OPTIMIZATION OF BUSINESS OPPORTUNITIES AS PREDICTOR OF GROWTH OF METAL FABRICATION MICROENTERPRISES IN KISII COUNTY: THE MODERATING ROLE OF OWNER'S LEVEL OF EDUCATION

By

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A Thesis Submitted in the School of Business and Economics in Partial Fulfillment for the Award of the Degree

of

DOCTOR OF PHILOSOPHY IN BUSINESS ADMINISTRATION

Department of Management and Economics

SCHOOL OF BUSINESS AND ECONOMICS

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DECLARATION

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DEDICATION

This thesis is dedicated to my entire family for their continued prayers

ACKNOWLEDGEMENTS

First of all my gratitude goes to our Almighty God for the gift of life and abundant blessings. I would like to acknowledge the enormous support and guidance from the School of Business and Economics of Jaramogi Oginga University of Science and Technology. I also extend great thanks to my able Supervisors, Dr. Caroline Sitienei Koech and Dr. Michael Nyagol whose instruction, coaching and mentoring made the research a success. Their suggestions, insights and constructive criticisms provided the necessary direction and motivation toward completion of the thesis. I do appreciate my research assistants and all the respondents who participated in this study without whom the study would be incomplete. I do also extend gratitude to all my colleagues who helped proof read the text and give moral support. I am deeply indebted to my family who offered me great support, encouragement and prayers throughout my studies. My profound gratitude goes to my wife, parents and children for their unfailing love, prayers and selfless support. I also acknowledge JOOUST for giving me opportunity to pursue the degree. I may not mention all of you, but I just wish to say thank you for the support.

ABSTRACT

Reports by The Kenya National Bureau of Statistics indicate that despite the metal fabrication sector making 12% of the small manufacturers in Kenya and contributing 10% to GDP the sector face growth challenges leading to over 70% failure within the first three years. This study sought to analyse the optimization of business opportunities for growth of metal fabrication MEs in Kisii County as moderated by owner level of education. Specifically, this study sought to examine the influence of business opportunities in finance, marketing, technology and government regulatory framework in the growth of metal fabrication MEs. This study is anchored in Senge's Learning Organization model which states that organizations can recognize and take advantage of opportunities in their business environment for competitiveness and growth. This is supported by Enterprise Life-cycle model, Porter's Generic Strategies and SWOT Analysis. Guided by positivistic approach together with a longitudinal survey, a mixed design involving quantitative and qualitative designs was used to obtain information from 255 Metal fabrication MEs in Kisii County. Purposive stratified sampling was used to classify these firms into five subsectors: wielding, motor vehicle panel beating, auto and industrial spare parts, key cutting and padlocks, and blacksmith adding to 155 metal fabrication MEs in Kisii, Ogembo and Suneka towns. A self-administered questionnaire and interview were used to collect data from 115 respondents who were the metal fabrication MEs owners/ managers and chairman of the Jua Kali Sacco respectively. A pilot study was done in Nyamache Town in Kisii County. Reliability and validity tests were done to ensure that the instruments were appropriate and measured the required data. Data was analyzed using SPSS and descriptive statistics such mean scores, variances, standard deviation and inferential statistics namely; correlation and regression were used to present and analyse the data. Bivariate correlations and regression results were also used to test the hypotheses. Moderated regression analysis was used to establish the moderating effect of owner level of education on the relationship between optimization of business opportunities and the growth of the MEs. The results showed that optimization of business opportunities is a significant predictor of the growth of the metal fabrication MEs. The findings also showed that owner level of education is a significant moderator of the relationship between optimization of business opportunities and growth of metal fabrication MEs. Specifically, all the four business opportunities (financial, technology, marketing and government regulatory policies) tested in this study were found to be significant and of positive influence on the growth of metal fabrication MEs. The study also noted that age, level of education and experience of owner/ managers of the MEs significantly influenced the relationship between optimization of business opportunities and growth of metal fabrication MEs. In the practice, this study recommends that MEs invest in information technology for updated information and developments in their trade, build a strong asset portfolio to meet the collateral requirements, register their businesses to improve their credit worthiness, partner through SACCOs to enhance bargaining power, exchange and bench marking ideas and knowledge for technological and innovation excellence, and spur horizontal integration for growth. On methodology, the study recommends further studies featuring multiple moderating variables and growth of metal fabrication MEs in other counties. On policy, the study recommends that the Kenyan government develop a policy framework that focuses on financial, technological needs and improvements; market and capacity building to enable the metal fabrication MEs grow and transit from informal to formal enterprises.

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LIST OF ACRONYMS AND ABBREVIATIONS

AGOA – African Growth and Opportunity Act

EU- European Union

GDP –Gross Domestic Product

GoK –Republic of Kenya

ICPAK – Institute of Certified Public Accountants of Kenya

IT –Information Technology

KNBS – Kenya National Bureau of Statistics

MEs – Microenterprises

MSEA –Micro and Small Enterprises Authority

MSMEs – Micro. Small and Medium Enterprises

SMEs -Small and Medium Enterprises

USA– United States of America

OPERATIONAL DEFINITION OF WORDS USED IN THE STUDY

Business Opportunity - A condition which avails new technologies, processes, materials and markets through new relationships (Eckhardt & Shane, 2003).

Growth - Absolute or relative changes in sales, assets, employment, productivity, profits and profit margins (Yeboah, 2015).

Jua Kali -Derived from the words jua (sun) and kali (strong) refers to small businesses operating in the open under the hot sun

Metal fabrication -Design and construction of structures/ items with the use of metal (Oroko, 2010)

Microenterprise (MEs) -Very small, owner or family managed businesses offering basic goods and services with an annual turnover not exceeding Ksh.500000 and employing less than 10 people (SMEs Act, 2012)

Moderator -Variable, commonly denoted as just M, a third variable that affects the strength of the relationship between a dependent (x) and independent (Y) variable

Optimization -Enhancing value/ return from an investment

Predictor -Denoted as an independent variable is a variable that can be used to predict the value of an outcome or another valuable (dependent variable)

CHAPTER ONE

INTRODUCTION

1.0 Background to the Study

1.0.1 Conceptual Background

Growth is second most significant goal of an enterprise, the most significant being survival. Failure to focus on growth is the reason why microenterprises decline and eventually go extinct. Focus on growth involves many factors, significant among them being optimization of opportunities for growth. Optimization of opportunities enables firms to most efficiently take advantage of available conditions or possibilities for growth. The opportunities when leveraged turn into predictor of growth. Few studies have been done (Saulo, 2016; Bouzzal and Adaba, 2015; Ismail and Karlsson, 2013; Obi, 2011; Hermsen, 2010; Afande, 2005) regarding opportunities for growth of microenterprises. Studies which have been done (Saulo, 2016; Hermsen, 2010) on opportunities for growth of metal fabrication microenterprises have concentrated in the city of Nairobi. The business opportunities available for enterprise growth are finance, marketing, technology, government regulatory framework, human capital, infrastructure, partnerships and natural resources among others, This study has focused on the most ubiquitous business opportunities that is finance, marketing, technology and government regulatory framework as a predictor for growth of Jua Kali metal fabrication MEs. This study therefore aims at analysing the optimization of opportunities in finance, marketing, technology and government regulatory framework for the growth of Jua Kali metal fabrication microenterprises in Kisii County.

1.0.2 Contextual Background

Understanding the growth dynamics of microenterprises (MEs) is gaining significance in the academic and commercial worlds due to their critical contribution to economic growth and poverty reduction (Liedholm and Mead, 2013). The Micro and Small Enterprise Bill of Kenya (2012) defines a microenterprise (ME) as a business with a yearly turnover of less than Ksh.500000 and/or less than ten employees. They are usually one person owned enterprise and are characterized by flexibility in operation, quick in adapting to dynamic business environment and exploiting indigenous raw materials. They also have localized operations with lesser gestation period (Kihonge, 2014). The preference for MEs is due to various features such as independence, less capital input, easy to start and assurance of profits Other advantages of MEs include the easy to start, use of local resources and skill and creation of employment opportunities (Joju et.al, 2015).

The debates on microenterprise growth and their contribution to economies have gained momentum, especially in developing countries where the informal sector plays pivotal role in the local economies. This is because worldwide, microenterprises are recognized as engines of growth and development as well as source of employment and income (Felsenstein, 1996). In developing economies SMEs create more formal job opportunities of around 7 out 10 jobs (World Bank, 2020). Despite the pivotal role of microenterprises in development, their growth has been irregular, given that majority of them fail to graduate into formal businesses (Kahando & Kyalo, 2014). Growth of microenterprises is not linear. Microenterprises can adapt and grow or fail. Microenterprises start, live and die small with only one out of three living to see third

year. Microenterprises grow horizontally as opposed to vertical growth, denying growth in innovation and differentiation. This trend however differs from region to region across the world.

Growth of MEs can be measured by increment in employment and revenue (Bigsten and Gebreeyesus 2007), and profit growth (Robb and Fairlie 2009). MEs are the smallest enterprises in terms of size (investment, employment, and total assets) but have the flexibility of easy start and exit. However, for robust growth of microenterprises, the right business opportunities need be identified and optimized. Microenterprises' growth requires congenial and healthy environment. This is enhanced by the fact that establishing MEs requires minimal funds and formalities. The significance of microenterprises lies in them being breeding ground for medium and large enterprises. Microenterprises' potential for innovation puts them in a significant position to engineer technological breakthrough to spur economic growth. Growth, an important variable in a microenterprise life cycle is measured in sales, profits and equity, and number of workers (Kahando & Kyalo, 2014).

Research has shown strong relationship between optimization of profitable business opportunities and growth of businesses. Shane (2000) illustrates how firms maximize market opportunities to solve customer problems. Oroko (2010) affirms strong correlation between financial opportunities and growth of metal manufacturing microenterprises in Kenya. In the reverse microenterprises which fail to exploit financial and marketing opportunities may stagnate or face extinction (Muiruri, 2014). In the same note, lack of financial management skills inhibits the effort of MEs to raise capital. Tushabonwe-Kazooba (2006) and Van Stel and Storey (2004) cite poor business management and accounting skills, limited finance and market research as the main contributors in business stagnation. The common observation is that sustainable growth of microenterprises in most economies is lacking (Wiggins and Ruefli, 2005; Ambrosini and

Bowman, 2009). Ignorance or lack of opportunities in education, skills, training and experience, limited financing, lack of market information, poor infrastructure, and unfriendly legal and regulatory environment have greatly contributed to the stagnation of microenterprise (Bokea, Dondo and Mutiso, 1999).

The irregular growth of MEs replicates across the world among developed and developing countries. Haynes (2017) study on strategies for successful MEs in USA shows that 70% of MEs failed after 2 years compared to 50% of SMEs (Small and Medium Enterprises) which survived beyond the first 5 years. However in the United States the MEs account for only 15 percent of all employment compared to 31 percent in the European Union (EU). Studies indicate above average graduation of microenterprises to small, medium and large enterprises in Europe, USA and Asia. They are UK (60%), Asia (50%) and Latin America (60%) (Gudda, 2003).

Significantly MEs have a major role in economies of developing countries like Mexico where they account for 95.4% of all firms in Mexico, employing 39.8% of the country's economically active population. However, the MEs in Mexico are typically non-exporting firms that operate informally and are concentrated in the lowest tiers of profitability, capital stock, wage spending, and innovative activities. The fact that the Mexican MEs account for 9.8% of GDP (Garcia, 2017) is prove enough that they not robust and competitive.

Abdhulla, Moten and Azam (2016) study on performance of Malaysian microenterprises indicated growth being accelerated by opportunities in finance and marketing. A conducive atmosphere for MEs growth thrives through recognition and optimization of opportunities in the business environment. Being an integral component of industrial development and income generation, SMEs were projected to contribute about 41 percent Malaysia’s GDP by 2020

(Department of Statistics, Malaysia, 2013). The government of Malaysia recognition of SMEs as vital pathway toward achieving the country's vision 2020 triggered leverage of opportunities in the export market (Business News 2014).

Harding, Soderbom, and Teal's (2004) research on 223 MSEs in Nepal found that metallic manufacturing grows faster than sectors like food manufacturing. In Bhutan, the cottage and small manufacturing industries are good examples of MSEs that have a high growth rate (Wangyal, 2005). Remarkable growth rate of manufacturing MEs is also evident in the newly industrialised economies of South East Asia.

In Africa the significance of SMEs is in their contribution of 80 percent of jobs and emergence of a new middle class as well as stimulating demand for middle class (Adeyeye, 2016). Compared to other regions of the world performance of MEs in Sub-Saharan Africa is below average. This is evident in Nigeria at 43%, Rwanda 10.75% and Botswana 20.7% (Gudda, 2003). The scenario is replicated in Kenya, Swaziland, Malawi and Zimbabwe where only 1% of the MEs graduated from category of 1 to 4 workers to that of more than 10 workers (Mead, 1994). About 75% of MEs never add workers after start-up, or they reduce employment. Less than 3% grow by four or more employees and only 1% of microenterprises graduate to become small enterprises (UNDP, 2012). In developing economies like Kenya the fatality rate of microenterprises is also high with most of them never surviving to see the second year (Bowen, Morara and Mureithi, 2009). This prevails despite the fact that in developing countries like Kenya microenterprises present significant untapped potential for economic inclusion (Tyson, 2016).

In Ethiopia, growth of SMEs has been a great preoccupation of the government. Several strategies and development plans have been formulated in order to stimulate the growth of SMEs to generate income and jobs. However the growth SMEs has been at a slow rate than anticipated. This has been attributed to lacks of opportunities in finance and marketing for SMEs in Ethiopia (Ethiopian Economic Association (EAA), 2015; Getahum, 2016).

The Namibian economy has witnessed a high rate of small scale enterprises in the last two decades with the sector contributing enormously to employment creation and GDP while helping the government achieve vision 2030 agenda. Despite the favourable outlook of the sector the SMEs in the country collapse at young age; probably within twelve months of their existence. The failure rate of SMEs in the country is 75 percent (Ogbokor, 2012). With the family and friends the main sources of finance the SMEs sector continues to face constrained finance (Bank of Namibia, 2010; Stork, 2010).

Rwanda presents a case of developing country where microenterprise growth and competitiveness has experienced remarkable transformation. In Rwanda, 97.7% of the private sector is made of small and microenterprises which account for 36% of private sector employment (Laetitia, Shukla and Luvunda, 2015). There are over 72,000 MSMEs (Micro, Small and Medium Enterprises) operating in Rwanda. Just like those in other developing countries, opportunities for growth of microenterprises in Rwanda is constrained by several challenges, among them limited innovation and competitiveness, lack of quality business development services, high costs, poor policies, inadequate access to market information and limited capacity in human capital (Laetitia, Shukla and Luvunda, 2015).

Kenya's informal economy is significant with enormous contribution toward job creation, given that it employs over 14 million Kenyans (GoK, 2016) creating 747,300 jobs that is 90% of the 832,900 jobs created in the year. The value of SME output was estimated to be 33.8 percent of GDP by 2015, a remarkable increment from 13 percent recorded in 1993, contributing Ksh.173 billion (10%) of a GDP of Ksh.1.6 trillion (MSMEs Survey, 2016). This compares unfavourably with other developing economies like Peru where contribution of the informal sector to GDP stood at 75.9% (Francisco, 2004; Tarmidi, 2005). Micro and small enterprises are also a key factor in entrepreneurship, technological innovations and poverty reduction through affordable pricing, accessible services, enhanced income and employment (Kinuthia, 2020).

The KNBS report (2016) shows that 12% of the small manufacturers are in metal fabrication product making it the leading informal manufacturing subsector, contributing 0.03% to Gross Domestic Product. Sheet metal fabrication is the most dominant metal fabrication sector producing a range of products namely, metal boxes, tanks, car bodies, gutters, kitchenware and simple appliances. The subsector is an informal process relying on locally produced hand operated tools. The other metal fabrication activity is wielding which involves cutting, bending and joining metal to produce doors, windows, gates and grills.

A survey by Kenya National Bureau of Statistics of 2017 shows that about 2.2 million SMEs have shut down in the last five years leaving the sector with about 7.8 million enterprises. There are around 400,000 micro, small, and medium firms in the country that have not yet reached their second birthday, the reasons being shortage of working capital, declining income, operational losses and diversion of returns The fact that few MEs make it to their fifth birthday has raised concern about the long-term viability of this sector.

Empirical studies in Kenya (Odongo and Wang, 2016; Kahando and Kyalo, 2014; Wanjohi and Mugure, 2012) have documented challenges facing growth of MEs, among them restricted levels and inappropriate technology, inadequate institutional capacity, rapid changes in technologies and innovation, limited market opportunities., non-orientation toward profit maximization, poor infrastructure, sub-standard products, and lack of access to credit, limited savings, unfriendly governmental regulations, corruption, economic uncertainty, and poor quality raw materials.

The microenterprise economy is significant in Kisii County given scarcity of land, unemployment and poverty. With a population of 1,266,860 persons Kisii County is one the most densely populated (958 persons/sq.km as in 2019) counties in Kenya (GoK, 2020). Prevalence of poverty in the county stands at 51% (eight points higher than national, 43%) and unemployment rate at 61% (Kisii County Strategic Plan, 2013-2018). The importance of micro-enterprise sector lies in job and wealth creation. Abisi (2018) study on women owned MEs in Kisii showed majority of the respondents (80.8%) cite finance inaccessibility a significant issue in the MEs growth. The MEs also indicated that lack of registration certificate/ licenses (89.8%) and collateral (98.7%) affected the growth of their micro enterprises. Mokua (2012) study of 560 registered MSEs in Kisii Town indicated 55% had inadequate funds with 27% stagnating financially.

The major hubs for Jua kali metal enterprises in Kisii County are the townships of Kisii, Ogembo and Suneka. The informal sites have become congested leading to competition for space between metal fabricators, garages and small scale traders. Coupled with poor planning and architecture, the structures are susceptible to frequent fire outbreaks. Given that land is scarce in Kisii County, many Jua Kali metal works have been forced to establish in informal sites in the townships.

A report by Deloitte (2016) indicated that SMEs growth in Kenya has faced numerous challenges. Despite the challenges, the metal fabrication sector in Kisii County is a major source of several products: door and window grills, boxes, hammers, jembes, rakes, pans, basins, sufurias (cooking pots), pangas, wheel barrows, trolleys and vehicles repairs among many others. The main raw material for the sector is scrap metal with little subsidization of new metal bars.

In response to the needs of the MEs the government of Kenya has evolved policies to foster their growth through affirmative action such Access to Government Procurement (30% reserved for youth and vulnerable groups) and legislation on local products- establishing 'Buy Kenya, Build Kenya 'in public procurement. A study on the effect of micro financing on the performance of youth micro enterprises under Kenya Rural Enterprise Program (K-REP) revealed that tapping into training and capacity development and micro-financing opportunities improved microenterprise performance by 28.1% (Otieno *et al.*,2011). In their study on capital structure among SMEs in Kisii County", Nyanamba *et al.,* (2013) identify micro-financing as an opportunity readily available in the county but has not been fully identified by the MEs due to high collateral requirements .Onsongo and Muturi (2015) study on the growth of hair salon enterprises in Kisii Town indicates positive correlation between training opportunities and growth of microenterprises.

This study seeks to analyze leverage business opportunities for growth of metal fabricating micro enterprises in Kisii County. Literature identifies optimization of business opportunities as an appropriate strategic orientation for microenterprise growth. According to Lumpkin and Dess (2001) opportunity optimization in strategic management fosters both opportunity seeking and advantage seeking trends geared at continuous exploration and exploitation of opportunities

while sustaining competitive advantage for the future. Although, several studies have shown that the optimization of business opportunities have an effect on performance of firms, there hasn't been specific focus on optimization of business opportunities for growth of Jua Kali metal fabrication MEs in Kisii county. This study therefore sought to analyse optimization of business opportunities as a predictor of growth of Jua Kali metal fabrication microenterprises in Kisii County.

1.2 Statement of the Problem

The growth of microenterprises is significant toward achieving Vision 2030 goal of making Kenya an industrialised economy by 2030 (GoK, 2007). Enterprise is a product of optimization of opportunities (Barney, 1986, 1991; and (Penrose, 1959). Opportunities are external factors for growth that are to be discovered and developed. Enterprise growth are changes that can be either absolute or relative in terms of sales, assets, employment, productivity, profits, and profit margins (Yeboah, 2015) . This study's objectives were to analyse the role of the optimization of business opportunities in finance, marketing, technology and government regulatory framework in the growth of metal fabrication MEs in Kisii County. The study further sought to investigate the moderating effect of the level education on the relationship between optimization of business opportunities and the growth of metal fabrication MEs.

It is estimated that the failure rate among Micro, Small and Medium Enterprises (MSMEs) is between 70% and 80% (Brink, Cant and Lighthelm, 2003). The life of MEs falls between 3 and 10 years (GoK, 2016), with at least three among five MEs (60%) dying in the first few months of operation. A survey by Kenya Bureau of Statistics (October 2016) indicates that in the last five years up to 400,000 MSMEs never celebrated their second anniversary with 2.2 million enterprises closing within five years and 46% dying in the first year of operation (GoK, 2016).

The high failure rate of MEs is attributed to poor strategies of growth, among them limited optimization of business opportunities by the entrepreneurs. The ability of the MEs to optimize business opportunities is begged on the level of education which determines the knowledge and skills required for leveraging of business opportunities for growth.

The microenterprises experience numerical growth (horizontally), that is being replicated in numbers as opposed to vertical growth which favours innovation, diversity and departmentalization. Effective Optimization of business opportunities will shift MEs from mainly horizontal to vertical growth (McCormick and Pedersen 1996; and K- Rep 1999). It is vertical growth which will propel Metal fabrication enterprises growth of sales, assets, profits and increased employment. Kisii County being a highly populated (1,266,860 persons) region with high poverty rate of 51% (eight points higher than national, 43%) and high unemployment rate of (61%; Kisii County Strategic Plan, 2013-2018) will immensely benefit from accelerated growth of metal fabrication microenterprises. This study sought to analyse the optimization of business opportunities for growth of metal fabrication of MEs in Kisii County.

1.3 Objective of the Study

This study sought to analyze the optimization of business opportunities for the growth of metal fabrication microenterprises (MEs) in Kisii County with regard to the moderating role of the level of education.

i) To examine the effect of optimization of financial opportunities on the growth of metal fabrication microenterprises
ii) To evaluate the effect of optimization of market opportunities on the growth of metal fabrication microenterprises

iii) To examine the effect of optimization of technological opportunities on the growth of metal fabrication microenterprises

iv) To assess the effect of optimization of opportunities in governmental regulatory policies on the growth of metal fabrication microenterprises

v) To explore the moderating effect of owner level of education on the relationship between optimization of business opportunities and growth of metal fabrication microenterprises

1.4 Hypotheses

This study sought to test the following hypotheses;

$H_0$1: Optimization of financial opportunities has no statistically significant effect on the growth of metal fabrication microenterprises

$H_0$2: Optimization of market opportunities has no statistically significant effect on the growth of metal fabrication microenterprises

$H_0$3: Optimization of technological opportunities has no statistically significant effect on the growth of metal fabrication microenterprises

$H_0$4: Optimization of opportunities in governmental regulatory policies has no statistically significant effect on the growth of metal fabrication microenterprises

$H_0$5: There is no significant effect of owner level of education on the relationship between optimization of business opportunities and growth of metal fabrication microenterprises

1.5 Justification of the Study

The sheer size of the informal sector and its contribution to employment creation, additional income and improved socio-economic well-being of Kenya makes the growth of microenterprises a worth topic to investigate. Microenterprise growth is significant because it is

the only way the most disadvantaged or bottom of the pyramid populations can generate employment and income. Kiveu and Ofafa (2014) showed that the poor economy, unemployment and poverty have necessitated adoption of growth strategies and revival of the Kenyan economy. Optimization of business opportunities is a major strategic issue in growth of enterprises (Saulo, 2016; Lee, 2014). Microenterprises have been the focus given the fact that micro and small businesses form the context within which entrepreneurial culture takes root. Nevertheless, the poor leverage of financial, marketing, technological opportunities and advantages accruing from government policies is a major threat to microenterprise growth in Kenya. Fatima, Iqbal, Rehman and Ali (2011) study posits that it is microenterprises that exploit opportunities that experience growth.

The Jua Kali metal sector in Kisii County is significant because of its vibrancy and continuous innovation despite the poor leverage of financial, marketing, technological opportunities and advantages in government policies. Studies in microenterprise growth are demanding in developing countries like Kenya because of the variance in the perception, organization and growth of MEs between developed and developing countries (Arinaitwe, 2002 as cited in Mbugua, Njeri and Ondabu, 2014). This study will provide impetus for further study into long term strategies for growth of metal fabrication MEs.

This study will be beneficial to various sectors, among them the government, academicians, research institutions, lenders and potential entrepreneurs who influence growth of MEs and can therefore minimize their failure rates.

The government can use the findings of this study to come up with well-informed policy framework that will create conduicive environment for MEs growth. The government will

provide support through sponsoring of innovation and reengineering of the processes, capacity building, provision of finance and marketing. This will improve productivity and profitability of the MEs which are an important in innovation, industrialization, job creation and income generation.

Research institutions and scholars will use results from the study for further studies based on recommendations and also add up as reference for their work. The findings will also beef up existing literature and add up to knowledge in strategic management, in particular business opportunities and growth of MEs.

Entrepreneurs will be enriched with potential opportunities for growth of MEs. In particular they will be informed on opportunities in finance, marketing, technology and government regulatory frame work for growth of MEs.

1.6 Significance of the Study

The rationale for pursuing this study was to identify and analyse business opportunities for the growth of Jua Kali Metal fabrication MEs. The concept of growth management is of strategic significance in the growth of MEs. This study was carried in Kisii County. Specifically, the findings of this study, it is hoped, will be beneficial to various key stakeholders that are the owners/managers of MEs, the government, and academicians and researchers.

1.6.1 Owners/ managers of MEs

The owners of the MEs will gain a better understanding of the relationship between optimization of business opportunities and growth of the MEs. On the basis of the findings of the study the owners of the MEs will seek to optimally leverage business opportunities for growth of MEs.

The findings of the study will help mitigate the high failure rates of the MEs and spur their growth.

1.6.2 The Government

The MEs sector is vital to the growth of Kisii County and the country. It is a source of revenue to the government through taxation and it also offers employment opportunities to the citizens. The government is charged with the responsibility of ensuring protection to both the industry players and other stakeholders. On the basis of the findings of this study, the government will make informed decisions when formulating policies to create a conduicive environment for growth of MEs.

1.6.3 Academicians and Researchers

The symbiotic relationship between optimization of business opportunities and growth of metal fabrication MEs will have been an explored concept. The academic world should definitely consider the enormous potential of this strategic intersection. The study will make a significant contribution to the growing body of research on optimization of business opportunities for growth of MEs. The findings may also be used as a source of reference for other researchers. In addition, academic researchers may need the study findings to stimulate further research in this area.

1.7 Scope of the Study

This study focused on microenterprises, in particular metal fabrication microenterprise in Kisii County, Kenya. In the light of the important role that microenterprises do and could play in the development of Kenya, and the available financial, market, technological and government

regulatory opportunities, it is important to have an in-depth study into the exploitation of the opportunities for growth of the MEs. This study then focused on 255 Jua Kali metal fabrication MEs (wielding, key cutting, motor vehicle panel beating and general repairs) in three townships of Kisii County: Kisii, Suneka and Ogembo towns. The study features four independent variables, namely; optimizing opportunities in finance, marketing, technology and governmental regulation, and the dependent variable, the growth of microenterprises, Owner demographic characteristic (level of education) is the moderating variable. The study employed a longitudinal descriptive design and mixed strategies of quantitative and qualitative approaches to collect and analyse data. Data was collected in the months October, November and December, 2020. The data was run in Statistical Package for Social Science (SPSS) and analyzed using inferential and descriptive statistics.

1.8 Limitation of the Study

This study recognizes the target population and research site to be a limitation given that it was carried in the three towns of Kisii County, namely Kisii, Ogembo and Suneka Towns. The urban setting of the study makes it difficult to replicate the results in rural areas of the country because metal fabricators in rural areas may be having different knowledge, skills and experiences as pertains to optimization of opportunities for growth. This study was carried out amidst constraints prompted by the fragile socio-economic and political environment in Kenya. The 2017-2018 post-election violence and Cov-2019 epidemic posed challenges through violence, insecurity, restricted movement and high operational cost. These circumstances forced the researcher to revise the research schedule and seek more funds. The information from the Jua Kali Metal fabricators, though not difficult to access was limited in detail due to many respondents' inability to quickly grasp the essence of study, hence staggered answering of

questionnaires. Moreover, most of entrepreneurs do not keep documented data prompting reliance on experiences to answer the questions. The respondents' busy working schedule denied them ample time to fill the questionnaires in time. A lot of time was spent in probing the respondents for details. Availing of an introduction letter enhanced the respondents' confidence in engaging the researcher.

1.9 Assumptions of the Study

Assumptions are statements of fact that a researcher embraces to be true without verification (Kihn and ihantola, 2015). In this study three assumptions were made. The first assumption was that the respondents had knowledge of opportunities for growth of microenterprises. The second assumption was that the respondents were involved in the processes of metal fabrication and growth of the microenterprises. The third assumption was that the respondents will freely participate in answering the questionnaire and provide truthful information. The fourth assumption was that the surveyed three years were normal and the four business opportunities had influence on growth of the MEs.

1.10 Summary

The chapter contains an in-depth explanation of the problem under study, definitions of key concepts and phenomenon, and the purpose and significance of the study. The study's premise arise from findings that MEs in Kenya and other parts of the world have not experienced progressive growth to graduate from informal to formal enterprises. A large proportion of the MEs have either stagnated or gone extinct within the first five years of existence. The statement of the problem specifies the independent variables as the business opportunities in finance, marketing, technology and government regulatory policy. The dependent variable is the growth of metal fabrication microenterprises. Owner's level of education is the moderating variable.

This chapter provides the basis for the next chapter, the literature review, which covers theoretical, conceptual and empirical review, and concludes with research gap and conceptual framework. Chapter 2 also presents an exploration of past studies and lessons learned from those studies and theories that guide the current research.

CHAPTER TWO
LITERATURE REVIEW

This chapter is divided into three sections: Theoretical review, Conceptual review and Empirical .review. Summary, research gaps and conceptual framework are also reviewed in this section. This study reposes in the domain of strategic management, in particular growth strategies for MEs.

2.0 Theoretical Review

Theories and models are related in their application in research. Theories are plausible explanatory propositions devised to link possible causes to their effects. Models are schematic representation of reality constructed to improve one's understanding of the world and/ or make predictions. Theoretical framework guides research in determining the variables to measure and the relationship between the variables of the study (Trochim, 2006). Theoretical literature helps in selection of applicable research design and analysis.

As pertains to growth of micro and small businesses there are multiple theories of growth (Garnsey, 1998) arising from multiple influences on small business growth. There is also no single model to explain phenomenon of growth (Penrose, 1959). Among the theories of small business growth are Gibrat's (1931) 'law of proportionate effect', Penrose's (1959) 'resource based theory', Javonic's (1982) learning theory, Churchill and Lewis's (1983) enterprise life cycle model, Davidson's (1991) theory of growth, Storey's (1994) model of growth and Davidsson and Wiklund's (1999) theory of growth and Senge's (2014, 2006, 1990) learning organization model, Porter's generic strategies .

The study is guided two models and theories: Learning Organization Model (Senge 2014, 2006, 1990), the Enterprise Life Cycle Model (Churchill and Lewis, 1993), SWOT analysis and Porter's generic strategies.

2.0.1 Learning Organization Model

Senge's learning organization model (1990) illustrates how enterprises thrive better than competitors. Enterprise survival can be predicated on a learning organization which favours creativity and innovation through collective learning. The learning organization model postulates that business organizations can sustain growth and competitiveness by scanning the business environment, identifying and exploiting business opportunities. Given that owner-managers are usually averse to their strength at launch of business it is through learning and experience they tend toward growth and survival (Javanovic, 1982). Firms which are efficient in scanning and leveraging opportunities will grow compared to inefficient firms which decline and die. The learning organization model is significant because it is geared toward the long term growth of internal and external resources of the organization for competitiveness.

Businesses that desire to expand through innovation do consistently provide customers with items that are state of the art. Innovative strategies involve creation of new products or services, or reengineering of existing ones to meet new demand; and creation of new processes of high production; development of new marketing techniques for increased sales, and the development of new forms of management systems and techniques for increased operational efficiency (Porter and Stern, 2001). Hoffman (2007) recognizes positive correlation between firm innovation and profitability. Likewise Scozzi*et al.* (2005) found positive correlation between enhanced research, development and innovativeness and new product development.

2.0.2 Enterprise Life Cycle Model

The enterprise life cycle model of Churchill and Lewis (1983) shows growth of a business organization through stages of birth, growth and decline (Lester and Parnell, 1996). Sometimes organizations re-awaken (renew), and sometimes they disappear (die). This results into a five stage growth curve namely existence, survival, success, renewal and death. The model is appreciated for enabling a firm analyse its prevailing position and plan for the next stage of growth. It aids enterprises identify threats to plan and strategize for subsequent stages (Churchill and Lewis, 1983).

Fresh levels of change may exist as opportunities or threats to transition from one stage to another. The growth of a firm is determined by availability of opportunities in finance, labour, market, technology and investment. The enterprise life cycle model reinforces the understanding that given the right business environment and business opportunities enterprises are able to grow progressively to full life cycle. It should be appreciated that growth process is unique to each firm; hence firms follow different paths and stages of growth. This study seeks to explain why microenterprises exit at survival stage without making to the last stage and experience not just horizontal growth but also vertical growth.

Existence stage known as inception or birth phase marks the beginning of MEs' growth and development. Microenterprises in the existence stage tend to create their own environment (Churchill and Lewis, 1983). The microenterprises explore their environment and take advantage of opportunities availed by the business environment, particularly government policies. At the survival stage the microenterprises seek to grow, formalize the structures and establish distinctive competencies. The phase typifies MEs with limited technological opportunities, substandard products, undeveloped distribution channels and understudied potential customers.

In the growth stage the microenterprises seek to tap into technological and market opportunities to shore up market share, sales and profits through standard products and economies of scale. Success stage referred as maturity is characterized by more standardized products and aggressive marketing. Renewal stage normalizes leaner time resulting in collaborative teamwork for enhanced innovation, creativity and leveraging of technological opportunities availed by the business environment. Death stage brings microenterprises to gradual folding up with the exit of the lifecycle taking place at any time (Churchill and Lewis, 1983).

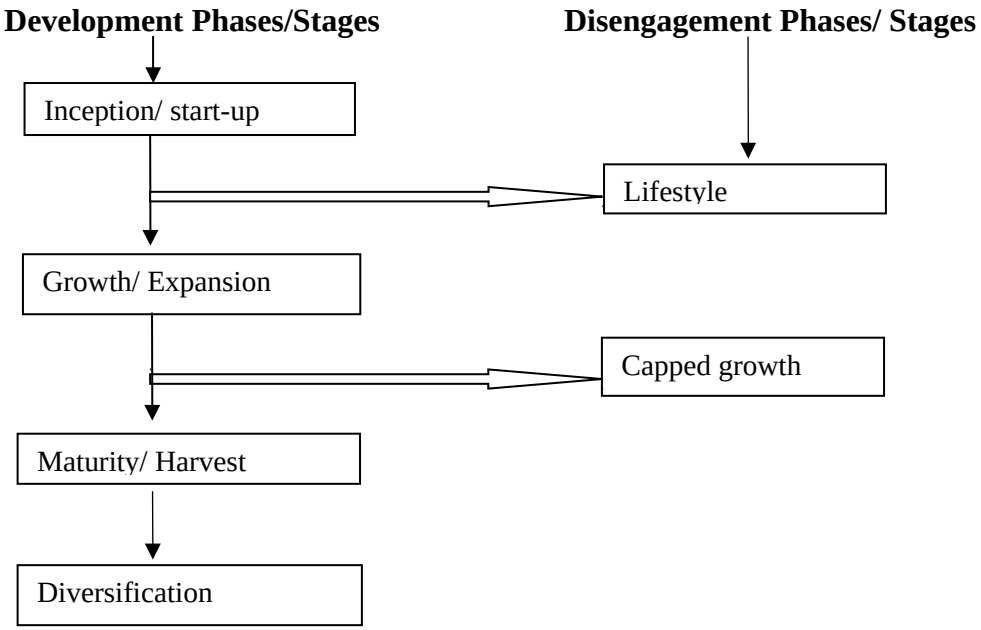


Figure 2.1 Enterprise Life-cycle Model

Source: Bordt *et al.*, 2004

The strength of life cycle model lies in its practicality. However, the model has been criticized for emphasizing more on internal than external environment (Farouk and Saleh, 2011). Thus, the life cycle model somehow inhibits the full identification and optimization of the opportunities. Levie and Lichtenstein (2010) point limitations of the enterprise life cycle model as that of laying more emphasis on internal than external factors.

2.0.3 SWOT Analysis and Growth of Firm

The SWOT (strengths, weaknesses, opportunities and threats) framework helps to analyse the business environment to enable businesses gain insight into internal strengths and weaknesses and relate these insights to the external opportunities and threats posed by the market place. According to Johnson, Scholes and Whittington (2008), SWOT informs strategies of growth by helping to identify the strategic gap (an opportunity in the competitive environment that is not being fully exploited by competitors). Strategic gaps or opportunities are where rivalry is low. The concept of strategic gap informs six opportunities, namely opportunities in substitute industries, opportunities in other strategic groups or strategic spaces (arising from new market spaces), opportunities in targeting buyers, opportunities for complementary products and services, opportunities in new market segments and opportunities over time.

2.0.4 Michael Porter's Generic Strategies Model and Growth of Firm

Michael Porter identifies cost leadership, differentiation, and focus as the three strategic options that are available to organizations for competitiveness. Organizations that achieve cost leadership optimize opportunities through enhanced market share sustained by competitive production and prices. Differentiation provides unique products and services for competitiveness. Focus strategy endears firms to niche markets featuring low-cost and differentiated products.

Barney (2002) stresses the importance of Porter's generic strategies of cost leadership, differentiation, and focus for competitiveness and sustained growth. The strategies apply effectively at every stage of the life cycle. Enterprises are able to differentiate their products and achieve cost leadership if they have access to low-cost factors of production, new technology. Onyonyi (2016) asserts that focus strategy make MEs thrive by sidestepping the competition of large enterprises. A combination of internal factors such as skills, knowledge, quality, patents,

brands and speed delivery enhances differentiation. Enterprises also focus on specific market niche, alliances and networks to sustain market leadership (Barney, 2002; Kazem, 2004). Failure to adopt strategy in any of the three directions is a firm held in the middle reflected in insufficient capital, limited market share and overhead control of costs as well as lack of differentiation to create margins and sound profits.

2.0.5 Summary

In summary, the growth strategies for MEs are predicated upon appropriate strategies and action plans for optimization of opportunities. This compels MEs to scan the environment for potential opportunities. MEs should also have capacity to exploit the opportunities. For MEs keen on innovation, opportunity scanning and exploitation must be frequent and robust. Opportunity scanning might be a challenge to MEs pursuing a low cost strategy due to cost and time implication. MEs which are keen on growth strategies should quickly seize the opportunities amidst the competition. The more responsive MEs are to changing environment and emerging opportunities, the more likely they pursue consistent growth strategy (Kemp *et.al*, 2002).

2.1 Conceptual Review

2.1.1 Concept of Microenterprise

The problem of definition of micro-enterprise (MEs) confronts researchers in the field of strategic management. Literature on MEs indicates definition of microenterprise variant across countries and dependent on factors such as the size and number of employees (Harabi, 2003). According to the Investment Climate Assessment (ICA), published in 2009, there is no singular or all-encompassing definition of the term "microenterprise". One aspect that is consistent across all definitions is the idea that microenterprises are quite modest businesses run by their owners or families and provide essential goods and services. A microenterprise (ME) is a company that has fewer than ten employees and a yearly revenue not exceeding Ksh.500000 (SMEs Act, 2012).

Micro, small and medium-sized enterprises (MSMEs) are the economic backbone in Kenya comprising the majority (98%) of all business entities in the country. The sector remains highly informal as only 20% of the 7.4 million MSMEs operate as licensed entities (AGOA, 2022). The MSEs account for 24% of Kenya' GDP, with MEs alone accounting for 12% of the GDP (AGOA, 2022).

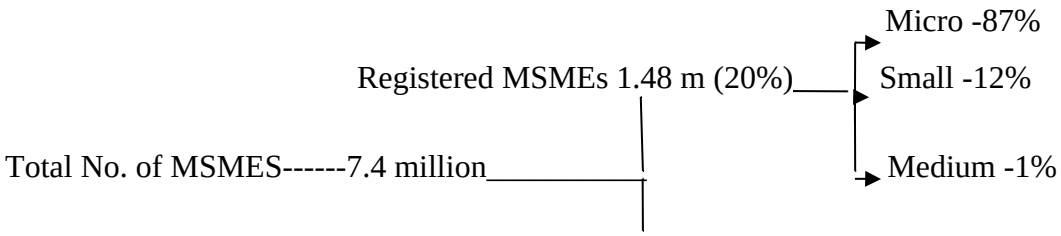


Fig 2.2 Kenya's Micro, Small and Medium Enterprises (MSMEs)
Source: AGOA (2022)

There are 7.4 million MSEs in Kenya. The MEs account for 98% of the MSEs, the informal sector contributes 83% of employment in Kenya (AGOA, 2022)

Table 2.1 Contributions of Formal and Informal Sectors to Employment in Kenya (in Thousands)

Sector	**2018**	**2019**	**2020**	**2021**	**2022**
Formal	3,012.1	3,091.1	2,897.2	3,071	3,183.5
Informal	14,283-6	15,051.6	14,508	15,261.8	15,964.7
Total	**17295.7**	**18,142.7**	**17,405.2**	**18,332.8**	**19,148.2**

Source: Republic of Kenya: Economic Survey (2022)

2.1.2 The Concept of Growth

Conceptualization of growth is predicated upon several factors, namely sales, assets, productivity, profit and employees. According to Yeboah (2015), the term "business growth" refers to changes that can be either absolute or relative in terms of sales, assets, employment, productivity, profits, and profit margins. According to Delmar et al. (2003), growth and expansion of a company is measured through sales and employment. According to Mao (2009) and Kruger, 2004 growth is a result of symbiosis of quantity and quality embodied in expansion

of scale, increase of sales, market share, profits and employees. Growth introduces vitality to an organization by providing challenges (threats) and rewards (opportunities).

Business growth is a sign of a flourishing firm typified by increase in sales and profits, Return on Equity (ROE), Return on Assets (ROA), capital employed and number of workers (Janssen, 2009). Examining growth through multiple indicators is significant due to multiple intervening factors such as inflation and exchange rates (Davidson, Delmar and Gartner, 2006).

Researchers have termed non-growing businesses survivalists or necessity entrepreneurs, ones initiated into business because they have no choice. They prioritize generation of income for survival with no impetus to save or reinvest. They are ready to abandon their business for favourable opportunities (UNDP, 2012). Necessity entrepreneurs as opposed to opportunity entrepreneurs (make affirmative action to establish business based on identification of specific opportunity) are a creation of unemployment or economic shocks (Cotter, 1996). Some MEs prefer “arrested development” where they forego growth to avoid accompanying risks of government regulation (UNDP, 2012)

Research on firm growth has identified two approaches to growth, organic and inorganic. Under organic strategies firms invest in in-house competencies, innovation and differentiation for competitive advantage. In inorganic strategies firms take advantage of the market, products and revenues of other companies. According to McKelvie and Wiklund, (2010) small firms prefer to grow organically while large firms grow by acquiring others.

Ansoff (as quoted in Johnson, Scholes and Whittington, 2008) analyses four strategies of growth; market growth, market development, product development, and diversification. In market growth a firm seeks to boost sales in existing markets through reengineering existing products and

adding new ones. Product development is aimed at increasing a company's sales through new items in existing market. This strategy suits metal fabrication microenterprises in their endeavor to adopt new technologies. Market development aims at boosting sales by entrenching present products in new markets. This strategic direction helps microenterprises with potential opportunities for market development such as reposition, leveraging new product utilities and entering new markets.

The growth strategies are cascaded down into concentration strategy, horizontal, vertical integration and diversification (Johnson, Scholes and Whittington, 2008). In the concentration strategy an organization concentrates its resources to the profitable expansion of a single product in a single market for competitiveness.

Horizontal integration is growth through acquisition of one or more enterprises manufacturing a similar product with the purpose of overtaking the competition and accessing new markets and resources. Vertical integration is acquisition of a supplier or buyer, a process called backward integration. Forward integration involves acquisition and control of sales and distribution channels. According to Berry, Rodrigues and Sandee (2002) vertical integration enables growth through enhanced business opportunities and improved firm capabilities through learning and innovation. Diversification enables firms enter new markets to spread risk (Johnson, Scholes and Whittington, 2008).

2.1.3 Concept of Optimization of Business Opportunities

The diverse conceptualization of opportunity (Herron and Sapienza, 1992; Shane, 2003) calls for consensual meaning, one which captures the three attributes: potential economic value (profit generation), innovativeness, and perceived acceptance (moral and legal). Opportunity can be

defined as possibility of favourably generating value that had not been previously realized. A business opportunity is a condition which avails new technologies, processes, materials and markets through new relationships (Eckhardt & Shane, 2003). Growth is the result of optimizing opportunities, which is optimal leverage of potential opportunities. Enterprise is a product of successful leveraging of opportunities (Barney, 1986, 1991) and (Penrose, 1959). Opportunities result from disturbing factors ever present in the business environment, particularly the market which triggers change in consumer demand, to which the market responds with new goods and services. Opportunities may be viewed as external factors for growth that are to be discovered and developed. Opportunities continue emerging as business environment evolves raising further possibilities for business (Shane and Venkataraman, 2000).

Urwyler's study (2006) on Swiss soft-ware based companies showed that firms identified and leveraged opportunities through scanning, affinity with customers and reciprocal learning. Leveraging opportunities is taking advantage of favourable factors availed by the business environment for the benefit of an enterprise. Barney (1991) points out that the first mover advantage and growth arises from the implementation of insights of opportunities not recognized by others. It is discovery and leverage of opportunities that leads to birth and growth of businesses (Short *et al.,* 2009). Leveraging of opportunities is begged on prior knowledge, new ideas and insights, information flow and entrepreneurial alertness (Ardichvili, Cardozo and dynamic environments there is variety of opportunities posing a challenge of selection for Ray, 2003).

2.1.4 Metal Fabrication in Perspective

Jua Kali metal fabrication is centred on specialization in a product supported by skill through apprenticeship and reliance on personal savings and local scrap materials. The wielding machine

is ubiquitous in metalwork, without which one cannot operate a Jua Kali metal fabrication. Creative fabrication techniques have originated tools such as I-beams used as hammers for riveting. A desire for independence, flexibility in time management and reliable profits are the benefits accruing from Jua Kali sector (Kinyanjui, 2008). The major strength of Jua kali enterprises is individual vision for business and investment diversification which determines the business strategy and competitiveness for long term survival. Despite their pivotal role in the economy, the Kenyan Jua Kali metal fabricator microenterprises operate on small-scale, at a subsistence level and survive for a short period, with very few employees and poor access to water and electricity (World Bank, 2006). The undoing of the micro-enterprises is their survivalist stance which denies them impetus beyond wage economy toward maturity into formal sector (Oketch and Otieno, 1999).

2.1.5 The Concept of Finance

Financial resources are the funds and assets that finance an organisation's activities and investments (Hayes, 2023). The two types of finance are internal and external finance. Internal sources of finance are funds that come from within a business. This includes profits generated by the business, retained earnings, capital funding, and liquid assets. External financial resources are particularly helpful for new businesses, organisations that are looking to grow and expand, and businesses that are looking for new investors to provide funding and even guidance and expertise within the organisation. It's worth noting, however, that external sources of funding can mean partial loss of ownership within the business, as well as the added cost of interest payments.

2.1.6 Concept of Marketing

Marketing refers to activities a enterprise undertakes to promote the buying or selling of a product or service (Twin, 2023). Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large (American Marketing Association, 2017). Marketing management involves identifying, anticipating and satisfying customer requirements profitably. Marketing includes advertising, selling, and delivering products to consumers or other businesses. At its core, marketing seeks to take a product or service, identify its ideal customers, and draw the customers' attention to the product or service available. Marketing seeks to match a company's products and services to customers who want access to those products. Matching products to customers ultimately ensures profitability.

2.1.7 The Concept of Technology

Technology is the practical application of scientific knowledge to solve real-world problems and improve human welfare (Luenendonk, 2023). It aims to achieve either a commercial or industrial objective. The benefits of technology are added efficiency, faster decision making, cost and time-saving, competitive edge, and increased innovation.

2.1.8 Government Regulations in Perspective

Government regulations refer to policies relied upon by the government to effect law (Constitution of Kenya, 2010). The government of Kenya’s policy on Jua Kali is manifested in industrial development through the courting of the Jua Kali sector into the economy. The government strategy for Jua Kali sector has focused on capacity building through technical training and access to working capital through micro-financing. The Public Procurement and Disposal (Amendment) Regulations of 2013 has provided procurement opportunities for Jua Kali

sector in the public sector through exclusive preference for local contractors. Access to Government Procurement Opportunities (AGPO) program aims at equity in public procurement for the benefit of vulnerable groups (Constitution of Kenya, 2010 Articles 55 and 227). The reality that government effort came true is when 30% of public procurement was affirmatively set aside for youths and women enterprises.

The Micro and Small Enterprises (MSEs) bill passed by the Kenyan government in 2012 marked a significant step in the country's effort toward growth and expansion of micro and small businesses. The law, by establishing the Micro and Small Enterprises Authority (MSEA) has enabled regulation of micro and small businesses by providing a conducive environment for growth. The Act further proposed the establishment of a distinct fund, The Micro and Small Enterprise (MSE) Development Fund. The Micro and Small Enterprises Authority (MSEA) has been tasked with making the fund available to the informal sector in order to maximize its potential benefits (Institute of Economic Affairs, 2016). The Youth Enterprise Development Fund, the Women's Enterprises Fund, and Uwezo Fund have availed micro-financing opportunities for MEs (www.kenyaengineer.co.ke, 2013).

The National Industrialization Policy Framework for Kenya places emphasis on growth and formalization of micro, small, and medium-sized enterprises (MSMEs) a strategy geared toward making Kenya an industrialized nation. The policy focuses on developing two special economic zones and SME Industrial Parks in all the counties of Kenya with aim of raising the contribution of MSMEs toward manufacturing to twenty percent. (GoK, 2012). Multiple agencies such as KETA (Kenya Export Trade Authority), KEDS (Kenya Export Development Scheme), EPPO (Export Promotion Programs Office), the Kenya National Chamber of Commerce and Industry, and National Trade Shows have been tasked with identifying and growing new markets.

The input of quality in MSE products and services is guaranteed though Kenya Bureau of Standards (KBS) by advancing ISO 9000 standards (Republic of Kenya: Sessional Paper No 2-1996). However, it has been difficult to sustain quality due to lack of patenting and branding of goods and services (Ruheni, 2017). Kenya government's membership in international and regional trade organizations like World Trade Organization (WTO), Common Market for Eastern and Southern Africa (COMESA), and East African Community have provided lucrative market for MSEs (Republic of Kenya: Sessional Paper No. 21996). The challenge for MSEs is to leverage the opportunities presented by the government for growth.

The Government of Kenya's policy on vocational education and training is a response to the ever changing technologies and markets which present opportunities for improvement of skills. The Training Needs Assessment on Jua Kali (GOK, 1997) posits that owner-managers should be capacitated to exploit opportunities through training in financial management and effective decision making. The government of Kenya through the Kenya National Qualifications Authority (KNQA) has promised to certify Jua Kali trained artisan.

2.1.9 The Concept of Owner Demographic Characteristics

This study sought to show how owner demographic characteristics, namely owner level of education influences the relationship between optimization of business opportunities and the growth of Jua Kali metal fabrication MEs in Kisii County.

One of the critical factors affecting the growth of businesses is educational attainment of owners/ managers (Morara and Mureith, 2009). Entrepreneurs who have completed a higher level of education and received vocational training have a significant knowledge, information and skills, and consequently have an advantage in optimizing opportunities in the business environment. According to Bosna et al. (2004), there is a significant relationship between employee work

experience and growth of a company. An experienced entrepreneur is more likely to be equipped with information and managerial competencies necessary for good plans for growth.

Oywa (2012) showed age, education and training to be significant moderating variables for growth. The findings show that 57.3% of the entrepreneurial managers possess at least primary education, a close concurrence with M'Mthiaru (2008) figure of 74.6%. However, 68.7% had not benefitted from business management training. Majority of MEs hadn't gone through full cycle of growth due to the limited basic level of education of owners/ managers..

This study used the level of education as moderator of the relationship between optimization of opportunities and growth of MEs. The level of education is a significant determinant of the entrepreneurs' ability to scan the environment for business opportunities.

2.2 Empirical Review

2.2.1 Growth of Metal Fabrication Microenterprises

Studies on metal fabrication microenterprises have been dome by UNDP study show that on top of records of large number of MEs in the featured countries (Malawi, Lesotho, Swaziland, Zimbabwe and Botswana) stagnating there was no significant growth in terms of employment creation. Studies in Southern Africa revealed that less than 1% of the enterprises succeeded to employ more than 10 workers (Rogerson 2001). A study of small firm dynamics in Sub-Saharan Africa by Mead and Liedholm (1998) averred that few firms added employees year after year and based on employee growth 4 percent of the microenterprises had graduated to medium size firms.

A study of metal works by Workneh and Desalegn (2015) in Ethiopia shows a country geared toward growth of the industry through favourable regulatory policy (macroeconomic stability, improved productivity and employment). The challenges derailing growth of the metal sector in Ethiopia include small local market, limited innovation, limited credit, and little investment in research, unreliable energy supply, and competition from cheap imports. The suggested solutions for the metal sector are technological innovations supported by reengineering, technology transfer, research and development, institutional development and partnerships. (Gebremedhine, 2009).

Saulo's study (2016) of metal work clusters in Nairobi showed an informal and motivated sector ready to graduate to formal enterprises through innovation and market penetration by offering a variety of products such as scale balances, flour mills, vehicle repair parts), window frames steel doors, grills and furniture. Other benefits accruing from the industry include upgrade and transfer of skills and enhanced employment. However, the study like others observed the challenge of marketing.

Marwanga's study (2015) on employment opportunities among the Kamkunji Jua Kali artisans in Nairobi revealed a diversified sector of light metal manufacturing (wheelbarrows, ploughs, jembes, metal boxes and containers), and allied services like scrap metal trade, metal cutting, wielding, polishing and painting. The findings showed limited government support for the sector (funding, 15%; skill upgrading, 27%; marketing, 6.3%; negotiated loans, 6.2%; and sponsored exhibitions, 2.5%). The rating of government influence on the sector is also not favourable (conducive business environment with mean score of 2.28; capacity building, 2.31; inter-economy dependability, 2.24; and taxation, 1.60). The study revealed that artisans were deficient in investment capital (35%), lacked space for expansion (32.5%), feared competition (3.8%),

abhorred prohibitive entry regulations (10%), and enjoyed limited investment opportunities (8%). The responses on education showed mixed results of qualifications; moderate (50%), lowly qualified (37%) and highly qualified (12%). These findings are echoed by Africa Development Bank report (ADB, 2013) that despite the informal sector's enormous contribution to GDP (55%) and employment (83%) minimal support has been extended to the sector by governments and partners.

2.2.2 Financial Opportunities and Growth of Microenterprises

Empirical evidence echoes the importance of finance for MEs growth pointing to positive relationship finance and growth in different countries, namely Spain (Moreno and Casillas, 2007) and Portugal (Oliveira and Furtunato, 2006). Need for capital is for the purchase of assets and running operations. Finance can be sourced from external and internal resources such as credit and personal savings (Atmaja, Jen -Je and Sharma, 2016; Gbandi and Amissah, 2014). Pecking theory advances selection of resources whereby firms give first preference to internal than external sources, a factor attributed to the high costs of external financing (Ryan & McCann, 2014; Daskalakis, Jarvis and Schizas, 2013). However, given the insufficient internal sources MEs seek more credit from external finance.

Unfavorable fiscal policies (Casey and O'Toole, 2014) coupled with poor investment climate and unfriendly lenders are some of the barriers toward accessing credit by MSEs (Beck, Demirguc-Kunt, Laeven and Maksimovic, 2006). MSEs are easily denied credit than larger firms because their limited equity and collateral. The MSEs also lack drive to take advantage of government initiatives (Neuberger & Rathke, 2009; Beck et al., 2016) due to limited information and bureaucracy. The high cost of credit has denied MSEs in Kenya working capital, hence high mortality rate of the firms within first one to three years of birth (Kenya National Bureau of

Statistics, 2016). The situation is aggravated given that majority of the firms' seed capital comes from the meager resources of family and personal savings (80.6%). Other sources include family and friends (4.2%), banks (5.6%), Chamas (1.4%), cooperatives (0.4%), and the government (0.1%).

Tarfasa, Kebede, Ferede and Behailu investigation (2016) of factors for growth of MSEs in Ethiopia reported constrains to accessing finance by majority of firms (55%). Credit was only accessed by 28% of the firms enjoying growth/survival leading to 53% and 19% to stagnation and decline respectively. A majority of the firms (79%) relied on own savings for seed capital and expansion. There was apathy for credit given that only 38% of the firms applied for loans (Gebreeyesus, 2007). Only 15% of the firms sought formal credit with majority of the firms preferring he friendly and affordable informal sources. Reported constraints were bureaucracy and corruption, prohibitive taxes and unaffordable collateral. There is need of relaxation of credit requirements and improvement of the macroeconomic and regulatory environment for MEs growth.

A study of financial constraints and opportunities for MEs in Malaysia also showed the trend of MEs (only 13% applied for credit) shunning formal credit despite government incentives (Hassan, Chin, Yeow, and Rom, 2010). This was attributed lack of sufficient collateral and documentation by MEs, bureaucratic loaning process and high interest rates. Lenders are hesitant to extend loans of substantial figures due to the high risk associated with lending to SMEs.

Wangmo survey (2016) of financial constraints for SMEs success in Bhutan singled collateral as key factor in accessing finance by small firms. The constraints are aggravated by the insufficient information, small capacity of the MEs size and limited credit history. Small and young firms

struggle to access credit compared to larger firms. The report recommends that MEs fast track consideration for credit by timely availing of credit history. However the study fell short of showing the critical role of lenders in eliminating hurdles to credit access through a friendly and relaxed process.

Lee‘s examination (2014) of challenges and opportunities for MEs in Vietnamese apparel retail market attributed lack of competitiveness among SMEs to limited access to finance. Applying Barney and Heterly’s (2005; 2010) VRIO (Valuable, Rare, Invisible resources and Organization) model the study echoed the significance of finance in firm competitiveness. Rostow (1960) stage of growth model illustrates how capital investment is a crucial factor in firm growth. In the model growth involves a linear spectrum of five stages of economic evolution whereby SMEs experience growth in an upward trajectory in stages. It is in the take-off stage that foreign investors pump capital into market to firms to success stage of Churchill and Lewis’ Enterprise Life Cycle model (1983).

Empirical evidence from MEs in Bangladesh shows that external finance though preferred was not easily accessible (Anur, 2012). The banking sector though having huge financial capacity was not the first choice for MEs; a scenario attributed to a bureaucratic loaning process. Non-banking sources such as donors and micro financing institutions (MFIs) though convenient provide credit at high cost, short repayment period and heft default penalties. The report showed preferences as follows; collateral free loans (100%), interest free loans (100%), flexible banking (100%), rural banking (95%), training on loan processing (100%) and simplified tax system (48%). The leading considerations for MEs financing are collateral and management capacity (Hasnah, Saniza, Jayaraman and Ismail, 2013). Given, Porter’s Cost Leadership strategy, it is affordable finance that will guarantee enterprises competitiveness.

Credit for MEs in Sub Saharan Africa has been boosted through availing information on potential lenders in the public domain (Subeyr. 2017). The downside of the lending process is MEs failure to give full disclosure of credit history leading to delayed lending (Winborg & Landstrom, 2000). The desire for fast tracked lending reinforces the need for quick financial disclosure by MEs (Abor & Biekpe, 2006). Scanning of the business environment with use of SWOT analysis will mitigate the prevailing opportunities for optimization by the MEs.

Hajjaji study (2012) on growth of small firms in Libya showed 20 out of 28 firms (72%) have difficult in accessing finance. Applying Davidsson and Wilkund's (1999) theory of growth in its four perspectives (resource based, motivation, strategic adaptation and configuration), the study purposed that sound financial strategies are necessary for growth of small firms. The respondents showed that small firm growth is begged upon own seed and operational capital. The sources of seed capital are own savings (46.3%), friends and relatives (28.4%), money lenders (14.7%, parents (7%), and partner (1%). Operational capital accrued from money lenders (21%), relatives and friends (16.8%), and combination of the two (34.1%). Using Penrose (1959) of Resource Based View and Life Stge Models (Greiner, 1972; Churchill and Lewis, 1983; Gibb and Davies, 1990; and Davidson and Wiklund, 2000) the study attributed to inhibited growth of small firms to limited financial opportunities. The study identified financial opportunities for enhanced growth of firms in higher purchase, soft loans from state banking institutions and Business Angel Partnership with venture capitalists.

Dumbu's report (2014) showed limited optimization of financial opportunities for MEs in Zimbabwe with 90% of the respondents indicating lack of financial statements major obstacle in their quest for credit. Applying Barney and Clark's Resource Based Entrepreneurship (2007) model the research identified affordable credit as one of the valuable, rare, inimitable and non-

substitutable resources key to high performance and competitiveness. The study reinforced the significance of Opportunity Based Entrepreneurship Theory (OBET) in sourcing of external finance.

Musona's study (2014) on constraints facing growth of MEs in Lusaka, Zambia revealed limited access to finance is due to high collateral and interest rates. Applying Perren's (1999) framework of enterprise growth the study showed that a synergy between finance and other internal factors is critical in growth of MEs. Growth oriented enterprises are those with the desire to increase numbers of employees with growth in assets, sales and revenue. The results indicated that 92.4% of the respondents reported insufficient finance as main constraint for growth. Apart from insufficient finance, diversion of working capital to non-entrepreneurial activities is another obstacle to growth.

Adjei's examination (2014) of Business Development Services and Growth of Microenterprises in Ghana showed positive correlation between opportunity exploitation and growth of microenterprises. Applying Schultz (1961) and Becker (1994) theory of capital and return on investment the study reported increased productivity accruing from investment in capacity building and sound financial management. Financial opportunities for growth lie in competitive credit schemes aimed for affordable capital.

Kiyai, Namusonge and Jagongo (2019) found on women owned MEs in Nairobi showing insufficient working capital (50%) among the constraints in the expansion and growth of their firms. Other critical factors were short repayment schedule (54.5%), high interest rate (47.9%), lack of information (35.5%), weak purchasing power (36.4%) and lack of market (20.5%). Though delicate, shylocks are an alternative source of capital for MEs. Kariuki (2018) avers that

preference by MEs for finance spread across microfinances (47.1 %), banks (26.2 %), other sources (20.9%), and friends (5.8%).

Ndede, Mbewa and Jagongo's study (2017) of financial services for micro and small enterprises in Nairobi located opportunities in public-private sector financing partnerships for seed capital. Using the logistic cumulative distribution function model as determinants of financial access the study showed the sources of finance in own savings (70.1%), bank loans (12.1%), friends (5.6%) and credit associations (1.7%). Seed capital proved to be critical factor in the success of MSEs. The determinants for accessing seed capital were possession of business insurance, age of the business owner/manager and possession of active bank account. This position is supported by Churchill and Lewis' Enterprise Life Cycle model (1983) which opines that seed capital roots a strong take off in the existence stage guaranteeing survival and ultimate success.

Oywa analysis (2012) of factors affecting performance of Youth Group MSEs in Kisumu identified financial opportunities in micro-financing (12.7%), statutory funds like Youth Enterprise Development (YEDF), and Women Enterprise Fund (9.3%), and donors (8%). Applying Bertalantfy's (1968) theory of group functioning, the study presented MSEs as systems in an environment with inputs and outputs where the inputs represent the opportunities (finance, market and technology). The findings indicated a low intake of loans by the firms.

Mwania's investigation (2011) of the influence of the Biashara Boresha Loan (BBL) on expansion of microenterprises (MEs) in Ruiru, found 52% of the enterprises experiencing increased earnings from invested advance loans. Among the respondents 11% diverted their loans toward other endeavors other than reinvestment. The respondents (53%) reported difficult in accessing loans due to complicated processing, high interest rates, and short repayment

schedules. There is need of reforms in financing procedures, collateral, and repayment schedules. Applying Barney's Resource Based Theory (1990) the study reported that a firm's ability to deliver competitive advantage hinges on optimization of available resources.

According to Rotich, Lagat, and Kosgey (2015) there is a correlation between the amount of credit received and enterprise success. The study featuring micro-financing of MEs reported a significant beta value of 0.385 for availability of credit. The report averred that microfinance product be diversified (a micro-insurance scheme should be introduced), and the grace period extended to more than one month. There is a call for the government and development partners to increase money for micro-finance programs.

2.2.3 Market Opportunities and Growth of Microenterprises

Brush *et al.,* (2009) front marketing as a challenge for MEs growth with ineffective distribution channels, lack of market information, poor communication, pricing, sales and product development, the most ubiquitous. It is with proper market positioning that MEs will exploit opportunities availed by global market. The KNBS report of 2016 shows that among the licensed MSMEs, 58.3% (MEs) did not market/advertise their products. Entry into alternative geographic markets probed by effective communication and logistics spur growth. According to Becchetti and Trovato (2002), there is a favorable association between the expansion of a company and its access to international markets. According to Wagner (2001), who conducted research on the effect that exports have on the expansion of businesses, the findings demonstrated a substantial association between the expansion of businesses and their import-export behavior. Porter's focus strategy helps chart a pathway of opportunities in niche markets for the MEs.

Yeh and Chang's (2018) study on competencies of start-up MEs supports market driven opportunity exploitation as the avenue for firm growth. It is through the development of the firm competencies that opportunities are recognized in the local markets and market strategies are evolved to satisfy customers. Lee (2014) study of opportunities for MEs in the Vietnam identifies marketing opportunities availed by liberalized economy and increased foreign direct investment (FDI) as major boost for apparel retail trade. Upon the liberalized and open economy in Vietnam in 1986 the vibrant middle class provided a lucrative market. Effort to enhance marketing opportunities has been through improved roads (paved roads improved by 95% by 2006), railway, ports and waterways. E-commerce has been embraced to reduce marketing costs and access the competitive global market. There is need of further research on the effect of differentiation and value addition.

Iqbal's (2007) analysis of communication and MEs growth strategies among Swedish Companies unveils marketing opportunities in new markets. Using Levy and Powell (2002) model of internet adoption, the study showed the role of internet in business growth through networking. The opportunities for growth abound in new product development, outsourcing production, internet integration in product and market development, and responding to customer behavior change. Widening product portfolio protects the existing market while segmenting market into foreign and domestic enhances focus. Internationalization helps focus on foreign markets. Outsourcing marketing services enhances efficiency.

Ismail and Karlsson's (2013) studying on barriers for growth of SME in the Sweden singled out acquisition and liquidation of small companies as an opportunity for controlling the market. This enables the firm to broadcast its services and products with ease. Analysing the need of the market brings understanding of the changing behavior of customers and be able to provide

complete solution. Experience of the market is the inexhaustible source of opportunities. Giving a competitive price helps sustain market share. The study used a single case study which is regarded suitable for unique case of study. Single case study is advantageous because it afford the researcher sufficient time to investigate in detail relevant information. However it is limiting because the findings cannot be generalized. The findings show that market opportunities for growth accrue from information given by customers about the product needs and research in the emerging lucrative markets of Eastern Europe.

Hajjaji (2012) survey of growth of small firms in Libya indicated smaller metal enterprises pursuing only mass marketing strategies as compared to medium-small and small enterprises which go for broad strategies (mass and niche) and mass respectively. A niche market's opportunities are those of focused and targetable portion of a market while mass market opportunities lie in a substantial customer population. Smaller firms target niche markets because of limited potential mass markets. Wijewardena and Tibbits (1999) also noted that niche market positioning is a key contributory factor to small business growth. High growth firms are evenly divided on market orientation, with 50% attributing growth to high market orientation. High or low market orientation refers to owner-manager's perception of the significance of market as an in growth. Results indicated 10 out of 28 of the firms (36%) exhibiting high degree of market orientation. Among the small firms 7 out of 9 firms (78%) low level of activities compared to 5 out of 10 large firms (50%) which were more market oriented. The study reported market opportunities in advertisement, product quality improvement, and packaging and customer incentives. The study further shows that African countries put less emphasis on marketing.

Obi (2011) study on export behavior of small manufacturing enterprises (garment & textile industry) in Ghana showed the influence of market information on firm marketing decisions.

Using multiple theories, the resource based view, stage theory, network theory, international entrepreneurship and contingency theory given that MEs export behavior is a complex event the results indicated that export trade benefitted firms through benchmarking and technology transfer. Market internationalization is a prime opportunity because the domestic market is too small to propel growth of local firms. Globalization has liberalized international markets giving small firms opportunity to overcome trade barriers. This is however predicated on availability of market information to firms. The challenge for the international community is to avail market information to small firms.

Dumbu's (2014) examination of management practices of Micro and Small Enterprises (MSEs) in Zimbabwe showed the challenges of marketing with rudimentary marketing of simple display of items (90%) dominating to the disregard effective marketing such as on-line marketing and exhibitions. At the same time 90% of the MSEs never engaged marketing personnel. Marketing was performed by the managers who otherwise should handle other core managerial duties. The sought after marketing opportunities are market management training, market research, promotions and relationship marketing to enhance trust, commitment and long term cooperation with customers. This study is guided by Opportunity Based Entrepreneurship Theory (OBET) (Barney and Clark, 2007) whose basic tenet is that entrepreneurs cause change as expressed by the Schumpeterian theory of entrepreneurship (Clausen, 2006; Mohar et al, 2007). The entrepreneur is regarded as an individual who always searches for change, responds to it and exploits it as an opportunity. The strength of strategic management is the pursuit of an opportunity without regard to inherent resources. Optimization of business opportunities involves sensing and exploitation of opportunities that didn't previously exist. Senge's Learning

Organization (1990) is key to understanding and prioritizing customers and other stakeholders' needs.

In Uganda Nuwagabal and Nzewi (2013) study on growth constraints for MSEs in Mbarara reported limited marketing opportunities for the MSE sector. The study's objective was to examine the extent to which growth of MSEs is associated with environmental constraints. The results showed 92% of the respondents agreeing that marketing is a significant constraint to the growth of MSE's. Competitive marketing strategies such as promotions, affordable pricing, packaging, branding and value addition are lacking. The findings indicated that lack of marketing management practices hampered the optimization of the emerging opportunities. The study recommended quality products, relationship marketing and joint marketing strategies as key to penetrating market niches. This supported is by Mwang'ombe, Mathuva and Njoroge (2017) study of youth owned MEs in Mombasa showed effectiveness (mean score index of 4.31) of mixed marketing such advertisements and promotions. Porter's differentiation and focus strategies will help MEs produce valuable and specialized good and services for niche markets.

Bunyasi's (2015) study of growth of small firms in Thika reported marketing opportunities in new distribution channels. Applied resource based view theory the study shows that sustainable competitive advantage is predicated on possession of unique resources (Barney and Clarks, 2007). The findings indicated that majority of the firms are however not keen in venturing into new distribution channels due to high costs. This study is guided by Resource Based Firm Theory (Goshal *et, al*., 2002) which affirms that firms have to be innovative by introducing new distribution channels through modern technology such online marketing which cuts the costs by almost a half.

2.2.4 Technological Opportunities and Growth of Microenterprises

Technology is a significant driver of business growth. Higher technology levels always yield high production translating to higher income (Berge, Bjorvatn and Tungodden 2010). High level technology is significant in innovation, high quality and cost effective production, major source of competitiveness (Variyan and Kraybill, 1994) Firms, which leveraged on new technology experienced higher growth rates compared to those which neglected (Birley and Westhead, 1990). Jaumandreu, (2003); Niefert, (2005); and Calvo, 2006) provided evidence of the favorable benefits of innovation on business growth. These researchers observed that innovation in products and greater sales boost employment growth. The microeconomics of endogenous growth theories demonstrate that businesses with their headquarters in sectors that are heavily focused on research and development (R&D) have a greater potential for expansion than those whose primary focus is on labor.

There is correlation between high technology operated businesses and growth rates. Increases Investments in technology reflects in a steady increase of income. According to Cohen (2004), technology can be defined as an in-depth knowledge of many techniques. According to a study conducted by Cohen (2004) on the topic of the transfer of technology to developing countries, technological opportunities can be broken down into one of four categories: technology as a general theoretical and practical understanding of how to do things (knowledge or information); technology as objects (goods or tools); technology as installed techniques of production; and technology as a combination of the two processes.

Rasmussen (2014) study on the effect of collectively competent resources on the expansion of SMEs revealed that innovativeness, formerly thought to be a reliable indicator of business expansion, is not a significant element in the expansion of businesses. Being innovative means

being able to do things in new ways and continually challenging the company to think in new ways, both of which are beneficial to the launch of new products and services. The results indicated that innovativeness is a mediator between collectively competence based resources and firm growth. However, the impact of innovativeness is not significant among high growth firms that have grown through acquisitions. Applying Penrose theory of firm growth (1959) the study attributed growth to external and internal factors. Barney resource based theory (1991) shows the link between a firm's internal characteristics and firm performance. Competitive advantage is gained through resources controlled (intangible) by the firm.

A study by Joju et.al (2023) on competitiveness of women microenterprises in India observed that Information and Communication Technology (ICT) and technologies like artificial intelligence were helpful in the empowerment of poor women. Artificial intelligence enabled technologies helped women to retrain up-skill and equip themselves. Women who had digital and financial literacy were more independent than other women. With the ICT the women were able to operate their businesses with cost effectiveness. Optimization of opportunities in ICT in developing countries will become a reality when cost effectiveness is factored in application of the technology by the SMEs

Martin and Palakshappa's (2011) study of small business in the outdoor leisure/recreation industry in New Zealand identified technical skills, conceptual skills and human skills as the critical success factors (CSF). To be useful the CSFs need to be documented and managed to focus on what is necessary for success (Dobbins, 2001). The CSF include establishing competitive advantage, good management, maintaining and developing employee relations, having right ideas, marketing, right people, trade and industry knowledge, technical abilities, motivation, commitment, need for independence, being in charge, tolerance for risk,

innovativeness, self-confidence, targeted and achievable goals, opportunity recognition and customer focus. The results indicated the highly rated CSFs were technical ability, motivation, self-confidence and commitment. Success is viewed as an internal measure rather than external. Success is something to be strived for and is inspirational. However the small number of case studies (Five) may not allow the findings to be replicated widely.

Ismail and Karlsson's (2013) study on barriers for growth of small firms in the Sweden reported technological opportunities in research and development, and investment in new machines. Competitive technologies provide complete solutions which neutralize bargaining of the customers. The study recommends development of the workforce to generate new ideas. The long term goal is to have the right people with the right skills. Benching marking brings new ideas and continuous improvement. The global market is changing and there is need to adopt alternative materials such synthetic and prefabricated products. Microenterprises in developing countries will benefit through timely technology transfer.

Iqbal's (2007) analysis of internet and growth MEs in Sweden identified technological opportunities for growth in information, research and development, and social media. The internet supports interactive marketing and online forums, networks the administration with customers sharing information on deliveries freights, buying statistics and tracing orders. Marketing campaigns are also conducted through the web, availing marketing material and campaigns to the customers. Internet is an important tool for new product formation. It helps in outsourcing experts and services. It helps to share information, conducting meetings online and evaluate technologies to be incorporated in product development. Internet is used to locate new customers (distributors) by providing instant information on potential customers and investors.

Internet facilitates customer support in different location. Online training provides services to distant customers.

Hajjaji's (2012) examination of growth of small firms in Libya showed that small firms are less innovative, a factor attributed to limited financial and material resources. Innovation is particularly low in metal industry (25%). Technical innovation is related to quality and new products. Process innovation is a source of competitive advantage and growth. It requires investment in new equipment, technologies and improvements. Microenterprises experience least process innovation at 11% compared to medium firms (22%) and large firms (40%). Microenterprises have modest budgets and human resources which cannot fully support development and research. Despite the limited resources technological opportunities lie in production specialization, management, monitoring and transforming production.

Adjei's (2014) analysis of business development services and performance of MEs in Asante Akim, Ghana recommend government effort in improving education and training in finance, marketing and technology, and diversifying dissemination of information through internet and workshops. Areas for leveraging new opportunities include competitive credit schemes to bring down cost of capital and generation of reasonable profits. There is also need to integrate national and international resources to enable government and private sector partner in driving growth of microenterprises. The study recommends training infrastructure for firms to improve their capacities on production, business planning, marketing and cash flow management. This will also be achieved through vocational training and greater access to information technology. There is need of further research into the best practices from international market.

Examining factors affecting growth of MEs in Algeria Bouazzal, Ardjouman and Adaba's (2015) reported technological opportunities in training and research and development (R&D) for enhanced production. Delving into Penrose's (1959) theory of growth of firm the study affirms that firms are a bundle of internal and external resources where technology transfer is accelerated through knowhow agreements between domestic and foreign firms and acquisition of foreign technology licenses. The study observes that firms will achieve quality by seeking internationally recognized quality certification. Further research into international quality standards will make MEs competitive.

According to the KNBS report from 2016, micro, small, and medium-sized enterprises (MSMEs) were effective in innovating in four different fields: manufacturing (31.6%), information and communication technology (33.3%), and finance (44.4%), and health services (42.5%). The majority of micro, small, and medium-sized enterprises (MSMEs) lacked process and marketing innovation (Kenya National Bureau of Statistics, 2016).

In their study on challenges in information and communication technology (ICT) and growth of SMEs in Nigerian Apulu and Lathan (2009) showed ICT technologies a major catalyst of organisational change and growth. ICT influences collaboration and transactions between firms and customers, suppliers and distributors. ICT makes businesses competitive in the globalized business environment through quality, speed and cost effectiveness. Currently opportunities to be lie in digital platform (Apulu and Lathan, 2009).

Hermsen's (2010) study of operational efficiencies of metalwork artisans in the Kamukunji, Kenya reported a technological success resulting from enacting of Small and Medium Enterprises Bill aimed at fostering cooperative effort among the small firms. The move will

bring the firms together in their aspirations to attract donor funding for high tech tools and machinery. There are emerging opportunities in Savings Cooperative Societies (SACCOs) saving and borrowing for investment in modern production systems.

Bonifas (2015) analysis of knowledge management and innovation among Kenya's Jua Kali metal fabricators reports technological opportunities in knowledge creation, sharing and transfer through Jua Kali exhibitions, workshops and seminars, formal education/ training, and peer platforms. However 26% of the respondents fear that sharing of ideas will make the less competitive. The other front for technological breakthrough is import substitution which has motivated young graduates to engage in knowledge application as evidenced in mobile phone and motorcycle serving and repairs. Knowledge application in scoring 0.527 Cronbach's alpha coefficient reflected representation of ideas in sketches, making trial products, using original ideas, and using combination of original and borrowed ideas.

Kiveu's (2017) analysis of the effect of innovation on firm competitiveness among the micro and small manufacturers in Nairobi showed innovation a critical capability for superior performance and competitiveness. Applying Schumpeter (1911) theory of entrepreneurship and innovation, later advanced by Lazonick's (2013) theory of innovative firm, the study revealed existence of sustainable competitive advantage in superior products and services supported by distinct resources and capabilities. The results show innovation's positive impact on competitiveness. Firm size had significant moderating effect on innovativeness and competitiveness. The firms need to implement innovations of high novelty to enhance their competitiveness in new markets and industry. MEs need linkages with knowledge generating institutions. The government's role is to support research to create new knowledge.

Wangari's (2015) study of knowledge management and innovation among metal fabricators in Kenya revealed that informal knowledge management practices bear significance in innovation of the sector. The findings showed innovation having incremental change in value addition. New developments accrue from import substitution and local artisans' ingenuity. Concerted knowledge preservation impacts incremental innovation most strongly. There is positive correlation between investment in technology and advancement in knowledge management and innovation. However, innovation in the sector has been constrained by slow adoption of modem technology and embracing of the innovations by domestic market. The study recommended increased focus on knowledge creation and knowledge application through application of modern, productive tools and machinery.

Kinyanjui's (2006) study on knowledge and technology among Kamukunji Jua Kali artisans defined technology as methods or techniques of doing things. Knowledge aids enterprises in decision-making, sourcing of raw materials, production, customers and markets. The results showed opportunities for innovation and technological advancement in competition among the artisans by copying and improving skills. Knowledge sharing among cluster members evolves quick ideas and solutions. The Jua Kali artisans have perfected manual technologies entrepreneurship, local sourcing of raw materials, production and marketing. The artisans have come to value customers input to knowledge and technology by bringing diverse product designs into the trade. Quick transfer of skills among the artisans has been enhanced by mutual trust enabling technological spillover from the formal sector. Recognized and well-established Jua Kali trainers are also sources of knowledge and technology. On the job training takes place through observation and practical activities. This is being perfected through training of youth by artisans under World Bank and Kenya Government sponsored KYEOP (Kenya Youth

Employment Opportunity Project). However the study revealed that knowledge and technology creation and adoption is messy entailing self-initiative, risks, trial and error, endurance and high cost. Few graduates have been attracted to the informal sector to help in knowledge creation and transfer.

Bunyasi's (2015) analysis of growth of SMEs in Thika, Kenya indicated a positive correlation between improved methods of production and increased productivity and profitability resulting from efficiency and cost effectiveness. Among the firms46.2% of the respondents strongly agreed, and 38.6% agreed. This is echoed in McCormick *et al.,* (2009) findings that innovative firms tend to achieve cost effectiveness, quality improvement, and renewal of existing products origination of new products. The study is guided by Resource Based Firm Theory (Goshal *et, al*., 2002) which identifies technology as among resources available for growth of firms through enhancement of innovation.

A document on strategy implementation and performance of SMEs in Kenya by Kihara (2016) singles the significance of technology in growth of small firms showing firms that reared go for improved technology registering significant performance and growth. Technical innovation proved key in competitiveness, profitability and market share. Firms with strong technical agility are able to create new technologies, differentiation, superior processes and structures to stay ahead of the competitors. Technical opportunities for growth of MEs lie in providing simple and modern tools appropriate for level of work, technical upgrading, and regular maintenance of tools and equipment.

In the technological and innovation fronts Kinyua (2014) study on factors affecting performance of 262 small and medium Jua Kali enterprises in Nakuru town found a small percentage of

entrepreneurs taking advantage training opportunities with 12.4% of the respondents reported to a great extent to have undertaken training, 26.4% to some extent and 61.2% not at all. New and yet to be embraced opportunities for metal fabrication MEs in Kisii County lie in integrated mechanized and automated wielding (Gyasi, 2013).

The studies in review while highlighting successes in technological development of small firms have fallen short of analyzing factors inhibiting technological revolution among the firms in developing countries for industrial take off. Significant factors for consideration include low levels of education, limited research and development, constrained technology transfer, poor policies and high costs.

2.2.5 Opportunities in Government Regulatory Framework and Growth of Microenterprises

State authorities (governments) are important stakeholders in the growth of microenterprises. Governments influence activities of MEs through regulations and policies. Government regulations do impact on licensing, financing, markets technology and innovations, significant factors in MEs growth. The mode of regulation and formation of enterprises is a determinant of organizational growth. Cases from German (Almus and Nerlinger, 1999) and Sweden (Davidsson et al., 2002) showed limited liability firms growing faster than unlimited liability firms. The growth of limited liability firms is attributed to their will to venture into risk which ultimately avails opportunities. The finding s also reported insolvency among limited liability as compared to full liability firms.

Bastien (2009) study of government policy for MSEs in Bhutan showed significance of state effort in policy formulation and implementation. In terms of policy level intervention Bhutan's Economic Development Policy (EDP) of 2012 boosted growth of private sector through

diversification of the economy (GNHC 2013a) and access to affordable finance. The study has not been specific on the growth experienced whether in employment, assets or income.

Hajjaji (2012) examination of growth of small firms in Libya showed the adverse effect of poor governmental policy on growth. Findings showed 20 out 28 firms (72%) considered inefficient government regulation a significant constraint on growth while 22 out of 28 firms (79%) considered taxation system hostile. This has made smaller firms evade most of the taxes. Among the respondents, 21 out of 28 (75%) felt bureaucracy, corruption and lack of financial and administrative capacities serious constraint on growth.

Dumbu's survey (2014) of management of Micro and Small Enterprises (MSEs) in Zimbabwe showed state impacting growth of business through creation of conducive business environment and indigenization policy aimed at empowering the natives. However, nepotism and fragile political environment has denied small firms opportunities for growth. There is call for government incentives such as subsidized production to bail out the ailing microenterprise sector. The study however failed to highlight the negative impact of the prolonged fragile political environment in the country.

Bouazza1 *et al.*, (2015) analysis of Factors for Growth of SMEs in Algeria listed ineffective government regulation as major hindrance of opportunity exploitation by the firms. There is state bureaucracy which as clouded registration and licensing resulting in high costs. The onus is on the government to originate progressive policies for improved business climate.

Mwadumba's (2007) study of management structures for SMEs in Malawi recognized government contribution to growth of MEs through stabilized exchange rates, price deregulation, privatization of ailing state corporations and cutting red tape. The reduction of state bureaucracy

has increased the participation of informal sector in the economy coupled with access to modern technology, affordable capital and materials. However, the developments are endangered by cheap imports prompted by liberalised importation policy. The study implores the government of Malawi to improve business environment by reigning on the large fiscal slippages, unsustainable domestic debt, low domestic investment, high energy costs, poor infrastructure and corruption. Given that Malawi is among the poorest countries in world there is need of gradual structural reforms to progressively prop the growth of MEs.

The Appui Au Development Autonome (ADA) (2016) report on growing small business in Africa: showed Kenya scoring better in ease of doing business (ranked 80thout of 190) than most developing countries. Kenyan's average score can be attributed to regulatory reforms, fewer requirements to open business and promotion of local products through the Buy Kenya, Build Kenya policy. Kenya also ranks fairly well in attracting investors (29th) as pertains to issues of inadequate capital, limited market access, poor infrastructure, inadequate knowledge and skills, corruption and unfavorable regulatory environment which hinder development and growth. The latest report ranks Kenya third globally in Foreign Direct Investment Opportunities for the year 2024 with an index score of 87.44 (FDI Standouts Watchlist, 2023). This is a testimony that reforms geared toward improving the business environment are bearing fruit.

Afande (2015) study of growth of MEs in Nairobi showed legal framework reforms simplifying the procedures for the creation, financing and capacity building for MEs and provide information on the available opportunities in seed money, leasing, venture capital, and investment funding and government grants. The challenge is for government to avail information through a central data bank. There is hope for conducive environment with the opening of Huduma Centers (one-shop center for all government services) and digitization of the government platforms. The

obstacles toward capitalizing on government initiated developments are costs, and the limited technology and skills of the MEs.

In examining of Impact of Knowledge and Technology on Growth of Jua Kali MEs in Kamukunji, Kinyanjui's (2006) noted government policy influencing MEs growth through partnerships with trade associations such as Kenya Federation of Jua Kali Association and Kamukunji Jua Kali Welfare Organization. The partnerships have impacted n MEs positively through joint projects such as trade exhibitions and skill development programs. The MEs have embraced government national campaign on environmental conservation has also motivated the MEs to innovate recycling and reduction of waste. The challenge is for the government to take the partnerships a notch higher though innovation and research with institutions of learning such ss universities and technical institutes.

Magambo and Omwenga (2015) investigation on variables impeding growth of Jua Kali motor garages in Shauri Moyo, Nairobi showed regulatory requirements as major hurdle in the expansion and growth MEs. These include burdensome tax system (49%) and extrajudicial activities by government officials (41%). The government effort in creating a conducive business environment has gained momentum by accessing government services in one-stop shop, the Huduma Centers and digitization of the government service platforms.

A study on hotel and hospitality MEs in Keroka by Ongoro (2013) identified government regulation as one the major hindrances (83%) to MEs growth. The much dreaded government regulation is the slow and bureaucratic licensing process which adds unnecessary operational costs. Motivation for opening and growth of MEs borders on government goodwill through a friendly regulatory regime (Edgar, (2003). The fragile economy of Kenya brought about by

Covid 2019 has not made the situation any better in reducing state's appetite for more revenue through expanded taxation.

Strategies of leveraging opportunities in government regulatory framework do influence growth of MEs. A good number of countries' regulatory regimes have presented opportunities for growth of MSEs, For example, India has provided special incentives for growth of MSEs by reserving manufacture of certain products for small firms (World Bank, 2005). In Namibia opportunities for MSEs are brightening with the enactment of a public procurement bill to provide preferential treatment for locally manufactured goods (Government of Namibia, 2015). World Bank Report (16th edition, 2018) shows improving business environment in Kenya which show the country made tremendous improvement in the ranking, moving 19 places from position 92 to peach at 73. According to Vision 2030, the government of Kenya is putting a lot of effort into providing a policy environment that is favorable for investment; practicing effective microeconomic management; preserving the rule of law alongside social and political stability; making investments in physical infrastructure and human resource development; and preventing human exploitation in international agreements and relationships (GoK, 2010).

According to the African Review of Business and Technology Report of May 2017, the government of Kenya has developed methods to speed up the processes of beginning new businesses and increasing existing ones in order to benefit small businesses. It deals with obstacles to growth by enforcing legislation on local content for public projects; establishing 'Buy Kenya, Build Kenya' policies in public procurement; providing support for research and development; and increasing funding though Uwezo, Women, affirmative and Youth Funds. These government has responded by closing the funding gaps through a program called ''Financial Sector Deepening'' (FSD), a partnership with other organizations aimed at enhancing

low-income households and smaller businesses access to financial services. The ease of opening business in Kenya has improved remarkably with the reduction of compliance procedures to seven and waiting period to 22 days,

2.2.6 Moderating Effect: Relationship between Owner Level of Education and Optimization of Business Opportunities (predictor) for Growth of Microenterprises

According to Chew, Levy, and Ilavarasan (2011), the majority of owners of micro, small, and medium-sized enterprises (MSEs) are devoid of formal education beyond primary school level whilst 58% of MSE owners have not received managerial, technical or marketing training. Echoing the significance of education, Hermon (2003), and Praag and Vinjverberg (2005) established that education raises wage income by an average of 6.5 percent. They also discovered that higher level of education corresponded with higher skills and better entrepreneurial performance of MSEs.Musavi and Maingi (2017) study on effect of credit and education on performance of MSEs revealed that educational attainment of the owner/manager of a firm has a significant and positive effect on its performance (β=0.396, t=3.721, R^2=.514), explaining why firms that were owned / managed by people with higher academic qualifications recorded higher productivity than those managed by people with just basic education. These findings concur with Mmari (2014) who noted that enterprises that were owned/managed by people with low education registered slow growth compared to those run by owners with relatively higher educational qualification.

Odero (2017) study of formal education and income of SMEs found the level of education a factor in the earnings among SMEs with the mean daily income for the lower education graduates at Kshs.981.75 compared to Kshs.1722.30 for the higher education graduates.

2.3 Summary and Critique of Existing Literature

Musavi and Maingi (2017) study on the effect of credit and education on the performance of micro, small, and medium-sized enterprises (MSEs), reported significant and positive of educational attainment on the performance of firms (=0.396, t=3.721, R2=.514). Firms operated by individuals with higher academic qualifications recorded higher productivity. These findings concur with of that of Mmari (2014), who indicated slow growth of firms operated by individuals with low educational qualification as compared those of high educational qualifications.

The prevailing dynamic environment has rendered the business opportunities sporadic making it difficult for the businesses to locate the strategic gap for full optimization of the opportunities. The situation is compounded by the enterprises inability to mitigate change for full optimization of opportunities (Teece *et al.*, 1997). Effective Optimization of business opportunities will shift MEs from mainly horizontal to vertical growth (McCormick and Pedersen 1996; and K- Rep 1999).

Previous studies have supported the view that supportive business environments present opportunities for firm growth (Chittithaworn, Islam, Keawchana, & Yusuf, 2011; and Ng & Kee, 2012). Opportunities for growth for different sectors are heterogeneous, varying from one nation to another, given the diverse socio-economic and political contexts (Ng & Kee, 2012; and Alexandrova, 2004). In developed countries the predictable business environment present much needed opportunities in finance, marketing, technology and government support. This contrasts growth of MEs in developing economies where fragile economic and political environment has doesn't guarantee steady stream of opportunities (Chittithaworn *et al*., 2011).

In Kenya recent research has mainly focused on factors of growth for MEs (Ndende*et al.,* 2017; Matoke and Muturi, 2017; Omboga and Okibo, 2016; Osoro, 2016; Odongo and Wang, 2016; Onyonyi, 2016; Simuyu *et al.,* 2016; Onsongo and Muturi, 2015; and Mbiti *et al.,* 2015; Oroko, 2010; and Kinyanjui, 2007). Few studies are on record to have focused on optimization of opportunities for the growth of metal fabrication MEs (Saulo, 2016; Hermsen, 2010; Oroko, 2010; and Sonobe & Otsuka, 2007). This study seeks to help metal fabrication MEs locate the strategic gap for the full optimization of business opportunities.

Table 2.2 Summary of Literature Review

Author	**Objective**	**Theory**	**Methodology**	**Results**	**Research Gap**
Chitthaworn and Islam (2001)	Investigating factors affecting business success of small enterprises	Salminen (2000) framework which views enterprise as a controlled system	Descriptive analysis	Most significant factors for MEs growth are finance, customers and market, MEs characteristics, way of doing business and external environment.	Lack of robust theory to explain how MEs can harness opportunities for success
Wangmo (2016)	Determine financing constraints of small and medium enterprises	Multiple theories (Theory of information asymmetry, agency theory, adverse	Explanatory research	Financing constraints are aggravated by lack of financial information on the part of	Emphasizes the constraints from the borrower's view point without examining the role of lenders

		selection, moral hazard, credit rationing, the pecking order theory and trade-off theory)		the firm as well as size and age of the MEs	in the failure to access finance by MEs.
Lee (2014)	Examine challenges and opportunities for MEs in Vietnamese apparel retail market	Barney and Heterly's (2005; 2010) VRIO (Valuable, Rare, Invisible resources and Organization) model and Rostow's (1960) stage of growth model	Mixed methods of research design (quantitative and qualitative)	Competitiveness for MEs is hampered by limited access to financial resources. Marketing opportunities for MEs lie in trade liberalization, an open economy and increased foreign direct investment (FDI).	The study fails to show the interrelationship between different factors ensures growth and sustainability of retail market.
Musona (2014)	Analysis of factors constraining growth of microenterprises	Perren (1999) framework of enterprise growth	Descriptive design and quantitative and qualitative analysis.	Financial opportunities were constrained by stringent lender demand collateral, high interest rates	The study falls short of showing the magnitude of the factors influencing growth of MEs
Adjei (2014)	Asses impact of Business Development Services on	Theory of capital (Schultz, 1961) which emphasizes on return on	Survey design-helped to address wide range of problems.	Improved education and training in finance enhances prudent	The study has not suggested best practices as pertains to opportunities in international

	microenterprises	investment and later advanced by Becker (1994) showing that investment in education and training increases productivity.		financial management. New opportunities in training infrastructure for firms to improve their capacities on production, business planning, marketing and cash flow management	marketing
Ndede, Mbewa and Jagongo (2017)	Examine regulatory framework and demographic determinants of acquisition of financial services by MSEs	Logistic cumulative distribution function with estimated probabilities; P(Y=i), I = 1, 2, 3----n, where I represents the various firms acquiring financial services and e is a natural number.	Descriptive survey	Sources of finance were; own savings (70.1%), bank loans (12.1%), friends (5.6%) and credit associations (1.7%). Start-up capital proved to be critical variable in the success of SMEs.	The study is skewed toward growth of MSEs in urban setting MSEs in rural areas.
Ismail and Karlsson (2013)	Investigate barriers for growth of MSEs		Single case study	Market opportunities for growth accrue from information given by customers and market	The study is a single case study focused on a developed economy (Sweden), hence the findings cannot

				research. Technological opportunities in research and development, and investment in new machines.	be generalized
Nuwagabal and Nzewi (2013)	Examine the extent to which growth of MSEs is associated with environmental constraints.	Ryan's measure of MSE growth based on the number of employees giving the measurements as follows; survival activities (<1 employee), microenterprises (<5), small emergent enterprise (<25), and growth businesses (<100).	A survey design	Lack of marketing management practices hampered the optimizing of the emerging opportunities	The findings focus very little on opportunities in emerging competitive marketing practices such relationship marketing
Bunyasi(2015)	Assess the entrepreneurial factors influencing the growth of small enterprises.	Resource Based Firm Theory (Goshal *et, al*., 2002),	Descriptive survey design	Opportunities in new channels of distribution. Innovative production for efficiency and cost effectiveness for growth	The study fails to hint opportunities for competitive marketing for MEs.

				with 46.2% of the responses strongly agreeing, and 38.6% agreeing. Factors enhancing innovation include availability of technology, attitude and affordability of the processes.	
Mwadumba (2007)	Examine the impact of structural adjustment programs on small and micro-enterprises	Barney (1991) resource based view theory	Descriptive design aided by qualitative and quantitative statistics.	Government to stabilize exchange rates to stimulate exports, price deregulation to stimulate investment, privatization of state owned enterprises.	The findings have not suggested how opportunities in governmental framework can be optimized through improved business climate
Bouazzal, Ardjouman and Adaba(2015)	Analyze key factors affecting growth of MSEs	Penrose's (1959) theory of growth of firm which affirms that firms are a bundle of internal and external resources	Exploratory study relying on quantitative and qualitative methods	Opportunities are in technology transfer and quality certification. Inept administrative and operational procedures	The study has not shown how MEs shall leverage opportunities in the international market through enhanced international quality

				of government regulations constrain growth requiring government improve business climate	standards
Hermsen (2010)	Examine collective efficiency in the metalwork cluster	Hemsen's technography approach		Attraction funding from donors modernize tools and machines.	Further study into how cooperative movement will assist The findings have not shown avenues such cooperative movement through which MEs will optimize opportunities in technology and innovation
Wangari (2015)	Study knowledge management and innovation among Kenya's Jua Kali metal fabricators			Innovation has incremental change in the form of product improvement. New innovation takes the form of import substitution.	The study fails to suggest way forward for MEs in optimizing modem technology, tools and machinery
Kinyanjui's (2006)	Examine knowledge and		Descriptive study	Major technological opportunities	-The study has not shown opportunities

	technology in Jua kali clusters			accrue from self-initiative, creativity and spillover and learning processes from large firms.	accruing from learning and technical institutions for growth of Jua Kali MEs
Bastien (2009)	Examine government input in SME policy formulation and implementation.		Cross-sectional survey	Government support for collateral affordable loans, access to finance and incentives, through Economic Stimulus Programme and Business Opportunity Information centres	Need of further research into success The study has not indicated opportunities in government regulatory framework for MEs growth
Magambo and Omwenga (2015)	Identify and explain factors affecting growth Jua Kali Motor Garages	Contingency and resource based theories	Descriptive study	Regulatory impediments for growth include tax (49%) and harassment by Govt. officials (41%).	No data on improving business environment for MEs growth

Source: Researcher (2022)

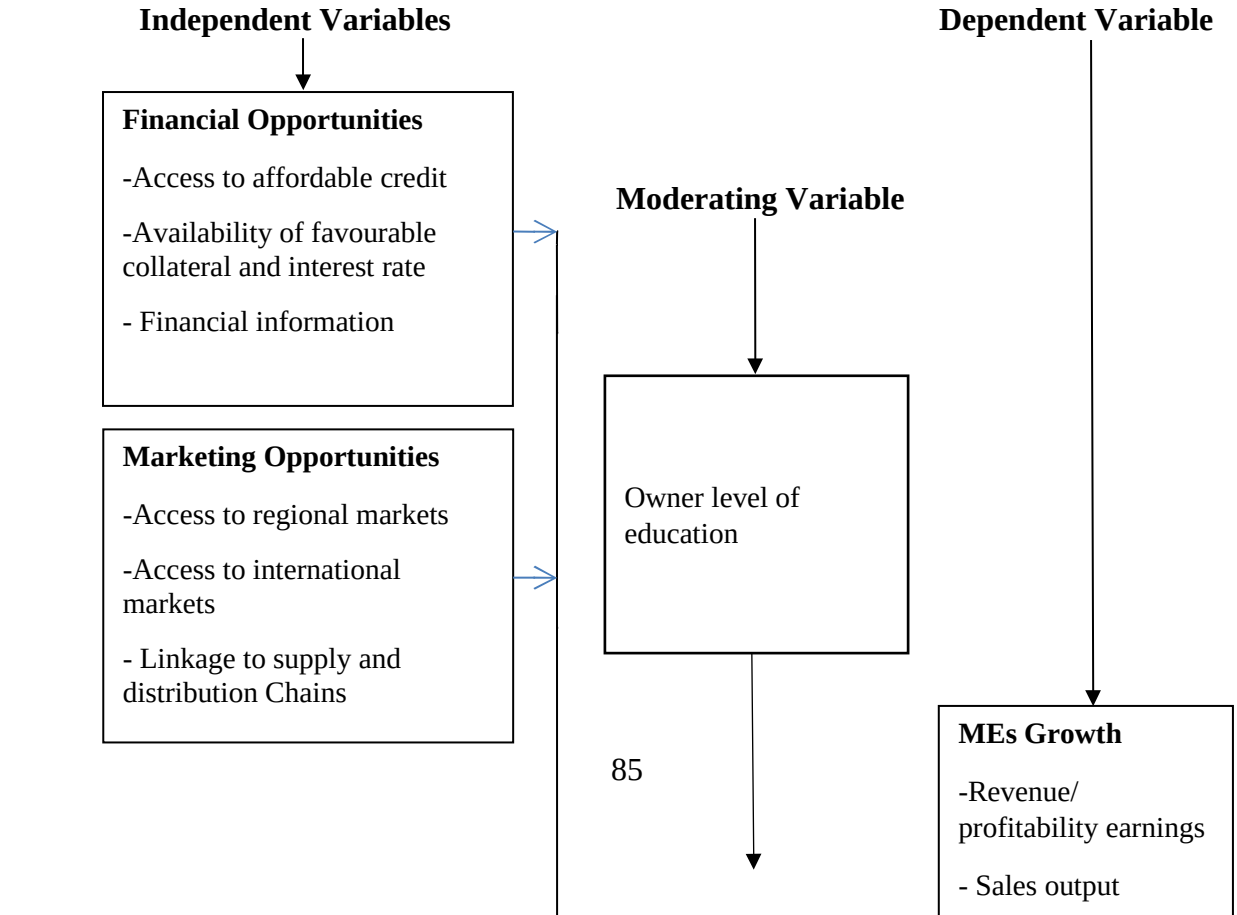
2. 4 Research Gap

The empirical literature shows that studies in both developed and developing countries have focused mainly on small and medium enterprises. Few if any of the studies have focused on opportunities for the growth of metal fabrication microenterprises. Previous studies have focused mostly on factors for growth of MEs (Wangmo. 2016; Bunyasi, 2015; Afande, 2015; Ongoro, 2015; Magambo and Omwenga, 2015; Musona, 2014; Rasmussen, 2014; Ismail & Karlsson, 2013; Haijaji, 2012; Martin & Kalshappa, 2012; Mwania. 2011; and Iqbal, 2008).

This study sought to analyse financial, marketing and technological opportunities, and opportunities in government regulatory framework for the growth of metal fabrication MEs. In finance there has been little emphasis in the preceding studies on the significance of optimizing seed and working capital for the take-off and growth of metal fabrication MEs. In the domain of marketing MEs need to be motivated in optimizing opportunities in market niches, differentiation and strong branding for domestic and international markets. In the optimization of technological opportunities the study sought to examine how metal fabrication MEs have advanced along with emerging technologies in IT and mechanization. Since government regulatory framework is ubiquitous, the study sought to establish how metal fabrications MEs have taken advantage of business opportunities in the public sector for growth. Given the ever evolving technologies and their effect on enterprise growth, this study sought to examine the moderating role of the level of education on the growth of the metal fabrication MEs.

Given that business environments are dynamic there is need of periodic scanning and optimizing of potential opportunities which impact on MEs growth. This study sought to analyse the optimization of business opportunities for growth of the metal fabrication MEs in Kisi County.

2.5 The Conceptual Framework



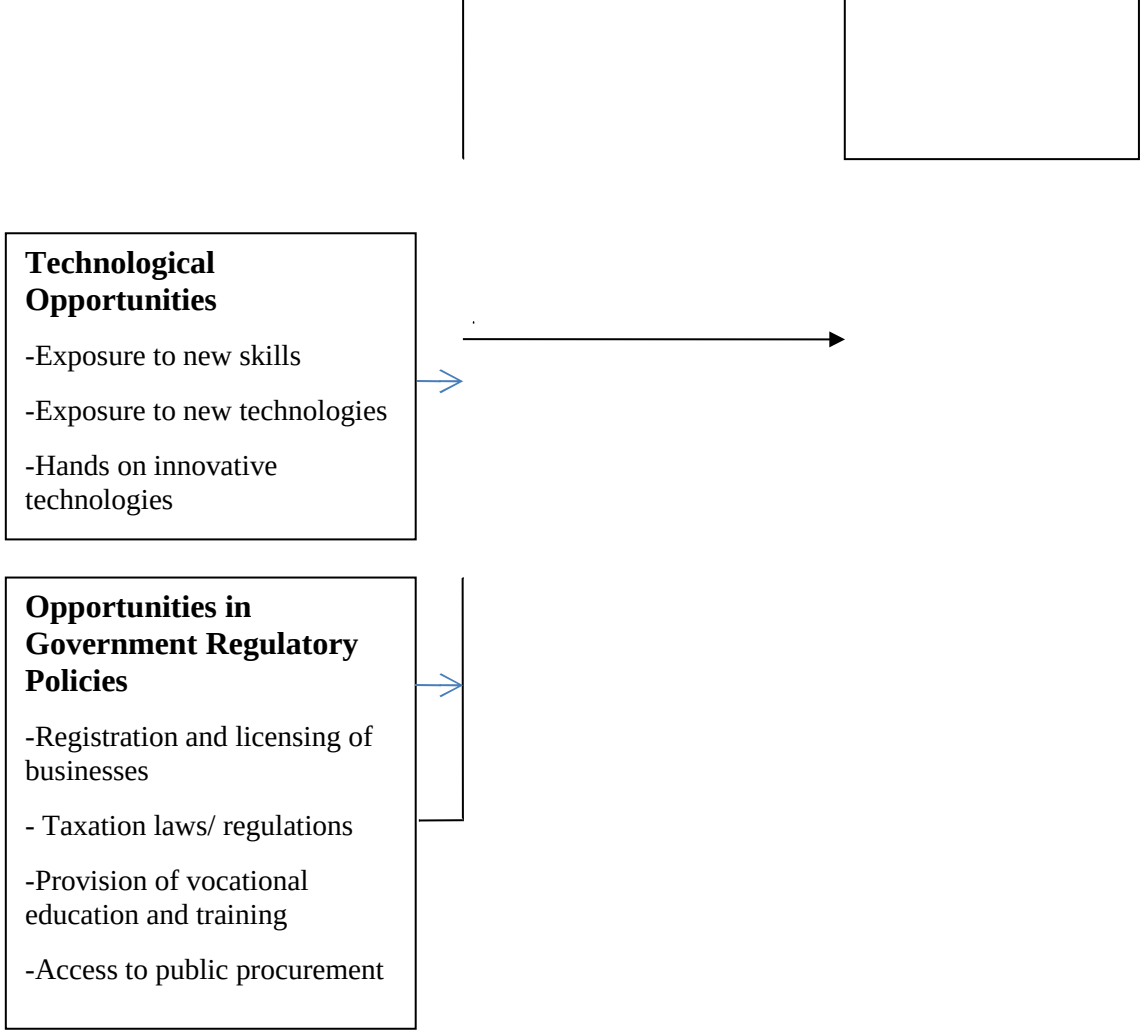


Fig 2.3 Conceptual Framework

A conceptual framework is a postulated model that summarizes behaviours and provides explanations and predictions for the empirical observations (Cooper and Schindler, 2008). Its goal is to classify and explain the concepts that are pertinent to the study, as well as to chart the link between those concepts. The variables in the conceptual framework are independent variable (business opportunities), the dependent variable (MEs growth), and the moderating variable (level of education). The financial opportunities were: finance, marketing, technology and government regulatory framework. The framework presents the moderating effect of the level of education on the growth of metal fabrication MEs in Kisii County. Financial opportunities include access to affordable credit, favourable collateral and interest rate and financial information. The market opportunities are access to domestic and international markets, and

linkage to supply chain and distribution channels. Technology as a business opportunity includes exposure to new skills and technology, and hands on innovation. The opportunities availed by the government regulatory environment include registration and flexible licensing of business, taxation laws, and vocational and technical training. The optimization of the business opportunities results in growth of the MEs in terms of new technology, products and services, sales, revenue and profitability.

2.6 Summary

The chapter presented the literature review on the optimization of business opportunities for the growth of metal fabrication microenterprises in Kisii County. The chapter outlines and elaborates the theoretical framework, key concepts and terms for the study. The key concepts and terms focus on the subject of research and provide a clear understanding of the conceptual flow. The chapter presented the models and theories that support the study being the learning organization model about scanning the business environment, identifying and exploiting business opportunities and the growth based theories (Enterprise life cycle model**,** Porter's generic strategies and SWOT Analysis) which are relevant to this study. The study explores previous studies of opportunity optimization and growth of me MEs, while identifying the lessons learned and the persistent gaps. Subsequent discussion explains the moderating role of owner level of education on the relationship between optimization of business opportunities in finance, marketing, technology and government regulatory policies and growth of metal fabrication MEs. The chapter also presented past studies done on various opportunities and factors influencing growth of MEs. From the literature it is clear that financial, marketing, technological and opportunities accruing from government regulatory policies are significant in the growth of MEs. The studies also confirmed that owner level of education is significant in influencing relationship between optimization of business opportunities and growth of MEs. Growth in MEs for this

study was determined by a combination of measurements of increase in new products, assets, profitability, sales turnover and employees. This study is consistent with the general notion that MEs which optimize business opportunities experience growth faster compared to those which don't leverage the opportunities. This is clearly explained in the conceptual frame under the independent, dependent and moderating variables. Chapter 2, therefore, provides background for the research's design, the subject of chapter 3.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter discusses the research methodology used in the study. This chapter describes the research design, target population, the sample and sample design, data collection methods and data analysis techniques

3.1 Research Paradigm

A positivistic approach to data collection, analysis and interpretation applied in the study as opposed to the humanistic approach where human judgment or bias is at play was adopted. The research exhibits characteristics of positivist approach as propagated by Tribe and Summer (2004), the goal being search of truth in regard to optimization of business opportunities as

predictor of growth of metal fabrication microenterprise in Kisii County. Through a structured approach the researcher was independent of the researched. The approach is structured in way that respondents had leeway to give feedback through structured questionnaire and interview.

3.2 Research Design

This research adopted a longitudinal survey and explanatory designs. A mixed strategy of quantitative and qualitative research approaches was adopted with the aim of determining the relationship between the optimization of business opportunities and growth of metal fabrication microenterprises in Kisii County. Creswell and Plano-Clark (2007); and Ivankova, Creswell and Stick (2006) recommend a mixed strategy of quantitative and qualitative methods in studying the relationship between theory and data. The overarching approach to this study is positivist hence the predominant method is quantitative.

Quantitative methods suited the study because it is specific, well structured, readily tested for validity and reliability and can be explicitly defined and recognized. Quantitative analysis provided measurement which established the relationship between independent and dependent variables. Regression and correlation analysis enabled testing of hypotheses and generation of statistics for generation of inferential statistics for prediction purposes (Sekaran, 2006). Analysis of variance was used to test the significance of the model.

Qualitative analysis proved valuable given its inductive approach and its focus on specific situations and people. The method's emphasis on words enhanced understanding, clarification and bringing meaning out clearly. It also preserved individuality during the collection of data.

In this study a longitudinal descriptive design was used to examine the influence of business opportunities on the growth of metal fabrication microenterprises over a period of three years

(2016, 2017 and 2018), The design suited the study because it describes phenomena as they exist, (Collins and Hussey, 2003). It also sought to understand situations, feelings, perceptions and attitudes of the respondents in relation to the subject of study. Being deductive, non-linear and non-sequential, the design is flexible and helps bring out full clarity of phenomena. The method when well used generates theoretical knowledge and meaning and shows relationship between variables (Zikmond, 2003).

3.3 Area of Study

The research was carried in Kisii County targeting the townships of Kisii, Ogembo and Suneka in Kenya. The county of Kisii had been selected because it is among the most densely populated regions in Kenya (1,021 persons/sq.km as in 2016) with a shrinking resource base aggravated by land fragmentation, unemployment and poverty (Apalia, 2017). Kisii County has a population of 1,306, 652 persons as of 2015, making it one of the top five most populated counties in Kenya (Kisii County Strategic Plan, 2013-2018). Prevalence of poverty in the county is at 51% (eight points higher than national, 43%) with the number of unemployed standing at 61% (Kisii County Strategic Plan, 2013-2018). This study sought to identify and analyse opportunities for growth of metal fabrication MEs in Kisii County.

3.4 Target Population

The target population for this study was 255 metal fabricators (wielding, motor vehicle panel beating, auto and industrial spare parts, key cutting and blacksmith) microenterprises in the three townships of Kisii County: Kisii, Ogembo and Suneka. The metal fabrication microenterprise form the unit of analysis. Also covered in the studies is the top official (Chairman) of the Jua kali Association of Kisii County. The Target population for the study is shown in Table 3.1

Table 3.1: Target Population

Category	Population (N)			
	Kisii	Ogembo	Suneka	**TOTAL**
Welding	113	20	18	151
Motor vehicle panel beating	31	3	4	38
Auto and industrial spare parts	13	1	2	16
Key cutting and padlocks	10	3	3	16
Blacksmith	28	3	3	34
TOTAL	195	30	30	255

Source: Researcher (2022)

3.5 Sampling Frame

Mugenda & Mugenda (2003) defined a sampling frame as a list, directory or index of a case from which a sample can be selected. The sampling frame consists of the list of elements that are in the population (Kothari, 2012). The sampling frame was drawn from 255 metal fabrication metal microenterprises from data base of Kisii County government (2018). The list availed by the Kisii County Registry was use to recruit candidate MEs for the study.

Table 3.2: Sampling Frame

Category	Population (N)			Sample Size (n)		
	Kisii	Ogembo	Suneka	Kisii	Ogembo	Suneka
Wielding	113	20	18	68	12	11
Motor vehicle panel beating	31	3	4	19	2	2
Auto and industrial spare parts	13	1	2	8	1	1
Key cutting and padlocks	10	3	3	6	2	2
Blacksmith	28	3	3	17	2	2
Total	195	30	30	118	19	16

Source: Researcher (2022)

3.6 Sample and Sampling Technique

The sampling unit is a metal fabrication microenterprise. According to Yamane's model (1967);

$$n_{s=} \quad \frac{N}{\{1+N\,(e^2)\}}$$

Where; n_s -sample size; N –population size; e-precision level (at 0.95 confidence interval), e = 0.05

Given N = 255, then

$$n_s= \quad \frac{255}{\{1+255\,(0.05^2)\}}$$

$$=155$$

Purposive sampling was used to select the sample of each of the three townships. Total population sampling (parent sample) applied, that is the entire population of Jua Kali metal fabrication MEs of the townships was selected. The method was preferred because of the small parent population and similar traits among the metal fabrication MEs among the three towns.

The study used stratified sample drawn from the population of Jua Kali metal fabricators in the different sub sectors of metal fabrication in Kisii County. The list was stratified into five sectors namely; wielding, motor vehicle panel beating, auto and industrial spare parts, key cutting, and blacksmith. A simple random sampling was used to ensure that the defined population of each sector has an equal and independent chance of being selected as a sample. The sample of each subsector was calculated using formula provided by Kothari's (2004) as follows;

$$n\,(\text{Subsector}) = \frac{N(\text{subsector}) * n(\text{all subsector})}{N\,(\text{all subsectors})}$$

Where:

n (subsector) is the sample size at the subsector level

N (subsector) is the population of a subsector

n (all subsectors) is sample size of all the subsectors combined

N (all subsectors) is the population of all the subsectors

A purposive sample of the leadership of the Jua Kali Association of Kisii County helped isolate sample with specific qualities important to the study. Hence the chairman of the association made up the purposive sample.

3.7 Data Collection Instruments and Procedure

Primary data was collected from respondents using self-administered questionnaire and interview. A questionnaire was adopted as suitable data collection instrument because of its suitability to collect information that is not directly observable, eliminates interviewer bias and assures respondents anonymity (Gall and Borg (1996). A close-ended questionnaire was used to generate statistics. Open-ended questionnaires having blank spaces for respondents answer was used for qualitative data collection. Research assistant helped to translate and interpret questionnaire for respondents. Interview schedule was used to ask questions for clarification from key informant namely, Jua Kali Association leader (Chairman). Investigative questions were used in the study because they help to probe the relationship between the variables while addressing each objective accordingly (Cooper and Schindler. 2006) Secondary data was sourced from existing literature and reports.

This study relied on primary data. The researcher obtained a letter of introduction from Post Graduate Board and Ethics and Research Council of JOOUST, and clearance from NACOSTI (National Commission for Science, Technology and Innovation) to allow conduct the research.

Then the researcher visited the metal fabrication MSEs to familiarize himself with the environment. The researcher organized for prior appointment with entrepreneurs and informed them that their responses will be confidential and only for academic purpose. The data collection procedure involved distribution of questionnaires to the respondents by the researcher and three trained research assistants. The answered questionnaires were collected at an agreed time. Interviewing the group leader of was done by the researcher to solicit more information.

3.8 Data Measurement

3.8.1 Independent variables (Business Opportunities)

The influence of business opportunities on the growth of the firms was measured by inquiring if the firms had in the past three years taken advantage of opportunities in their business environment: 1) financing 2) marketing 3) technology and 4) government regulatory policies Te items were rated on a 5-point scale (1=Strongly disagree 5= Strongly agree. To measure the overall opportunity exploited by a firm the five items were combined to form a sum scale, where higher numbers indicate greater opportunity exploitation. Opportunity exploitation sum variable measures how extensively the firms had taken advantage of new and attractive opportunities. A manager/owner was assessed (5-point scale, 1= strongly disagree, 5= strongly agree) on the ability to take advantage of opportunities.

3.8.2 Dependent variable (Microenterprises Growth)

The researcher measured growth by asking if the firms had in the past three years experienced growth concerning 1) products 2) sales 3) employees 4) revenue 5) profit. To measure growth of a firm these items were combined to form a sum scale, where higher numbers indicate greater degree of growth. Finally the research sought to establish the most sought after opportunities by MEs in their quest to boost growth of their enterprises.

3.8.3 Moderating Variable

A moderator is a third variable denoted as M specifying conditions under which a predictor is related to an outcome. The moderator explains how a dependent variable and independent variable are related. Moderation implies an interaction effect, where introducing a moderating variable changes the direction or magnitude of the relationship between two variables (Elite Research, 2013). A moderation effect could be (a) Enhancing, where increasing the moderator would increase the effect of the predictor (independent variable) on the outcome (dependent variable); (b) Buffering, where increasing the moderator would decrease the effect of the predictor on the outcome; or (c) Antagonistic, where increasing the moderator would reverse the effect of the predictor on the outcome. In this study the moderation is the owner demographic characteristics (owner level of education). Testing moderation will examine the interaction effect between opportunities for growth (independent variable) and owner level of education (moderation variable) and whether or not it is significant in predicting growth of the microenterprises (dependent variable).

3.9 Reliability and Validity of the Research Instrument

This refers to the extent to which the instruments adequately or appropriately reflect the situation. To what extent does the instrument measure what it is designed to measure is known as the accuracy of the measurement (Holloway & Wheeler, 1997).

The degree to which the instrument maintains its original state over time is referred to as the instrument's reliability (Best, 1998). It refers to the degree to which the instrument, when used multiple times, would provide the same findings in the research (Holloway and Wheeler, 1997). Cronbach's alpha is a statistical measure of reliability that is recommended by Cohen et al. (2013). For social-sciences values above 0.7 are acceptable (Kline, 1999). A Cronbach’s alpha

(α) > 0.7 implies the instrument provides a relatively good measurement tool, hence reliable. Pre-testing enhances consistency and dependence, accuracy and adequacy of the instruments. This was done through test-retest run so as to bring out weakness if any. The questionnaire was administered to ten metal fabrication operators in neighboring town of Nyamache to prove its suitability. After the test-retest run, the researcher made revision and final adjustment to the questionnaire.

Validity requires that the questionnaire measures exactly what it is tailored to measure. The three dimensions from which validity can be examined are content, construct, and criterion validity (Orotho, 2009). Content validity was ensured by designing the instrument in line with the study variables and their respective indicators of measurement while construct validity, was adhered through restricting the questions to the conceptualized variables and ensuring that the indicators of a given variable fall within the same construct. Criterion and external validity ensured that the results of the study correlated with other studies that have been conducted in a similar manner and that comparable findings can be predicted for studies that will be conducted in the future. The research instrument was validated through review by my two research supervisors and two colleagues.

3.10 Pilot Study

In the context of scientific research, the phrase "pilot study" refers to feasibility studies, often known as test runs or versions performed on a smaller size and carried out in advance of the main study (Politand Beck, 2010). According to Mugenda & Mugenda (2008), a pilot test sample could consist of anything between 1 and 10 percent of the total population. A pilot survey was conducted on 10% (four businesses chosen at random) of the metal fabricator microenterprises in Nyamache Town in Kisii county. The respondents were requested to provide feedback regarding

how convenient it was to answer the questionnaire. The reliability and validity of the instruments were determined with the help of the pilot study. The results computed on Statistical Package for Social Sciences (SPSS) had a Cronbach's alpha (α) value of 0.8531 for all the variables. A Cronbach's alpha (α) > 0.7 (Serakan, 2003) was interpreted to mean that the instrument provided relatively reliable measurement tool. The questionnaires were validated by discussing with four randomly selected MEs owners whose views were evaluated and incorporated to enhance content and their validity of the questionnaire.

3.11 Data Processing and Analysis

It was determined whether the data obtained from the questionnaire contained any errors, omissions, or discrepancies. The responses to the questionnaire and interview schedule were itemized, and the data from the questionnaire and interview schedule were coded, all in accordance with the objectives. The statistical methods of descriptive statistics and inferential statistics were utilized in order to analyze the quantitative data. Tables were used to provide descriptive data, including frequency distributions, mean values, and standard deviations.

The analysis utilized a Likert scale with points ranging from 1 to 5. The decision rule for the Likert questions is based on the measurement of the respondents' perceptions of the situation. On the Likert scale, which ranges from 1 to 5, the following responses are possible for each characteristic being measured: 5-strongly agree, 4-agree, 3-neutral, 2-disagree, and 1-strongly disagree. Means that were lower than 3 suggested that there was considerable disagreement, while means that were higher than 3 indicated that there was strong agreement.

Qualitative data was collected using the open ended questions and analysed using content analysis. Content analysis is any research technique for making inferences by systematically and objectively identifying specified characteristics within text (Prasad, 2008).

3.11.1 Correlational Analysis

Inferential statistics technique was used to test various hypotheses. Pearson Product's Moment correlation and simple regression analysis was used to test hypotheses for the variables. A p value less than 0.05 implied a rejection of the hypotheses. A p value greater than 0.05 implied acceptance of the hypotheses.

The Product Moment Correlation Coefficient helped ascertain the relationship between opportunity optimization in finance, marketing, technology and government regulatory policy and MEs growth. The correlation coefficient might have values that range from minus one to plus one. A value of 0 indicates that there is no relationship between the two variables, a value of +1 indicates that there is a perfect correlation between the two variables in a linear sense that is positive, and a value of -1 indicates that there is a perfect correlation between the two variables in a linear sense that is negative (Kothari, 2012).

3.11.2 Multiple Regression Analysis

Multiple regression was used to determine whether the opportunities proposed predicted growth of metal fabrication MEs as indicated in /the conceptual framework. The analysis was aided by Statistical Package for Social Science (SPSS) version 20.1. SPSS was used as it helps to cover a wide range of statistical and graphical data analysis.

Regression Model

In order to determine the relationship between business opportunities and growth of MEs, a multiple regression model was used to express MEs growth as a function of opportunities in

finance, marketing, technology and government regulatory policies (Y= f (financial, marketing, technological and governmental regulatory opportunities). The regression function is as follows:

$Y = \beta o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$---Multiple Regression)

Where:

Y= Dependent variable (Growth of MEs)

β_0 = Constant

β_1- β_4 = Coefficient of independent variables

X_1 = -Financial opportunities

X_2 = Marketing opportunities

X_3= Technological opportunities

X_4 = Governmental opportunities

ε *is* the standard error term.

Moderation Model

The moderation effects of demographic characteristics (Level of education) was tested using equation below where the combined relationship between the independent variables X1*Z, X2*Z, X3*Z and X4*Z and dependent variable, growth of MEs was tested following steps by (Baron & Kenny, 1986).

$Y = \beta o + \beta_1 X_1 z + \beta_2 X_2 z + \beta_3 X_3 z + \beta_4 X_4 z + e$---- (Moderated Regression)

Where:

Y= Dependent variable (Growth of MEs)

β_0 = Constant

β_1- β_4 = Coefficient of regression

X_1 = -Financial opportunities

X_2 = Marketing opportunities

X_3= Technological opportunities

X_4 = Governmental opportunities

Z = Owner demographic characteristics (Level of education)

β0 being a constant (Y- intercept) is the value of dependent valuable when all the independent variables are zero

β_5- β_8 are regression constants or the rate of change induced by X1*Z, X2*Z, X3*Z and X4 *Z on Y.

ε is the standard error term.

3.12 Test of Regression Assumptions

3.12.1 Test of Normality

Tests of normality were used to determine if the data is modeled and normally distributed (Cooper & Schindler, 2012). The Shapiro-Wilk (value less than 0.05 means that the data is normally distributed), and the kolmogorov-Smirnov test (a value of less than 0.05 means that the data is not normally distributed) was used. The variables are roughly normally distributed for the findings to be generalized beyond the sample.

3.12.2 Multi-co-linearity Diagnostics

The degree to which particular variables in the regression model are highly associated might be thought of as the extent of multi-co-linearity. The issue of multi-co-linearity arises when there is a significant degree of correlation between the variables that are being studied independently. If it is 0.8 or above then, there is a significant concern with multi-co-linearity. In order to determine the potential degree of multi-co-linearity exhibited by the independent variables in the regression

model, an application of variance inflation factor analysis was carried out. According to Cohen and Cleveland (2013), the Variance Inflation Factor (VIF) is an index that measures the amount by which the variance of each regression coefficient is increased in comparison to a scenario in which all predictor variables are uncorrelated. This comparison is made in relation to a situation in which there is no correlation between the predictor variables. The general rule of thumb is that the VIF should be lower than 5. Because of this, if two or more variables have a VIF of 5 or more, it is necessary to eliminate one of them because the presence of multi-co-linearity is indicated by this regression analysis. To the greatest extent possible, efforts were made to minimize the degree of multi-co-linearity. The extent of the correlation between business opportunities in finance, marketing, technology, and government regulations was shown by a correlation matrix, which led to this conclusion being reached. Within SPSS, the co-linearity diagnostic was utilized in order to put the assumption to the test.

3.13 Ethical Considerations

The researcher safeguarded the rights of the participants by using an introductory letter from the university and NACOSTI. The privacy, anonymity and confidentiality of participants was guaranteed. The participants were promised to share and benefit from the recommendations of the study. The covering letter from the university was attached to the questionnaire.

3.14 Summary

Chapter 3 focuses on research methodology, which considers the research philosophy and design employed, data collection, presentation and analysis. A positivistic approach to data collection, analysis and interpretation, and a longitudinal survey and explanatory designs appropriately fitted the problem of study by being unbiased and objective in data collection, presentation and analysis. The chapter highlighted; the target population and sampling strategies, relationship data

collection procedures, reliability and validity tests, and data presentation and analysis procedures. Thus, chapter 3 provides a guide for conducting and implementing the field study prior to reporting results. As such, critical comprehension of the research methodology enabled analysis and discussion of the findings in Chapter 4.

CHAPTER FOUR

RESEARCH FINDING AND DISCUSSION

4.0 Introduction

The primary purpose of this research was to investigate how metal fabrication businesses might best capitalize on available business opportunities for growth. This chapter offers the outcomes and comments for each of the objectives that were set. The first thing that was done was to offer the descriptive statistics on the research variables, and then the effects of those factors were studied. Descriptive statistics using percentages was used to determine the response rates and profiles of the respondents. Following that, the chapter delved into the findings of the study and how they relate to the overall goals of the research. SPSS version 24.0 was utilized in order to do the analysis on the results. A normality test, a reliability test, a factor analysis, a correlation analysis, and a regression analysis are among the tests that were carried out.

4.1 Response Rate

The sample of the study comprised 155 metal fabrication MEs in the various subsectors of Jua Kali metal fabrication namely welding, motor vehicle panel beating, auto and industrial spare parts, key cutting and padlocks, and blacksmith. The instruments were administered to all 155

MEs to analyse the influence of business opportunities on the growth of the MEs. The response rate per strata is shown in Table 4.1.

Table 4.1 shows that after close checking and scrutiny, 115 responses of metal fabrication MEs were established as valid representing 74% response rate. The non-response was 40 respondents representing 26%. The response rate is higher than the 70% threshold that Mugenda & Mugenda (2003) consider to be very good. In addition, it agrees with Kothari (2012), who considered any response with a score higher than 70% to be excellent. According to Babbie and Mouton (2002), an excellent response rate for analysis is greater than fifty percent, and as a result, a response rate of seventy-four percent is regarded sufficient for this study. Indication that the findings can be generalized and that inferences can be derived from the research is provided by the fact that the response rate was well distributed among the five different categories of the metal fabrication MEs.

Table 4.1: Response Rate

Category	**Sample**	**Response**	**% response of selected sample**	**Non Response**
Welding	89	73	82	16
Motor vehicle panel beating	24	14	58	10
Auto and industrial spare parts	9	4	44	5
Key cutting and padlocks	10	8	80	2
Blacksmith	23	16	70	7
Total	**155**	**115**	**74**	**40**

responses
Source: Researcher (2022)

Table 4.1 shows that out of the sampled categories, the respondents from the welding category formed the greatest percentage (82%), followed by that of key cutting (80%), blacksmiths (70%), and motor vehicle panel beating (58%). The smallest percentage was that of the Auto and industrial spare parts (44%). The information shows that the population was distributed proportionately among the categories.

4.2 Background Information on the Respondents

The first section of the questionnaire was designed to collect the background information of the respondents which included respondents' gender, age, level of education, legal status of the business and period of existence of the business. The purpose of collecting the background information was to enable the study obtain more reliable, relevant and detailed information on optimization of business opportunities and growth of metal fabrication enterprises. The results for the analysis are shown in the sub-sections below.

4.2.1 Gender of the Respondents

The results from the study as indicated in table 4.2 shows that 97.39% of the respondents were male while remaining 2.61% were female. This scenario can be attributed to cultural influences which limit women to house chores while discouraging them from establishing and operating technical work entailing high input of physical energy. The high percentage of male ownership of the MEs is also attributed to male domineering culture in Kenya where women are relegated to domestic chores denying them opportunity to own and operate income generating MEs as well as stereotype that women lack physical energy to run the Jua Kali metal fabrication machinery and equipment. The pervading cultural trait that men are the owners of property denies women access to much needed resources to establish and operate capital intensive businesses. This

scenario has persisted despite the fact women constitute 51% of Kenya's population. However with awareness spurred by feminism the culture of excluding women from this sector is fading away as women are undertaking training and opening businesses. The results are in line with Wanjau, Gakure and Kahiri (2012) findings that 70% of MEs and SMEs are owned and managed by men.

The respondents were asked to indicate their gender. The result for the analysis is shown in Table 4.2 below.

Table 4.2 Respondents Gender

Gender	Frequency	Percent
Male	112	97.39
Female	3	2.61
Total	**115**	**100**

Source: Researcher (2022)

4.2.2 Age of Respondents

The findings show the Jua Kali metal fabrication MEs dominated by male aged 41 years and above (59%), followed by 26-33 years (20%), 31-41 years (19%), and 18-25 years (2%). The domination of the sector by aged population is attributed to the knowledge and skills required by the trade which has been acquired through pupilage under apprenticeship over long period. The findings are supported by Bass (2005) who found that age brings along experiences, responsibilities and skills. The young populations who have left school recently and college may not have the requisite resources and capital to initiate the trade which is available to those who have worked for long and made savings. This is accordance with a study by Ngugi, (2012) who reported the age bracket of most of the SMEs was between 36 to 55 years

The findings of the respondents' age are presented in table 4.3

Table 4.3 Respondents' Age

Age (Years)	Frequency	Percent
18-25	2	2
26-33	23	20
34-41	22	19
Above 41	68	59
Total	**115**	**100**

Source: Researcher (2022)

4.2.3 Owner Level of Education

To determine the knowledge and skills required by metal fabrication artisans there was need to know their level of education. The findings indicated that majority of the respondents had secondary level education (50%), followed closely by respondents with primary level education (44%). This was attributed to the primary and secondary school graduates' failure to secure white collar jobs forcing them to end up in certificate artisan courses/ apprenticeships and jobs like metal work. These findings are supported by Oroko (2012) who reported that most metal work entrepreneurs are primary and secondary school leavers.

Table 4.4 shows results for the analysis of level of education.

Table 4.4 Respondents' Level of Education

Level of Education	Frequency	Percent
Primary Education	51	44
Secondary Education	57	50
University Education	7	6
Did not go to School	0	0

Total	115	100

Source: Researcher (2022)

4.2.4 Legal Status of the Business

The researcher sought to understand the legal status of the businesses and their level of

Table 4.5 Legal Status of Business

Legal Status of Business	Frequency	Percent
Sole proprietorship	114	99
Closed corporation	0	0
Partnership	1	1
Private company	0	0
Total	115	100

Source: Researcher (2022)

compliance. The results as shown above in table 4.5 indicated that majority of the businesses are sole proprietorship. This justifies their small size and investment

4.2.5 Period of Existence

The respondents were asked to indicate the period that their businesses have existed since inception and the results showed that majority of the metal fabrication MEs in Kisii County have been 10 and more years in existence which is 63%. This is attributed to the fact that the MEs have taken advantage of opportunities in marketing, technology, government regulation and improved infrastructures. This was followed by MEs in existence between 4 and 6 years which is 19%, those in existence between 1 and 3 years at 10%, and the least those in existence between 7 and 9 years at 8%. In summary majority of the MEs are over 10 years, a situation attributed to resilience due to accumulated apprenticeship which comes with age. According to Churchill and Lewis (1993) enterprises which live beyond the survival stage are able to grow for many years to the completion of the life cycle. The responses are shown in Table 4.6.

Table 4.6 Period of MEs Existence

Years	Frequency	Percent
1-3 Years	12	10
4-6 Years	22	19
7-9 Years	9	8
10 and above years	72	63
Total	115	100

Source: Researcher (2022)

Results in Table 4.6 show that most of the MEs had existed for over ten years (63%). This is followed by those businesses that had existed for between four and six years (19%), those that had existed for one and three years (10%), and lastly by those that had existed for between seven and nine years. This shows that most of the businesses had existed for a long period to understand issues of apprenticeship.

4.2.6 Number of Employees in the Business

There was a desire to know the number of employees that the metal fabrication MEs have in their businesses. This was to assess whether they were indeed MEs. As it can be inferred from Table 4.7 below most of the businesses had between one and three employees (52%). Those businesses operated by the owners with no employees comprised of 23% while those that had employees between four and six comprised 17%. The least percentage (3%) were of seven to nine employees.

Table 4.7 Number of Employees in the Business

No. of Employees	Frequency	Percent
0	26	23
1-3	60	52
4-6	19	17
7-9	4	3
10 and above employees	6	5
Total	115	100

Source: Researcher (2022)

In summary majority of the metal fabrication (95%) have less than 10 employees, a characteristic in line with definition of a microenterprise by Kenya Micro and Small Enterprise Bill (2012).

4.2.7 Reasons for Establishing Business

The respondents were asked to indicate the reasons for establishing the businesses. This was to gauge their level of understanding the variables of the study. Results in Table 4.8 show that most of the respondents started their businesses for lack of formal employment (42%). This is followed by those who indicated that they had started their businesses to be their own boss (34%), and those who wanted to supplement the business income with other income (23%).

Table 4.8 Reasons for Establishing Business

Reason for starting business	Frequency	Percent
Lack of formal employment	48	42
To supplement my income	26	23
To be my own boss	40	34
Personal interest	1	1
Other	0	0
Total	115	100

Source: Researcher (2022)

4.2.8 Type of Business Location

The respondents were asked to indicate the type of business they operate. As it can be seen in Table 4.9 below, most of the metal fabrication MEs operate their businesses in a permanent structure (69%) while the rest operate in open air (31%).

Table 4.9 Type of Business Location

Type of business premise	Frequency	Percent
Permanent structure	79	69
Open air trade	36	31
Other	0	0
Total	115	100

Source: Researcher (2022)

4.2.9 Business Opportunities Leveraged

The respondents were asked to indicate the most leveraged business opportunity. As shown in Table 4.10 the most leveraged business opportunity is marketing (39%) followed by finance (27%), technology (8%), government regulation (2%), and none (24%).

Table 4.10 Business Opportunities

Business opportunities leveraged	Frequency	Percent
Financial	45	27
Marketing	65	39
Technological	13	8
Government regulation	4	2
None	40	24

Source: Researcher (2022)

4.3 Descriptive Analysis of the Variables

The data were initially put through a descriptive analysis in order for the researcher to be able to identify the main central patterns of the replies pertaining to the study variables. The questionnaire was developed to have a 5-point Likert scale measurement, which is a measurement with five response categories ranging from "Strongly disagree" (1) to "Strongly agree" (5). This measurement requires the respondents to indicate a degree of agreement or disagreement with each of a series of statements related to explanatory variables. The response categories range from "Strongly disagree" (1) to "Strongly agree" (5). The information is presented in the sub-sections below.

4.3.1 Descriptive Analysis of Financial Opportunities

Optimization of financial opportunities for growth of MEs is predicated on several factors, among them accessible and affordable credit and availability of information. The study sought to examine the effect of financial opportunities on the growth of metal fabrication MEs in Kisii County as indicated in table 4.11.

Table 4.11 Descriptive Analysis of Financial Opportunities (In percentages)

Financial Opportunities	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I have taken advantage of start-up capital	24	48	0	21	7
I have taken advantage of working capital	25	49	0	20	6
I have taken advantage of affordable interest rates	23	48	0	26	3
I have taken advantage of favourable collateral terms	23	47	3	20	6
I have taken advantage of favourable loan servicing period	23	45	2	22	2
Refinancing is guaranteed	24	46	2	22	6

Source: Researcher (2022)

The analysis in Table 4.11 shows that for the first statement that was used to measure financial opportunities that required the respondents to indicate if they had taken advantage of start-up capital, 24% of the respondents strongly disagreed, 48% disagreed, 21% agreed while 7% strongly agreed. On whether they had taken advantage of working capital, 25% of the respondents indicated that they strongly disagreed, 49% disagreed, 0% was neutral, 20% agreed while 6% strongly agreed. On whether they had taken advantage of affordable interest rates, 23% of the respondents indicated that they strongly disagreed, 48% disagreed, 0% was neutral, 26% agreed while 3% strongly agreed. When asked if they had taken advantage of favourable

collateral terms 23% of the respondents indicated that they strongly disagreed, 47% disagreed, 3% was neutral, 20% agreed while 6% strongly agreed. When asked if they had taken advantage of favourable loan servicing period, 23% of the respondents indicated that they strongly disagreed, 45% disagreed, 2% was neutral, 22% agreed while 2% strongly agreed. On if refinancing is guaranteed, 24% of the respondents strongly disagreed, 46% disagreed, 2% was neutral, 22% agreed while 6% strongly agreed.

The findings indicated that optimization of financial opportunities by metal fabrication MEs in Kisii County is not at its maximum. This is supported by. Kiyai, Namusonge and Jagongo (2019) who revealed shortage of working capital as constraint to the expansion and growth, a factor attributed to short repayment schedules, high interest rate and lack of information.

4.3.2 Descriptive Statistics of Financial Opportunities

In support of the findings in table 4.11 the mean and standard deviation was computed to show how the respondents strongly agreed, agreed, or were neutral according to the scale of 1-5 which is shown by the means and the dispersion of respondents as shown by the standard deviation. Table 4.12 shows that majority of the responses on the various aspects of optimization of financial opportunities were below average with highest at a mean of 2.39 and therefore strongly reflects that financial opportunities for growth of metal fabrication MEs though significant have not been optimized.

Table 4.12 Descriptive Statistics of Financial Opportunities

Financial Opportunities	Mean	Std. Deviation
I have taken advantage of start-up capital	2.39	1.25
I have taken advantage of working capital	2.33	1.22

I have taken advantage of affordable interest rates	2.38	1.18
I have taken advantage of favourable collateral terms	2.17	1.23
I have taken advantage of favourable loan servicing period	2.32	1.38
Refinancing is guaranteed	2.36	1.22

Source: Researcher (2022)

4.3.3 Descriptive Analysis of Marketing Opportunities

Optimization of marketing opportunities for growth of MEs is predicated on factors among them access to government procurement, E-Commerce, capacity building, product differentiation and niche markets. The study sought to evaluate the effect of market opportunities on the growth of metal fabrication MEs as shown in table 4.13

The analysis of marketing opportunities in table 4.13 indicated how the respondents had taken advantage of opportunities in government procurement, on-line marketing, product differentiation, market niches and market training. The results showed that in government procurement 15% of the respondents strongly disagreed, 42% disagreed, 1% was neutral, 31% agreed while 11% strongly agreed. On whether they marketed their products on-line, 13% of the respondents strongly disagreed, 50% disagreed, 0% was neutral, 28% agreed while 9% strongly agreed.

Table 4.13 Descriptive Analysis Marketing Opportunities (%)

Marketing Opportunities	Strongly	Disagree	Neutral	Agree	Strongly agree

I have taken advantage of government procurement	15	42	1	31	11
I market my products on-line	13	50	0	28	9
I do use product differentiation	1	2	0	43	60
I've taken advantage of market nich	3	15	3	32	48
I take advantage of market training	39	50	5	6	0

Source: Researcher (2022)

On whether they used product differentiation, 1% of the respondents strongly disagreed, 2% disagreed, 0% was neutral, 43% agreed while 60% strongly agreed. When asked whether they had taken advantage of market niches, 3% of the respondents strongly disagreed, 15% disagreed, 3% was neutral, 32% agreed while 48% strongly agreed. On whether they had taken advantage of market training programs, 39% of the respondents strongly disagreed, 50% disagreed, 5% was neutral, 6% agreed while 0% strongly agreed.

The findings of the study showed that optimization of marketing opportunities was more skewed toward product differentiation, market niches and government procurement than online marketing and market training. This is scenario is also reported by Brush *et al.,* (2009) and Hajjaji (2012) who attributed it to ineffective distribution channels, lack of market information, poor communication and little emphasis on marketing. Other sought after marketing opportunities are market management training, market research, promotions and relationship marketing and technology transfer (Dumbu, 2014); Nuwagabal & Nzewi, 2013).

4.3.4 Descriptive Statistics of Marketing Opportunities

In support of the findings in table 4.13 the mean and standard deviation was computed to show how the respondents strongly agreed, agreed, or were neutral according to the scale of 1-5 which

is shown by the means and the dispersion of respondents as shown by the standard deviation. Table 4.14 shows that majority of the responses on the various aspects of optimization of marketing opportunities was above average in product differentiation, market niches, government procurement and on-line marketing. Dismal optimization was reported in market training which is occasioned by lack of information, poor communication and lack of exposure (Obi, 2011).

Table 4.14 Descriptive Statistics for Marketing Opportunities

Marketing Opportunities	Mean	Std. Deviation
I have taken advantage of government procurement	2.81	1.32
I market my products on-line	2.70	1.25
I do use product differentiation	4.50	1.31
I've taken advantage of market nich	4.10	1.11
I take advantage of market training	1.78	.795

Source: Researcher (2022)

4.3.5 Descriptive Analysis of Opportunities in Technology (in percentages)

Technology is a significant driver in the growth of enterprises. Optimization of opportunities in technology for growth of MEs was measured use of IT in project planning and implementation, use of MPESA in business transaction, online banking, mechanization and recycling in production. The study sought to establish the effect of technological opportunities on the growth of metal fabrication MEs. The result on optimization of opportunities in technology is shown in Table 4.15 below

As regards optimization of IT in project planning and implementation 5% of the respondents strongly disagreed, 17% disagreed, 46% agreed while 31% strongly agreed. On whether they use E-Commerce in doing business, 9% of the respondents indicated that they strongly disagreed, 50% disagreed, 1% was neutral, 21% agreed while 17% strongly agreed. On whether MPESA had made business transaction easy for them, 0% of the respondents indicated that they strongly disagreed, 0% disagreed, 0% was neutral, 19% agreed while 81% strongly agreed. When asked if they use online banking 5% indicated that they strongly disagreed, 55% disagreed, 0% was neutral, 17% agreed while 23% strongly agreed. When asked if they use mechanization in production, 0% indicated that they strongly disagreed, 10% disagreed, 1% was neutral, 50% agreed while 39% strongly agreed. When asked if they apply recycling in production, 0% strongly disagreed, 2% disagreed, 1% was neutral, 29% agreed while 68% strongly agreed.

Table 4.15 Descriptive Analysis of Opportunities in Technology

Technological Opportunities	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I have adopted use of IT in project planning and implementation	6	17	0	46	31
Use E-Commerce in doing business	9	50	1	21	17
Use of MPESA has made business transaction easy	0	0	0	19	81
I use online banking	5	55	0	17	23
I use mechanization in production	0	10	1	50	39
I do apply recycling in production	0	2	1	29	68

Source: Researcher (2022)

The findings in table 4.15 show a significant role played by IT, MPESA, mechanized production and recycling in the growth of metal fabrication MEs. The findings are supported by the studies of Rasmussen (2014); Ismail & Karlsson's (2013); Hajjaji's (2012); Bouazzal, Ardjouman & Adaba's (2015); amd Kihara (2016) which located technological opportunities in competitive

technologies driven by research and development, and investment in process innovation and new machines. Technical innovation is critical in competitiveness, profitability and market share.

4.3.6 Descriptive Statistics of Technological Opportunities

In support of the findings in table 4.15 the mean and standard deviation was computed to show how the respondents strongly agreed, agreed, or were neutral according to the scale of 1-5 which is shown by the means and the dispersion of respondents as shown by the standard deviation. Table 4.16 below shows that all the responses range from above average to close to 5 and therefore agreed that technology has significant influence on the growth of metal fabrication MEs.

Table 4.16 Descriptive Statistics of Opportunities in Technology

Technological Opportunities	Mean	Std. Deviation
I have adopted use of IT in project planning and implementation	3.78	1.25
Use E-Commerce in doing business	2.81	1.38
Use of MPESA has made business transaction easy	4.81	.392
I use online banking	2.98	1.36
I use mechanization in production	4..18	.876
I do apply recycling in production	4.67	1.00

Source: Researcher (2022)

4.3.7 Descriptive Analysis of Opportunities in Government Regulation

The fourth independent variable of the study was opportunities in government regulation. The descriptive analysis for the variable is shown in Table 4.17

On measures of opportunities in government regulation, the respondents were asked if they take advantage of related requirements for registration of business to diversify operations and open

more outlets to which it was showed that 27% of the respondents strongly disagreed, 57% disagreed, 3% were neutral, 10% agreed while 3% strongly agreed. On whether they take advantage of favourable taxation to increase profits and savings, 28% of the respondents indicated that they strongly disagreed, 58% disagreed, 7% was neutral, 6% agreed while 1% strongly agreed. On whether they take advantage of favourable tendering with government to procure contracts, 20% of the respondents indicated that they strongly disagreed, 35% disagreed, 1% was neutral, 25% agreed while 9% strongly agreed. When asked if they take advantage of supportive education and training to improve management skills and innovation 33% of the respondents indicated that they strongly disagreed, 53% disagreed, 3% was neutral, 9% agreed while 2% strongly agreed. When asked if they take advantage of supportive trade policies to increase sales, 35% of the respondents indicated that they strongly disagreed, 56% disagreed, 2% was neutral, 7% agreed while 0% strongly agreed. When asked if they take advantage of favourable infrastructure to penetrate market, 3% of the respondents strongly disagreed, 23% disagreed, 3% was neutral, 49% agreed while 22% strongly agreed.

The dependent variable of the present study was changes in growth. Table 4.17 shows that when the respondents were asked if there has been backward integration into supply channels it was showed that 24% of the respondents strongly disagreed, 62% disagreed, 0% were neutral, 12% agreed while 2% strongly agreed. On whether there has been forward integration into distribution by the businesses, 23% of the respondents indicated that they strongly disagreed, 70% disagreed, 3% was neutral, 3% agreed while 1% strongly agreed.

The findings in table 4.17 showed that though government regulations have influence in financing, markets, technology and innovations, the optimization of opportunities availed by government regulatory framework had not been fully realized. This scenario was attributed to

corruption and bureaucracy in government services, unfriendly tax regime and poor planning (Magambo & Omwenga, 2015; Bouazza1 *et al.*, 2015; and Hajjaji, 2012).

Table 4.17 Opportunities in Government Regulation

Opportunities in Government Regulation	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I take advantage of related requirements for registration of business to diversify operations and open more outlets	27	57	3	10	3
I take advantage of favourable taxation to increase profits and savings	28	58	7	6	1
I take advantage of favourable tendering with government to procure contracts	20	35	1	35	9
I take advantage of supportive education and training to improve management skills and innovation	33	53	3	9	2
I take advantage of supportive trade policies to increase sales	35	56	2	7	0
I take advantage of favourable infrastructure to penetrate market	3	23	3	49	22
Certification by TVETA has enhanced my image and bargaining power	17	50	0	10	23

Source: Researcher (2022)

4.3.8 Descriptive Statistics of Opportunities in Government Regulation

In support of the findings in table 4.17 the mean and standard deviation was computed to show how the respondents strongly agreed, agreed, or were neutral according to the scale of 1-5 which is shown by the means and the dispersion of respondents as shown by the standard deviation. As shown in Table 4.18 below there was above average optimization of opportunities in government procurement, infrastructure, and certification by TVETA.

Table 4.18 Descriptive Statistics of Opportunities in Government Regulation

Opportunities in Government Regulation	Mean	Std. Deviation
I take advantage of related requirements for registration of business to diversify operations and open more outlets	2..12	1.11
I take advantage of favourable taxation to increase profits and savings	1.94	.822
I take advantage of favourable tendering with government to procure contracts	2.78	1.35
I take advantage of supportive education and training to improve management skills and innovation	1.94	.947
I take advantage of supportive trade policies to increase sales	1.81	.784
I take advantage of favourable infrastructure to penetrate market	3.64	1.14
Certification by TVETA has enhanced my image and bargaining power	2.72	1.46

Source: Researcher (2022)

4.3.9 Changes in Growth

Changes in growth of the metal fabrication MEs was measured in the integration into supply and distribution channels, and acquisitions, diversification into products and markets, and growth in products, customers, sales, revenues, profitability and innovation. The descriptive analysis for the variable is shown in Table 4.19.

The dependent variable of the present study was changes in growth. Table 4.19 shows that when the respondents were asked if there has been backward integration into supply channels it was shown that 24% of the respondents strongly disagreed, 62% disagreed, 0% were neutral, 12% agreed while 2% strongly agreed. On whether there has been forward integration into distribution channels by the businesses, 23% of the respondents indicated that they strongly disagreed, 70% disagreed, 3% was neutral, 3% agreed while 1% strongly agreed.

On whether there has been horizontal integration through acquisition of other firms, 24% of the respondents indicated that they strongly disagreed, 68% disagreed, 3% was neutral, 4% agreed while 1% strongly agreed. When asked if there has been diversification into new products and markets, 41% of the respondents indicated that they strongly disagreed, 22% disagreed, 1% was neutral, 31% agreed while 5% strongly agreed. When asked if there has been growth in new products in the last 3 years, 10% of the respondents indicated that they strongly disagreed, 44% disagreed, 3% was neutral, 37% agreed while 6% strongly agreed. When asked if there has been growth in innovations and application of new technology in the last three years, 11% of the respondents strongly disagreed, 47% disagreed, 6% was neutral, 33% agreed while 3% strongly agreed.

Table 4.19 Descriptive Analysis of Changes in Growth

Changes in Growth	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
There has been backward integration into supply channels	24	62	0	12	2
There has been forward integration into distribution channels	23	70	3	3	1
There has been horizontal integration through acquisition of other firms	24	68	3	4	1
There has been diversification into new products and markets	41	22	1	31	5
There has been growth in new products in the last 3 years	10	44	3	37	6
There has been growth in customers in the last 3 years	8	41	5	40	6
There has been growth in sales in the last 3 years	7	42	6	40	5
There has been growth in number of employees in the last 3 years	7	42	6	40	5

There has been growth in revenue in the last 3 years	10	41	5	41	3
There has been growth in profit in the last 3 years	7	44	4	40	4
There has been growth in innovations and application of new technology in the last 3 years	11	47	6	33	3

Source: Researcher (2022)

4.3.10 Descriptive Statistics of Changes in Growth

In support of the findings in table 4.18 the mean and standard deviation was computed to show how the respondents strongly agreed, agreed, or were neutral according to the scale of 1-5 as shown by the means, and the dispersion of respondents by the standard deviation in table 4.20. There was above average performance over the three years in the growth of new products, innovations and new technology, customers, sales, employees, revenue and profit. The dismal performance of the metal fabrication MEs in backward, forward and horizontal integration, and diversification into new products is evidence of the MEs failure to graduate from informal to formal enterprises. This findings are supported by the reports of KNBS (2017), GoK (2016) and Oroko (2012) which indicated high mortality rate of the MEs with most of them dying within one and half years' operation and not graduating into medium or large size enterprises. This is also a sign of MEs persisting in the survival mode and not progressing into growth mode.

Table 4.20 Descriptive Statistics of Changes in Growth

Changes in Growth	Mean	Std. Deviation
There has been backward integration into supply channels	2.06	0.69
There has been forward integration into distribution channels	1.89	0 .677

There has been horizontal integration through acquisition of other firms	1.90	0.714
There has been diversification into new products and markets	2.37	1.40
There has been growth in new products in the last 3 years	2.85	1.19
There has been growth in customers in the last 3 years	2.95	1.06
There has been growth in sales in the last 3 years	2.95	1.14
There has been growth in number of employees in the last 3 years	2.95	1.14
There has been growth in revenue in the last 3 years	2.87	1.12
There has been growth in profit in the last 3 years	2.87	1.16
There has been growth in innovations and application of new technology in the last 3 years	2.70	1.13

Source: Researcher (2022)

4.4 Multiple Regression Results for Hypotheses Testing

Inferential analyses were conducted to specifically analyze the influence of optimization of business opportunities on growth of metal fabrication microenterprises (MEs). The main inferential statistic conducted was the hierarchical regression that was intended to establish the influence of each optimization of business opportunities determinant while holding the influences of the background variables under control. Before conducting the hierarchical regression, the research used simple regression analyses to determine the linear statistical relationship between the independent and dependent variables of the study based on each objective.

For each goal, a straight forward regression analysis was carried out in order to determine how the independent factors influenced the outcome of the study (the dependent variable). According

to Sekaran (2008), a straight forward regression analysis can be utilized to shed light on the statistical connection that exists between the variables that are the subject of the investigation. This, in turn, can assist in drawing meaningful conclusions and suggestions. According to Kothari (2004), regression methods are used when there is a need to powerfully test the correlation between two or more variables; firstly, ratio scales are used to measure all variables in the study; and secondly, there is a need to use ratio scales to measure all variables in the study. The purpose of the statistical modelling technique known as simple regression analysis is to establish meaningful and consistent correlations between different sets of data. It does this by calculating the correlation between two variables, one of which is independent and the other of which is dependent. The goal of regression analysis from a statistical perspective is to produce high R^2 and significant t-values, which will lead to the rejection of the null hypothesis that there is no influence. Additionally, the beta values, which are measures of the influence that the independent variable has on the dependent variable, are presented by the study. According to Creswell (2008), parameters with an absolute t-value that is more than 1.96 suggests a significance level that is lower than 0.05 (also written as p 0.05). For the purpose of this investigation, the null hypotheses were examined by employing regression models, as will be detailed in the next subsections of this section.

First, diagnostic tests were performed, and only then did the regression tests get started. These included the normalcy test, the test for multicollinearity, and the test for homoscedasticity. In order to determine whether or not the data acquired were accurate, dependable, and able to infer the study results to the community, the tests were carried out. The section begins with a test for multicollinearity, then moves on to tests for normalcy and autocorrelation, and finally concludes with an autocorrelation test.

4.4.1 Multicollinearity Test

Using tolerance and variation inflation factor (VIF) statistics of the predictor constructs, the purpose of this study was to determine the degree to which the independent variables were correlated with one another. In order to determine whether or not there was multicollinearity, the variance inflation factor (VIF) was extracted (Billings & Wroten, 1978). The value of the VIF is less than or equal to 2.0, which suggested the absence of possible threats from multi-co-linearity (Hair *et.al.* 2009). Table 4.21 shows the result of the test.

Table 4.21: Multicollinearity Test

Model		Tolerance	VIF
1	Financial Opportunities	.734	1.362
	Market Opportunities	.731	1.367
	Technological Opportunities	.515	1.943
	Government Regulation Opportunities	.684	1.472

a. Dependent Variable: Growth

Source: Researcher (2022)

The study used a variance inflation factor threshold of 4.0 to indicate strong multicollinearity. The findings in Table 4.21 demonstrated that the independent variables had high tolerance values, indicating that the beta values of the independent variables' regression equation would be constant with low standard error terms. Tolerance is whereby part of the denominator applies in

calculating the confidence limits on the partial regression coefficient. According to Porter and Gujarat (2009), the VIF of an independent construct that exceeds 10 is considered collinear. This means there was no co-linearity among the observed independent variables with a VIF less than 10 and none with a statistic value less than 0.100. Waithaka (2016), Hamilton (2012).

4.4.2 Normality Test

Normality test was done using Shapiro-Wilk test and Kolmogorov Tests. Shapiro-Wilk is appropriate for smaller samples less than 50 while Kolmogorov-Smirnov (KS) is appropriate for larger samples. As per Kolmogorov-Smirnov (KS) and Shapiro-Wilk test values indicate insignificant statistics with p-values exceeding the standard p-value of 0.05. This study used Kolmogorov-Smirnov (KS) since the sample size is larger. According to Ricci, Baumgartner, Malan, and Smuts (2019), when the significance level of a variable is more than 0.05, we reject the null hypothesis that the data is not normally distributed. In this study, it was established that the P-values for the variables were more than 0.05 hence the null hypothesis was rejected. This implies that the responses on the variable were normally distributed.

Because the P-values for the variables in this investigation were found to be greater than 0.05, the researchers concluded that the null hypothesis should not be accepted. It may be deduced from this that the responses to the variable followed a normal distribution.

Table 4.22: Normality Test

Variables	**Kolmogorov-Smirnov[a]**		
	Statistic	**df**	**Sig.**
Financial Opportunities	.065	221	.200
Market Opportunities	.061	221	.200

Technical Opportunities	.074	221	.068
Government Regulation Opportunities	.092	221	.200
Growth	.060	221	.200

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Source: Researcher (2022)

Figure 4.1 illustrates the Q-Q plot for normality, which also shows that the distribution of the

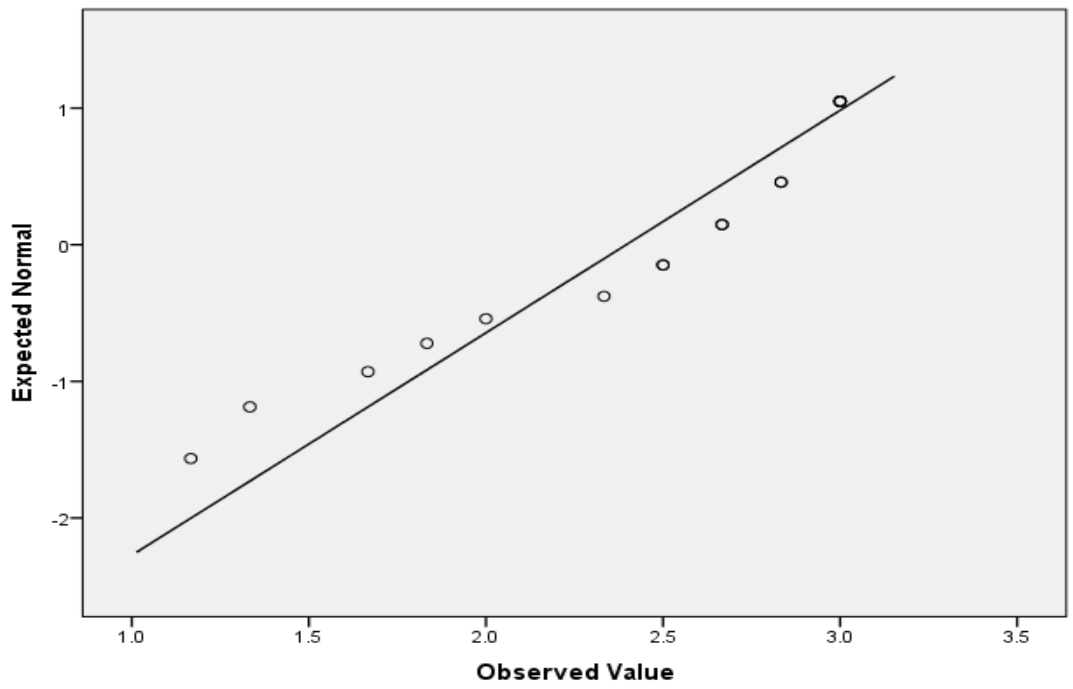


Figure 4.1: Q-Q Plot for Normality Test

variables in the study is normally distributed. When the construct has low values, any variation from normality is considered normal. The distribution gives the impression of normal distribution.

4.4.3 Test Homoscedasticity

The study carried out a test for homoscedasticity. It is the assumption that the variability of a variable is equal across the range of values of a second variable that predicts it (Vinod, 2008). The null hypothesis was that there was no homoscedasticity in the model for the study. A scatter plot was used to test for homoscedasticity. The findings as shown in Figure 4.2 revealed that the plots had no standard flow, in that they are scattered across the chart. This is an indication that there was homoscedasticity. The study therefore fails to reject the null hypothesis that there is no homoscedasticity.

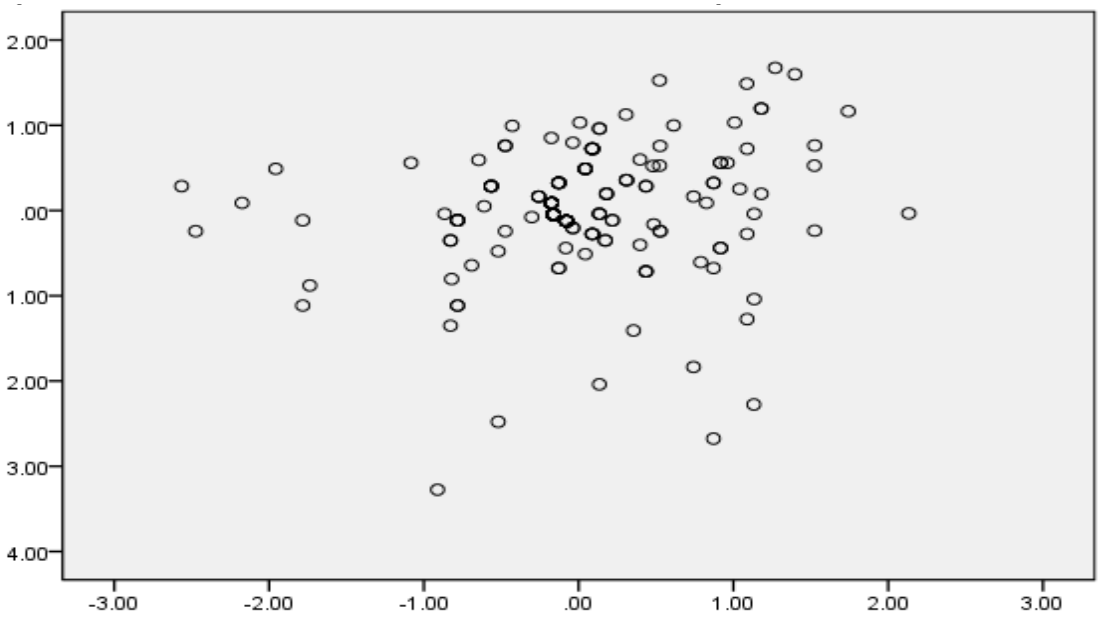


Figure 4. 2: Scatter Plot for Homoscedasticity

Before performing a regression analysis, a correlation of the study variables was done. Correlation is utilized to investigate the relationship between a set of variables (Pallant, 2010), which aids in testing for multicollinearity. The fact that the correlation values are not near to 1 or -1 indicates that the variables are sufficiently distinct. It also suggests that the variables are not

multicollinear. Absence of multicollinearity permits the investigation to employ all the independent variables.

A correlation coefficient of +1 means that two variables are perfectly related in a positive linear sense; a correlation coefficient of -1 means that two variables are perfectly related in a negative linear sense; and a correlation coefficient of 0 means that the two variables have no linear relationship. A correlation coefficient between 0.0 and 0.19 is considered "very weak," a correlation coefficient between 0.20 and 0.39 is considered "weak," a correlation coefficient between 0.40 and 0.59 is considered "moderate," a correlation coefficient between 0.60 and 0.79 is considered "strong," and a correlation coefficient between 0.80 and 1.0 is considered "very strong."(Hope-Hailey, V., Farndale, E., & Kelliher, 2010). Table 4.19 shows results of the correlation analysis.

Table 4.23: Correlations Results of Study Variables

Variables		Fin Opport	Mkt. Opport	Tech. Opport	Govt. Reg. Opport.	Growth
Fin Opport	Pearson Correlation	1				
	Sig. (2-tailed)					
Mkt. Opport	Pearson Correlation	.393**	1			
	Sig.(2-tailed)	.000				
Tech, Opport	Pearson Correlation	.420**	.307**	1		
	Sig. (2-tailed)	.000	.000			
Govt.Reg. Opport	Pearson Correlation	.407**	.391**	.443**	1	
	Sig. (2-tailed)	.000	.000	.000		
Growth	Pearson Correlation	.719**	.585**	.654**	.768**	1
	Sig. (2-tailed)	.000	.000	.000	.000	

Source: Researcher (2022)

Table 4.23 showed that the lowest correlation in this study was between market opportunities and ME growth (r=0.585, p<0.01). The strongest link was found between government regulating opportunities and ME growth (r=0.768, p0.01). A correlation of greater than 0.90 indicates that the variables may be measuring the same thing (Tabachnick, B. G., & Fidell, 2013). The fact that all of the correlations were less than 0.90 indicated that the factors were sufficiently different measures of separate variables, and so this study used all of them.

Multiple regression analysis was employed in this study to find the linear statistical relationship between the independent and dependent variables. According to Young (2014), regression analysis helps to explain the statistical relationship between variables thus enhancing the ability of the study to make substantive conclusions and recommendations. The statistical objective of regression analysis is to show high R^2 and significant t-values, thus rejecting the null hypothesis of no influence. Parameters with an absolute t-value greater than 1.96 indicate a significance level of 0.05 (i.e., p<0.05). The five null hypotheses as stated in chapter one of this study were tested using regression models

4.4.4 Effect of Financial Opportunities on the Growth of Jua Kali Metal Fabrication Microenterprises

The first objective of the study was to examine the effect of financial opportunities on the growth of Jua Kali metal fabrication microenterprises. To achieve this objective, the coded data was then analysed to test the hypothesis of the study which was;

> ***$H_0$1*** *Financial opportunities have no significant effect on the growth of Jua Kali metal fabrication microenterprises*

To test the above hypothesis, simple linear regression was used. The results are presented in Table 4.24, 4.25 and 4.26.

The model summary Table 4.24 above shows the suitability of financial opportunities in predicting the growth of Jua Kali metal fabrication microenterprises.The correlation coefficient (*r*) of 0.875 shown in the table indicates that there is a high correlation between availability of financial opportunities and growth of Jua Kali metal fabrication microenterprises. The coefficient of determination*(*R^2= 0.766) for the regression model connecting financial opportunities and the growth of Jua Kali metal fabrication microenterpriseswas 0.766 implying that financial opportunities explain 76.6 % variation in the growth of the microenterprises, while the remaining variation of 23.4% is explained by the error term.

Table 4.24: Model Summary for Financial Opportunities

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.875[a]	.766	.761	2.756

a. Predictors: (Constant), Financial Opportunities

b. Dependent Variable: Growth

Source: Researcher (2022)

An analysis of variance (ANOVA) was also conducted to test the goodness of fit of the model. The result is shown in Table 4.25 below

Table 4.25: Analysis of Variance (ANOVA) for Financial Opportunities

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14258.58	1	14258.58	747.971	.000[b]
	Residual	2154.12	113	19.06		
	Total	16412.70	114			

a. Dependent Variable: Growth

b. Predictors: (Constant), Financial Opportunities

Source: Researcher (2022)

The ANOVA table above shows that the regression model is a good fit as indicated by a significant F-statistic (F=747.971, $p<0.05$). This implies that the model can be relied to link financial opportunities to the growth of Jua Kali metal fabrication microenterprises.

To establish the magnitude of growth that is caused by financial opportunities, a regression coefficient was obtained. This is shown in Table 4.26.

Table 4.26: Regression Coefficients for Financial Opportunities

Model		Unstandardized Coefficients		Standardized Coefficients	t-stat	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.376	.286		4.811	.000
	Financial Opportunities	.654	.164	.605	3.988	.000

a. Dependent Variable: Growth

Source: Researcher (2022)

The regression coefficient Table 4.26 shows that the beta value for financial opportunities is 0.654. This indicates that a unit increase in the financial opportunities would result in 65.4% growth of Jua Kali metal fabrication microenterprises. The t-statistic for the regression coefficient for financial opportunities is significant at 5% level of significance (T= 3.988, $p<0.05$). This implies that the study's hypothesis is accepted. On the basis of these statistics, the study concludes that financial opportunities have a significant effect on the growth of Jua Kali metal fabrication microenterprises. The model that was fitted based on this result is as follows:

*Growth =1.376 +0.654 * Financial Opportunities*

4.4.5 Effect of Market Opportunities on the Growth of Jua Kali Metal Fabrication Microenterprises

The second objective of the study was to evaluate the effect of market opportunities on the growth of Jua Kali metal fabrication microenterprises. The respondents were asked to rate the exent of availability of market opportunities on a Likert scale from which responses was coded. The research hypothesis formulated from the specific research objective was.

> ***$H_0$2:*** *Market opportunities have no significant effect on the growth of Jua Kali metal fabrication microenterprises*

To test the above hypothesis, simple linear regression was used. The results are presented in Table 4.27, 4.28 and 4.29.

Table 4.27: Model Summary for Market Opportunities

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.783[a]	.613	.604	3.2789

a. Predictors: (Constant), Market Opportunities

b. Dependent Variable: Growth

Source: Researcher (2022)

The model summary Table 4.27 above shows that the correlation (*r*) between market opportunities and growth of Jua Kali metal fabrication microenterprises is high (r = 0.783). The coefficient of determination value (R^2= 0.613) shows that for the regression model connecting market opportunities and the growth of Jua Kali metal fabrication microenterprisesis 0.613. This implies that availability of market opportunities explains 61.3% variation in the growth of the Jua Kali metal fabrication microenterprises while the remaining variation of 38.7% is explained by the error term.

From the ANOVA table 4.28 below it is shown that the regression model is a good fit as indicated by a significant F-statistic (F=695.020, p<0.05). This implies that the model for market opportunities is a good predictor of growth of Jua Kali metal fabrication microenterprises.

Table 4.28: Analysis of Variance (ANOVA) for Market Opportunities

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21045.85	1	21045.85	695.020	.000[b]
	Residual	3421.74	113	30.281		
	Total	24467.59	114			

a. Dependent Variable: Growth

b. Predictors: (Constant), Market Opportunities

Source: Researcher (2022)

A simple regression was conducted to establish the magnitude of growth that is caused by market opportunities. This is shown in Table 4.29.

Table 4.29: Regression Coefficients for Market Opportunities

Model		Unstandardized Coefficients		Standardized Coefficients	t-stat	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.447	.334		4.332	.000
	Market Opportunities	.741	.149	.705	4.973	.000

a. Dependent Variable: Growth

The regression coefficient Table 4.29 shows that the coefficient for market opportunities is 0.741 indicating that a unit increase in the market opportunities results to a 74.1% growth of Jua Kali metal fabrication microenterprises in Kisii County.The t-statistic for the regression coefficient for marketing opportunities is significant at 5% level of significance (T= 4.973, $p<0.05$). This implies that the study's hypothesis is accepted. On the basis of these statistics, the study concludes that market opportunities have a significant effect on the growth of Jua Kali metal fabrication microenterprises in Kisii County. The model that was fitted based on this result is as follows:

*Growth =1.447 +0.741 * Market Opportunities*

4.4.6 Effect of Technological Opportunities on Growth of Jua Kali Metal Fabrication Microenterprises

The third objective of the study was to establish the effect of technological opportunities on the growth of Jua Kali metal fabrication microenterprises. The respondents were asked to rate the extent of availability of technological opportunities on a Likert scale from which responses were coded. The research hypothesis formulated from the specific research objective was.

> ***$H_0$3**: Technological opportunities have no significant effect on the growth of Jua Kali metal fabrication microenterprises*

The above hypothesis was tested using simple linear regression methodologies whose results are presented in Table 4.30, 4.31 and 4.32 below.

Table 4.30: Model Summary for Technological Opportunities

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.879[a]	.772	.704	2.5014

a. Predictors: (Constant), Technological Opportunities

b. Dependent Variable: Growth

Source: Researcher (2022)

The model summary Table 4.30 indicates that the correlation (*r*) between technological opportunities and growth of Jua Kali metal fabrication microenterprises is high (*r* = 0.883). The coefficient of determination value (R^2= 0.772) shows that for the regression model linking technological opportunities and the growth of Jua Kali metal fabrication microenterprisesis 0.772 which implies that availability of technological opportunities explains 77.2% variation in the

growth of the Jua Kali metal fabrication microenterprises while the remaining variation of 22.8% is explained by the error term.

An analysis of variance (ANOVA) was conducted to test the goodness of fit of the model evaluating the effect of technological opportunities on the growth of Jua Kali metal fabrication microenterprises. The result is shown in Table 4.31 below.

Table 4.31: Analysis of Variance (ANOVA) for Technological Opportunities

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	28124.01	1	28124.01	625.822	.000[b]
	Residual	5078.14	113	44.940		
	Total	33202.15	114			

a. Dependent Variable: Growth

b. Predictors: (Constant), Technological Opportunities

Source: Researcher (2022)

The ANOVA Table 4.31 above, it can be inferred that the regression model is a good fit as indicated by a significant F-statistic (F=625.822, p<0.05), implying that the model for predicting growth of Jua Kali metal fabrication microenterprises through technological opportunities is a good predictor.

A simple regression was conducted to establish the magnitude of growth that is caused by technological opportunities. The result is shown in Table 4.31 above.

Table 4.32: Regression Coefficients for Technological Opportunities

Model		Unstandardized Coefficients		Standardized Coefficients	t-stat	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.558	.229		6.803	.000

Technological Opportunities	.810	.191	.788	4.240	.000

a. Dependent Variable: Growth

Source: Researcher (2022)

From the regression coefficient Table 4.32 above, it is shown that the coefficient for technological opportunities is 0.810 indicating that a unit increase in the technological opportunities results to a 81.0% growth of Jua Kali metal fabrication microenterprises.The t-statistic for the regression coefficient for financial opportunities is significant at 5% level of significance (T= 4.240, $p<0.05$). This implies that the study's hypothesis is accepted. On the basis of these statistics, the study concludes that technological opportunities have a significant effect on the growth of Jua Kali metal fabrication microenterprises. The model that was fitted based on this result is as follows:

*Growth =1.558 +0.810 * Technological Opportunities*

4.4.7 Effect of Opportunities in Governmental Regulatory Policies on Growth of Jua Kali Metal Fabrication Microenterprises

The fourth objective of the study was to assess the effect of opportunities in governmental regulatory policies on the growth of Jua Kali metal fabrication microenterprises.The research hypothesis formulated from the specific research objective was.

> ***$H_0$4**: Opportunities in governmental regulatory policies have no significant effect on the growth of Jua Kali metal fabrication microenterprises*

The above hypothesis was also tested using simple linear regression methodologies whose results are presented in Tables 4.33, 4.34 and 4.35 below.

Table 4.33: Model Summary for Opportunities in Governmental Regulatory Policies

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.725[a]	.526	.504	3.379

a. Predictors: (Constant), Opportunities in Governmental Regulatory Policies

b. Dependent Variable: Growth

The model summary Table 4.33 indicates that the correlation (r) between opportunities in governmental regulatory policies and growth of Jua Kali metal fabrication microenterprises is high (r = 0.725). The coefficient of determination value (R^2= 0.526) shows that for the regression model linking opportunities in governmental regulatory policies and the growth of Jua Kali metal fabrication microenterprises explains 52.6% variation in the growth of the Jua Kali metal fabrication microenterprises while the remaining variation of 47.4% is explained by the error term.

An analysis of variance (ANOVA) was conducted to test the goodness of fit of the model evaluating the effect of opportunities in governmental regulatory policies on the growth of Jua Kali metal fabrication microenterprises. The result is shown in Table 4.33 below.

From the ANOVA Table 4.34 below, it can be inferred that the regression model is a good fit as indicated by a significant F-statistic (F=554.161, p<0.05), implying that the model for predicting growth of Jua Kali metal fabrication microenterprises through Opportunities in Governmental Regulatory Policies is good.

Table 4.34: Analysis of Variance (ANOVA) for Opportunities in Governmental Regulatory Policies

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30145.441	1	30145.441	554.161	.000[b]
	Residual	6147.01	113	54.398		
	Total	36292.451	114			

a. Dependent Variable: Growth

b. Predictors: (Constant), Opportunities in Governmental Regulatory Policies

Source: Researcher (2022)

A simple regression was conducted to establish the magnitude of growth that is caused by Opportunities in Governmental Regulatory Policies. The result is shown in Table 4.35.

The regression coefficient Table 4.35 shows that the coefficient for Opportunities in Governmental Regulatory Policies is 0.579 indicating that a unit increase in the Opportunities in Governmental Regulatory Policies results to 57.9% growth of Jua Kali metal fabrication microenterprises.The t-statistic for the regression coefficient for financial opportunities is significant at 5% level of significance (T= 2.706, p<0.05). This implies that the study's hypothesis for the objective is accepted. It is therefore concluded that Opportunities in Governmental Regulatory Policies have a significant effect on the growth of Jua Kali metal fabrication microenterprises. The model that was fitted based on this result is as follows:

*Growth =1.057+0.579 * Opportunities in Governmental Regulatory Policies*

Table 4.35: Regression Coefficients for Opportunities in Governmental Regulatory Policies

Model		Unstandardized Coefficients		Standardized Coefficients	t-stat	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.057	.279		3789.	.000

Regulatory Opportunities	.579	.214	.503	2.706	.000

a. Dependent Variable: Growth

Source: Researcher (2022)

4.4.8 Moderating Effect of Owner Level of Education on the Optimization of Business Opportunities for the Growth of Jua Kali Metal Fabrication Microenterprises

In order to determine the moderating effect of owner demographic characteristics on the optimization of business opportunities for the growth of Jua Kali metal fabrication microenterprises, the steps proposed by Baron and Kenny (1986) were used. Baron and Kenny (1986) proposed a three-step approach in which several regression analyses are conducted and significance of the coefficients is examined at each step.

Step one is a regression model testing the effect of optimization of business opportunities on growth of metal fabrication microenterprises (MEs). The overall model which is:

$\boldsymbol{Y = \beta\, o + \beta\, _1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon}$---Multiple Regression)

Where:

Y= Dependent variable (Growth of MSEs)

β_0 = Constant

β_1 - β_4= Coefficient of independent variables

X_1 = Financial opportunities

X_2 = Marketing opportunities

X_3= Technological opportunities

X_4 = Governmental opportunities

$\boldsymbol{\varepsilon}$ is the standard error term.

Step two is a model which includes the moderating variable (education level) as an independent

variable. The model is;

$\boldsymbol{Y = \beta o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon}$ ---Multiple Regression)

Where:

Y= Dependent variable (Growth of MSEs)

β_0 = Constant

$\beta_1 - \beta_5$= Coefficient of independent variables

X_1= Financial opportunities

X_2 = Marketing opportunities

X_3= Technological opportunities

X_4= Governmental opportunities

X_5= Education Level

$\boldsymbol{\varepsilon}$ is the standard error term.

Step three is a model with the combined product between the independent variables and the moderator (X_1*Z, X_2*Z, X_3*Z and X_4*Z) is included as part of the independent variables. The model is as follows:

$\boldsymbol{Y = \beta o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_1 * Z + \beta_6 X_2 * Z + \beta_7 X_3 * Z + \beta_8 X_4 * Z + e}$

Where;

Y= Dependent variable (Growth of MEs)

β_0= Constant

β_1 - β_4= Coefficient of regression

X_1= -Financial opportunities

X_2 = Marketing opportunities

X_3= Technological opportunities

X_4= Governmental opportunities

Z= Owner demographic characteristics (Level of education)

$\beta 0$ is constant (Y- intercept) which is the value of dependent valuable when all the independent variables are zero

$\beta_1 - \beta_8$are regression constants

$\boldsymbol{\varepsilon}$ is the standard error term.

The three steps above are shown in the sections below. Table 4.36, 4.37, and 4.38 shows the model summary for the overall model, the ANOVA for the overall model that combines the four independent variables and the regression coefficients for the overall model respectively.

Table 4.36: Model Summary for the Overall Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.748[a]	.556	.555	3.40671

a. Predictors: (Constant), X_1, X_2, X_3, X_4

b. Dependent Variable: Growth

Source: Researcher (2022)

The model summary Table 4.36 shows that the correlation between the combined variables of optimization of business opportunities and growth of the metal fabrication microenterprises (MEs) is high (R = 0.748). The coefficient of determination (R^2 = 0.556) indicates that the combined variables of optimization of business opportunities predict 55.6% of growth in the metal fabrication microenterprises (MEs), with the remaining 44.4% being represented in the error term.

To test the significance of the whole model, an analysis of variance was conducted. The results for the analysis are shown in Table 4.37.

Table 4.37: ANOVA for the Overall Model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29646.126	4	7411.531	166.898	.000[b]
	Residual	4884.833	110	44.008		
	Total	34530.959	114			

a. Dependent Variable: Growth

b. Predictors: (Constant), X_1, X_2, X_3, X_4

Source: Researcher (2022)

The ANOVA results as shown in Table 4.37 revealed that the overall model predicting growth of the metal fabrication microenterprises (MEs) is significant. This is shown by the F-statistic value which is 166.898 at a significance level of 0.000. This implies that the model can be relied upon to predict growth in the metal fabrication microenterprises (MEs). A multiple regression analysis was conducted to establish the effect of each of the independent variables on growth in a combined model. The results are shown in Table 4.36 above.

The regression coefficients for the overall model are a shown in Table 4.38. The findings revealed that financial opportunities (X_1) had a regression coefficient of 0.305 and indication that holding all other factors constant, a unit change in financial opportunities would influence growth of the metal fabrication microenterprises (MEs) by 30.5%. The study also revealed that the beta for market opportunities (X_2) was 0.402 which indicates that a unit increase in market opportunities leads to a 40.2% growth of the metal fabrication microenterprises (MEs). Furthermore, it was revealed that the beta for technological opportunities (X_3) was 0.453 which implies that a unit change in technological opportunities leads to a 45.3% growth of the metal fabrication microenterprises (MEs). The findings also revealed that opportunities in governmental regulations (X_4) lead to a 39.4% change in growth of the metal fabrication microenterprises (MEs) as shown by the beta value of 0.394.

Table 4.38: Regression Coefficients for the Overall Model

Model	Unstandardized Coefficients		Standardized Coefficients	t-stat	Sig.
	B	Std. Error	Beta		
(Constant)	3.679	.860		4.278	.000
X_1	.305	.095	.298	3.210	.001
X_2	.402	.077	.390	5.220	.000
X_3	.453	.140	.268	3.236	.000
X_4	.394	.186	.369	2.118	.000

a. Dependent Variable: Growth

Source: Researcher (2022)

Step two and three in the moderation involved combining the moderator variable (Education Level) and testing the change in the regression coefficients. Results for the analysis are shown in Tables 4.39 and 4.40.

The Coefficient of Determination (R^2) for the first model was 0.556, indicating that optimization of business opportunities variables on their own, contributed 55.6% to the change in growth in the metal fabrication microenterprises (MEs). Upon the introduction of Level of Education as predictor, the R square marginally changed from .556 (55.6%) to .564 (56.4%) an increase of 0.8%. This means that optimization of business opportunities variables and level of education explain up to 56.4% of growth. With addition of the level of education in the model as a moderator, the model further improved to an R square of .667, a significant increase of 0.103 (10.3%). This implies that education level significantly moderates the relationship between optimization of business opportunities and the growth of metal fabrication microenterprises. Table 4.39 shows that the three models were all significant (p-value< 0.05) in all the three cases.

Further examination of the moderation regression as illustrated inTable 4.40 shows that all the variables are significant upon moderation. Specifically, the result shows that financial

opportunities alone predicts 30.5% of growth in the metal fabrication MEs. However, with the introduction of education level as a moderator, this growth improves to 41.4%, which implies that education level is a significant moderator of the relationship between optimization of business opportunities and the growth of Jua Kali metal fabrication microenterprises.

Upon the introduction of level of education as predictor, the R square marginally changed from . 556 (55.6%) to .564 (56.4%) an increase of 0.8%. With addition of the Level of Education in the model as a moderator, the model further improved to an R square of .667, a significant increase of 0.103 (10.3%). This implies that education level significantly moderates the relationship between optimization of business opportunities and the growth of Jua Kali metal fabrication microenterprises.

The study findings in Table 4.40 also show that education level is a significant moderator of the relationship between market opportunities and the growth of Jua Kali metal fabrication microenterprises. This is shown by the increase in the regression coefficient from 40.2% to 45.7%. This implies that education level helps the Jua Kali metal fabrication microenterprise owners to access market opportunities.

Table 4.39: Moderated Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of Estimate	Change Statistics R Square Change	F Change	df1	df2	Sig. F Change
1	.748[a]	.556	.555	3.40671	.556	13.352	1	115	.000
2	.751[b]	.564	.550	5.37828	.008	4.050	1	114	.047
3	.817[c]	.667	.664	5.32161	.103	2.172	1	110	.003

a. Predictors: (Constant), X_1, X_2, X_3, X_4

b. Predictors: (Constant), X_1, X_2, X_3, X_4, Z

c. Predictors: (Constant), X_1, X_2, X_3, X_4, Z, X_1*Z, X_2*Z, X_3*Z, X_4*Z

d. Dependent Variable: Growth

Source: Researcher (2022)

Table 4.40, also shows that education level significantly moderates the relationship between technological opportunities and the growth of Jua Kali metal fabrication microenterprises. This is shown by the regression coefficient change from 45.3% to 50.8%. It is also shown that education level significantly moderates the relationship between opportunities in governmental regulations and growth of Jua Kali metal fabrication microenterprises as shown by the change of the beta from 39.4% to 40.0%.

Table 4.40: Moderated Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		Beta	**Std. Error**	**Beta**	**t-stat**	**Sig.**
1	(Constant)	3.679	.860		4.278	.000
	X_1	.305	.095	.298	3.210	.001
	X_2	.402	.077	.390	5.220	.000
	X_3	.453	.140	.268	3.236	.000
	X_4	.394	.186	.369	2.118	.000
2	(Constant)	3.761	.784		4.797	.000
	X_1	.314	.083	.301	3.783	.001
	X_2	.403	.073	.399	5.521	.000
	X_3	.465	.164	.445	2.835	.000
	X_4	.397	.189	.369	2.100	.000
	Z	.329	.064	.352	5.140	.000
3	(Constant)	3.987	.960		4.153	.000
	X_1	.414	.099	.398	4.182	.001
	X_2	.457	.091	.450	5.022	.000
	X_3	.508	.078	.468	6.513	.000
	X_4	.400	.156	.389	2.564	.000
	Z	.322	.060	.352	5.367	.000
	$C*Z$	.168	.065	.193	2.584	.051

Dependent Variable: Growth

Source: Researcher (2022)

4.5 Qualitative Data Analysis

The findings of the interview with the Jua Kali Metal fabrication respondent (Jua Kali Association chairman) covered growth of MEs, opportunities for growth of MEs, challenges facing MEs in exploiting opportunities and the way forward for MEs in exploiting the opportunities. The interview session was recorded and transcribed to enable detailed analysis.

The respondent attributed the positive growth in sales and new employees to the infrastructural development launched by the national and county government after the 2017 general elections. The MEs took advantage of sales through Access to Government Procurement Opportunities (AGPO) for groups such as youth and people with special needs. The demand for construction materials and office supplies in the county provided lucrative market for MEs. Wielding gained immensely (46% growth in the three year period) from the demand for metal doors, windows and grills by the construction industry. Increased uptake of opportunities was also experienced in technology through increased connection of MEs to national grid of electricity, use of modern grinding and spraying machines, online banking and money transactions through Mpesa money transaction platform.

However, the respondent noted that the MEs have not taken full advantage of opportunities in finance, marketing and technology. The respondent noted minimal uptake of credit, a condition attributed high collateral demanded by lenders, lack of enough information on the available credit and general fear of risks associated with microfinance loans. In the field of marketing the MEs have not been engaged in trade fares due to long procedures for consideration and the high

fee for booking exhibition space. The limitations in technological opportunities oscillate around limited innovations in precision and design, finishing, branding and patenting.

Overall the respondent attributed poor leverage of opportunities by MEs to limited knowledge and skills among the artisans, poor infrastructure (transport, internet and electricity), lack of enough information on the ever emerging opportunities and poor partnership with other stakeholders(government, donors and private sector). In the light of these hiccups the MEs sector calls for support through capacity building, improved infrastructure and increased provision of up to date information.

4.6 Summary

Chapter 4 considers the findings of the study of optimization of business opportunities as a predictor of the growth of metal fabrication microenterprises. The chapter presents the response rate, background information of the respondents, descriptive analysis of the variables, and multiple regression analysis of the hypotheses and qualitative data analysis. This section lays the foundation for summary, conclusion and recommendations in chapter 5.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

The study sought to analyse optimization of business opportunities for the growth of metal fabrication MEs in Kisii County. The business opportunities in the study were finance, marketing, technology and government regulatory framework. This chapter gives a summary of the study, highlighting the findings in line with the objectives and presenting the conclusions from the findings. The chapter also gives recommendations to the beneficiaries of the study and further areas of research.

5.1 Summary of Findings

This section presents a summary of findings according to the specific objectives of the study

5.1.1 To Examine the Effect of Optimization of Financial Opportunities on the Growth of Metal Fabrication Microenterprises

Findings arrived on the optimization of financial opportunities indicated that it had significant effect on the growth of the MEs. Financial opportunities had positive correlation with growth which is in accordance with findings of other researchers like Wangmo's (2016), and Rotich, Lagat & Kosgey (2015) who asserted that access to credit is an important source not only for seed capital but also money for expansion. The findings showed that the key considerations for leveraging financial opportunities are access to information, lending procedures, repayment period, collateral requirements and interests charged on the credit. The results showed that growth of MEs will be realized through streamlining of lending procedures, extension of grace

period, availing information on financial products through multiple channels and rationalizing interest rates through diversification of financial products (Kiyai, Namusonge and Jagongo, 2019)

From the findings in this study MEs need to optimize financial opportunities for growth. Without affordable credit MEs will fall short of seed capital and money for expansion (Ndede, Mbewa and Jagongo, 2017). From the findings a correlation coefficient (*r*) of 0.875 indicates a high correlation between availability of financial opportunities and growth of the metal fabrication microenterprises. Regression results with a beta value of 0.654.for financial opportunities indicated a significant effect of financial opportunities on growth (increase of 65.4% in growth of metal fabrication MEs). The findings are supported by other researchers like Maina, Kahando & Maina (2017) and Mwania (2011) who found positive correlation between financial management practices and growth of MEs. The studies showed that firms that optimized financial opportunities experienced progressive growth.

5.1.2 Hypothesis Testing for Financial Opportunities on the Growth of Metal Fabrication Enterprises

In order to test the hypothesis - $H_0 1$**:** Optimization of financial opportunities has no statistically significant effect on the growth of metal fabrication microenterprises, the beta coefficient was computed and t-test used to test the relationship between financial opportunities and growth of metal fabrication MEs at 95.5% sig level. The t-statistic for the regression coefficient for financial opportunities was found to be significant at 5% level of significance (T= 3.988, $p<0.05$). This implies that the study's hypothesis was accepted. The ANOVA was also used to test the hypothesis and the results show significant F-statistic (F=754.59, $p<0.05$) implying a strong relationship between financial opportunities and the growth of metal fabrication MEs,

hence acceptance of the hypothesis. This is also supported by Tarfasa, Kebede, Ferede and Behailu (2016) who indicated a positive effect of finance on the growth of SMEs.

5.1.3 To Evaluate the Effect of Optimization of Market Opportunities on the Growth of Metal Fabrication Microenterprises

Findings on the optimization of market opportunities showed significant effect on the growth of metal fabrication MEs. Market opportunities had positive correlation with growth of MEs which is in accordance with findings of other researchers like Yeh and Chang's (2018) and Bunyasi's (2015) who supported market driven opportunities for growth of MEs. The findings showed opportunities lie in competitive marketing strategies such as promotions, affordable pricing, packaging, branding and value addition are lacking. The reports showed that growth of MEs is propelled by penetration of market niches through quality products, relationship marketing and joint marketing strategies.

From the findings, a high coefficient (r = 0.783), and coefficient of determination value (R^2= 0.613) showed that market opportunities had significant effect on the growth of metal fabrication MEs. A regression of 0.741 for market opportunities indicated a significant effect on the growth of metal fabrication MEs. The findings are supported by other scholars like Nuwagabal and Nzewi (2013) who reported significant effect of marketing management practices on growth of MEs.

5.1.4 Hypothesis Testing for Market Opportunities on the Growth of Metal Fabrication Microenterprise

In order to test the hypothesis - $H_0 2$: Optimization of market opportunities has no statistically significant effect on the growth of metal fabrication microenterprises, the beta coefficient was computed and t-test used to test the relationship between market opportunities and growth of

metal fabrication MEs ay 95.5% level. The t-statistic for the regression coefficient for marketing opportunities is significant at 5% level of significance (T= 4.973, p<0.05). This implies that the study's hypothesis is accepted. The ANOVA gave a significant F-statistic (F=701.172, p<0.05) implying that the model for market opportunities is a good predictor of growth of metal fabrication MEs. This is echoed by the findings of Dumbu (2014) who reported a positive correlation between market opportunities (market management training, market research, promotions and relationship marketing) and growth of SMEs.

5.1.5 To Examine the Effect of Optimization of Technological Opportunities on the Growth of Metal Fabrication Microenterprises

Findings on the optimization of technological opportunities indicated significant effect on the growth of metal fabrication MEs. The positive correlation is in line with researchers like Bonifas (2015) and Kihara (2016) who indicated a positive relationship between technological advancement and growth and competitiveness of SMEs.

A correlation (r = 0.883) and a coefficient of determination value (R^2= 0.772) showed a positive relation between technological opportunities and growth of metal fabrication MEs. A regression coefficient of 0.810 indicates optimization of technological opportunities positively affects growth of metal fabrication MEs. The findings are reinforced by the studies of Kiveu (2017) and Wangari which reported a positive correlation between technological advancement, knowledge management and innovation, and growth of SMEs.

5.1.6 Hypothesis Testing for Optimization of Technological Opportunities on the Growth of Metal Fabrication Microenterprises

To test the hypothesis - ***$H_0$3:*** Technological opportunities have no significant effect on the growth of Jua Kali metal fabrication microenterprises, the beta coefficient was computed and t-

test used to test the relationship between technological opportunities and growth of metal fabrication MEs ay 95.5% level. The t-statistic for the regression coefficient for marketing opportunities is significant at 5% level of significance for the regression coefficient for technological opportunities is significant at 5% level of significance (T= 4.240, $p<0.05$). This implies that the study's hypothesis is accepted. The ANOVA with a significant F-statistic (F=631.368, $p<0.05$), implied that technological opportunities is a good predictor of growth of metal fabrication MEs. This finding is averred by the studies of Hajjaji (2012), and Berge, Bjorvatn & Tungodden (2010) which located opportunities for growth in emerging technologies and innovations like E-commerce and computerized production, the outcome which is cost effective production and high quality products and services.

5.1.7 To Assess the Effect of Optimization of Opportunities in Governmental Regulatory Policies on the Growth of Metal Fabrication Microenterprises

Findings on the optimization of opportunities in governmental regulatory policies indicated a significant effect on the growth of metal fabrication MEs. The positive correlation concurs with the findings of Magambo and Omwenga (2015) and Afande (2015) that government policy is a critical factor in the growth of SMEs. Government influence in the growth of SMEs is felt in development of infrastructure and technology, financial regulation, trade policies and capacity building.

With a correlation (r = 0.725) and a coefficient of determination value (R^2= 0.526) there is significant relationship between opportunities in government regulatory policies and growth of metal fabrication MEs. A regression coefficient of 0.579 indicated that optimization of opportunities in government regulatory policies positively influenced growth of metal fabrication MEs. The findings are supported by World Bank (2018) and GoK (2010) reports which indicated

that conducive policy environment for investment, sound micro economic management, rule of law together with social and political stability and investment in physical infrastructure and human resource development are significant prerequisites for MEs growth.

5.1.8 Hypothesis Testing for Optimization of Opportunities in Governmental Regulatory Policies on Growth of Metal Fabrication Microenterprises

To test the hypothesis - *$H_0$4:* Opportunities in governmental regulatory policies have no significant effect on the growth of metal fabrication MEs, the beta coefficient was computed and t-test used to test the relationship between opportunities in governmental regulatory policies and growth of metal fabrication MEs ay 95.5% level. The t-statistic for opportunities in governmental regulatory policies is significant at 5% level of significance (T= 2.706, p<0.05). This implies that the hypothesis for the objective is accepted. The ANOVA with a significant F-statistic (F=559.065, p<0.05), implied that the model for predicting growth of metal fabrication MEs through Opportunities in Governmental Regulatory Policies is good. This finding is supported by researchers like Bouazzal, Ardjouman, & Abada (2015) and African Review of Business and Technology report (May, 2017) which indicated significant effect of opportunities in government regulatory policies through affirmative funds, accessible and affordable licensing and permits and friendly tax regimes.

5.1.9 To Explore the Moderating Effect of Owner Level of Education on the Relationship between Optimization of Business Opportunities and Growth of Metal Fabrication Microenterprises

The study findings showed that level of education is a significant moderator of the relationship between business opportunities in finance, marketing, technology and government regulatory framework and the growth of metal fabrication microenterprises. With the level of education as predictor, the R square marginally changed from .556 (55.6%) to .564 (56.4%), an increase of

0.8%. However, with addition of the Level of Education as a moderator, the model further improved to an R square of .667, a significant increase of 0.103 (10.3%). This implies that level of education significantly moderates the relationship between optimization of business opportunities and the metal fabrication MEs.

Upon the introduction of education as a predictor, finance influenced growth of the MEs from 30.5% to 41.4%, marketing influenced growth from 40.2% to 45.7%, technology pushed growth from 45.3% to 50.8%, and governmental regulations from 39.4% to 40.0%. The findings concur with studies of Odero (2017); Praag and Vinjverberg (2005); and Hermon (2003) which established that the level of education is significant in entrepreneurial knowledge and skills, operations and performance. This position is also reinforced by human capital theory which posits that training and education are significant in improving efficiency and productivity of the owner-manager knowledge and skills geared toward productivity of a firm (Chiliya & Robert, 2012).

5.2 Conclusion

In chapter one, the problem in this study was identified as the inability of majority of the metal fabrication micro enterprises to achieve optimum leverage of business opportunities for growth. Based on the findings the study presents the following conclusions Optimization of business opportunities is a significant predictor of the growth of the metal fabrication MEs. The findings also showed that owner level of education is a significant moderator of the relationship between optimization of business opportunities and growth of metal fabrication MEs. Specifically, all the four business opportunities (financial, technology, marketing and government regulatory policies) tested in this study were found to be significant and of positive influence on the growth of metal fabrication MEs. The study also noted that age, level of education and experience of

owner/ managers of the MEs significantly influenced the relationship between optimization of business opportunities and growth of metal fabrication MEs.

5.2.1 Effect of Financial Opportunities on the Growth of Jua Kali Metal Fabrication Microenterprises in Kisii County

With a regression result showing a beta value of 0.654, it was concluded that financial opportunities is a significant predictor for growth of metal fabrication MEs but had not been optimally leveraged. The MEs have not fully leveraged seed (2.39 out of 5 on Likert scale) and working capital (2.33 out of 5 on Likert scale) for the successful take-off and growth of the businesses. The MEs also indicated not to have optimally benefited from affordable interest rates (2,38 out of 5 on Likert scale) and favourable collateral (2.17 out of 5 on Likert scale), and loan repayment period (2.32 out of 5 on Likert scale).

5.2.2 Effect of Market Opportunities on the Growth of Jua Kali Metal Fabrication Microenterprises in Kisii County

The findings indicated that with a beta value of 0.741, market opportunities had significant effect on the growth of metal fabrication microenterprises in Kisii County. The results showed that close to optimal leverage ofmarketing opportunities was realized in product differentiation (4.5 out of 5 in Likert scale) and taking advantage of market niches (4.1 out of 5 in Likert scale) Other results were in taking advantage of government procurement (2.81 out of 5 in Likert scale), online marketing (2.7 out of 5 in Likert scale), and taking advantage of market training (1.78 out 5 in Likert scale).

5.2.3 Effect of Technological Opportunities on Growth of Jua Kali Metal Fabrication Microenterprises in Kisii County

The findings for technological opportunities showed a remarkable beta value of 0.810 indicating that it had very significant effect on the growth of metal fabrication MEs. There was almost close to optimal leveraging of MPESA services (4.81 out of 5), recycling (4.67 out of 5), mechanized production (4.18 out of 5), and the use of IT (3.78). Above average results were in online banking (2.98) and E-Commerce (2.81).

5.2.4 Effect of Opportunities in Governmental Regulatory Policies on Growth of Jua Kali Metal Fabrication Microenterprises in Kisii County

With a beta value of 0.579 opportunities in government regulatory policies there had been indication that optimal leverage of the opportunities had not been realized. The results show above average leverage in infrastructure (3.64 out of 5 on Likert scale), government procurement (2.78 out of 5 on Likert scale), and certification by TVETA (2.72 out of 5 on Likert scale). Other results were taking advantage registration of businesses (2.12 out of 5 on Likert scale), favourable taxation (1.94 out 5 on Likert scale), supportive education and training (1.94 out of 5 on Likert scale), and supportive education and training (1.81 out of 5 on Likert scale.

5.2.5 Moderating Effect of Owner Level of Education on the Optimization of Business Opportunities for the Growth of Jua Kali Metal Fabrication Microenterprises in Kisii County

Regression results showed that financial opportunities alone predicts 30.5% of growth in the metal fabrication microenterprises in Kisii County. However, with the introduction of level of education as a moderator, this growth improved to a significant 41.4%.

The findings also showed that education level is a significant moderator of the relationship between market opportunities and the growth of metal fabrication microenterprises in Kisii County. This was shown by the increase in the regression coefficient from 40.2% to 45.7%.

The findings also revealed that education level significantly moderates the relationship between technological opportunities and the growth of metal fabrication microenterprises in Kisii County.

Finally moderating effect of the level of education on the relationship between opportunities in governmental regulatory framework and growth of metal fabrication MEs is positive as shown by the change of the regression value from 39.4% to 40.0%.

5.3 Recommendations

Based on the findings of the study recommendations were proposed in relation to each objective. In order for the metal fabrication MEs to optimize potential opportunities the study recommends that the firms invest in information technology for updated information and developments in the business world. The entrepreneurs should comprehend, appreciate and meet the lenders' requirements for successful loaning. To meet the collateral requirements for the lenders the MEs should build a strong asset portfolio. The MEs should register their businesses to improve their credit worthiness. Due to high risks and financial insecurity MEs will improve their optimization of financial opportunities by developing strong partnerships with financiers by developing credit

history through application for affordable and quick to service loans. To strengthen their bargaining power with lenders MEs should partner through Savings and Credit Cooperatives (SACCOs).

To optimize on opportunities in marketing the study recommends that the government partners with MEs to identify and come up with portfolio of potential opportunities for exploitation. To increase access to useful marketing information, the government policy should make information available specifically to MEs. In order to optimize on E-commerce the MEs have to invest on the internet and business information hubs and increase their presence in the online business forums and participate in trade fairs and promotions.

In order to optimize opportunities in technology, the study recommends that MEs partner in sharing, exchange and bench marking ideas and knowledge with technology/ innovation champions. Microenterprises should take advantage of capacity building opportunities availed by technical and vocational training institutes (TVETIS)The government policy should be geared toward technology (artisan) transfer that will specifically benefit MEs.

As pertains to opportunities in government regulatory framework it is recommended that the government provides enough information on the available opportunities such as finance through affirmative funds (UWEZSO, YEDF and Women Fund), procurement opportunities, subsidized rates at the export processing zones and marketing through trade fairs. Microenterprises are urged to capitalize on government platforms like Huduma Centre and Ajira Digital for information and access to potential opportunities.

Since the results showed that the level of education is significant in the optimization of business opportunities for growth of the MEs it is recommended that the entrepreneurs'' knowledge and

skills be bolstered through vocational training and continuous improvement and certification. The government policy toward vocational training for MEs entrepreneurs should be tailored to meet demands of emerging technologies and the ever evolving taste of the market.

Overall the study recommends that the metal fabrication MEs focus their effort for growth on horizontal integration through acquisitions and penetration of supply and distribution channels. This will shift the MEs from survival to growth mode and graduate into formal enterprises.

5.4 Suggestions for Further Research

This study was conducted under several limitations and assumptions. Based on these limitations and assumptions, the following suggestions for further study are proposed.

This study focused on only Kisii County. A study should be conducted to incorporate several counties to locate the strategic gap (opportunities) and integrate long term strategies into growth of MEs to enable them shift mindset from survival mode to growth mode for graduation into small and medium enterprises.

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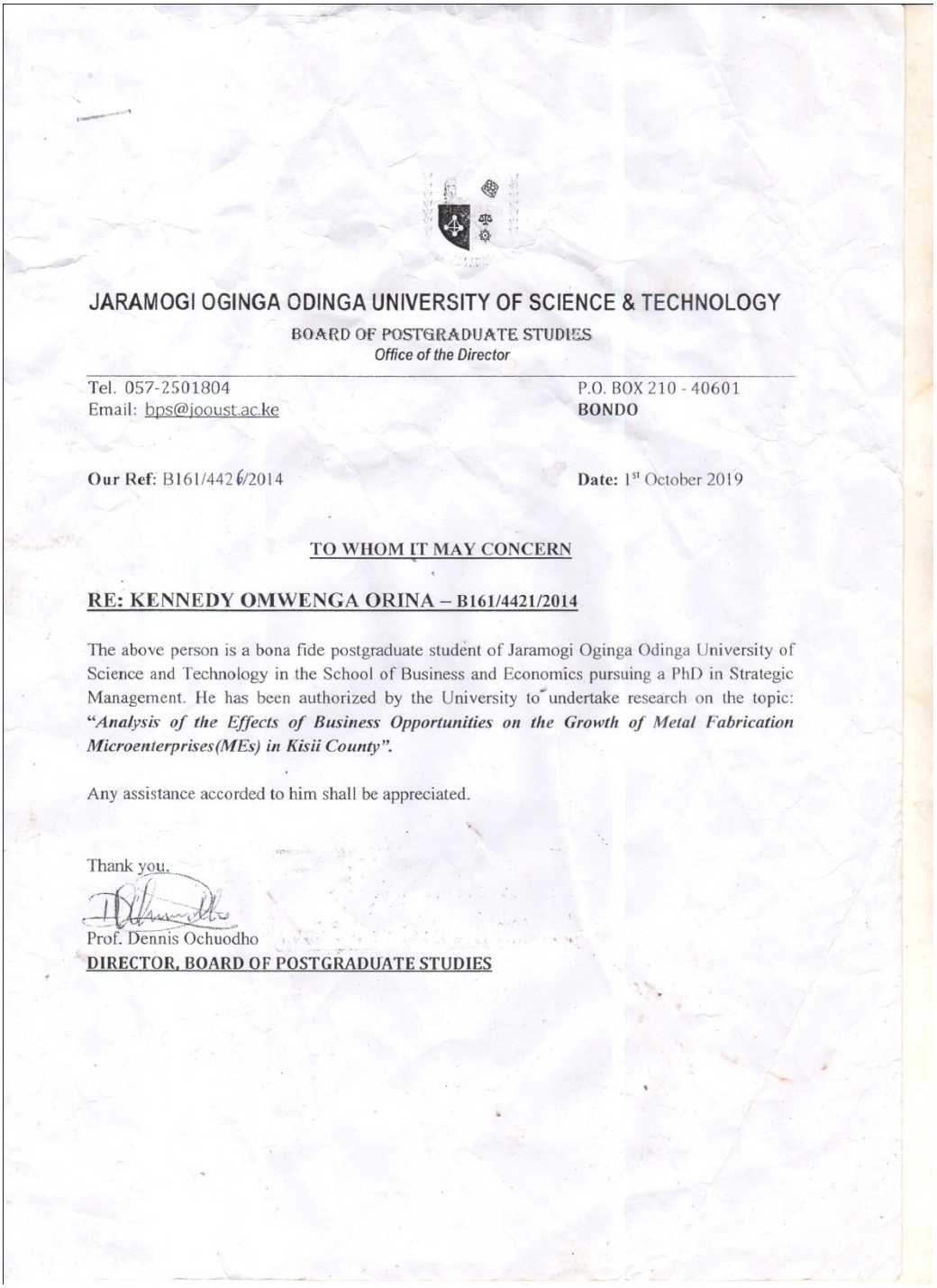
APPENDICES

APPENDIX A: A LETTER OF INTRODUCTION



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY

BOARD OF POSTGRADUATE STUDIES
Office of the Director

Tel. 057-2501804
Email: bps@jooust.ac.ke

P.O. BOX 210 - 40601
BONDO

Our Ref: B161/4426/2014

Date: 1st October 2019

TO WHOM IT MAY CONCERN

RE: KENNEDY OMWENGA ORINA – B161/4421/2014

The above person is a bona fide postgraduate student of Jaramogi Oginga Odinga University of Science and Technology in the School of Business and Economics pursuing a PhD in Strategic Management. He has been authorized by the University to undertake research on the topic: ***"Analysis of the Effects of Business Opportunities on the Growth of Metal Fabrication Microenterprises(MEs) in Kisii County".***

Any assistance accorded to him shall be appreciated.

Thank you.

Prof. Dennis Ochuodho
DIRECTOR, BOARD OF POSTGRADUATE STUDIES

APPENDIX B: QUESTIONAIRE
SECTION A: FIRM BACKGROUND AND RESPONDENT INFORMATION

Kindly answer the questions either by ticking the boxes or filling the spaces

1. Gender Male ☐ Female ☐

2. Age 18-25 years ☐ 26-33years ☐ 34-41 years ☐ above 41 years ☐

3. What level of education did you attain?

Primary education ☐

Secondary education ☐

University education ☐

Did not go to school ☐

4. After your formal education what other professional training have you?

1) Apprentice ☐

2) Polytechnic ☐

3) Diploma ☐

4) University ☐

5) None ☐

5. Which one of the following is your area of trade?

(a) Wielding ☐

(b) Motor vehicle panel beating ☐

(c) Key cutting and Padlocks ☐

(d) Auto and industrial spare parts ☐

(e) Blacksmith ☐

6. (a) List the products produced by your firm

1.

2.

3.

4.

5.

7. What is the legal status of your enterprise?

(a) Sole Proprietorship ☐

(b) Close Corporation ☐

(c) Partnership ☐

(d) Private Company ☐

8. How long has the firm operated/ existed?

1) 1-3 Years ☐

2) 4-6 Years ☐

3) 7-9 Years ☐

4) 10 and above years ☐

9. How many employees do you have?

1) 0

2) 1-3

3) 4-6

4) 7-9

5) 10 and above employees

10. What was your reason for starting this business? (tick one)

1) Lack of formal employment ☐

2) To supplement my income ☐

3) To be my own boss ☐

4) Personal interest ☐

5) Other (specify) ----------

11. Is your business registered by registrar of companies?

1. Yes ☐

2. No ☐

12. Where is the type of your business premise?

1) Permanent structure ☐

2) Open air/ shade ☐

3) Other (specify) ☐

13. What are the business opportunities leveraged by your firm in the last three years?

1) Financial ☐

2) Marketing ☐

3) Technological ☐

4) Government regulation ☐

5) None ☐

(b) Has your firm participated in any trade fair/ and technology conference such as the recent East African Jua Kali Trade Exhibition of 2018 in Eldoret?

SECTION B

INFLUENCE OF BUSINESS OPPORTUNITIES ON GROWTH OF THE FIRM

Assess the influence of business opportunities on the growth of your business

5 4 3 2 1

	Business Opportunities	**Strongly agree**	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
	Financial Opportunities					
14	**FO1**I have taken advantage of start-up-capital	☐	☐	☐	☐	☐
15	**FO2** I have taken advantage of working capital	☐	☐	☐	☐	☐
16	**FO3** I have taken advantage of affordable Interest rates	☐	☐	☐	☐	☐
17	**FO4** I have taken advantage of favourable collateral terms	☐	☐	☐	☐	☐
18	**FO5** I have taken advantage of favourable loan servicing period	☐	☐	☐	☐	☐
19	**FO6** Refinancing is guaranteed	☐	☐	☐	☐	☐
20	**Marketing Opportunities** MO1 I take advantage of government procurement					
21	**MO2** I market my products on-line					

22	**MO3** I do use product differentiation					
23	**MO4** I have taken of advantage of market niches					
	MO5 I take advantage of market training programs					
25	**Technological Opportunities**					
26	**TO1** I have adopted use of IT in project planning and implementation					
	TO2 I use E-Commerce in doing business					
27	**TO3** I Use of MPESA has made business transactions easy					
28	**TO4** I use online banking					
29						
30	**TO5** I use mechanization in production					
31	**TO6**I do apply recycling in production					
32	**Opportunities in Government Regulatory Policies**					
33	**GRP1**I take advantage of relaxed requirements for registration of business					
34	**GRP2** I take advantage of favourable taxation					
35	**GRP3** I take advantage of favourable tendering with					

36	government					
37	**GRP4** I take advantage of supportive education and training					
	GRP5 I take advantage of supportive trade policies					
	GRP6 I take advantage of favourable infrastructure					
	GPR7 Certification by TVETA has enhanced my image and bargaining power					

SECTION C: CHANGES IN GROWTH

Read the statement related to growth and indicate the level of agreement or disagreement

		5	**4**	**3**	**2**	**1**
Statement		**Strongly agree**	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
38	There has been backward integration into supply channels	☐	☐	☐	☐	☐
39	There has been forward integration into distribution channels	☐	☐	☐	☐	☐
40	There has been horizontal integration	☐	☐	☐	☐	☐
41	There has been diversification into new products and markets	☐	☐	☐	☐	☐
42	There has been growth in new products in the last 3 years	☐	☐	☐	☐	☐
43	There has been growth in customers in the last 3 years	☐	☐	☐	☐	☐
44	There has been growth in sales in	☐	☐	☐	☐	☐

	the last 3 years					
45	There has been growth in number of employees in the last 3 years	☐	☐	☐	☐	☐
46	There has been growth in revenue in the last 3 years	☐	☐	☐	☐	☐
47	There has been growth in profit in the last 3 years	☐	☐	☐	☐	☐
48	There has been growth in innovations and application of new technology in the last 3 years	☐	☐	☐	☐	☐

SECTION D: GROWTH INDICATORS

Please indicate in figures in change of growth variables in the last three years (2017-2019)

	Year 1	**Year 2**	**Year 3**
49. Sales Revenue			
50. Number of employees			

APPENDIX C: INTERVIEW GUIDE

My name is Kennedy Orina a Doctor of Philosophy in Business Administration student at Jaramogi Oginga Odinga University of Science and Technology. I am working on my thesis on Optimization of Business Opportunities as a Predictor of Growth of Metal Fabrication Microenterprises in Kisii County: The Moderating Role of Level of Education. I therefore request that you provide me with information for the questions below and that the information obtained will be used for the mentioned purpose only and will be treated with utmost confidentiality

1. What has been the growth trend of the MEs over time?
2. What are growth indicators exhibited by the MEs?
3. In your opinion what opportunities are available for the growth of MEs in Kisii County?

4. What are opportunities which have been fully exploited by the MEs?
5. Have the MEs taken advantage of credit facilities availed by the state and financial institutions?
6. Have the MEs taken advantage of marketing opportunities availed by trade fairs such the Southern Kenya Agricultural Show of Kenya and East African Jua Kali Trade Exhibition?
7. What are the technological innovations which have benefitted the MEs?
8. What government regulations have provided opportunities for growth of the MEs?
9. What are the benefits accruing from taking advantage of the available opportunities?
10. State the challenges encountered in the process of exploiting the opportunities
11. What should be done to assist the microenterprises take full advantage of the opportunities for growth?

APPENDIX D: Work Frame for the Research Project

Process	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Seminar paper/ Concept Dev	X	X								
Development of Proposal Document			X							
Literature Review	X	X	X	X	X	X	X	X	X	X
Proposal				X						

Submission and Defence										
Pilot Study					X					
Data Collection						X				
Data Analysis							X			
Thesis Writing							X			
Thesis Submission and Defense								X	X	
Final Thesis Submission										X

ACTIVITIES	QUANTITY	RATE	TOTAL
PROPOSAL WRITING			
i)Stationery -Pens	1 Dozen	720.00	720.00
-Notebooks	6 Reams	550.00	3300.00
-Spring Files	4 pieces	80.00	320.00
-Flask Disk	4 GB	2000.00	2000.00
ii) Typesetting and printing	180 copies	30.00	5400.00
iii) Photocopying	240	5.00	1200.00
iv) Binding (Loosely)	7	150.00	1050.00
v) Transport (Local)	20 days (Bondo)	2000.00	40000.00
vi) Subsistence	20 days (Bondo)	1500.00	30000.00
vii) Literature Review (Library and Internet, transport and subsistence)	8 days (Kisumu)	30000.00 1500.00	12000.00
	8 days (Kisumu)	2000.00	16000.00
Sub Total			**141990.00**
PILOT STUDY			
i)Printing/ photocopying questionnaires	80 copies	10.00	800.00
ii) Transport (Local	3 days(Nyamache)	1000.00	3000.00
iii) Subsistence (Local))	3 days (Nyamache)	1500.00	4500.00
Sub Total			**8300.00**

DATA COLLECTION i)Printing and photocopying questionnaires ii) Transport (Local) iii) Subsistence (Local)	 180 copies 15 days (Kisii, Ogembo and Suneka) 15 days (Kisii, Ogembo and Suneka)	 10.00 1000.00 1500.00	 1800.00 15000.00 225000.00
Sub Total			**46000.00**
THESIS PREPARATION i)Typesetting, printing and photocopying ii) Binding iii) Transport (Local) iv) Subsistence (Local)	 1400 copies 7 copies 5 day (Bondo) 5 days (Bondo)	 30 600 2000.00 1500.00	 42000.00 4200.00 10000.00 7500.00
Sub Total			**63700.00**
CONTIGENCIES	35000.00		
GRAND TOTAL	294000.00		

APPENDIX E: PROPOSED BUDGET

APPENDIX F: PERMISSION FROM NACOSTI

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 490325

Date of Issue: 12/October/2020

RESEARCH LICENSE

This is to Certify that Mr.. KENNEDY OMWENGA ORINA of Jaramogi Oginga Odinga University of Science and Technology, has been licensed to conduct research in Homabay, Kisii, Migori, Nyamira, Siaya on the topic: ANALYSIS OF THE EFFECTS OF BUSINESS OPPORTUNITIES ON THE GROWTH OF METAL FABRICATION MICROENTERPRISES (MEs) IN KISII COUNTY for the period ending : 12/October/2021.

License No: NACOSTI/P/20/7042

490325

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

APPENDIX G: MAP OF KISII COUNTY


Kisii South
Kenyenya
Kenyoka
Ogembo
Masaba
Gucha South
Gucha
Magongo
N
Density people per km²
769 779 846 902 1009
(Urban centres with population of more than 2,000 people)