.1.2 Hands on skills and empowerment

The new trend in Kenya about TVET offering hand on skills is backed by solid primary education and curriculum that is geared to competency based. Free primary education is an expansion of whole population towards human resource development strategy. The hands on skills are offered both formally and informally.

In the formal sectors they trainees join institution that offer the courses of their choice and instructors lead them to certification. Informal set up entails apprenticeship, where the trainee identifies a skilled personnel for on the job training, at this level no documentation is offered.

The basic primary education is strategic for equality in both urban and rural income gaps. This can reduce the gap of poverty between rural areas and urban centers. Expanding vocational education at high schools and 100% transition from primary education is another key strategy in Kenya.

Hand on skills in TVET is strategic to ensuring the youth that are in poverty stricken rural areas can now significantly contribute to economic empowerment and development of the nation. To improve perception and low demand of hand on skills several interventions are
made such as; institution capacity building and equality improvement force quality expansion. Malaysia identified four strategies in her tenth plan of the economy (2011-2015); to widen opportunities of better TVET, To change negative perception of TVET and enroll trainees on board, upgrade TVET curriculum and align it with industrial needs .To develop a highly effective instructors and streamline methodology in TVET.

Thailand policy opines that; all the youths joining the labour market must have hand on skills training by year 2020. Hand on skills has gained impetus due to high numbers of unemployment, skills mismatch with industrial needs, evolving technology in employment, higher hands on skill immigration arising from emerging new technologies and industrialization. The sustainable development goals by united nation member states to eradicate poverty, is a broad and positive trajectory to exponentially lead the world to a path that is sustainable and resilient UN, 2015 p.1).

In order to break the vicious circle of low hands on skills, poverty levels and low productivity, It is vital to have a balanced economic empowerment and growth. (ILO 2017).Skills development is notable key ingredient for sustainable empowerment that entails a key element in vision 2030, underpinned by sustainable development (king 2016).

Whilst increased demand for high school has gone up due to 100% transition policy by the government. The increased rates of secondary education competition have led to learners completing schools with inadequate hand on skills to achieve SDG no 4. The narrow occupation classification may need to be significantly reorganized as a means by which
learning is recognized as proof of rise digital credential such as badges and micro credentials (UNESCO 2017).

1.1.3 Historical background of TVET

Hand on skills acquisition and competencies is essential to the empowerment of workers and a skilled work force in TVET. The constitution of Kenya under 2nd schedule states that TVET is a responsibility of national government. The polytechnics, craft centres, farmers training, and by large similar institutions that offer vocational trades and skills is the responsibility of county government. TVET has been epicenter of national government policies aimed at creating a TVET institution in every constituency in Kenya. Nakuru City County has 9 TVET institutions that are in operation. Kenya has been grappling with poverty, disease and ignorance ever since independence. The focus on employment and wealth creation (ERCSWEC 2003-2007) (GOK 2003) that was operational and now the vision 2030 that is being implemented in order to tackle the problems and empower the masses with relevant skills (MOE 2015).

The Ominde commission 1964 also advocated for vocational training as well as session paper 1 of 2005 which sought to review the curriculum. Besides the tertiary institution to run TVET as well as universities. (GOK 2005).

1.2 Statement of the Problem

A greater priority by investment of personnel as a way of accelerating economic empowerment, (World Bank, 2011).
In Kenya there has been preference of white collar jobs that equip learners with soft skills, over the years, village polytechnic was seen as avenues of poorly performed student. Amidst this the government has come into realization of population shift of youths not employed make up a bigger percentage of the population. The study focuses on the shift of empowerment of human capital through TVET that has been reinforced by government of Kenya. The demand of hands on skills in implementation of agenda four (affordable homes, industrialization, universal health care and food sufficiency) has had a great policy shift towards equipping and rebranding of TVETS.

Several studies conducted on school programmes and their outcomes on social, political, economics and historical issues that drive the noted factors. Few studies if any has focused on hands on skills and economic empowerment as noted by King, 2005; Okwach and Abagi, 2005 despite Kenya’s vision 2030 agenda of embracing hands on skills workforce for economic transformation. The progress has been too slow. It is in light of this that the researcher aims at assessing the effects of hands on skills on economic empowerment in TVET in Nakuru County, Kenya.

1.3 Objectives of the Study

i. To explore the effect entrepreneurial skills on economic empowerment in Nakuru County.

ii. To evaluate the effect of industrial skills on economic empowerment in Nakuru County.
iii. To assess the effect of innovative agricultural skills on economic empowerment in Nakuru County.

iv. To find out the effect of local manufacturing skills on economic empowerment in Nakuru County.

1.4 Research Questions

i. Do entrepreneurial skills affect economic empowerment in Nakuru County?

ii. How do industrial skills affect economic empowerment of manufacturing industries in Nakuru County?

iii. Do innovative agricultural skills affect economic empowerment in Nakuru County?

iv. How do local manufacturing skills affect the economic empowerment in Nakuru County?

1.5 Justification and Significance of the Study

1.5.1 Justification of the Study

Despite the economic significance of hands on skills limited studies have been conducted on hands on skills on economic empowerment in Nakuru County with CEDEFOP (2011) research reviewing ‘the benefits of TVET in 21 European countries”, and a research by Moranga-Maroria and Nyikal (2015) on “Youth Polytechnics in Kisii Central” focusing on issues leading to joining of vocational training among youth but little has been done on effect of hands on skills on economic empowerment. This project wants to find out the effects of hands on skills towards economic empowerment in Nakuru County. The County
is at the heart of the Kenya, with a population of 2.16 million people (KNBS, census 2019) and is largely an agricultural area with a potential to be the Country’s food basket and an ever revolving industrialized County.

1.5.2 Significance of the Study

This project study will enlighten drafters of public policies in line with economic view as well as in the education undertaking. The results and conclusion obtained from this study project shall reinforce policy directions for betterment of the institutions and operations reform in the TVET level in Kenya. The county will significantly enrich their laid down research and innovation foundation as well as providing critical facts on the trajectory of polytechnics, craft and vocational institutions in the county. Finally, the development stakeholders concerned with TVET sector will also gain from the study as they will have candid insight on emerging global perspective of TVET institutions in Nakuru County and hence know where to invest.

1.6 Scope and Limitation of the Study

1.6.1 Scope of the Study

The research shall take place in Nakuru County. Data will be gathered from the students, tutors and TVET principals from the 9 selected institutions in Nakuru County. The study will collect data between Feb 2022 and March 2022, the study will target youths in Nakuru County who have undergone hands on skills in TVET between year 2015 and 2020 that will provide primary data.
1.6.2 Limitation of the Study

The research will be done in the jurisdiction of Nakuru County and will be determined by a number of limitations like honest feedback from the youths (students), administrators and management. The researcher will overcome this limitation through making a genuine appeal and assurance of confidentiality to the interviewees. The findings will be used for the study purposes alone. Being vocational and educational training centres it would be a challenge to interview subjects during working hours hence the researcher will leave the questionnaires with the subjects and pick them up over the weekend however schedule a face-to-face and focus group discussion over the weekend too.
CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This review shall keenly look at the depth of the study derived from studies and assignment of fellow researchers found in journals, search engines in the computer and manuals. It includes; developed conceptual framework, theoretical literature review, scientific literature review and gaps in research. The literature review is systematically following the study objectives as stated.

2.2 Empirical Literature Review

2.2.1 Economic Empowerment

According to Hua (2018) there are seven indicators of economic empowerment and they include: higher industrial production, meaning manufacturing firms indicate how the state of the economy is in terms of economic output of a country in which an increase in output indicates the stability of the economy; wage growth which affects consumer demand in this case spending power strongly attributed to consumer income; strong employment or workforce number to mean that the Gross Domestic Product increases through an increase in consumer spending or an accelerated production of produce- high employment means more disposable income and the demand for goods and services also goes up; stable inflation rate to mean at a desirable level of about 2% to 3% repeatedly shows that the economy is on the right path to good economic growth; rising interest rates also indicate that the economy is recovering and while they are lowered the economy is stimulated to
make borrowing easier and hence helps in stirring up investment; high retail sales which means household consumption adding to the economy, hence higher spending means more output of products thus improving the GDP; and also higher new property selling to mean that the real estate sector is significantly improving the economy through the resources it uses such as construction materials, services savings and loans.

According to Ranis (2004), human development which correlates to human capital and human capital greatly affects a country’s economic empowerment; for example education and skills strongly affects labour productivity and the highly skilled farmer increases farm output significantly and Duflo (2001) Indonesia’s wages grew higher between 1.5% - 2.7 percent for every added school constructed out of a thousand children. While endogenous gain is determined by the transformation of personnel and labour quality, the height of human empowerment is directed by a country’s sustainable empowerment path. Pavlova (2014) argues that economic empowerment resulting from better green restructuring should work closely with personnel development that causes tremendous value of hand on skills, an argument supported by Asia and Pacific studies on the empowerment of the ‘green economy’ that acknowledges the critical interrelations among the economic systems, environmental base and social empowerment. According to Silve (2013) there exists three dimensions of empowerment and these include: economic as indicated by standard of living and distribution of wealth; political as indicated by individual freedoms and individual rights, freedom of political choice, rule of law, effective regulations, curbing corruption; and the social dimension as indicated by health, education as well as social protection.
African nations continue to rely on the exports of handful commodities and trade restrictions coupled with trade losses have further made the situation worse in terms of the capacity to invest in human capital and infrastructural development (UNCTAD, 2001). According to Shaw (2015), Africa has for the last 10 years recorded a positive growth attributed to the drop in oil prices, high investment, improvement in governance, relative peace (political stability), human capital as well as prudent fiscal policies (TACBF, 2017). Jäntti et al (2014) comparing contemporary poverty indexes that are guided by utility theory as the base, in contrast prospects theory reveals a contrary level of relationship of GDP gain and level of poverty decline highlighting the impressive African growth not eradicating poverty; hence what raft of measures should she employ to rid herself out of poverty and inequality to align to Sustainable Development Goals (SDGs) is it in human capital (skills) or foreign direct investment or rather political stability?

Kenya’s education development is projected to accelerate economic empowerment through skilled workforce and breaking the long standing economic inequalities through wealth distribution and according to Mohajan (2013), Kenya’s economy has continued to expand and is dominant in East Africa, and position three in Sub-Saharan Africa. Closely following South Africa and Nigeria in that order, courtesy of skilled labour in agriculture, food export and imports.

2.2.3 Entrepreneurial Skills and Economic Empowerment

Cooney (2012) argues that as a result of the contemporary economic hurdles facing a number of nations worldwide, the idea of engendering massive entrepreneurial skills has
become the primary objective of a number of state governments. Gibb (2010) indicates that entrepreneurship is a discipline and can be learnt following education and training of hands on skills that helps a person’s mind-set, hands on skills, behavior and potential that can be used to build wealth in a broader perspective of contest of economic empowerment especially through job creation. It is noted that education of the hand on skills training leads a pivotal space in the empowerment of future entrepreneurs. Hands on skills impaction leads to developing capabilities of working personnel to promote their businesses successfully (Henry et al, 2003). European Commission (2008) notes that the strides of entrepreneurship education emerging from TVET will lead to ‘enhanced entrepreneurial potential and positive thinking’ which will improve the economic empowerment through promoting innovation, self-employment, self-employment, creativity and the publication noted by ‘Small Business Act for European’ in 2008 and the ‘Entrepreneurship 2020 Action Plan ‘They strengthened the role of SMEs in economic empowerment as underscored by Bruyat and Julien (2001) this concept has led a number of European union countries to reinforce their SME public policies since academicians, policy drafters and parliament are increasingly acknowledging the immense benefits that entrepreneurship portrays to a nation economic empowerment.

In Kenya, the government has enhanced measures geared at improving the technical capabilities among the youth which includes the re-engineering of condition of working environment through implementation of policy guidelines to benefit TVET graduates. This in turn will lead to ownership of micro and small enterprises (MSEs) to thrive (Kithae et al, 2014). The various hand on skills learnt by the youths in TVET colleges has not solved
issues of; availability financial support, equipment support as well as widespread computer 
information and technology are still a great bottleneck to empowerment and sustenance of 
TVET graduates. This research therefore is on mission to look for answering the question; 
what is the effect of hands on skills on entrepreneurship in Nakuru County?

2.2.4 Industrial Skills and Economic Empowerment

UNIDO (2004) notes that a number of firms and MSEs lack capacities to produce 
efficiently and sufficiently, underperform, and produce low quality products due to lack of 
the hands on skills including the technical and technological skills and in reference to 
Kithae et al (2013) highly successful individuals have unique hands on skills in a specific 
area making it possible for them to be noticed among their peers as a skill becomes perfect 
when it gets practiced over and over and GOK, 2004; GOK, 2005 notes that the government 
has been facilitating and supporting the acquisition of such skills through TVET programs 
to enhance productivity hence accelerate the economy.

Corpeno, 2018 indicates that after the 2007 investment of wooden low-cost greenhouses in 
Central America thanks to hands on skills, the farmers could comfortably access the 
markets where they could directly sell their farm produce with a reduction of post-harvest 
loses and in some cases sold a kilogram of tomato for an aggregate price of US $ 0.70 
something that yielded a significant profit for the farmers and the report adds that similar 
greenhouses have since been replicated in Guatemala, Honduras, Jamaica, Tanzania and 
Kenya and today Jamaica boasts of over 120 farmers growing vegetables in greenhouses 
while Tanzania has more than 40 low-cost greenhouses courtesy of Central America,
producing low cost sweet pepper and tomato. This study therefore want to deal with the question, “How do hands on skills affect the economic empowerment of manufacturing industries in Nakuru County?

2.2.5 Agricultural Innovation Skills and Economic Empowerment

In 2007 when farmers failed to meet market demands to produce vegetables that would sustain all year round with enough vegetables in Central America as a result of unpredictable rainfall coupled with insufficient water supply, which drove up the prices for commodities, a number of farmers resolved to invest in cheap greenhouses made of wood to produce vegetables that was sustainable (Corpeno, 2018), and 10 years later they up-scaled their efforts and markets through creating a cooperative and looked for markets where they could sell directly to food chain stores in cities; owing to the investment made on technology.

Zimbabwe being originally known for her excellent, self-sufficient agricultural producer, unstable rainfall in modern times has led to a bigger limiting factor for many farmers who largely maize is their staple food and their economic welfare. Zimbabwe unfortunately, has reported 4 to 5 years of drought consecutively (FAO, 2018) however, between the period of 2007 and 2013 about 10 maize varieties that are drought resistant were introduced courtesy of International Institute of Tropical Agriculture (IITA) through a research and development program. In 2016, a Sahrawi refugee known as Taleb with an agricultural engineering background through technical and hands on skills came up with low-tech hydroponics to ensure vegetation grow in dry environments without use of soil
technique; smart farming and cost efficient solution that saves 90% of water use and three quarter less space which can supports local fodder supply for their livestock which shows skilled technical expertise (World Food Program, 2018). Moyi (2005) opines that Kenya’s investment and output potential is hampered by issues such as expensive agricultural machinery and spare parts. Gichira (2002) states that there is significant gap in technological potential used by African companies as compared with companies in the world is largely because of limited funding. Vision 2030 supported by the Sustainable Development Goals however, emphasizes on skilled economic empowerment through agricultural innovation. Much is still to be realized as Kenya is only 8 years shy from 2030. This study hence seeks to answer the question ‘How do hands on skills affect agricultural innovation in Nakuru County?'

2.2.6 Local Manufacturing Skills and Economic Empowerment

Lee, 2004; Vivarelli, 2006, indicates that in the first world countries both trade liberation and technological change could be the leading cause of the clamor for higher demand for hand on skilled labourers; in other words, industrialization has a major recipe in the demand for skilled labour. According to Wolff (2006) firms with increasing fast technological growth attracts job seekers with greater capability of learning. Robbins (2003) states that through his ‘hand on skills reinforced trade (SET) hypothesis’ trading liberation speeds the entry of imported technology that is embodied. The under developed nations adopting to the current hand on skills that use intensive technologies. The graduates are currently employed by first world nations hence leading to an accelerated demand for skilled workforce (Vivarelli, 2004).
Pavlova (2014) informs that China is a classic example of a nation that has embraced local consumption through hand on skilled workforce. She has embraced the policy of initiating a one direction cyclical economy as her current fifth year plan; a nation in which ‘pollution is controlled and recycling’ at each level of output and consumption is advocated. Hong Kong’s nation has heavily and strategically invested in technology and innovation as forces of economic empowerment and competitiveness as a result of environmental changes. In Kenya, apart from fulfilling Kenya Vision 2030, hands on skills could prove beneficial to local consumption and production hence the research question, “How do hands on skills affect the reduction of manufactured imports in Nakuru County?”

2.3 Theoretical Framework

2.3.1 New Growth Theory

The theory explores that man vehement desire and infinite wants projects increasing output and economic growth. In pursuit of profits the real gross domestic product will increase perpetually. Competition narrows profits and thus entrepreneurs have to frequently find new methods to do or come up with new products so that to widen profitability. The forces that progressively make long term economic empowerment (OECD1996.11). Powell and Snellman (2004) States that conventional economic theories as a result of labour supply, growth is inevitable and thus labour productivity is said to depend on productivity input such as capital intensity and quality of labour force. This increase in input can form part of unaccounted economic growth that is referred to as multifactor productivity (MTP) which results from technical progress and improve efficiency. This improved product and services
has a possibility to steer investment which leads to acquisition of hand on skills. This postulates a continuous and increased economic growth trajectory. The New Growth theory briefly explains the forces that sequentially make long term economic empowerment and according to Powell and Snellman (2004), conventional economic theories resulting from labour supply as well as growth are inevitable and hence labour productivity is said to rely on productivity input such as capital intensity and the quality of labour force; and as argued by Mohajan (2013) skilled labour force in Agriculture has placed Kenya on top of economic giants in East Africa coming third in Sub-Saharan Africa as a productive and labour intensive country.

Katole (2015) posits that hand on skills are essential for the economic empowerment of a nation and that acquisition of the skill is founded in education, training and developmental experiences to imply that the increase in input can form part of unaccounted economic growth that is referred to as multifactor productivity (MTP) which results from technical progress and improve efficiency. New Growth theory relates to Skill Acquisition theory which not only encompasses language development but also the cognitive to psychomotor skills according to Mystkowska-Wiertalak and Pawlak (2012) and as Vanpatten and Benati (2010) argue that people begin learning things through explicit process and consequently through enough practice and exposure, proceeding to implicit process hence it is a progressive growth process. Through hands on skills from TVET therefore improvement of product and services has a possibility to steer up investment and this in the long run postulates a continuous and increased economic empowerment trajectory. These results will therefore be helpful to the study topic.
2.3.2 System Theory

System theory examines creativity and innovation as a system and according to OECD, 2005; and Lundvall, 2010; this is direction affecting the external institution on creative activities of the companies and actors. It describes the importance of passing and learning of skills, creative ideas, knowledge and current information. In 2007 Central America Farmers invested in wooden low-cost greenhouses innovation as a result of unpredictable rainfall marred with insufficient water supply and improved the quality and quantity of tomato production (Corpeno, 2018) courtesy of the new technology. The system approach shift view to policy integration in the institution and observes at the interactive process in building of application and disseminating learning. This emphasizes on the role of government in developing integrating mechanism of the hand on skills acquired. This leads to growth of the economy and according to the report by GOK, 2004; and GOK, 2005 the national government has been facilitating and supporting the acquisition of such hand on skills through TVET programs to enhance productivity hence accelerate the economy.

The cardinal relationship of this study is that between knowledge, technology, economic empowerment policy and UNIDO (2004) notes that a number of firms and MSEs lack capacities to produce efficiently and sufficiently, underperform, and produce low quality products due to lack of the hands on skills including the technical and technological skills. Manufacturing pillar is arguably the most vital for job creation because of its strong multiplier effect with other sectors as it is largely serves micro and small enterprises (MSE) that features low skilled job that are mostly hand on skills. In this period of globalization and changes in technology, the type of work and skills needed is quickly evolving and no
routine cognitive, social and behavioral skills appear to be rising as the demand for routine job specific skills is declining and combination of various skills is on the increase (World Bank, 2019). There is possibility of youths being employed informally in spite of the higher learning amongst the youth in comparison with the other older category of people (Bossavie, Khadka and Stroko, 2018). These findings will hence be relevant to the study.
### 2.4 Conceptual Framework

The conceptual framework shows how dependent variable is supported by independent variables.

#### Independent Variables

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>(Dependent Variable)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entrepreneurial skills</strong></td>
<td><strong>Economic Empowerment</strong></td>
</tr>
<tr>
<td>-Job creation</td>
<td>-Improved living standards</td>
</tr>
<tr>
<td>-Self reliance</td>
<td>-High output</td>
</tr>
<tr>
<td>-Entrepreneurial know how.</td>
<td>-High demand for skilled</td>
</tr>
<tr>
<td>-Business start up</td>
<td>-High returns on skilled</td>
</tr>
<tr>
<td><strong>Industrial skills</strong></td>
<td></td>
</tr>
<tr>
<td>-Improved production</td>
<td></td>
</tr>
<tr>
<td>-Sustainable investment</td>
<td></td>
</tr>
<tr>
<td>-Creativity and innovation</td>
<td></td>
</tr>
<tr>
<td>labour</td>
<td></td>
</tr>
<tr>
<td>investment</td>
<td></td>
</tr>
<tr>
<td><strong>Innovative agricultural skills</strong></td>
<td></td>
</tr>
<tr>
<td>-Research and development program</td>
<td></td>
</tr>
<tr>
<td>-Improved agricultural technology</td>
<td></td>
</tr>
<tr>
<td>-Technology investment</td>
<td></td>
</tr>
<tr>
<td>-Low cost agricultural equipment</td>
<td></td>
</tr>
<tr>
<td><strong>Local Manufacturing skills</strong></td>
<td></td>
</tr>
<tr>
<td>-Local Production</td>
<td></td>
</tr>
<tr>
<td>-Local Consumption</td>
<td></td>
</tr>
<tr>
<td>-Skilled labour demand (export)</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2.1 Conceptual Framework
CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

It will entail, methodology, research design and the target population of the project. The independent and dependent variable(s) will also be singled out and checked with the study area. The analyst will also identify and explain the sample size and technique, furthermore come up with the research instruments involving collection, processing and analyzing data, expected study output, data management and ethical issues will as well be described.

3.2 Research Design

This study embraces a descriptive survey research design. The study shall apply both quantitative and qualitative approaches. This shall be used to get useful data from the sample population on the “Effects of hands on Skills on economic empowerment in TVET in Nakuru County.” Descriptive survey entails describing an occurrence and its distinctive features (Nassaji, 2015). The study is mostly aimed at what happened instead of how/why something happened and stated by Gall, Gall, and Borg (2007) Data will be gathered through observation and survey tools. The descriptive survey shall provide the researcher with detailed facts on the connection and features of the topic project.

3.3 Location of the Study

This study will be done in Nakuru County; which is among the 47 Counties put in writing after the new dispensation of the 2010 Kenya constitution. Nakuru County is found the Rift
Valley region. It is bordered by seven counties with Nyandarua, Bomet, Kericho, Baringo, Laikipia, Kajiado and Narok (KNBS, 2019).

3.4 Target Population

Nakuru County has 9 TVETs in the following sub counties namely; Molo, Gilgil, Naivasha, Njoro, Kuresoi north, Kuresoi south, Rongai, Nakuru East and Bahati. The researcher will mainly focus on the 9 selected TVET institutions located in Nakuru City County. Table 3.1 indicates the 9 selected TVET institutions principals, tutors and students.

Table 3.1 Target Population

<table>
<thead>
<tr>
<th>Target population</th>
<th>Target population (numbers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principals</td>
<td>9</td>
</tr>
<tr>
<td>Tutors</td>
<td>180</td>
</tr>
<tr>
<td>Technicians</td>
<td>450</td>
</tr>
</tbody>
</table>

3.4.1 Variables

This study will compare two categories of variable(s) that is; independent and dependent variable(s). The independent variable(s) are the hands on skills in TVET while the dependent variable(s) is the economic empowerment.
3.5 Sampling Technique and Sampling Size

3.5.1 Sampling Technique

This researcher shall use a stratified sampling method in which the selected institutions will be put into 3 stratus and out of these stratus the students (trainees) who studied between the year 2015 and 2020. The 9 principals will be purposively selected. The students and tutors will be selected using 14% according to Mugenda and Mugenda 2003 who states the percentage is adequate.

Table 3.2 Selected TVET institutions and Sampling Grid

<table>
<thead>
<tr>
<th>Total population</th>
<th>Target population(numbers)</th>
<th>Sampling percentage (%)</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>9</td>
<td>100</td>
<td>9</td>
</tr>
<tr>
<td>Tutors</td>
<td>180</td>
<td>14</td>
<td>25</td>
</tr>
<tr>
<td>Technicians</td>
<td>450</td>
<td>14</td>
<td>63</td>
</tr>
<tr>
<td>Total</td>
<td>639</td>
<td></td>
<td>97</td>
</tr>
</tbody>
</table>

3.5.2 Sample Size

Using purposive sampling technique, 9 key informants will be selected to be part of the sample size; and applying stratified sampling method and the quarter sampling technique, a sum of 63 TVET graduates shall form the sample size from a target population of 450. A sum of 97 respondents shall be included in the project.
3.6 Research Instruments

The study will employ questionnaire(s) (for TVET graduates) and interview guide(s) (for key informants) which will be used in the field. Questionnaires will be very important in collecting primary data from TVET technicians from the selected TVET institutions.

3.7 Data Collection Procedure

The questionnaires will be administered to the sampled graduates, tutors and 9 principals selected across the institutions in Nakuru County to get primary. The questionnaires will assist in collection of data hence aiding the researcher to gather data in an objective way, which is important for the study (Mugenda, 2003). The questionnaires will help to provide information to the opinion shapers, form attitude and reactions about ‘Hands on skills effect on economic empowerment in TVET’ by participants in the study area, gender, education achievement and age.

3.8 Validity and Reliability

3.8.1 Validity of Instruments

Kothari (2004) indicates that research instruments’ validity to be observed in terms of content and face validity. The test validity is supposed to measure the expected level. The researcher has been on consultation with the research supervisor on her candid opinion on content validity to ensure validity of the instrument. The questionnaire will be proofread after piloting to ascertain that it measures to excellent level of content and face validity.
3.8.2 Reliability of Instruments

Orodho (2009) states that reliability of the instrument encompasses the standard of measure for internal consistency of a specific instrument within a stipulated time or the extent of an instrument of study to continuously provide identical results from respondents. Test-retest reliability coefficient shall be engaged to make sure the level of reliability of the research instrument the study will employ. The study will accept a reliability of 0.7.

3.9 Data Analysis Procedure and Presentation

Data analysis will be conducted after getting data and this will involve data results interpretation (Zikmund, 2003). The questionnaire will bring up quantitative and qualitative data. Qualitative data from the open ended questions in the questionnaire will be systematically organized in connection with the study topic. Data will be coded for conversion, information quantitative form. Quantitative data will be gotten from the graduates and inserted by conversion into numeric codes to represent various variables.

Statistical Package for Social Sciences (SPSS) will be employed by the researcher to analyze the different categories of converted data and use descriptive statistics in form of mode, mean, frequency and percentages to sum up the obtained information, in addition to inferential statistics to be conveyed in tables and figures. The findings will then be tabulated using frequency tables as stated by Kutner et al. (2004). Multiple linear regression will be used to show the relationship between the independent and dependent variables.
The interview guide(s) hence, will inform qualitative data which will be edited, rephrased and analyzed for agreement and intense comprehension before being put into different subjects in the objectives of the study. The data will then be conveyed by the researcher in exact words in narrative form to portray the quantitative data findings.

3.9.1 Regression Model

This study shall apply the model as stated.

\[ Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e \]

Where \( Y_i \) = Economic Empowerment

\( \beta_0 \) = Regression intercept

\( \beta_1, \beta_2, \beta_3 \) and \( \beta_4 \) = Regression coefficient

\( X_1 \) = Hands on skills on entrepreneurship,

\( X_2 \) = Hands on skills on manufacturing industry

\( X_3 \) = Hands on skills on agricultural innovation

\( X_4 \) = Hands on skills on manufactured imports

\( e \) = term of error.
3.10 Data Management and Ethical Consideration

Ethical issues are beneficial to any research and therefore the researcher finds it crucial for this study project. To comply with logical consideration, the researcher will get an introductory letter from Kenyatta University and NACOSTI clearance permit within convenient time before the study and go through all the mandatory pilot procedures as well as written permission from relevant authorities. Participants of the study will be focused before undertaking the study. Ethics will be upheld through objectively picking of participants, getting voluntary and well informed consent, respecting capabilities and selected subjects as well as keeping the identity of all respondents confidential and private. All the active participants and respondents will be totally be informed and made to comprehend the purpose of the study and the benefits of participating in the study. The information got from the participants will enrich the study and not related to commercial or selfish benefit. Reviewed references will also be accredited and acknowledged accordingly.
CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION

Descriptive and inferential statistics outcomes from effects of hands on skills on economic empowerment, study case: Technical and Vocational Training in Nakuru County, Kenya are discussed here.

4.1 Response Rate

Completed questionnaires were evaluated and proven in Table 4.1

Table 4.1: Response Rate

<table>
<thead>
<tr>
<th>Total Population</th>
<th>Sample Size</th>
<th>Response</th>
<th>Non-Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>9</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Tutors</td>
<td>25</td>
<td>23</td>
<td>2</td>
</tr>
<tr>
<td>Technicians</td>
<td>63</td>
<td>62</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>97</strong></td>
<td><strong>92</strong></td>
<td><strong>5</strong></td>
</tr>
<tr>
<td><strong>Percentage</strong></td>
<td><strong>100</strong></td>
<td><strong>94.8%</strong></td>
<td><strong>5.2%</strong></td>
</tr>
</tbody>
</table>

*Source: Field Data (2022)*

In Table 4.1 show 92 out of 97 reacted to the questionnaires. The composition included 62 technicians, 7 principals and 23 tutors. The total response was 94.8% and a non-response was 5.2%. Mugenda and Mugenda (2003) recommends above 50% response; where over 70% is excellent rate.

4.2 Demographic Information

Most of respondents lived in Nakuru city and its environs where majority were unemployed with less than half of them in any formal employment nor part time contracts. The populace indicated that they had hand skills such as tailoring, plumbing, electrical, computer,
masonry, painting while others were mechanics. These had skills had been practiced for less than a year, others between 2 to 3 years while those with over 4 years were at least in some casual work earning as low as 10,000 Kenya shillings with an average pay of between 11,000 -19 000 Kenya shilling and most paid at 21000

4.2.1 Age of Respondents

Verdicts of the age of who replied the questionnaires are in table 4.2

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-30</td>
<td>51</td>
<td>55.4</td>
</tr>
<tr>
<td>30-40</td>
<td>25</td>
<td>27.2</td>
</tr>
<tr>
<td>Above 40</td>
<td>16</td>
<td>17.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>92</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

*Source: Field Data (2022)*

Table 4.2 represents 55.4 Percent has majority of respondents between 20-30 age because majority target were technicians. 27.2 percent were between 30-40 age who were mostly the tutors while above 40 years had few responses at 17.4 percentage simply highlighting principals and other tutors.

4.2.2 Marital Status

Marital status was gauged and the conclusions are in table 4.3

31
Table 4.3 Marital Status

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>30</td>
<td>32.6</td>
</tr>
<tr>
<td>Not Married</td>
<td>52</td>
<td>56.5</td>
</tr>
<tr>
<td>Other(Specify)</td>
<td>10</td>
<td>10.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>92</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Field Data (2022)

Above table 4.3 show the unmarried respondents had highest percentage of 56.5 because some of the target were students. Married respondents were 52 making 32.6 percent. 15 respondents were others making to 10.9 percent.

4.2.3 Education Background

Education was evaluated and the outcomes were represented in the table 4.4

Table 4.4 Education Status

<table>
<thead>
<tr>
<th>Education Status</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>2</td>
<td>2.2</td>
</tr>
<tr>
<td>Secondary</td>
<td>20</td>
<td>21.7</td>
</tr>
<tr>
<td>Tertiary</td>
<td>65</td>
<td>70.7</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>5.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>92</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Field Data (2022)
In Table 4.4 tertiary level of education had more than half of population at 70.7 percent because of TVET populace. Second was secondary with 12 making it 21.7 percent. 5 respondents had other education while primary amounted to 2.2 percent.

### 4.3 Entrepreneurship Skills and Economic Empowerment

The participants were from TVET institution such as Kenya industrial. Rift valley institution of science and Technology, Naivasha Technical, ICS College and KITI represented a number. These partakers said their businesses have had benefits such as better running, notable sales, flexibility to take new changes all from hands on skills from such institutions.

#### Table 4.5: Entrepreneurship Skills Descriptive Statistics

<table>
<thead>
<tr>
<th>Statement</th>
<th>Number</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hands on skills have led to more job creation under entrepreneurship</td>
<td>62</td>
<td>1</td>
<td>5</td>
<td>3.64</td>
<td>1.27</td>
</tr>
<tr>
<td>Hands on skills have enhanced self-reliance among entrepreneurs</td>
<td>62</td>
<td>1</td>
<td>5</td>
<td>3.42</td>
<td>0.95</td>
</tr>
<tr>
<td>Hands on skills have promoted better SMEs</td>
<td>62</td>
<td>1</td>
<td>5</td>
<td>3.45</td>
<td>1.09</td>
</tr>
<tr>
<td>Policies under entrepreneurship</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hands on skills have enhanced entrepreneurial capacities and mindset towards economic growth and development</td>
<td>62</td>
<td>1</td>
<td>5</td>
<td>2.48</td>
<td>0.87</td>
</tr>
<tr>
<td>Hands on skills have promoted businesses start up</td>
<td>62</td>
<td>1</td>
<td>5</td>
<td>2.68</td>
<td>1.01</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>62</td>
<td>1</td>
<td>5</td>
<td>3.13</td>
<td>1.03</td>
</tr>
</tbody>
</table>

*Source: Research Data (2022)*
Table 4.4 average mean score is 3.13 and 1.03 standard deviation implying that most participants agreed on the positive impact of hands kills earned in the institutions to entrepreneurship Skills. Hands on skills have led to more job creation under entrepreneurship was agreed highly by 3.64 mean and 1.27 standard deviation. Secondly, Respondents agreed that hands on skills have promoted better SMEs Policies under entrepreneurship. Also, it was supported that hands on skills have enhanced self-reliance among entrepreneurs by 3.42 means and 1.09. However, hands on skills have not really enhanced entrepreneurial capacities and mindset towards economic growth and development as proved by 2.48 and 0.87 standard deviation.

The judgements of Gibb (2010) are backed up which indicates that entrepreneurship is a discipline and can be learnt following education and training of hands on skills that helps a person’s mind-set, hands on skills, behavior and potential that can be used to build wealth in a broader perspective of contest of economic empowerment especially through job creation. It is noted that education of the hand on skills training leads a pivotal space in the empowerment of future entrepreneur.

4.4 Industrial Skills and Economic Empowerment

Some of the participants evidenced benefits realized through hands on skills in the manufacturing industry while things like enhancement in manufacturing skill, access to financing, faster way to process and overall enhanced living standards.
Table 4.6: Industry Skills Descriptive Statistics

<table>
<thead>
<tr>
<th>Statement</th>
<th>Number</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is improved production due to hands on skills in the manufacturing industry</td>
<td>62</td>
<td>1</td>
<td>5</td>
<td>3.76</td>
<td>0.96</td>
</tr>
<tr>
<td>There is better sustainability of investment as a result of hands on skills in the manufacturing industry</td>
<td>62</td>
<td>1</td>
<td>5</td>
<td>2.93</td>
<td>1.14</td>
</tr>
<tr>
<td>Hands on skills in the manufacturing industry have led to more government support through grants and bonuses</td>
<td>62</td>
<td>1</td>
<td>5</td>
<td>1.81</td>
<td>1.01</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>62</strong></td>
<td><strong>1</strong></td>
<td><strong>5</strong></td>
<td><strong>2.83</strong></td>
<td><strong>1.37</strong></td>
</tr>
</tbody>
</table>

**Source: Research Data (2022)**

Table 4.5 display average of 2.83 and 1.37 correspondingly hence response was slightly below neutral which brings a verdict that hands on skills have had a moderate impact on manufacturing Industrial skills. At least some said that there is improved production due to hands on skills in the manufacturing industry with 3.76 mean and 0.96 standard deviation. Averagely, 2.93 means and 1.14 standard deviation point there is better sustainability of investment as a result of hands on skills in the manufacturing industry. It’s unfortunate, that hands on skills in the manufacturing industry have not led to more government support through grants and bonuses as proved by 1.81 lowest mean and 1.01 standard deviation.

These aftermaths support Kithae et al (2013) suggestions that highly successful individuals have unique hands on skills in a specific area making it possible for them to be noticed among their peers as a skill becomes perfect when it gets practiced over and over and GOK,
2004; GOK, 2005 notes that the government has been facilitating and supporting the acquisition of such skills through TVET programs to enhance productivity hence accelerate the economy.

4.5 Agricultural Innovation Skills and Economic Empowerment

The populace considered presented their view of other benefits associated with hands on skills on economic empowerment under agricultural innovation which included things such as chances for youths to construct livelihoods, creativity was boosted and options of using farming technology like greenhouses.

Table 4.7: Agricultural Innovation Skills Descriptive Statistics

<table>
<thead>
<tr>
<th>Statement</th>
<th>Number</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research and development programs are prompted through agricultural innovation due to hands on skills have Hands on skills have led to more skilled technical experts under agricultural innovation. Hands on skills have stirred up technology investment through agricultural innovation. Hands on skills have supported low cost agricultural equipment</td>
<td>62</td>
<td>1</td>
<td>5</td>
<td>1.96</td>
<td>1.03</td>
</tr>
<tr>
<td>Average</td>
<td>62</td>
<td>1.00</td>
<td>5.00</td>
<td>2.42</td>
<td>1.13</td>
</tr>
</tbody>
</table>

Source: Research Data (2022)
Table 4.7 display 2.24 average mean and 1.13 standard deviation proving close agreements to agriculture innovation measures. Hands on skills have supported low cost agricultural equipment was highly agreed with 3.02 mean and 1.41 standard deviation. Hands on skills have stirred up technology investment through agricultural innovation was second supported by 2.38 mean and 0.96 standard deviation. Respondents said that research and development programs are not prompted through agricultural innovation due to hands on skills have with low 1.96 mean and 1.03 standard deviations.

The results concur with Moyi (2005) opines that Kenya’s investment and output potential is hampered by issues such as expensive agricultural machinery and spare parts. Gichira (2002) states that there is significant gap in technological potential used by African companies as compared with companies in the world is largely because of limited funding. Vision 2030 supported by the Sustainable Development Goals however, emphasizes on skilled economic empowerment through agricultural innovation. Much is still to be realized as Kenya is only 8 years shy from 2030QZ

**4.6 Local Manufacturing Skills and Economic Empowerment**

The challenges associated with local manufacturing skills associated with hands on skills included limited colleges, unemployment, Competitions and low quality products. Also, capital accessibility, counterfeits as well as presence of substitutes are key trials.
Table 4.8 Local Manufacturing Skills Descriptive Statistics

<table>
<thead>
<tr>
<th>Statement</th>
<th>Number</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is more local production due to hands on skills</td>
<td>62</td>
<td>1</td>
<td>5</td>
<td>3.39</td>
<td>1.05</td>
</tr>
<tr>
<td>Hands on skills have promoted local consumption</td>
<td>62</td>
<td>1</td>
<td>5</td>
<td>2.60</td>
<td>0.80</td>
</tr>
<tr>
<td>Hands on skills have led to the reduction of manufactured imports into the country.</td>
<td>62</td>
<td>1</td>
<td>5</td>
<td>2.27</td>
<td>1.10</td>
</tr>
<tr>
<td>Hands on skills have led to an increased demand for skilled labor export.</td>
<td>62</td>
<td>1</td>
<td>5</td>
<td>2.24</td>
<td>0.92</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>62</strong></td>
<td><strong>1</strong></td>
<td><strong>5</strong></td>
<td><strong>2.63</strong></td>
<td><strong>0.97</strong></td>
</tr>
</tbody>
</table>

Source: Research Data (2022)

In table 4.8 Findings indicated that manufacturing import statements were less than moderate level agreed with 2.63 average mean and 0.97 standard deviation. For sure there is more local production due to hands on skills with high 3.39 mean and 1.05 standard deviation. Its slightly not true that hands on skills have promoted local consumption by 2.60 mean and 0.80 standard deviation. Regrettably, hands on skills have not necessarily led to an increased demand for skilled labor export with 2.24 low mean and 0.92 standard deviation.

There is support to Robbins (2003) facts that through his ‘hand on skills reinforced trade (SET) hypothesis’ trading liberation speeds the entry of imported technology that is embodied. The under developed nations adopting to the current hand on skills that use intensive technologies. The graduates are currently employed by first world nations hence leading to an accelerated demand for skilled workforce.
4.7 Economic Empowerment

There are notable benefits realized from hands on skills on economic empowerment. They vary from reduction in crimes and drug intakes, unemployment, poverty levels among others.

Table 4.9: Economic Empowerment Descriptive Statistics

<table>
<thead>
<tr>
<th>Statement</th>
<th>Number</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>There has been improved living standards lead by hands on skills</td>
<td>62</td>
<td>1</td>
<td>5</td>
<td>2.53</td>
<td>0.97</td>
</tr>
<tr>
<td>Hands on skills have promoted high output.</td>
<td>62</td>
<td>1</td>
<td>5</td>
<td>2.55</td>
<td>1.00</td>
</tr>
<tr>
<td>Hands on skills have led to high demand for skilled labor.</td>
<td>62</td>
<td>1</td>
<td>5</td>
<td>3.06</td>
<td>1.32</td>
</tr>
<tr>
<td>Hands on skills have enhanced high returns on skilled investment</td>
<td>62</td>
<td>1</td>
<td>5</td>
<td>2.31</td>
<td>1.20</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>62</td>
<td>1</td>
<td>5</td>
<td><strong>2.61</strong></td>
<td><strong>1.121</strong></td>
</tr>
</tbody>
</table>

Source: Research Data (2022)

Table 4.9 points economic empowerment outcomes proving closeness in views by 2.61 mean average. For sure hands on skills have led to high demand for skilled labor due to high 3.06 mean and 1.32 standard deviation. In second with 2.55 mean and 1.00 standard deviation is a slight disapprove that hands on skills have promoted high output. There have been no major improved living standards lead by hands on skills has specified by 2.53 means and 0.97 standard deviation. At very low impacts of 2.31 mean and 1.20 standard deviation has hands on skills have enhanced high returns on skilled investment.
4.5 Inferential Statistics

Inferential statistics provides variables connect ability. Below are the output for the regression analysis, with significant importance on the $R^2$

4.5.1 Regression Analysis

Data from technical and vocational training in Nakuru county, Kenya were regressed on the basis of effects on economic empowerment. The aim was to analyze the magnitude of manufacturing skills, agricultural innovation skills, industrial skills and entrepreneurship skills acquired in TVET on the economic empowerment.
Table 4.10 Regression Model Summary

<table>
<thead>
<tr>
<th>Model Summary</th>
<th>Adjusted R</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.810a</td>
<td>.315</td>
</tr>
<tr>
<td></td>
<td>.657</td>
<td>.633</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Manufacturing Skills, Agriculture innovation Skills, Industrial Skills, Entrepreneurship Skills

Source: Field Data (2022)

Table 4.10 show multiple determinations coefficient of 0.63 linking that the four independent variables tested that is; manufacturing skills, agriculture innovation skills, industrial skills and entrepreneurship skills jointly explained 63 percent of differences in economic empowerment for the case of TVET in Nakuru county. The model is therefore significant and is applicable for advanced inferential statistics. The R square yielded 0.657. This value showed that economic empowerment considered in this study has significance variance in independent variables tested.

4.5.2: ANOVA

The ANOVA results focused to view regression model fitness observations.

Table 4.11 display of the ANOVA results
Table 4.11: ANOVA Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>10.807</td>
<td>4</td>
<td>2.702</td>
<td>27.247</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>5.652</td>
<td>58</td>
<td>0.099</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>16.460</td>
<td>62</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A. Dependent Variable: Economic Empowerment
B. Predictors: (Constant), Manufacturing Skills, Agriculture Innovation Skills, Industrial Skills, Entrepreneurship Skills

Source: Field Data (2022)

The ANOVA outputs show regression model fitted the observed data at $F(4,58) = 27.247$ Probability value was 0.000 hence below the adopted edge of 0.05. This made inference that ANOVA model was better match for the data. It was vital hence asserting that hand on skills in industrial, entrepreneurship and agricultural innovation significantly lead to economic empowerment of the skilled personnel in Nakuru county. Reliably the regression model is applicable in inferring the value of economic empowerment under known parameters.

4.5.3 Coefficients

Table 4.12 indicate that independent and dependent variables has relationship and that economic is empowered by manufacturing, agriculture innovation, and industrial and entrepreneurship skills gained in TVET.
Table 4.12: Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(constant)</td>
<td>2.309</td>
<td>.321</td>
<td>1.964</td>
<td>.001</td>
</tr>
<tr>
<td>Entrepreneurship skills</td>
<td>.021</td>
<td>.059</td>
<td>.029</td>
<td>.349</td>
</tr>
<tr>
<td>Industrial skills</td>
<td>.025</td>
<td>.059</td>
<td>.035</td>
<td>1.424</td>
</tr>
<tr>
<td>Agriculture innovation skills</td>
<td>.130</td>
<td>.051</td>
<td>.201</td>
<td>2.535</td>
</tr>
<tr>
<td>Manufacturing skills</td>
<td>.776</td>
<td>.083</td>
<td>.756</td>
<td>3.386</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Economic Empowerment

When the four skills gained from TVET applied in this study including entrepreneurship, Industrial, agriculture innovation and manufacturing skills are all held at zero constant, economic empowered would be at 2.309.

The model thus becomes

**Economic Empowerment = 2.309 + 0.021 Entrepreneurship skills + 0.025 Industrial skills + 0.130 Agriculture innovation skills + c Manufacturing skills**

### 4.5.4 Specific Objective One: Entrepreneurship skills

The researcher viewed entrepreneurship hands on skills gained in Nakuru TVET effect on economic empowerment. Table 4.12 depicted that entrepreneurship hands on skills is significant at β=0.029, t=0.349, p=0. 000. From this, an increase in one unit of entrepreneurship skills empowers economic to 0.021. The p value was 0.000 hence P < 0.05 level of significance.
The outputs agreed with Henry et al, (2003) that education of the hand on skills training leads a pivotal space in the empowerment of future entrepreneurs. Hands on skills impaction leads to developing capabilities of working personnel to promote their businesses successfully. Also, Gibb (2010) argument that entrepreneurship is a discipline and can be learnt following education and training of hands on skills that helps a person’s mind-set, hands on skills, behavior and potential that can be used to build wealth in a broader perspective of contest of economic empowerment especially through job creation is backed up.

4.5.5 Specific Objective Two: Industrial skills

Study on effect of industrial skills gained in Nakuru TVET on economic empowerment was the priority. Table 4.12 depicted that industrial skills is significant at $\beta=0.035, t=1.424, p=0.0000$. Notably one unit of industrial skills empowers economic to 0.025. The p value was 0.000 hence $P < 0.05$ level of significance.

Thereorefore , Kithae et al (2013) is supported who highly said that successful individuals have unique hands on skills in a specific area making and this enables them to be noticed among their peers as a skill becomes perfect when it gets practiced over and over and GOK, 2004; GOK, 2005 notes that the government has been facilitating and supporting the acquisition of such skills through TVET programs to enhance productivity hence accelerate the economy. Corpeno, 2018 indicates that after the 2007 investment of wooden low-cost greenhouses in Central America thanks to hands on skills, the farmers could comfortably access the markets where they could directly sell their farm produce with a reduction of
post-harvest loses and in some cases sold a kilogram of tomato for an aggregate and this is in line with the findings here.

**4.5.6 Specific Objective Three: Agriculture innovation skills**

The Focus was on how agriculture innovation skills gained in Nakuru TVET lead to economic empowerment. Table 4.12 highlight that agriculture innovation skills is significant at $\beta=0.201$, $t=2.535$, $p=0.0001$. Conclusions is that agriculture innovation single unit enables economy to push to 0.130. The p value was 0.001 hence $P < 0.05$ the level of significance.

Gichira (2002) states that there is significant gap in technological potential used by African companies as compared with companies in the world is largely because of limited funding. Vision 2030 supported by the Sustainable Development Goals however, emphasizes on skilled economic empowerment through agricultural innovation. Much is still to be realized as Kenya is only 8 years shy from 2030. Hence the findings anchor these prepositions. Also, Moyi (2005) outputsthat Kenya’s investment and output potential is hampered by issues such as expensive agricultural machinery and spare part is correct.

**4.5.7 Specific Objective Four: Manufacturing Skills**

The interest was in finding out the effect of local manufacturing skills on economic empowerment in Nakuru County. Table 4.12 highlight that local manufacturing skills is significant at $\beta=0.756$, $t=3.386$, $p=0.0000$. Local manufacturing skills single unit enables
economy to move upwards to 0.776. The p value was 0.000 hence P < 0.05 the level of significance.

Robbins (2003) s Suggestions are provided backing up that through his ‘hand on skills reinforced trade (SET) hypothesis’ trading liberation speeds the entry of imported technology that is embodied. The under developed nations adopting to the current hand on skills that use intensive technologies. Also, Wolff (2006) firms with increasing fast technological growth attracts job seekers with greater capability of learning findings are in agreement.

4.6 Qualitative Data Analysis

The interview guides for key informants such as tutors and principals and out of 9 principals and 25 tutors 7 and 23 responded respectively as indicated in table 4.1

The period of tutoring ranged between 3 years to 25 years in such institution hence some tutors had more TVET programs in various specialization. This raised a concern that some instructors teach in some areas they are not specialists due to strained tutors. internal or external financing or grants was nonexistence in most TVETS and those lucky get very little programs sponsorships. Tutors own vies of economic empowerment through entrepreneurial skills was commendable. Also unison agreement was that skills like industrial, entrepreneurship and local manufacturing are inculcated.

Principals on the other side had quite experience of between 5yeras to 37 years heading TVET institution. The highlighted competitive advantages involved high number of
learners, accessibility of institutions among others. While selecting suitable employees, principals said they aim at appropriate skills with between 2 years to 3 years alongside exposure and personal qualities like communication and classroom management ability. Notably such institutions offer opportunities for placements of grandaunts who are eventually posted for trainees and also as tutors. Highlighted was that TVET trainees are in what ways can TVET institutions offering hands on skills improve to better meet the needs of the market. The technological level of TVET hands on skills graduates is limited to those who do such programs only since technicians have different abilities at their entrant levels.
CHAPTER FIVE: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

The chapter addresses discoveries, the research summary, suppositions and endorsements of economic empowerment in Nakuru county as a result of hands on skills gained in TVET

5.2 Summary

The four objectives were manufacturing, agriculture innovation, industrial and entrepreneurship Skills and their effect on economic empowerment in Nakuru County.

First aim was to explore the effect entrepreneurial skills on economic empowerment in Nakuru County and the upshots were that Hands on skills have led to more job creation under entrepreneurship and that hands on skills have promoted better SMEs Policies under entrepreneurship. Also, it was supported that hands on skills have enhanced self-reliance among entrepreneurs. However, hands on skills have not really enhanced entrepreneurial capacities and mindset towards economic growth and development.

Second outcomes on evaluating the effect of industrial skills on economic empowerment in Nakuru County were slightly below neutral which brings a verdict that hands on skills have had a moderate impact on manufacturing Industrial skills. At least some said that there is improved production due to hands on skills in the manufacturing industry. Averagely, there was better sustainability of investment as a result of hands on skills in the manufacturing industry. It’s unfortunate, that hands on skills in the manufacturing industry have not led to more government support through grants and bonuses as proved
Third aim of assessing the effect of innovative agricultural skills on economic empowerment in Nakuru County has outputs like hands on skills have supported low cost agricultural equipment highly. Hands on skills have stirred up technology investment through agricultural innovation was and respondents said that research and development programs are not prompted through agricultural innovation due to hands on skills.

Last was to find out the effect of local manufacturing skills on economic empowerment in Nakuru County had aftermaths like manufacturing import statements were less than moderate level agreed. For sure there is more local production due to hands on skills. Its slightly not true that hands on skills have promoted local consumption. Regrettably, hands on skills have not necessarily led to an increased demand for skilled labor export.

5.3 Conclusions

Entrepreneurial skills were acknowledged to affect economic empowerment in Nakuru County in ways like hands on skills have led to more job creation under entrepreneurship have promoted better SMEs Policies enhancing self-reliance among entrepreneurs. Also, Industrial skills gained from TVET affect economic empowerment since manufacturing skills lead to improved production.

Hands on skills in the manufacturing industry have not led to more as proved. Hands on skills have supported low cost agricultural equipment highly, stirred up technology investment through agricultural innovation but research and development programs are not prompted through agricultural innovation. For sure there is more local production due to hands on skills. Its slightly not true that hands on skills have promoted local consumption.
Regrettably, hands on skills have not necessarily led to an increased demand for skilled labor export.

5.4. Recommendations for Policy Practice

TVET institutions should strive to inculcate more skills to the technicians rightly because such skills have been found to impact the economic absolutely. More job creation should be fostered under entrepreneurship skills gained. Campaigns on promoting local consumption are crucial.

Such institutions should create an ecosystem to increase demand for skilled labor export. Industrial skills gained from TVET to be utilized for economic empowerment to lead to improved production. The TVET should aid technology investment through agricultural innovation research and development programs. It’s imperative that government support through grants and bonuses.

5.5 Recommendations for Further Study

TVET skills instilled in all technicians are crucial for economic empowered globally. This study focused on Nakuru county hence comparable studies in other counties could be carried. Researchers can as well research in countries

The study only considered the four determinants manufacturing skills, agriculture innovation skills, industrial skills, entrepreneurship skills. Other researchers should focus to discover other determinants that affect economic empowerment.
REFERENCES


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KNBS and Maphill (2020). Nakuru County Map.


APPENDiCES

APPENDIX I: INTRODUCTORY LETTER

RE: REQUEST TO FILL IN THE QUESTIONNAIRE

I am Manasess Ciuri, a Masters’ degree student in Public Policy and Administration at Kenyatta University conducting a study on: EFFECT OF HANDS ON SKILLS ON ECONOMIC EMPOWERMENT IN TECHNICAL AND VOCATIONAL EDUCATION TRAINING IN NAKURU COUNTY, KENYA.

Kindly assist in filling the questionnaire as honestly as possible. The information provided shall be confidential and strictly enrich the study. The findings of the study shall in future assist improve service delivery in public and private medical institutions.

Yours sincerely,

____________________

Manasess Ciuri
APPENDIX II: GRADUATES’ (TECHNICIANS) QUESTIONNAIRE

Instructions: Kindly write your honest response or mark with (X) on the spaces provided.

Section One: Background Information (Kindly check (X) where necessary).

1. How old are you?

15-17 Yrs [ ]  18-20 Yrs [ ]  Above 21 Yrs [ ]

2. Mark your Gender

Male [ ]  Female [ ]  other (specify) ____________

What is your;

3. Marital Status?

Married [ ]  Not Married [ ]  Other (specify) ____________

4. Level of education?

Primary School [ ]  Secondary School [ ]  Tertiary [ ]  Other (specify) ____________

5. Where do you live? Please indicate. ______________________________

6. Type of work involved: Employed( ) Self-employed ( ) Unemployed( )

7. Which hands on skill did you prefer?

(i) Tailoring ( )  (ii) Plumbing ( )  (iii) Electrical ( )  (iv) Mechanics ( )
8. Do you have any other source of income beside your current one?  Yes [ ] No [ ]

If Yes, is it based in Nakuru? ________________________________

9. What your experience on this trade (hands on skills)?

Less than 1Yr [ ] 2-3 Yrs. [ ] More than 4Yrs [ ]

10. What is your average earning per month from your trade?

Less than sh. 10,000 [ ] sh.11,000- sh.19,000 [ ] More than sh.21,000 [ ]

Section Two: Entrepreneurship Skills and Economic Empowerment

11. Which TVET institution were you in?

______________________________

Mark the level you ascribe with the assertion below on the scale of 1-5. 1.Strongly Disagree(SD), 2.Disagree(D), 3.Not Sure(NS), 4.Agree(A), 5.Strongly Agree(SA)

<table>
<thead>
<tr>
<th>Hands on skills have led to more job creation under entrepreneurship</th>
<th>SD</th>
<th>D</th>
<th>NS</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
</table>
Hands on skills have enhanced self-reliance among entrepreneurs
Hands on skills have promoted better SMEs Policies under entrepreneurship
Hands on skills have enhanced entrepreneurial capacities and mindset towards economic growth and development.
Hands on skills have promoted businesses start up.

12. What other benefits have you realized through hands on skills in your business?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Section Three: Industrial Skills and Economic Empowerment

Indicate the level you ascribe with the assertion below on the scale of 1-5. 1.Strongly Disagree(SD), 2.Disagree(D), 3.Not Sure(NS), 4.Agree(A), 5.Strongly Agree(SA)

| (a) There is improved production due to ands on skills in the manufacturing industry | SD | D | NS | A | SA |
| (b) There is better sustainability of investment as a result of hands on skills in the manufacturing industry |
| (c) Hands on skills in the manufacturing industry have led to more government support through grants and bonuses. |

13. What other benefits have you realized through hands on skills in the industrial?

________________________________________________________________________
Section Four: Agricultural Innovation Skills and Economic Empowerment

Mark to what level you support the assertion below on the scale of 1-5. 1.Strongly Disagree(SD), 2.Disagree(D), 3.Not Sure(NS), 4.Agree(A), 5.Strongly Agree(SA)

<table>
<thead>
<tr>
<th></th>
<th>SD</th>
<th>D</th>
<th>NS</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research and development programs are prompted through agricultural innovation due to hands on skills have</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hands on skills have led to more skilled technical experts under agricultural innovation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hands on skills have stirred up technology investment through agricultural innovation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hands on skills have supported low cost agricultural equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14. Kindly indicate other benefits associated with hands on skills on economic empowerment under agricultural innovation.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

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61
Section Five: Local Manufacturing Skills and Economic Empowerment

Mark to what level you ascribe with the stated opinion below on the scale of 1-5. 1. Strongly Disagree (SD), 2. Disagree (D), 3. Not Sure (NS), 4. Agree (A), 5. Strongly Agree (SA)

| There is more local production due to hands on skills have led to more |
| Hands on skills have promoted local consumption. |
| Hands on skills have led to the reduction of manufactured imports into the country. |
| Hands on skills have led to an increased demand for skilled labour export. |

15. List other challenges associated with manufactured imports associated with hands on skills.

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

Section Six: Economic Empowerment

Tick to what level you support the statements below on the range of 1-5. 1. Strongly Disagree (SD), 2. Disagree (D), 3. Not Sure (NS), 4. Agree (A), 5. Strongly Agree (SA)

| There has been improved living standards lead by hands on skills have led to |
| SD | D | NS | A | SA |

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Hands on skills have promoted high output.

Hands on skills have led to high demand for skilled labour.

Hands on skills have enhanced high returns on skilled investment.

16. Kindly list any benefits realized from hands on skills on economic empowerment.

______________________________________________

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APPENDIX III: REPRESENTATIVE/ INSTITUTIONS TUTORS’ INTERVIEW

GUIDE

1. Describe your experience in this institution?

2. Since your tenure, which TVET programs do students prefer to specialize? Is there justification of their choice?

3. Do you have well trained TVET instructors and if so how many in each of Q (2) programs?

4. Do you receive local or global financing/ grants for the programs? State the amount in Kshs. Which specific organization sponsors locally and globally?

5. How have hands on skills affected economic empowerment through;

   i. Entrepreneurial skills?

   ii. Industrial skills?

   iii. Innovative Agricultural skills?

   iv. Local Manufacturing skills?
APPENDIX IV: PRINCIPALS’ INTERVIEW GUIDE

1. How long have you headed this institution?

2. In what area is your institution competitive? Kindly state it.

3. How many officers work under you?

4. When selecting suitable employees, what level of qualification do you search for?

5. Do you offer internship for graduates of hands on skills?

6. In what area of specialization has your business/industry employed a qualified TVET job seeker?

7. According to your experience, are hands on skills TVET trainees relevant to industrial needs? And if yes how so? If no please elaborate.

8. What difficulties have you encountered with hands on skills TVET graduates working for you?

9. What benefit do you think hands on skills learnt in TVET institutions are to the needs of employers?

10. In what ways can TVET institutions offering hands on skills meet industrial needs?

11. How would you rate the technological level of TVET hands on skills graduates who join this institution?

12. What is the number in years of experience do you prefer for job seekers of hands
on skills from TVET? (i) 0 years ( ) (ii) 1 year ( ) (iii) 2 years ( ) (iv) 3 years ( )
(v) 4 years ( ) (vi) 5 years ( ) (vii) more than 5 years ( )

7. Which hands on skill did you prefer?
(i) Tailoring ( ) (ii) plumbing ( ) (iii) electrical ( ) (iv) mechanic ( )
(v) ICT ( ) (vi) Masonry ( ) (vii) Painting ( )

ii. others (specify) ....................

8. How did this course benefit the industry? (Please state)

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

........

9. Did you receive a well skilled employee in this course?

(i) Yes ( ) (ii) No ( )

10. In your own opinion, what influences your decision on selection of suitable employee(s) for your industry/business?
APPENDIX V: NAKURU COUNTY MAP: KNBS & MAPHILL, 2010

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<th>Item</th>
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<td>Stationary</td>
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<tr>
<td>Data</td>
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<tr>
<td>Airtime</td>
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<td>Typesetting and Binding</td>
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<tr>
<td>Miscellaneous</td>
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<td><strong>Total Expenditure</strong></td>
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### APPENDIX VII: RESEARCH PERIOD (2021/2022)

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<th>JUNE-JULY 2021/2022</th>
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<tbody>
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