

**ENTREPRENEURIAL MINDSET AND PERFORMANCE  
OF SMALL AND MEDIUM ENTERPRISES IN KENYA**

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AGRICULTURE AND TECHNOLOGY**

**2020**

**Entrepreneurial Mindset and Performance of Small and Medium  
Enterprises in Kenya**

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**A Thesis Submitted in Partial Fulfillment for the Degree of Doctor  
of Philosophy in Entrepreneurship in the Jomo Kenyatta University  
of Agriculture and Technology**

**2020**

**DECLARATION**

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

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## **DEDICATION**

This work is dedicated to my husband, Joseph Muigai, children; Gian Kihumba, Zita Wanjiku and Alban Kimathi for their never ending support and encouragement during my studies. To my parents Alice Kimathi and Dominic Kimathi, your prayers worked.

## **ACKNOWLEDGEMENT**

I wish to acknowledge and thank my supervisors Prof. Elegwa Mukulu and Prof. Romanus Odhiambo for their guidance, support and encouragement throughout the entire period of development and completion of this thesis. I would like to extend my gratitude to Jomo Kenyatta University of Agriculture and Technology for giving me the opportunity and support to undertake my PhD degree.

I thank the almighty God for enabling me to successfully carry out this work. In addition, my discussions with colleagues, friends and other scholars have benefited me greatly in my efforts to develop and accomplish this work. I am also truly grateful to the respondents (Small and medium enterprises in Nairobi County) who without their participation this research would not have been possible

Special thanks to my husband Joseph Muigai for the financial and moral support, I am happy to have you by my side. To my lovely children Gian Kihumba, Zita Wanjiku and Alban Kimathi, thank you for your patience, understanding and accepting to do with less of my motherly time as I pursued my studies.

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

<b>ANOVA</b>	Analysis of variance
<b>BLUE</b>	Best Linear Unbiased Estimator
<b>DW</b>	Durbin Watson
<b>EA</b>	Entrepreneurial Awareness
<b>GDP</b>	Gross Domestic Product
<b>ICT</b>	Information & Communication Technology
<b>ICTs</b>	Information & Communication Technologies
<b>KNBS</b>	Kenya National Bureau of Standards
<b>OECD</b>	Organization for Economic Cooperation and Development
<b>OLS</b>	Ordinary Least Square
<b>SME</b>	Small and Medium Enterprise
<b>SMEs</b>	Small and Medium Enterprises
<b>SMME</b>	Small Medium and Micro Enterprise
<b>SPSS</b>	Statistical Package for Social Science
<b>VIF</b>	Variance Inflation Factor

## DEFINITION OF TERMS

- Entrepreneurial Mindset** To the small and medium enterprise, entrepreneurial mindset refers to exploring opportunities and innovation, taking risks, as well as managing change and uncertainty and is an ability or way of thinking to identify and exploit new opportunities through flexible, reactive, innovative and renewal manner (Darjat, 2015).
- Creativity** Creativity is the skill or capability to come up with new ideas and to find out new ways of viewing challenges and opportunities and is manifested by the ability to make, generate, bring to life, to invent, to produce through imaginative skill or to bring into life/existence something new (Leitner & Guldenberg, 2010). In this study creativity was measured through product creativity, process creativity and business model creativity.
- Innovation** Innovation refers to the implementation or transformation of a new idea into a new product or service, or an improvement in organization or process (Arend, 2014). In this study, innovation was measured through product innovation, process innovation and business model innovation.
- Propensity to take risk** Propensity to take risk is the entrepreneur's general likelihood of behaving more or less in a risky manner and how entrepreneurs evaluate the risk-return trade-off or the affinity for or tolerance of calculated risk. It is the tendency to take bold actions such as venturing into unknown new markets and committing a large portion of resources to ventures with uncertain outcomes (Boermans & Willebrands, 2017). In this study,

propensity to take risk was measured through resource allocation, risk avoidance and risk perception

**Awareness about**

**SME support services**

Small and Medium entrepreneurs' knowledge about support services available and accessible to them like credit facilities, state policies, interventions, laws and regulations central to Small and Medium Enterprises (SMEs), market information and institutions supporting SMEs (Ngek, 2012). In this study, awareness about SME support services was measured through credit support, market access and government support

**Self-efficacy**

Self –efficacy refers to an individual's beliefs regarding their capability in discovering and exploiting opportunities in the process of starting and growing a business (Klyver & Thornton, 2010). In this study, self-efficacy was measured through coping with unexpected challenges, defining core purpose and adopting new products, services and markets

**Performance**

This is a measure of an enterprise's success in achieving its goals, it is the degree to which a feat or a deed is being or has been accomplished. In this study, performance shall be measured through gross profit, annual sales and number of employees (Grisna & Qaanita, 2014).

**Small &Medium**

**Enterprises**

According to KNBS (2016) and the Micro and Small enterprises act No. 55 of 2012, an SME is a firm, trade, service, industry or a business activity whose annual

turnover ranges between five hundred thousand and eight hundred million Kenya shillings; and which employs between ten and ninety nine people.

## ABSTRACT

Entrepreneurial mindset plays an important role in sustainable growth, development and performance of small and medium enterprises (SMEs). Entrepreneurial mindset is an important factor for the success of SMEs without which they are likely to fail. According to KNBS (2016) and the Micro and Small enterprises act No. 55 of 2012, an SME is a firm, trade, service, industry or a business activity whose annual turnover ranges between five hundred thousand and eight hundred million Kenya shillings; and which employs between ten and ninety nine people. SMEs play a crucial role in Kenya because they control above 80% of all jobs in the country and contribute to over 30% of the Gross domestic product (GDP) in Kenya in 2019 (KNBS, 2019). However, some of the SME's do not survive past their first year, others do not grow beyond the initial status, while others fail to perform as well as they were projected to perform. Entrepreneurial mindset is one possible strategy for enhancing the performance of SMEs. Although theoretical review and some studies have explored the area of entrepreneurial mindset, there is no study which focused on effect of entrepreneurial mindset on the performance of SMEs in Kenya. This study, therefore, sought to fill this gap by investigating the effect of entrepreneurial mindset on the performance of small and medium enterprises in Kenya. The focus of the research was to measure the entrepreneurs' mindset exhibited through creativity, innovation, propensity to take risk, awareness about SME support services and self-efficacy and how these attributes contribute to the performance of an SME. Specifically, the study sought to determine the effect of creativity on performance of SMEs, to assess the effect of innovation on performance of SMEs, to find out the effect of propensity to take risk on performance of SMEs, to establish the effect of awareness about SME support services on performance of SMEs and to determine the effect of self-efficacy on performance of SMEs. The study adopted survey research design focusing on a population of 268,100 licensed small and medium enterprises in Nairobi County in Kenya, from which a sample of 400 SMEs were selected through a multi-stage probability sampling method where stratified sampling method was used first to select firms under the sector strata's (manufacturing, services, wholesale and retail trade and real estate activities) and then simple random sampling was used to select representative samples from each sector. Quantitative data was collected using questionnaires and analyzed using Statistical Package for Social Science (SPSS) and Microsoft Excel. The study results established that creativity, innovation, awareness about SMEs support services and self-efficacy had positive and significant effect on performance of small and medium size enterprises in Kenya. Propensity to take risk was positively but insignificant related to performance of small and medium size enterprises in Kenya. The study concluded that entrepreneurial mindset influenced performance of small and medium enterprises in Kenya and entrepreneurs with creativity, innovative, risk taking, aware and self-efficacy outperform their competitors and steer their enterprises to profitability. The results of this study will contribute to the theoretical and empirical body of knowledge especially in the area of entrepreneurship and entrepreneurial mindset. The study recommends that SMEs owner or managers should adopt entrepreneurial mindset to help them build resilient and high performing sustainable small and medium enterprises.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

Today's global economy is characterized by changes in development and technology fueled by information and driven by entrepreneurial knowledge, skills and mindset (Gyong, 2014). To succeed in today's business world calls for appropriate innovative ideas and strategies which are functions of entrepreneurial mindset. Entrepreneurial mindset is a critical issue in today's business sustainability (Tyopaine, Teddy, James & Ringim, 2016). Business success is not merely a function of relevant skills; it in addition requires appropriate entrepreneurial mindsets that capture the benefits of uncertainty hence attainment of the correct entrepreneurial mindset creates a solid in-road to the achievement, growth and performance of Small and Medium Enterprises (SMEs) (Junde, 2015).

In regard to the small and medium enterprise, mindset refers to exploring opportunities and innovation, taking risks, as well as managing change and uncertainty and is an ability or way of thinking to identify and exploit new opportunities through flexible, reactive, innovative and renewal manner (Darjat, 2015). Small and Medium Enterprises bring or restore growth to stagnant economies and contributes to economic growth and social development and they cannot be undermined anywhere across the globe (Gürol & Astan, 2006). The mindset of the entrepreneur determines the business success in today's competitive market (McGrath, & MacMillan, 2000).

World over, SMEs are recognized as the catalyst by which global economies are built. Small and medium enterprises are used by governments worldwide for job creation, economic development, wealth creation and poverty reduction. According to Kenya National Bureau of Statistics (2016) the importance of small and medium enterprises in the Kenyan economy cannot be underestimated. The survey indicated that eighty per cent of the eight hundred thousand jobs created belonged to the informal sector that is controlled by SMEs. They are the undisputed foundation of economic diversification and expansion, contributing immensely towards a positive socio-

economic impact within the country (Karen, 2015). Generally, majority of Kenyan investors start off as entrepreneurs mostly micro, small or medium enterprises which form a large a large part of the private sector in the developed and developing countries. The Small enterprises are considered as those that employ 10 to 49 employees while medium enterprises are those that are able to employ 50 to 99 employees (Njeru, 2012).

According to a report by KNBS (2016) Kenya had 1,560,500 SMEs and out of this number Nairobi County had 268,100 which are 17.2% of all SMEs in Kenya. The same report also showed that SMEs in Nairobi County are distributed across all the sectors; manufacturing, wholesale and retail trade, services and real estate activities. This data advised the researcher in choosing to carry out the research in Nairobi County because the results could be generalized to the whole country.

### **1.1.1 Entrepreneurial Mindset**

Success in today's dynamic and competitive business world transcend beyond a mere a mere acquisition of relevant skills, business operators under the present dispensation must in addition possess appropriate entrepreneurial mindset which is important for business success (Tyopine, Teddy, James & Ringim, 2016). An entrepreneurial mindset indicates a way of thinking about business and its opportunities that capture the benefits of uncertainty (Dhliwayo & Vuuren, 2007). According to Seneges (2007) it portrays the innovative and energetic search for opportunities and facilitates actions aimed at exploiting opportunities. It also refers to a specific state of mind which orientates human conduct towards entrepreneurial activities and outcomes (Asenge & Agwa, 2018).

Entrepreneurial mindset is described by Mathisen and Arnulf (2014) as a definite state of mind which positions human conduct or behavior towards business or entrepreneurial activities showing that people or individuals with entrepreneurial mindsets are often pulled to or drawn to business opportunities, risk taking activities, innovation and creativity or new value formation. Scheepers (2009) define an entrepreneurial mindset as something which relates to an innovative, willing and

energetic pursuit towards any given opportunity by means of rapid sensing-, acting- and mobilized responses, in order to achieve a possible gain.

Entrepreneurial mindset is described by Shepherd, Patzelt and Haynie (2010) as a point of view that is adopted by an entrepreneur that is the business leader, whereby he or she is eager towards innovation, opportunities, personal growth and achieving personal goals. In essence, entrepreneurs with a well-developed entrepreneurial mindset are also identified by their passion for what they do in and around their respective businesses (Zaidatol & Abdullah, 2009). According to Gustafsson (2004) entrepreneurs with an entrepreneurial mindset, while engaging in a business opportunity identification task, are able to spot the nature of the opportunity they face and adapt their behavior to the nature of the duty or task. McGrath and MacMillan (2000) further added that the passionate seeking of lucrative opportunities, being goal orientated, having enormous discipline and incubating a strong inner-drive, are also essential characteristics of an entrepreneurial mindset. Creativity, innovation, propensity to take risk, awareness about SME support services and self-efficacy are considered as some of the characteristics of entrepreneurial mindset (Thompson, 2004).

According to Faltin (2007) entrepreneurial mindset is about creativity, innovation and taking opportunities that leads to business wealth creation and success and that this type of mindset enables SME entrepreneurs to make realistic decisions when faced with uncertainties. Creativity is important for the success of the business and is a means to unlock the entrepreneurial potential of individuals, entrepreneurs and businesses, since new ideas and approaches are key ways on promoting an entrepreneurial culture (Pisapia, 2009. Innovation is the course through which the entrepreneur converts market opportunities into workable, profitable, and marketable ideas (Ranga, Murali & Swathi, 2013).

According to Forlani and Mullin (2000) propensity to take risk is the perceived probability of getting the rewards linked with success of an anticipated situation, which is required by a person before he or subjects themselves to the consequences associated with failure, the alternative situation providing less reward as well as less severe consequence than the proposed situation. Dhliwayo and Vuuren (2007) describe risk



taking as an important element of the strategic entrepreneurial mindset which is because risk-taking is necessary for the success, development and growth of a business, which is based on how entrepreneurs recognize or perceive and cope with the risks in their environment.

Dunlap (2008) highlights that business ventures should adopt an entrepreneurial mindset wherein at the heart, lays the ability of the entrepreneur to accept and manage risk. A study by Nieuwenhuizen and Kroon (2002) revealed a strong relationship between the willingness to take risks (risk tolerance) and SME success. According to Ngeek (2012) it is necessary to understand the entrepreneurial mindset in the SME sector as one of the means to foster SME success and is among the various factors shown in other studies (Willemse, 2010; Fatoki, 2010; Ehlers & Lazenby, 2007) as the reasons for high rate of SME failure.

### **1.1.2 Performance of SMEs Globally**

Small and medium enterprises play a major central role in regard to entrepreneur skills, innovation and employment across the world (Kinyua, 2014). They contribute to more than one third of GDP in emerging and developing economies and account for 34% and 52% of formal employment respectively (OECD, 2018). The important roles SMEs play in the economy of every nation has continued to be crucial in broadening the sources of national income, improving the competitiveness and economic development and contributing to the sustainability, flexibility and resilience of economies (Harrigan, Ramsey & Ibbotson, 2011). Such roles include: entrepreneurship, innovation, productivity, competition, job creation, diversification, earning and growth in many economies of the world (Gilmore, Galbraith & Mulvenna, 2013). For any economy world over, small and medium enterprises contribute greatly to job creation, create significant domestic and export earnings, contribute to the universal wellbeing and welfare of economies and are key instruments in poverty reduction (Muiruri, Bwisa, Muturi & Kihoro, 2017).

Small and medium enterprises make important contributions to development of any countries, of the 350 million industrial-commercial units with over two billion staff currently working in the world, more than 90% of them are SMEs (Al-Swidi & Al-

Hosam, 2012). According to Organization for Economic Co-operation and Development (OECD), SMEs represent more than 95% of enterprises in the world and ensures 60 to 70% of employment. Formal SMEs contribute up to 45% of total employment and up to 33% of national income Gross Domestic Product (GDP) in developing or emerging economies (Moshe, 2012; OECD, 2010).

Inter-American Development Bank defines SMEs as having a maximum of 100 employees and less than \$3 million in revenue. In Europe, they are defined as having manpower fewer than 250 employees and United States define them with employees less than 500 (Natarajan & Wyrick, 2011). The impact of SMEs in established or developed economies or countries is also very key and is considered as the main source of employment and income generation (Oladapo & Onyeaso, 2012; Ong & Ismail, 2012). Similarly, the SMEs also has critical role in developing countries. In developing countries, a significant proportion of population is directly or indirectly dependent upon the SMEs. Hence, the input of SMEs is highly recognized at the global level and this has informed authorities around the world to give more focus on SMEs (Shelley, 2004).

### **1.1.3 Performance of SMEs in Africa**

The future of Africa development lies to a large extent in the hands of its indigenous SMEs. These are the firms that will create most of the private sector jobs that a rapidly growing labor force is craving. These are the firms that will meet surging African demand for products and services. These are the firms where local entrepreneurial talent will grow and realize it self. And these are the firms that will become the future champions of African industry. Likewise, a lot has been said of the development role of the African entrepreneur (Liedholm & Mead, 2013), but if entrepreneurs never succeed in breaking through the enterprise barrier and build viable and sizable organizations, their role in economic development will stay restricted. It is important to note that SMEs are the main source of employment in established and emerging economies or nations alike, comprising over 90% of African business operations and contributing to over 50% of African employment and GDP (Okafor, 2009).

Most scholars and researchers agree that the way out of poverty for Africa is through SMEs however, many of the SME businesses started in Africa do not last more than three years and do not contribute to a better economy for their countries. Lack of entrepreneurial mindset has been postulated to contribute positively to the growth and performance of SMEs (Asenge & Agwa, 2018).

#### **1.1.4 Performance of SMEs in Kenya**

The SMEs play a key role in triggering and sustaining economic growth and equitable development in both established and emerging countries. According to Government of Kenya Sessional Paper No.2 of 2005 on Development of SMEs cut across all sectors of the country's economy. They also offer one of the most productive sources of employment, not to mention the breeding ground for entrepreneurs in small, medium and large industries, which are crucial for development and industrialization.

An essential element in development of the SME sector in Kenya is the aspect of entrepreneurial mindset (Munyaka, Ouma & Ndirangu, 2015). We have many SMEs spread across Kenya which produce and provide different products and services that offer jobs to both low and middle level income sectors of the economy and this number has been rising every year. Seeds of future business or enterprise performance are sown in the initial stages of business life cycle and the understanding of the same enable entrepreneurs' to run sustainable businesses (Bwisa, 2013).

Small and medium enterprises play a significant role creating jobs or employment opportunities to a large proportion of Kenyans more than any other sector. Small and medium enterprises constitute 98% of all business in Kenya, create 30% of the jobs annually as well as contribute 40% of the GDP. Approximately 720,000 new jobs were created, this is 86% of all new jobs in the 'Juakali' or informal SME sector in 2015 as compared to 120,000 (14%) in the formal sector the same year. SMEs created 3.7 Million in 1999 which grew to 12.6 million in 2015. The worth of SME's output is estimated at Ksh 3,371.7 billion against a national output of Ksh 9,971.4 billion representing a contribution of 33.8 per cent in 2015. In terms of gross value added, the SMEs are estimated to have contributed Ksh 1,780.0 billion compared to Ksh 5,668.2 billion for the whole national economy (Kenya National Bureau of Statistics, 2016).

However, according to KNBS (2016), a total of 2.2 million SMEs were closed in Kenya in the last five years, 2016 inclusive and on average, businesses were closed at the age of three years and eight months.

Kenya has 1,560,500 licensed small and medium enterprises spread across the 47 counties with Nairobi county carrying 17.18% of that number (Kenya National Bureau of Statistics, 2016). Under the Micro and Small Enterprise Act of 2012, a small enterprise has between KES 500,000 and 5 million annual turnover and employ 10-49 people. While medium enterprises are not covered under the act, a medium enterprise has been reported to have an annual turnover of between KES 5 million and 800 million, employing 50-99 employees (Adefolake, 2016). Regardless of their significance, previous statistics indicate that three out of every five businesses in Kenya flop within the first few months of operation (Kenya National Bureau of Statistics, 2016). One of the most noteworthy challenges is the undesirable perception towards SMEs and lack of entrepreneurial mindset (Nabintu, 2013).

### **1.1.5 Performance of SMEs in Nairobi County**

The Nairobi City County is the creation of the Constitution of Kenya 2010 and successor of the defunct City Council of Nairobi. It operates under the auspices of the Cities and Urban Areas Act, The Devolved Governments Act and a host of other Acts. Nairobi is the capital and largest city of Kenya and the 10<sup>th</sup> largest city in Africa and is reported to be the most populous city in East Africa with a population of approximately 3,138,369 people according to the 2009 census (Kenya National Bureau of Statistics, 2009).

Nairobi County is the home to thousands of Kenyan businesses and over 100 major international companies and Organisations (Ochola, 2013). There are approximately 268,100 registered SMEs in Nairobi County which fall under four main sectors mainly manufacturing, real estate activities, wholesale & retail trade and services (Kenya National Bureau of Statistics, 2016).

Researchers and scholar have postulated that there are various reasons that account for failure of SMEs in the world, Kenya included. Entrepreneurial mindset has been

suggested to play an important role in the success of businesses because it touches on the mindset of the business owners or those charged with the responsibility of managing businesses. This is so because, it is said that when business fails, what first failed was management. It is against this backdrop that this study seeks to specifically determine the extent to which entrepreneur's creativity affects the performance of his or her SME; to examine the effect of innovation on the performance of SMEs; to ascertain the effect of propensity to take risk on the performance of SMEs; to establish the effect of awareness about SME support services on the performance of SMEs; and to assess the extent to which entrepreneur's self-efficacy affects the performance of SMEs.

## **1.2 Statement of the Problem**

Small and medium firms are increasingly becoming important in any economy in the world. Productivity growth and consequently economic growth is strongly influenced by the performance of SMEs positively if more are born and thrive and negatively if they die and exit. Less than one-half of small start-ups survive for more than five years, and only a fraction develop into the core group of high performance firms which drive industrial innovation and performance (OECD, 2010).

The SME sector in Kenya has over the years been recognized for its role in provision of goods and services, enhancing competition, fostering innovation, generating employment and in effect, alleviation of poverty. SMEs created 3.7 Million jobs in 1999 which grew to 12.6 million in 2015 (Kenya National Bureau of Statistics, 2016). However, while there is consensus about the crucial role played by SMEs in any economy, previous data indicate that three out of every five businesses in Kenya fail within the first few months of opening shop or operation and there is still essential lack of understanding as to why some SMEs manage to grow, while others remain trapped at small scale and low productivity levels (Simiyu, Namusonge & Sakwa, 2016; Munyaka, Ouma & Ndirangu, 2015).

According to KNBS (2016), a total of 2.2 million SMEs were closed in Kenya in the last five years, 2016 inclusive and on average, businesses were closed at the age of three years and eight months. The dilemma then is what causes these SMEs to close

shop. Some scholars have argued that the death of SMEs is because of the perceived mindset of its owners identified as one of the major causes of SMEs failure rates. Others have said entrepreneurial mindset is an important success factor for SMEs without which a business will fail (Nieman, 2006; Dhliwayo & Vuuren, 2007; Alasadi & Sabbagh, 2015; Tyoapine, Teddy, James & Ringim, 2016; Ngek, 2012; Asenge & Agwa, 2018). However, the results obtained in previous research on entrepreneurial mindset are far from conclusive and there is need to progress research to add knowledge in this area and contribute to the growth of small and medium enterprises in Kenya.

Scholars and researchers have suggested that a focus on the role of entrepreneurial mindset to business growth has the potential to contribute meaningfully to the study of entrepreneurship (McGrath & MacMillan, 2000; Kirzner, 1997). Majority of investors in developing countries like Kenya start business of as small and medium enterprises which lead to creation of employment, increased wealth creation, expanded market, variety of goods and services and high quality goods and services.

There exists limited literature focusing on the effect of entrepreneurial mindset on the performance of SMEs in Kenya. Previous studies in Kenya focused on entrepreneurial mindset in the context of manufacturing firms in Nairobi industrial area and university graduates in Kenya (Njeru, 2012; Ndururi & Mukulu, 2015). Although various studies have explored the area of entrepreneurial mindset exhibited through other attributes like business alertness, training, work experience and education (Kalu, & Peace, 2017; Asenge, Diaka, & Soom, 2018) there is insufficient empirical data with specific focus on effect of entrepreneurial mindset exhibited through creativity, innovation, propensity to take risk, awareness about SME support services and self-efficacy on the performance of SMEs in Kenya (Ngek, 2012; Susilo, 2014). This study sought to fill that knowledge gap by assessing the effect of entrepreneurial mindset on the performance of SMEs in Nairobi County, Kenya.

### **1.3 Research Objectives**

#### **1.3.1 General objective**

The general objective of the study was to investigate the effect of entrepreneurial mindset on the performance of small and medium enterprises in Kenya.

#### **1.3.2 Specific Objectives**

This study sought to address the following specific objectives:

- i. To establish the effect of creativity on the performance of small and medium enterprises in Kenya.
- ii. To find out the effect of innovation on the performance of small and medium enterprises in Kenya.
- iii. To determine the effect of propensity to take risk on the performance of small and medium enterprises in Kenya.
- iv. To assess the effect of awareness about small and medium enterprises support services on the performance of small and medium enterprises in Kenya.
- v. To examine the effect of self-efficacy on the performance of small and medium enterprises in Kenya.

### **1.4 Research Hypotheses**

The study was guided by the following hypotheses:

**H<sub>01</sub>:** There is no significant positive effect of creativity on the performance of small and medium enterprises in Kenya

**H<sub>02</sub>:** There is no significant positive effect of innovation on the performance of small and medium enterprises in Kenya

**H<sub>03</sub>:** There is no significant positive effect of propensity to take risk on the performance of small and medium enterprises in Kenya

**H<sub>04</sub>:** There is no significant positive effect of awareness about small and medium enterprises support services on the performance of small and medium enterprises in Kenya

**H<sub>05</sub>:** There is no significant positive effect of self-efficacy on the performance of small and medium enterprises in Kenya

## **1.5 Significance of the Study**

This study sought to provide some significant insights that suggest entrepreneurial mindset contributes to performance of small and medium enterprises in Kenya. The researcher accessed entrepreneurial mindset exhibited through creativity, innovation, propensity to take risk, awareness about SME support services and self-efficacy because from theoretical and empirical analysis the variables have been postulated to have positive effect towards performance of businesses. The insights are meant to create an understanding to the policy makers, practitioners and other stakeholders on the need to promote entrepreneurial mindset and create the infrastructures necessary so that the manifestation of these traits through creativity, innovation, propensity to take risk, awareness about SME support services and self-efficacy for SME entrepreneurs can increase. In view of the above, potential benefits to stakeholders and beneficiaries are highlighted below:

### **1.5.1 Researchers and Academia**

At universities and other institutions of learning that conduct research, the study findings will contribute to the pool of additional entrepreneurship literature on especially on entrepreneurial mindset on the performance of SMEs. The research findings will improve the common understanding of entrepreneurial mindset on performance of SMEs adding value or insight to the existing scientific body of knowledge.

### **1.5.2 Entrepreneurs**

At the enterprise level, this study may sensitize entrepreneurs and their managers especially in the SME sector to understand the significance of entrepreneurial mindset



on performance of their small and medium enterprises. The small and medium enterprises may thus improve their entrepreneurial mindset in order to confront challenges and exploit opportunities to achieve growth and business sustainability.

### **1.5.3 Policy Makers**

Small and medium enterprises are the biggest supplier of employment in most nations, mostly of new jobs and are a major source of technological creativity and innovation and new products and services. Small and medium enterprises have proved to possess the potential to contribute greatly to a national economy and can provide a strong and stable foundation for the growth and development of new industries as well as strengthening existing ones. Therefore, the outcome of this research will provide government and other policy and law makers for the SMEs with information that can be used as inputs for policy development which are focused on entrepreneurship mindset on performance of SMEs.

### **1.6 Scope of the Study**

This study was to determine effect of entrepreneurial mindset on the performance of small and medium enterprises in Nairobi County. The research was carried out between 13<sup>th</sup> and 17<sup>th</sup> in August 2018. The researcher selected Nairobi County because according to a report by KNBS (2016) the county had 268,100 SMEs out of the 1,560,500 SMEs found in Kenya; this is 17.2% of all SMEs in Kenya. The same report also showed that SMEs in Nairobi County are distributed across all the sectors; manufacturing, wholesale and retail trade, services and real estate activities. The researcher hence considered SMEs in Nairobi County as representative of what is in the rest of the country. The research measured the entrepreneurs' mindset demonstrated through creativity, innovation, propensity to take risk, awareness about SME support services and self-efficacy and how these attributes contribute to the performance of an SME. The researcher focused on a population of 268,100 small and medium enterprises in Nairobi County from whom a sample of 400 firms was selected through a multi-stage probability sampling method where stratified sampling method was used first to select firms under the sector strata's (manufacturing, services,

wholesale and retail trade and real estate activities) and then simple random sampling was used to select representative samples from each sector.

### **1.7 Limitations of the study**

The main limitation in this study was that some SME owners or managers considered the information on business performance especially gross profit and annual sales as confidential and were not willing to freely share this information. To overcome this limitation, the questionnaire was accompanied by a letter of introduction from the university that assured the respondents that the information collected would be used purely for academic purpose and confidentiality and anonymity would be maintained during and after the research. The researcher also promised to share the findings with respondents who made such a request.

The study did not obtain 100% response rate due to unwillingness and unavailability of some targeted respondents. To address this limitation where the respondent was not available to complete the questionnaire the researcher dropped the questionnaire to be collected at a later date hence improving the response rate to 84%. This response return rate met the threshold of above 50% which is considered adequate for a descriptive study (Babbie, 2004).

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter provides a brief review of the literature relating to the study. The chapter captures theoretical background on entrepreneurial mindset in an attempt to provide basis for appropriate conceptual and theoretical framework for the current study. The chapter also looks at related past studies and outlines the critique of the existing literature. Finally, the chapter highlights the research gaps that justified the current study.

#### **2.2 Theoretical Framework**

According to Ocholla and Le Roux (2010), theoretical framework is a map for a study, an agenda, outline or construct of a research approach that precedes the literature review. Theoretical framework forms the rationale for a study that helps a reader make logical sense of relationships between variables relevant to a problem and the theorized relationship between them. Theories are formulated to explain, predict and understand phenomena and in many cases, to challenge and extend existing knowledge within the limits of critical bounding assumptions (Swanson, 2007).

This theoretical review explores other scholars' theories focusing on the following theories: entrepreneurial creativity theory, the Schumpeterian theory on innovation, risk propensity theory and knight's theory of risk, uncertainty and profit, risk propensity theory, self-efficacy theory, entrepreneurial alertness theory and entrepreneurial growth theory of the firm in explaining the relationship entrepreneurial mindset and performance of SMEs.

##### **2.2.1 Entrepreneurial Creativity Theory**

Entrepreneurial creativity theory postulated that creativity has evolved from origins in mysticism and divine inspiration to being a key performance contributor in helping businesses adapt to changing environments. There have been many conceptualizations

of creativity over time, but research over the past years has produced some consistent themes. Creativity has been defined variously as a process, as a product outcome, and in social constructionist terms (Eno-Obong, 2006). Creativity is most commonly described today as the generation or production of ideas that are novel and useful. In order to be useful, creative ideas must also be appropriate, that is, of potential value towards accomplishing desired goals. These ideas may reflect either a recombination of existing materials or an introduction of new materials to the organization (James & Drown, 2012).

The critics of this theory argue that the main conceptual challenge with creativity as ideas that are novel, useful, and appropriate, is that it is difficult to objectively measure as an output variable, as it depends upon the context and observer's perspective. Nieman (2006) argues that creativity is a domain-specific, subjective judgment of the novelty and value of an outcome of a particular action. The domain is a cultural aspect that includes the structured knowledge system that an individual must access and gain knowledge of, in order to create something new and make a change to the domain. The criteria of novelty, usefulness, and value towards goals raise the question of who is to make that decision. The experts within a domain are the gatekeepers of such value judgments; they constitute the field and define what is creative and in practice, gatekeepers of domains may extend well beyond the experts, to include anyone with influence within that domain (Faltin, 1999).

According to Cannon (1985) there is a great set of relationships between innovativeness, creativity and small businesses and has for a long time been built into thinking about small firms. Most previous literature reveals a belief that an entrepreneur's innovative or creative activities determine how successful their organization will be (Kris & Kurz, 1981). Various aspects have contributed to this belief one, the notion of the entrepreneur as a mould maker; two the link between open and organic enterprise and creativity; three the suggestion that smallness, decisiveness and flexibility counter-balance absolute investment; and four the evidence that small businesses account for a disproportionate number of new processes and products (Rogers, 1961). The capability of the entrepreneurial mould-maker to break loose from bureaucratic inflexibilities, to fuel the fires of innovation and create new opportunities

and situations has been the foundation of the growth of most current successful trade (Okpara, 2007).

Entrepreneurial creativity theory guided the researcher in discovering the theory's view that there is a great set of linkages between creativity as an attribute and performance of small businesses or firms in this case the SMEs in Kenya. The theory helped bring out the link between creativity in relation to how SMEs perform. In relations to this study, SMEs in Kenya rely mostly on the owners' creativity to steer the business growth hence the confirmation of the link between creativity and performance of SMEs.

### **2.2.2 The Schumpeterian Theory on Innovation**

According to Cantwell and Santangelo (2000) the most widely known theory of innovation is that of Schumpeter 1934. Kurz (2008) notes that one of the best-known contributors to the theory of entrepreneurship has been Joseph Schumpeter, Schumpeter (1942) viewed the entrepreneur as a mould-maker who is the force behind industrial and business innovation and a visionary innovator whose role was central in economic growth and development.

According to him, the entrepreneur was an individual who created new things or ways of meeting currently unsatisfied needs in the market place. People introducing new products, services or combinations depict this very distinct quality of entrepreneurship innovation, a special quality should be differentiated from other attributes and aspects of the business such as self-efficacy, risk-taking, control and management (Reisman, 2004).

Schumpeter (1965) in a later study defined an entrepreneur as a person who comes up with ideas and a man who acts and holds the ability to inspire others people and one who does not consent to restrictions of structured circumstances or situations. An entrepreneur is considered as a catalyst of transformation or change who is crucial in discovering new business opportunities, which makes the entrepreneurial function very unique. Schumpeter (1934) in his book titled, *The Theory of Economic Development*, originally written in 1912, identified the entrepreneur as an individual

or a person who introduces or brings forth new products, services or combinations that is considered innovation to the economy.

In his theory of business cycles, Schumpeter explains that innovations come in swarms, meaning the initial innovator is followed by a bunch of imitators which results in an economic boom and that, periods of innovation and lack of innovation are the main causes for the business cycle (Verspagen, 2005). For Schumpeter, an entrepreneur is not only an innovator but also a leader. Since the main characteristic of an entrepreneur is innovation and leadership, Schumpeter's entrepreneur does not necessarily start his own business and does not have risk taking as one of his functions (Reisman, 2004).

Schumpeter contended that any person seeking to make profits or business gain must innovate. He alleged that innovation is considered as a key driver of competitiveness, country development and economic dynamics (Solow, 2007). He also believed that innovation is the epicenter of economic transformation causing storms of creative destruction, which according to Schumpeter is called Socialism, Capitalism and Democracy. According to Schumpeter innovation is a process of industrial modification, that continually revolutionizes the economic organization from within, continually abolishing the old one and continuously creating a new one (Smithies, 1950).

Schumpeter (1934) termed economic development as historical route of structural modifications, significantly driven by innovation. According to him the innovation process is divided into four dimensions which are innovation, invention, diffusion and imitation (Solow, 2007). Then he placed the energetic and dynamic entrepreneur at the centre of his analysis. In Schumpeter's theory, the likelihood and actions of the entrepreneurs, borrowing from the discoveries of scientists, innovators and inventors, create absolutely new opportunities for business, growth, investment and employment. In his analysis, Schumpeter indicated that the invention stage or the basic innovation have a smaller impact, while the diffusion and imitation process have a much larger influence on the state of an economy (Verspagen, 2005).

Even though this theory is critical in explaining influence of innovation on business performance, critics of this theory have provided counterarguments to nullify the propositions of Schumpeter. One of the notably critics is Moldaschl, (2010) who argue that innovation theories do not make sense. The author arguments are based recent boom of literature on “social innovation” seems to be particularly questionable. It presents itself with the attitude of opening, broadening, or intellectually “freeing” the discourse of innovation from its technological insularity. That might be interpreted as opportunism since the idea of “innovation” generates an abundance of attention and approval so that any matter of concern can be legitimated and ennobled by the simple use of the word.

In the beginning or the first few years and often even longer the macroeconomic effects of any basic innovation are hardly noticeable. The vital thing in terms of economic development, growth, investment and employment, is not the discovery of basic innovation, but more so the diffusion of basic innovation, that is the time when imitators begin to realize the profitable potential of the new product, service or process and start to invest their resources heavily in that technology (Acs & Audretsch, 1991).

In the context of this research, the Schumpeterian theory on innovation brings out the connections between innovation as an independent variable representing entrepreneurial mindset and performance of SMEs especially in relation to profits. Innovation is an independent variable under entrepreneurial mindset which was studied under this study; hence the Schumpeterian theory on innovation created the foundation in understanding the variable.

### **2.2.3 Risk Propensity Theory and Knight’s Theory of Risk, Uncertainty and Profit**

Risk-taking propensity is motivation of interest, which emerged from McClelland’s (1961) original research on entrepreneurs. McClelland claimed that willingness to engage in relatively high levels of risk taking behavior enables entrepreneurs to seize profitable opportunities in the face of uncertainty which leads to long term profitability. This claim by McClelland is especially interesting for entrepreneurship research because the entrepreneurial process involves acting in the face of uncertainty.

Liles (1974) argued that entrepreneurs often must accept uncertainty with respect to financial well-being, psychic well-being, career security, and family relations. Moreover, several theories of entrepreneurship view the entrepreneur as bearing residual uncertainty (Venkataraman, 1997).

Knight (1921) observes an entrepreneur in terms of uncertainty, risk and profit and held that profit is a return for bearing with uncertainty and not bearing risks. In other words, profit is the return left behind for or with the entrepreneur for bearing or contending with the uncertainty in business. Knight made a very clear distinction between what is considered as a risk and uncertainty. Risk can be classified as calculable or non-calculable risk (Bianchi & Henrekson, 2005) where calculable risks are those whose chance of occurrence can be predicted or anticipated through statistical data. Such risks include risks due to theft, fire or accidents and are calculable and therefore can be insured in exchange for a premium. This amount of premium can be added to the total cost of business production (Emmett, 2010). On the other hand the non-calculable risks are those whose probability of occurrence cannot be determined, these could include risks such as the strategies of a competitor which cannot be correctly measured as well as the cost of eradicating the competition cannot be accurately calculated (Emmett, 2010).

A distinction between risk and uncertainty was made by Knight (1933), where he stated uncertainty as a factor that is uncontrollable and risk as fully calculable or computable. He argues that the role of an entrepreneur is handling this factor of uncertainty, which is not computable. This requires a person who takes on the responsibility of the decisions, which entails taking the consequences for the uncertainty that comes with the particular situation (McGrath & MacMillan, 2000). In any business, there are risks. These risks are handled in different ways, although ultimately, one or a few people take the highest risk in terms of the survival of the business and these people are the entrepreneurs. This great responsibility calls for an individual that is not averse to risk, which is one of the common attributes the general public uses to describe an entrepreneur (Amit, Glosten & Muller, 1993).



An ever-changing world brings new opportunities for businesses to make profits, but also means we have imperfect knowledge of future events (Bianchi & Henrekson, 2005). Therefore, according to Knight, risk applies to situations where we do not know the outcome of a given situation, but can accurately measure the odds. Uncertainty, on the other hand, applies to situations where we cannot know all the information we need in order to set accurate odds in the first place (Knight, 1942). Knight (1942) states that the main function of the entrepreneur is to assume the uncertainty related to business events, thereby shielding all other stakeholders against the entrepreneur.

It could be argued that the innovating role of the entrepreneur was already identified or at least mentioned by Marshall. That is the entrepreneur exercises judgment over these unique situations, the uncertainty in the economy, and functions as an insurance agent. Knight elaborated his theory in the paper; “Profits and Entrepreneurial Functions” from 1942 (Higgs, 1891; Higgs, 1892). He explicitly argues that entrepreneurs are owners of companies, that is residual claimants, and thus receive profits. In order to earn a positive profit, the entrepreneur carries out three tasks; he initiates useful changes or innovations, adapts to changes in the economic environment and assumes the consequences of uncertainty related to the company (Knight & Cavusgil, 1996).

Critics of this theory however argued that the theory establishes a direct relationship between profit and risk-taking which is not correct. A high degree of risk in an enterprise does not necessarily mean a high rate of profit. Sometimes it so happens that the entrepreneurs incur losses in more risky enterprises. Profits are influenced by several other factors besides risk-taking. Not all the profits of the entrepreneur are entirely due to risk-taking. A part of the profit is also due to his superior organisational ability or it may be due to the existence of monopoly power or just chance.

It can be argued that the Knightian theory of entrepreneurship is a refinement of the theory by Cantillon (Hebert & Link, 1988). The latter also argued that entrepreneurship is closely connected to risk/uncertainty but did not recognize the important distinction between the two. However, the Cantillonian entrepreneur is also an arbitrageur who ensures that the economy is in equilibrium-a function which is not entrusted to the

entrepreneur as described by Knight (Hebert, 1981). In the context of this study, Knight's theory of risk, uncertainty and profit brings out the link between risk and uncertainty and profits or performance of the SMEs in Kenya. The theory also guided the research in understanding the risk propensity which was an independent variable for the study and its effect on performance of SMEs in Kenya.

#### **2.2.4 Entrepreneurial Alertness Theory**

Kirzner (1973) was the first to use the term alertness to explain entrepreneurial recognition of opportunities. Ray and Cardozo (1996) argue that any recognition of opportunity by a prospective entrepreneur is preceded by a state of heightened alertness to information. They called this state entrepreneurial awareness (EA), and defined EA as a propensity to notice and be sensitive to information about objects, incidents, and patterns of behavior in the environment, with special sensitivity to maker and user problems, unmet needs and interests, and novel combinations of resources Gaglio (2004). Further, in keeping with several authors, they claimed that personality characteristics and the environment interact to create conditions that foster higher EA (Shapero, 1975; Sathe, 1989; Hisrich, 1990; Gaglio & Taub, 1992). Embedded in this line of thought is the notion that higher alertness increases the likelihood of a business opportunity being recognized or relevant information that can improve business being accessed.

Some researchers suggest that habitual entrepreneurs with more experience develop an entrepreneurial mindset that prompts them to search for and pursue opportunities, and only the very best of these opportunities (McGrath & MacMillan, 2000). Pursuing opportunities can be influenced and its components may be enhanced in order to achieve a larger measure of opportunity identification (Gaglio & Katz, 2001). There are, however, reports of studies that testify to the contrary. For example, Buzenitz (1996) conducted an empirical test of Kaish and Gilad (1991) proposition that entrepreneurs are more alert to new opportunities and use information differently from managers. Busenitz found little empirical support for the Kaish and Gilad theoretical framework, but indicated that the measures of entrepreneurial alertness need further development.

People tend to notice information that is related to information they already know (Von Hippel, 1994). Therefore, Shane (1999) postulated that entrepreneurs will discover opportunities because prior knowledge triggers recognition of the value of the new information. Drawing on the Austrian economics argument that entrepreneurship exists because of information asymmetry between different actors (Hayek, 1945). Shane maintains that any given entrepreneur will discover only those opportunities related to his or her prior knowledge. In his three-stage study of opportunity recognition processes, Shane (1999) tested and confirmed a number of hypotheses, which could be summarized as follows: Any given entrepreneurial opportunity is not obvious to all potential entrepreneurs, the rationale being that all people do not possess the same information at the same time (Kirzner, 1997).

Each person's distinctive prior knowledge creates a knowledge corridor that allows him/her to recognize certain opportunities, but not others (Hayek, 1945; Ronstadt, 1988). Three major dimensions of prior knowledge are important to the process of entrepreneurial discovery: prior knowledge of markets, prior knowledge of ways to serve markets, and prior knowledge of customer problems. Sigrist (1999) in her qualitative study employing conceptual plotting of entrepreneurial opportunity identification process suggests that there are two types of prior knowledge relevant to this identification process. The first is knowledge in an area or domain of special interest to an entrepreneur, an area that can be described in terms of fascination and fun.

According to Harper (2003) driven by this special interest, an entrepreneur spends a lot of effort and time to engage in learning that advances and deepens her/his capabilities, thereby gaining profound knowledge about this topic of interest. The second type of knowledge refers to domain of knowledge about a particular area of business and is accumulated over the years, while working in a certain job or doing a certain business. The integration of the two domains leads to the finding of a new offering, opportunity, a new market, or a new solution to customer's problems (Gartner, 1990)

The Entrepreneurial alertness theory provided a foundation to help understand awareness about SME support services which is an independent variable of entrepreneurial mindset and the effect of this awareness on the performance of SMEs in Kenya. The entrepreneurial alertness theory also helped in understanding to what extent entrepreneurs of SMEs in Kenya are alert to searching for the information that lead to achievement of business goals and objectives.

### **2.2.5 Self-Efficacy Theory**

According to Krueger and Brazeal (1994) entrepreneurs that show more or greater self-efficacy identify or perceive opportunities and threats differently and are likely to take more risks. Similarly, it is verified for entrepreneurs that the assessment of a business opportunity and threats depends on control beliefs. According to Bandura (1986) self-efficacy refers to a judgement of one's capability to accomplish a certain level of performance or desired outcomes. Individuals gradually accumulate their self-efficacy through prior cognitive, social, and physical experiences (Gist, 1987). As such, prior successful enactment of a task can change one's expectations and help further reinforce his or her self-efficacy.

Bandura (1997) argued that self-efficacy affects an individual's thought patterns that can enhance or undermine performance. Specifically, if one has a high level of self-efficacy, he or she is more likely to set a higher or challenging goal, which in turn raises the level of motivation and performance attainments. A high level of self-efficacy can help individuals maintain their efforts until their initial goals are met. According to Gist (1987) self-efficacy has a number of practical and theoretical implications for entrepreneurial success because initiating a new venture requires unique skills and mind sets, which may be far different from those required for managers in a fully established organization. Sometimes, roles for an entrepreneur may not be clearly defined, and many uncertainties may exist regarding the success of one's venture. One of the strongest barriers that an entrepreneur has to overcome is the anxiety about his or her success throughout the initial startup process.

An entrepreneur with a high level of self-efficacy is by definition one that actually believes in his or her capability to perform all of the requirements to perform a task

successfully and is more likely to see the positive probable outcomes that might accumulate from a new venture (Krueger & Brazeal, 1994). As a result, the entrepreneur may sustain more effort through the entrepreneurial process to achieve these positive outcomes.

Self-efficacy has been linked theoretically and empirically with entrepreneurial phenomena. Feasibility perceptions consistently predict goal-directed behavior where control is problematic (Ajzen 1991). Most important, feasibility perceptions drive career related choices, including self-employment as an entrepreneur. For example, sexual characteristics and ethnic differences in occupation or career inclinations seem to be fully mediated by differences in self-efficacy.

Self-efficacy theory provided the foundation to understand self-efficacy, an independent variable under entrepreneurial mindset and find out its role in the performance of SMEs. The theory also guided the researcher in discovering the significance of self-efficacy in relation to the other independent variables of entrepreneurial mindset under the study like creativity, innovation and risk propensity.

#### **2.2.6 Greiner's Enterprise Growth Theory**

This theory was proposed by Greiner (1998) in his study on evolution and revolution as organizations grow According to the theory an entrepreneurial venture is successful if it is growing. Growth has various connotations. It can be defined regarding revenue generation, value addition, and expansion regarding the volume of the business. It can also be measured in the form of qualitative features like market position, quality of a product, and goodwill of the customers (Kruger & Kumar, 2004).

Geroski (2002) has done the foundational work on the theory of enterprise growth. Based on his theoretical review of growing enterprises, he concluded that enterprises move through five distinguishable stages of growth. Each phase contains a relatively calm period of growth that ends with a management crisis (Masurel & Montfort, 2006). These five phases and crises of growth are creativity, direction, delegation, coordination, and collaboration. He suggests that an enterprise goes through evolution

and revolution crises. These crises can be solved by introducing new structures and programs that will help employees to revitalize them.

Greiner's phenomena of evolution and revolution became the basis of many studies on enterprise growth cycle. This theory is relevant in explaining the role of entrepreneurial mindset in growth of enterprises. Enterprise growth undergoes various stages. These five phases and crises of growth are creativity, direction, delegation, coordination, and collaboration. Entrepreneurs therefore must have diverse set of skills to spear the firm through these phases of growth.

The viewpoint on entrepreneurial theory of the firm which is in some cases is also known as entrepreneurial growth theory of the firm, is the bridge onto building up arguments toward the entrepreneurial mindset development model. It is undoubtedly expected that theory of the entrepreneurial growth firm is able to provide the foundation closer to the reality of the business's operational and managerial activities rather than the original theory of the firm that accounted firms' production processes as mere black boxes. In today's extremely dynamic environment, certain developmental processes are common in entrepreneurial firms (Anantadjaya, 2008; Anantadjaya, Finardi, & Nawangwulan, 2010).

To realize opportunities, entrepreneurs must organize business activities and firm's resource base needs to be presented and mobilized before entrepreneurs can attempt to organize business activities thus, entrepreneurs need to match up market opportunities to the available resources for the firms to start growing (Anantadjaya 2008; Anantadjaya, et al, 2010; Colombo & Grilli, 2005). Thus, management and entrepreneurs are faced with demands for expansion, innovation, and making a good use of all sources of competitive advantage. This competitiveness environment pressures firms to specialize in areas that they are doing comparatively good over period.

According to Westaby (2005) existing products are merely representing the current ways of any firm in using its various resources toward sustainability. It provides factual grounding on numerous product developments to obtain all firms' potentials. The success of the firm may certainly rest on that final product. However, today's firms are

relying on new products, which are substantially different from their original products that they were once based their success on (Whincop, 2000).

The relationship between entrepreneurship and growth is the subject of a growing literature. Acs and Audretsch (1987), Acs and Audretsch (1990), and Audretsch (1995), set the stage by providing empirical evidence of the significant role of small firms in generating technological innovations. Acs (1992) went further to sketch multiple pathways by which entrepreneurial activity drives economic growth. Schmitz (1989) offered a formal model of this process in which the entrepreneur is represented as an imitator of incumbents. More recently, Acs and Armington (2004) empirically assessed the role of entrepreneurs in promoting knowledge spillovers and growth at the scale of a city.

For this research, entrepreneurial growth theory of the firm helped in understanding the relationship between entrepreneurial mindset and performance of SMEs and the role of innovation in the performance of SMEs in Kenya.

### **2.3 Conceptual Framework**

According to McGaghie, Bordage and Shea (2001) a conceptual framework represents the researcher's synthesis of literature on how to explain a phenomenon. It maps out the actions required in the course of the study given his previous knowledge of other researchers' point of view and his observations on the subject of research. In other words, the conceptual framework is the researchers' understanding of how the particular variables in his study connect with each other. Thus, it identifies the variables required in the research investigation. It is the researcher's map in pursuing the investigation.

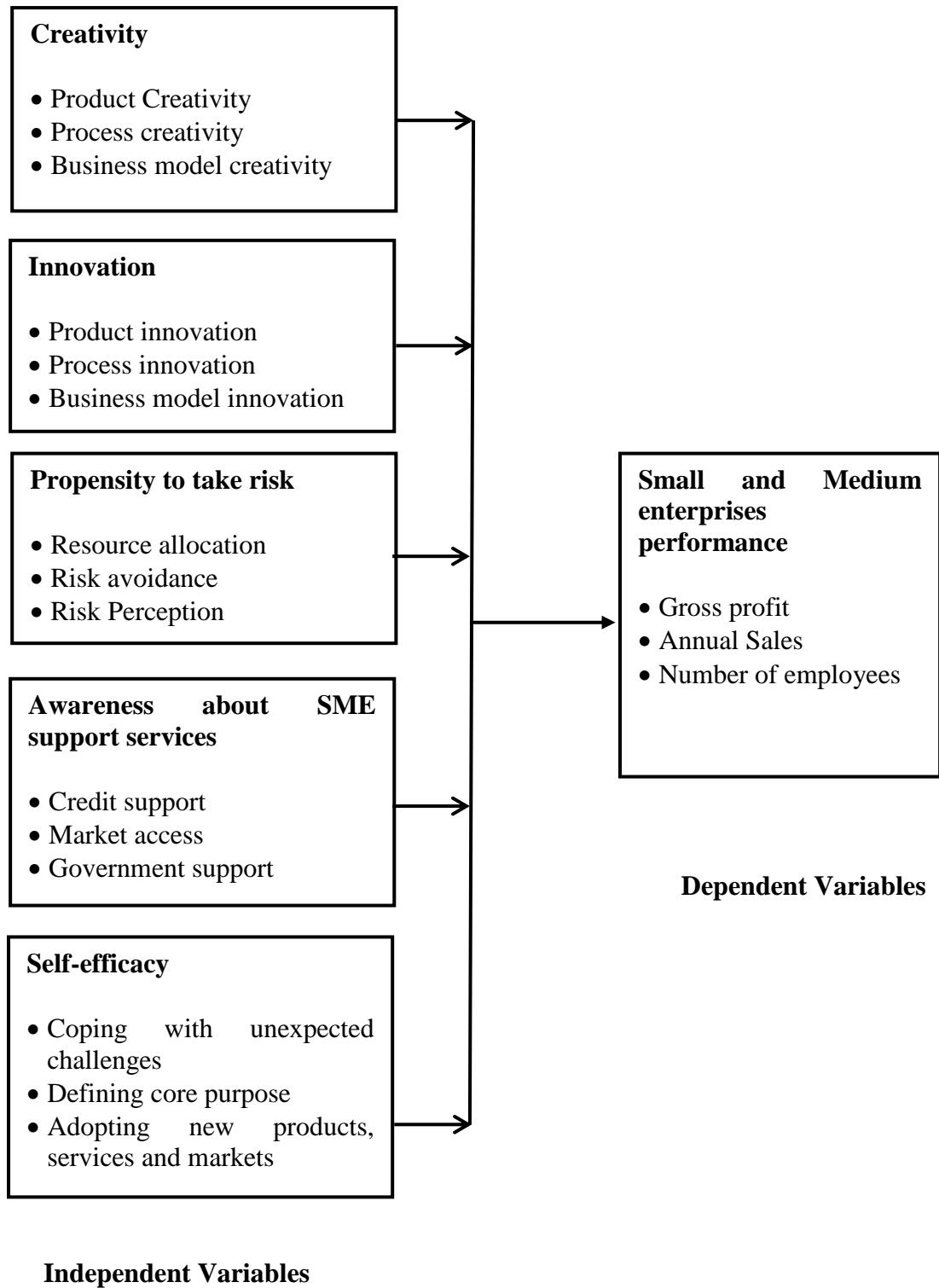
From the literature review it's obvious that varying views have taken centre stage and the argument on what really promote entrepreneurs' performance in the market is unlikely to end soon. However, the researcher can conceptualize that the entrepreneur's innovativeness, business alertness and creativity accredited to a person's entrepreneurial mindset plays a major role in a business performance which we measure through the profitability, expansion, sales volume, market share and other

parameters. The independent variables for this study were creativity, innovation, propensity to take risk, awareness about SME support services and self-efficacy while the dependent variable was performance of SMEs.

The entrepreneur's level of Creativity, Innovativeness, propensity to take risks, awareness about SME support services and self-efficacy may be a predictor of the level of performance on the firm and they form the entrepreneurial mindset. An independent variable is that specific factor or condition that can be varied. Its value or level can be influenced and its change then affects the dependent variable (Alof, Dan & Dietz, 2008). The dependent variable on the other hand is the observed result of the independent variable being manipulated.

The independent and dependent variables of the study are demonstrated using the model on Figure 2.1.





**Figure 2.1: Conceptual Framework**

### **2.3.1 Creativity and Performance of Small and Medium Enterprises**

According to Weerasiri, Zhengang and Perera (2012) creativity is the beginning for innovation and it is depicted by the ability to bring into life, create, invent, to produce through imaginative and visionary skill, to make or birth something new. According to Harris (2012) in some cases creative ideas are incredible and bright, while others are just modest, just decent useful ideas that no one seems to have thought of yet. Creativity is also defined as the ability to accept change and newness, an attitude, a readiness to play with ideas and opportunities, a flexibility of viewpoint, the practice of enjoying the worthy, while looking for ways to increase it.

Creativity is a crucial ingredient for the success of SMEs especially when advanced to innovation because it enables their businesses to survive and grow (Blackburn, Hart & Wainwright, 2013). Creativity enables the entrepreneur to act on these opportunities in ways which can result in competitive advantage for the business. It can provide the basis for innovation and business growth, as well as impacting positively on society generally.

Product creativity allows the organization to take advantage of opportunities which develop as the result of changing environmental conditions (Shalley, Zhou & Oldham, 2004). According to Gurpreet, Bernd and Richard (2009) there are many good reasons for paying attention to SME's. They constitute the majority of organizations, they are a main source of employment, they are flexible, and they are often creative and innovative. While many SMEs are creative and innovate partly because of their need to remain competitive, effective use of ICT helps in defining newer opportunities and sustainability in a marketplace (Harris, 2012).

Rukevwe (2015) view creativity as being able to do imaginative and non-routine things while also building on tradition to achieve profitable outcomes. They say creativity for creativity's own sake can result in profitable outcomes. According to Ranga, Murali and Swathi (2013) the entrepreneur is mainly concerned with coming up with new services, products, markets, processes, the ability to bring something new into the market to ensure business or enterprise growth.

Process creativity is a system which, through the dynamic interaction of personal characteristics, social psychological context and cognitive processing, produces an output that the social organization in the field finds valuable. Creativity requires an entrepreneur, a context and a process as well as interaction between these elements to produce a novelty, such as a business opportunity. Creative personalities have internal intentions that drive them to realize their dreams (Baldacchino, 2009). The goal of the creative personality is self-actualization, and the means of achieving that goal are mustered from the deep structures of personality. Creative personalities have the ability to tap into the preconscious and conscious, and even to access the unconscious, and use the symbol collections found there as material for self-fulfillment. Thus, they pursue their internal intentions under conscious control and exploit preconscious and unconscious deep structures to find an expression for their creative urges (Bilton, 2007).

To sum up, the creative process includes problem definition, information gathering, generation and selection of a solution and generation of a product. However, these stages can be found in the entire range of human thinking and are not specific to creativity. What really makes the process creative is its characteristic nature: creative thinking is fluent, flexible, original, and elaborate and lateral in essence.

Sudath, Zhang and Tissa (2012) argue that today businesses are knowledge based and their success and survival depends on business model creativity, innovation, discovery and inventiveness. An effective reaction to these demands lead to innovative change in the organization to ensure their existence. Successful entrepreneurs come up with ideas and then find ways to make them work to solve a problem or to fill a need. In a world that is changing faster than most of us could ever have imagined, creativity and innovation are vital to business's success and endurance. Small and medium enterprises owners need to develop creative mindset that will help them create new ideas and bring them to the market in an appropriate way that can create value for the entrepreneur and grow the business (Blackburn, Hart & Wainwright, 2013).

### **2.3.2 Innovation and Performance of Small and Medium Enterprises**

According to Rukevwe (2015) business performance is related to the ability of the business to gain profit and growth in order to achieve its general strategic objectives. Firm's innovation performance depends on the opportunities provided by their external environment. This implies that SMEs becomes very competitive in an emerging market when they give importance to innovative activities that build their reputation in the market environment (Weerasiri, Zhengang, & Perera, 2012). Essentially, the key reason for innovativeness is the desire of firms to obtain increased business performance and increased competitive edge (Kimandu, 2016).

The importance of product innovation is described by Roberts and Amit (2003) as a means leading to a competitive advantage and superior profitability. Beaver (2002) believes that innovation is an essential element for economic progress of a country and competitiveness of an industry. Innovation plays an important role not only for large firms, but also for SMEs (Jong & Vermeulen, 2006). Sandvik and Sandvik (2003) argue that innovation is a major and important competitive weapons and generally seen as a business's core value capability. Innovation is also considered as an effective way to improve the productivity of a business due to the resource constraint issue facing a business. Bakar and Ahmad (2010) add that the capability in product and business innovation is important for a firm's ability to exploit new opportunities and to gain competitive advantage.

McAdam and Keogh (2004) investigated the relationship between firms' performance and its familiarity with innovation and research. It was found that; outlook of firms towards innovations has high score in the competitive environments so as to gain higher competitive lead. Through an integrated innovation-performance analysis carried out by Yahya, Marwan and Muna (2013) on 184 manufacturing firms operating in Turkey, the effect of organizational, product, process and marketing innovation was explored on different aspects of firm performance-innovation, production, market and financial. The results showed an evidence of a positive relationship of innovations on firms' performance.

Terziovski (2010) considered processes innovation practices and its effects on performance of SMEs in Australians. With an investigation of 600 firms in the manufacturing sector, the study results showed that, innovation strategy is a key driver to performance of SMEs, which do not appear implement innovation culture in a strategic and structured manner, the study concluded that SMEs performance is likely to improve as they increase the degree to which they realized that innovation culture and strategy are closely aligned throughout the innovation process.

Business model innovation is vital to the survival and growth of any business or enterprise. It has changed the way enterprises conduct business and the way both customers and clients procure goods and services. There is a perceived positive link between innovation and business growth that showed that most of the innovating businesses realized increased sales, growth in customer base, increase in number of branches and profits (Linguli & Namusonge, 2015).

According to a study conducted by Njogu (2012) innovations are vital to the performance of SMEs in Nairobi County. Njogu's study concluded that there is a positive and significant relationship between innovation and financial performance of SMEs in Nairobi County as SMEs developed and implemented new business methods and services which improved productions and delivery of services of most SMEs. The SMEs applied new technology and new combination of materials in production which enhanced process innovation which resulted to improved performance of the SMEs.

### **2.3.3 Propensity to Take Risk and Performance of Small and Medium Enterprises**

According to Wang and Poutziouris (2010) empirical studies done in developed and transition economies suggest that risk taking as a firm-level strategic posture constitutes a potential source of competitive advantage and has positive, long-term effect on growth and financial performance of SMEs. The significance of risk taking and its influence on firm performance has been highlighted in both theoretical discussions and empirical research. At the theoretical level, the willingness to engage in relatively high levels of risk taking behavior enables SMEs to seize profitable opportunities in the face of uncertainty which leads to long term profitability (Subrahmanya, 2011).

An important dimension of the entrepreneurial spirit is risk taking propensity. Propensity to take risks is necessary for the success, sustainability and growth of an enterprise and how entrepreneurs identify and cope with risks in their surroundings or environment (Kimandu, 2016). The view of some writers is that small business owners, entrepreneurs, and business managers, world over identify their role in making risky decisions as somewhat similar, despite the fact that risk management is culturally conditioned. The attitude of entrepreneurs is that they take risks only after carefully analyzing the situation at hand (Ahmad & Seymour, 2008).

Entrepreneurs, in actuality, tend to proactively deal with the risks. Risk-taking has strong relationship with performance of entrepreneurial firms. Research suggests that entrepreneurial firms exhibiting moderate levels of risk-taking would outperform in market as compared to firms exhibiting either very high or very low levels of risk taking (Kreiser & Davis, 2010). However, process of forming a risk problem, results of past risk-taking and the ability to perform under risky conditions affect the risk-taking ability of entrepreneur (Dimitratos, Lioukas & Carter, 2004).

The importance of risk taking and its influence on business performance has been highlighted in both theoretical discussions and empirical research. At the theoretical level, the willingness to engage in relatively high levels of risk taking behavior enables SMEs to seize profitable opportunities in the face of uncertainty which leads to long term profitability (McGrath, 2001). Empirically, risk taking firms are able to secure superior growth and long term profitability in contrast to risk avoiders (Ahimbisibwe & Abaho, 2013).

#### **2.3.4 Awareness about SME Support Services and Performance of Small and Medium Enterprises**

Access to business support services has been recognized as one area that requires consideration from governments and state organizations and business services providers if the SMEs sector in emerging markets and developing countries is to accomplish sustainable heights of growth and development. According to Odhiambo (2013) most firms in the African region run in a poor information environment due to inadequate business support services and the poor or lacking information technological

and communication infrastructures. Access to timely and relevant information has yet not been given the same focus as other constrictions to growth and development of SMEs like access to markets, suppliers, access to credit or finance, technology or training.

Accessing business support services has over the years been largely improved with the development of various ICT platforms. In advanced economies or developed countries, SMEs enjoy easy access to business information services because of well-developed information and communication technologies (ICTs) infrastructures and easy access to computer hardware and software. In emerging economies SMEs identify financing, mostly medium to long-term finance, as their biggest hindrance to growth and investment in their businesses (Kinyua, 2014).

These hindrances come at two stages. In the least established economies and in some evolving and emerging economies insufficiencies in both the macro-economic and micro-economic environments present challenges. These challenges include unsteady exchange rates, huge budget deficits and legal, regulatory and administrative environment which present major difficulties to access of SMEs to financing and credit. In some countries, capital may just not be available, property rights organizations may not allow possession of land and property, marketplaces for transfer of fixed assets may be not developed, access to finances and collateral regulation may be strict to allow certain assets that SMEs normally have access to, to be used as security, lack of records or registries for mortgages and other securities may rise risks to financiers, contract execution and asset liquidation may be hindered due to weaknesses in laws and judiciary (Nyang'au, Mukulu & Mung'atu, 2014).

According to Cant, Brink and Ligthelm (2003) who studied small businesses failure entrepreneurs mostly have good ideas and are knowledgeable and competent but they lack a clue on how to run and manage a business and mostly they have no prior grasp of business essentials. Professional experience and skills have been mentioned as essential factor affecting several aspects of entrepreneurial organizations and firms. Experience comes up very often as important and extensiveness of experience is shown to be a significant factor driving the performance of businesses, with the number of

past jobs being positively related to new business performance (Marvel & Lumpkin, 2007).

### **2.3.5 Self–efficacy and Performance of Small and Medium Enterprises**

According to Oyugi (2016) self-efficacy will make an entrepreneur even stronger under a high uncertainty and increase a person's effort in accomplishing a difficult task because of the beliefs inside themselves that tailor with their capability to make their business succeed. Self-efficacy plays an important role in influencing a person to achieve business goals. A person with self-efficacy has the belief in their mind that their business will succeed (Mohd, Kamaruddin, Hassan, Muda & Yahya, 2014).

Self-efficacy has been commonly related to performance, in the field of entrepreneurial self-efficacy, several empirical studies have found a positive relationship between a broad calculation of self-efficacy and business or firm performance. According to Hmieleski and Baron (2008) entrepreneurs' entrepreneurial self –efficacy has been commonly considered to be a strong determiner of the performance of their businesses. Self-efficacy has also been found to have important effects on other entrepreneurial-related outcomes, for example, Bradley and Roberts (2004) found self-efficacy to be positively related to the work satisfaction of entrepreneurs.

Similarly, Tyoapine, Teddy, James and Ringim, (2016) found that the higher the confidence of entrepreneurs in their ability to develop and grow their new ventures, the greater their satisfaction, regardless of the actual performance of their firms. The results of these studies indicate that self-efficacy may help mitigate some of the stress associated with being an entrepreneur. Wilson, Kickul and Marlino (2007) conducted a study among Masters of Business Administration students and found that lack of self-efficacy would act as an obstacle to entrepreneurial performance Hmieleski and Baron (2008) investigated the effect of self-efficacy on venture growth and results proved a positive effect. On the contrary, Hmieleski and Baron (2008) found that self-efficacy reduces firm performance rather than increase under some moderating conditions, however, in the absence of the moderating conditions self- efficacy increases firm performance.



## **2.4 Empirical Review**

Kuo-Feng (2015) did an empirical Study on market performance, entrepreneurship and core competency of SME firms in Taiwan and concluded that compared to large enterprises, SMEs have high flexibility and low formalization and the lower the degree of formalization of a business, the greater its entrepreneurship and, hence, the better its performance. Audretsch (2004) points out the link between entrepreneurship, innovation and growth, and states that the entrepreneurial spirit improves the economic performance of a business.

### **2.4.1 Creativity**

According to (Harris, 2012) creativity is the skill or capability to come up with new ideas by merging, varying, or re-applying existing ideas. Some creative ideas are amazing and wonderful, whereas others are just modest, basic practical ideas that no one seems to have considered yet. Creativity is also considered as an attitude, meaning the capacity to take in change and novelty, a readiness to juggle with ideas, opportunities and possibilities, openness of outlook and the practice of relishing the good while looking for ways to improve it. Creativity can be defined as the production of novel and useful ideas, while innovation refers to the implementation or transformation of a new idea into a new product or service, or an improvement in organization or process, (Baldacchino, 2009).

According to Turyakira and Mbidde (2015) there is a relationship between innovation and SME survival through globalization of the markets and increasing international competition force SMEs to search for new, innovative, flexible and imaginative ways to survive. This was supported by Oncioiu (2013) who discovered innovation as an important ingredient in this knowledge based society in SMEs sustainability. Kemp, Folkeringa, de Jong and Wubben (2003) in their research, found that the innovation output was determined by the innovative input that is the transformation of input into output. Finally, the innovative output was related to the firm performance. They stated that innovative output, via business performance, would affect the innovation expenditures. The overall economic performance of a business would be affected by

all the levels of the innovation process for that business. The growth of total sales would be higher for innovating businesses than for non-innovating businesses.

#### **2.4.2 Innovation**

According to Okpara (2007) innovation is the other side of creativity. Innovation is the means to entrepreneurship and together innovation and entrepreneurship call for creativity. Innovation is also discussed as putting on something new to an existing product, service or process. The product, service or process could already be working reasonably well but is changed or improved so that it works better or fulfils a different need, this is then referred to as innovation. Innovation therefore is the effective exploitation of new ideas and processes not forgetting that all innovation starts with creative ideas and thoughts (Waithaka, 2016).

According to Faltn (1999) it is, often said that there are plenty of ideas around but innovative ideas are not easily available. The attempt to generate them needs in-depth analysis in the particular business field and perseverance in trying to create a new solution. The increasing competitive pressure in small and medium enterprises requires businesses to engage in activities that will generate high performance and a competitive advantage. Product/service innovation can be an important source of competitive advantage that leads to improved performance (Jones & Linderman, 2014).

Aguomo (as cited in (Nyang'au, Mukulu & Mung'atu, 2014) defined entrepreneurship as a process of bringing together creative and innovative ideas then combining them with organization and management skills so that human resources, finances and other relevant resources can be combined to meet an identified need leading to creation of wealth. Without added innovations there cannot be entrepreneurial growth and development especially in the services or products or in its processes or sales and marketing. With added innovations, a firm becomes striking and prominent and coming up with novel products and services is usually seen as part of the process of innovation, which considered the engine driving sustained entrepreneurial growth and development.

### **2.4.3 Propensity to Take Risk**

Cantillon (1755, cited in Kimmo and Mika, 1999) contends that the earliest identified entrepreneurial characteristic was risk-taking. Wang and Poutziouris (2010) and Mill (1848) described an entrepreneur as an individual or person who took up the risk for the business and incorporated the term risk-bearing to differentiate an entrepreneur from a business manager. Entrepreneurial functions consisted of direction, control, superintendence and risk-bearing. Schumpeter (1934) later noted the innovating characteristic, nature and motivation of the entrepreneur in terms of coming up with new processes, products, services, methods and enterprises and the inherent risks linked with this kind of behavior. Despite the understanding that risk management is culturally conditioned, some scholars hold the view that small business owners, entrepreneurs and business managers, universally, perceive and recognize their role in making risky decisions as somewhat similar. Business owners or entrepreneurs are generally believed to be ready and willing to take up more risks than business managers and salaried employees (Kimandu, 2016).

An individual's risk-taking propensity can be defined as their inclination to accept risk comfortably (Brice, 2002). Stewart & Roth (2001) researched on the risk propensity dissimilarities between business owners or entrepreneurs and managers in a meta-analysis of twelve studies of entrepreneurial risk-taking propensity. Five of the studies showed no significant differences, with the remaining seven supporting the notion that entrepreneurs are moderate risk-takers. Across the twelve studies, five different risk-propensity measures were used, and one of the reasons attributed to the lack of consensus in the research results is methodological issues. Factors affecting individuals' perceived risk assessments include cognitive biases such as, overconfidence and the illusion of control (Shaver & Scott, 1991).

The perception of risk and the expectations about the results of an entrepreneurial activity depends highly on several other expectations, including the probability estimation of the outcome occurring and the ability to control the outcome. In a simpler model which is based on social cognitive theory where outcome expectancies depend on two main fundamentals that incorporate Miller's three dimensions which are locus

of control, the belief of whether or not one's outcomes depend mainly on one's own actions, self-efficacy, the belief of whether or not one is able to put required actions into practice, and or on factors not under one's control (Bandura, 1997).

#### **2.4.4 Awareness about SME Support Services**

According to Boysana and Ladzani (2011) the slow growth of SMEs can be partly attributed to the lack of support that they receive from institutions offer them credit facilities, other government institutions that should be mentoring them or regulations that have negative impact on SMEs. The challenges for small businesses in Nigeria are lack of access to credit and finances, bribery and corruption, lack of government and regulatory support, poor road infrastructure, low profits, and the lack of demand of the products produced (Okpara, 2011).

Abor and Quartey (2010) findings in their study on issues in SME development in Ghana and South Africa concluded that the growth and development of SMEs are largely inhibited, amongst others, by lack appropriate technology, limited access to global markets, the existence of government laws, regulations and rules that impede the growth and development of the SME sector, weak capacity by institutions supporting SMEs, inability to access business information, lack of management skills and training and most importantly insufficient finances and credit facilities (Magdalene,2016).

Nabintu (2013) found a positive relationship between education and the success of small businesses. The probability that a business will fail was found to be linked with the owner/manager's education and work experience before the business launch. Human capital is mostly the critical agent of SME performance hence recruitment of academically qualified employees is a necessary start for sustainable human capital development in all organizations. Human capacity has become a critical index of competition in the business environment to the degree that the development of such capacities through training has become top priority in designing the strategic plan of business organizations (Tim & Brinkerhoff, 2008).

### 2.4.5 Self-Efficacy

Self-efficacy plays an important role in influencing a person to achieve their goals. This is because; to take a calculated risk may require a person's confidence. However, in order for a person to have a confidence, they may require a capability to achieve their designated. A study proved that, a person with a human capital pool has the belief in their mind that their business will succeed. It is supported by Mohd et al. (2014), where the results in acquiring human capital will in turn develop a high self-efficacy.

Hence, it is clear that self-efficacy is closely interlinked with human capital. According to Shane, Locke and Collins (2003) a person still could not perform if they don't have the confidence that their business will be successful although they have all other relevant capabilities. This is because; an entrepreneur will face a lot of obstacles and receive negative feedback along the way that may impede their business growth. However, a person with high self-efficacy is able to regard a negative feedback in a positive manner. It is supported by Oyugi (2016) who concluded that self-efficacy will make an entrepreneur even stronger even under a high uncertainty. According to his study, self-efficacy will increase a person's effort in accomplishing a difficult task because of the beliefs inside themselves that tailor with their capability.

Another study done by Shane *et al.* (2003) stated that it is impossible to investigate the relationship between self-efficacy and performance because the relationship is considered weak. Hence, the study recommended that in order for the researcher to study this relationship, the other factors such as cognitive factor should be studied in concert. Besides that, the study done by Mohd *et al.* (2014) stated that self-efficacy helps people to understand why some business still fail although they employ the sufficient capabilities. A low in self-efficacy may result to low performance. A person with high self-efficacy is able to utilize their skills that they have to achieve their targeted goals. A person with high self-efficacy possesses a belief in their mind that tailor with their skills to keep a cool head and perform well.

#### **2.4.6 Performance of Small and Medium Enterprises**

Previous studies have shown that a number of factors affect the performance of small businesses; these factors include entrepreneurial mindset, access to capital or financial resources, technological advancement and managerial skills. According to 2004 survey of OECD countries revealed that SMEs accounted for over 90% of total number of enterprises in Emerging Economies (EEs), further, 60% of all companies in emerging economies are SMEs. 70% of foreign trade in China is attributed to Small and medium enterprises (Newberry, 2006). In EEs small and medium enterprises are becoming more competitive and increasingly crucial for economic growth, a report based on 670 Asian organizations, revealed that almost one half of the SMEs entrepreneurs expect to grow significantly in the future as they think they can react and innovate more quickly and have closer customer relationships than their large corporate competitors (Newberry, 2006).

The small and micro enterprises (SMEs) play a vital role in the Kenyan economy; they are estimated to have generated over 700,000 new jobs in 2015 which is 85% of all new jobs created in Kenya. Both theoretical and empirical arguments and evidence support the importance, significance and potential of the SME sector. Regardless of significance of SMEs, previous statistics show that 60% of all SME businesses fail within the first year of operation. In the years 2012 to 2016 inclusive, a total of 2.2 million MSMEs were closed. The majority of the closed businesses were in wholesale and retail business and repair of motor vehicles and motorcycles business which accounted for 74% of the total business closures. Businesses were closed at the age of 3.8 years on average. Businesses that were started or acquired within the last two years were more vulnerable to closures and they accounted for 61% of the total businesses closed (Kenya National Bureau of Statistics, 2016).

One of the most significant challenges for the SMEs is insufficient funds or finances to operate their businesses; others include high operating expenses, low revenues and losses in the business. Also prospective customers look at SMEs as lacking the capacity to provide quality products and services and are incapable of satisfying more than one vital business project concurrently. Most of the time, larger corporations are

picked and given business for their influence in the market and name respect alone (Nabintu, 2013).

Small and medium enterprises are not just considered to be the driving force of economic development but they are also regarded as key contributors of growth in almost all the economies of the world (Gathenya, Bwisa & Kihoro, 2011). The SMEs play a key role in triggering and sustaining economic growth and equitable development in both developed and developing countries. According to Government of Kenya Sessional Paper No.2 of 2005 on Development of SMEs cut across all sectors of the country's economy. They also make available one of the most inexhaustible sources of employment, not to mention the breeding ground for entrepreneurs in medium and large industries, which are critical for industrialization. A crucial element in development of the SME sector in Kenya is the aspect of entrepreneurial mindset (Munyaka, Ouma & Ndirangu, 2015).

## **2.6 Critique of the Existing Literature Relevant to the Study**

Majority of the empirical literature reviewed was carried out in the context of South Africa, Indonesia, Malaysia, Nigeria and Kenya. Many of these scholars are in agreement that entrepreneurs need to have a unique trait to run a successful business enterprise. They associate their success to varying reasons. The major controversies in literature on entrepreneurial mindset are on operationalization of the entrepreneurial mindset and indicators used in those studies. For instance McGrath and MacMillan (2000) propose that it is the leadership trait in an individual that emerge to lead organizations that face increased competitiveness and uncertainty in these dynamic markets.

Dhliwayo and Vuuren (2007) emphasize that an entrepreneurial mindset is an important success factor for SMEs without which a business will fail. Likewise, Morris and Kuratko (2002), also argues that the current business environment needs an entrepreneurial mindset that must unlearn traditional management principles in order to minimize the high failure rates of SMEs and improve performance. However, these studies did not pin point the variables under entrepreneurial mindset that were important or significant to improve the performance of small and medium enterprises.

There researcher therefore found the need to research more in this area to fill these gaps and increase the body of knowledge.

The literature analysis also revealed that there seems to be no agreement on one single theory that is most appropriate in achieving entrepreneurial mindset as well as improved performance. For instance, Ngeek (2012) who carried out an exploratory study on entrepreneurial mindset in the SME sector in South Africa concluding that the level of entrepreneurial mindset is low in the SME sector in the country hence the need for it to be enhanced as a means of nurturing SMEs success.

Scheepers (2009) who carried out a study on entrepreneurial mindset of ICT firms concluded that entrepreneurs should be eager towards innovation, opportunities, personal growth and achieving personal goals in order to achieve business success. Another study by Juan-Pierré (2014) on understanding the entrepreneurial mindset of retail small medium and micro enterprise (SMME) leaders in the Cape Metropole deduced that overall Retail SMME leaders operating in the Cape Metropole have a very sound entrepreneurial mindset that has reflected in the businesses they lead and which in turn allows for these entities to attain such levels of success.

Zaidatol and Abdullah (2009) researched on exploring the entrepreneurial mindset of students and established that entrepreneurial directed approach which is a student centered learning model enables students to have a confident and positive entrepreneurial mindset. The researcher identified gaps in previous research and literature and found the need to study effect of entrepreneurial mindset on the performance of small and medium enterprises in Nairobi County, Kenya.

## **2.7 Summary of Literature Reviewed**

This chapter has reviewed literature on the relationship between each variable under study on entrepreneurial mindset and the performance of SMEs. The entrepreneurial mindset variables reviewed include creativity, innovation, propensity to take risk, awareness about SME support services and self-efficacy. Reviewed literature generally agrees that these attributes of entrepreneurial mindset affect the performance of SMEs. The chapter elaborated on the theoretical background and conceptual



framework through extensive literature review. Most empirical studies have reported that there is a positive effect of entrepreneurial mindset on business or individual performance. The researcher examined the way in which entrepreneurial mindset may be used to attain business growth and improve performance.

## **2.8 Research Gaps**

The reviewed empirical studies indicate that research in the area of entrepreneurial mindset has been done especially in Nigeria and South Africa but not in a comprehensive approach and more so in Kenya (Asenge & Agwa, 2018; Asenge, Diaka, & Soom, 2018; Tyoapine, Teddy, James & Ringim, 2016; Ngek, 2012) The few studies which have been done in Kenya in reference to entrepreneurial mindset focusing on manufacturing firms and businesses operated by university graduates (Njeru, 2012; Ndururi & Mukulu, 2015). The reviewed literature pointed out the existing relationship between entrepreneurial mindset and performance of businesses. However, the previous researchers focused on different variables of entrepreneurial mindset such as motivation, business alertness and financial education and others focused on a different dependent variable for example university graduates, firms and SMMEs (Ngek, 2012; Scheepers, 2009; Zaidatol & Abdullah, 2009; Asenge, Diaka, & Soom, 2018). This provides evidence that much research is needed to add to the debate in this area.

Other similar researches carried out in Kenya include Njeru (2012) who carried out a study on the effect of entrepreneurial mind set on the performance of manufacturing businesses in Nairobi, Industrial area and concluded that entrepreneurs with high levels of each variable of entrepreneurial mindset specifically creativity and innovation performed better than those who had low levels and Ndururi and Mukulu (2015) studied role of entrepreneurial mindset in success of enterprises operated by entrepreneurship university graduates in Kenya and found out that entrepreneurs should have the necessary resources in terms of business knowledge and experience to enhance their survival in the business world. The current study considered a sample of 400 SMEs drawn from of all SMEs in Nairobi County, Kenya.

Finally, the reviewed studies focused on entrepreneurial mindset, entrepreneurial intentions and entrepreneurial competencies and performance but none focused on the creativity, innovation, propensity to take risk, awareness about SME support services and self-efficacy variables of entrepreneurial mindset and performance of SMEs which the researcher consider important in studying entrepreneurial mindset.

This study, therefore, intends to fill these pertinent gaps in literature by studying the selected independent variables (creativity, innovation, propensity to take risk, awareness about SME support services and self-efficacy) on the effect of entrepreneurial mindset on the performance of SMEs in Kenya. This study will not only add value to existing literature but also provide empirical evidence on the role played by entrepreneurial mindset on the performance of SMEs in Kenya and fill the existing contextual and conceptual gaps.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the research design, research philosophy and methodology that were used in the study. The chapter is organized under the following sections: research design, research philosophy, population, target population, sampling frame, sample size and sampling techniques, data collection instruments, data collection procedure, pilot study, reliability of the research instrument, validity of the research instrument, statistical tests, data analysis and ethical issues.

#### **3.2 Research Philosophy**

According to Blaxter, Hughes and Tight (2006) research philosophy is a belief about the way in which data about a phenomenon should be gathered, analyzed and used. A positivistic philosophy approach was adopted in this study. Positivists believe that reality is stable and can be observed and described from an objective viewpoint (Levin, 1988), that is without interfering with the phenomena being studied. They contend that phenomena should be isolated and that observations should be repeatable. Predictions can be made on the basis of the previously observed and explained realities and their inter-relationships.

##### **3.2.1 Positivism**

The research adopted a positivistic approach because the study is descriptive in nature and also because positivistic approach acknowledges that the theories, hypothesis, background knowledge and value attached to the study can influence what is observed. Positivists aim to test a theory or describe an experience through observation and measurement in order to predict and control forces that surround us. According to Sekaran (2010) the positivism philosophy helps a researcher collect all facts and figures that are related with the research issue through general sources. Under this philosophy, the researcher plays an important role of objective analyst in evaluating the collected data and produces an appropriate result in order to achieve the research

objectives. Many philosophers believe that positivism is the foundation and rationale for most management research.

### **3.3 Research Design**

According to Trochim (2016) a research design constitutes the blue print for the collection, measurement, and analysis of data. Cooper and Schindler (2008) define research design as the road map and structure of study or investigation considered so as to find answers to research questions. Kothari (2009) defined research design as a master plan that stipulates methods and procedures for collecting data and analyzing the needed information. A research design is also described as the framework or blueprint for the research (Mugenda & Mugenda, 2003).

The study adopted descriptive research design through survey research using both quantitative and qualitative methodologies. According to Aggarwal (2008) descriptive research is devoted to the gathering of information about prevailing conditions or situations for the purpose of description and interpretation. The choice of this design is informed by the fact that entrepreneurial mindset is a precise state of mind which positions people or individuals towards entrepreneurial actions and outcomes which can easily be described and information acquired through such description (Karanja, 2012). It is also useful for identifying variables and hypothetical constructs which can be further investigated through other means. Such a design is not only concerned with the characteristics of individuals but also with the characteristics of the whole sample hence providing information useful to the solutions of issues or problems (Bechhofer & Paterson, 2008).

This type of research method is not simply amassing and tabulating facts but includes proper analyses, interpretation, comparisons, identification of trends and relationships. According to Creswell (2002), descriptive research design is used when collecting information about people's attitude, opinions and habits and is appropriate for analyzing social behavior and patterns. Surveys are more efficient and economical and they help the researcher to understand more about opinions, and attitudes of the respondents (Kothari, 2009).

According to Mugenda and Mugenda (2003) a survey attempts to collect data from members of a population in order to determine the current status of that population with respect to one or more variables. Wibowo (2008) argues that qualitative and quantitative are the two main approaches that define any research. According to Zikmund (2003) quantitative approach is a design that sets out to quantify data in order to use statistics to analyze a data set. It is, the most popular research approach used to examine relationship between different variables and measure objective theories (Creswell, 2009).

In this study quantitative approach was used to quantify the hypothesized relationship between dependent variable which is performance of SMEs and the independent variables which are; creativity, innovation, propensity to take risk, awareness about SME support services and self-efficacy. The approach was used because the data collected through the questionnaires were analyzed using standard statistical tools. It is worth noting that quantitative approach enables the researcher to achieve high levels of reliability of gathered data especially where a big sample is being used as in this study (Frankfort-Nachmias & Nachmias, 1992).

Qualitative approach was also adopted to provide in-depth understanding of the situation about entrepreneurial mindset and performance of SMEs. Open-ended questions were used which met the criteria described by Cooper *et al.*, (2006) about qualitative research. The two approaches complement each other in that qualitative approach provide in-depth explanations while quantitative approach provide the hard data needed to meet required objectives.

### **3.4 Population**

Nei and Kumar (2000) refer to the population as the set of all objects that possess some common set of characteristics with respect to some research problem. Akinade and Owolabi (2009) defined population as the total set of observations from which a sample is drawn. According to Kenya National Bureau of Statistics (2016) there were 1,560,500 licensed to operate SMEs in Kenya, hence the total population of licensed SMEs in Kenya is 1,560,500. These SMEs are spread out in all the 47 counties in Kenya with Nairobi County carrying the majority.

### **3.4.1 Target Population**

Target population refers to the entire number of subjects of interest to the researcher. According to Berg (2001) target population refers to the population to which the researcher plans to generalize the results or findings of the study. The target population of this research consisted of all licensed small and medium enterprises in Nairobi County, Kenya which according to Kenya National Bureau of Statistics (2016) are estimated to be 268,100 in number (Kenya National Bureau of Statistics, 2016).

Unit of analysis is the major entity being analyzed and represents who or what is being studied in a given research. SMEs were the unit of analysis for this study while the unit of observation was the owners or managers of the SMEs who were studied hence the respondents. Business owners or manager understand the operations, performance and strategic direction of their business hence the decision to use them, this was supported by previous similar studies that also used owner or managers (Aliyu & Rosli, 2014). The target population was identified based on the fact that SMEs are engines of growth, vital to most economies, research suggests that SMEs account for 95 percent of firms in most countries, create jobs, contribute to GDP, aid industrial development, satisfy local demand for services, innovate and support large firms with inputs and services (Karen, 2015).

The SME sector in Kenya has over the years been recognized for its role in provision of goods and services, enhancing competition, fostering innovation, generating employment and in effect, alleviation of poverty. The crucial role of SMEs is underscored in Kenya's Vision 2030-the development blueprint which seeks to transform Kenya into an industrialized middle-income country, providing a high quality life to all its citizens by the year 2030 (Mbogo, 2011). Nairobi county has the highest number of all SMEs in Kenya with 17.2% (268,100) of all SMEs (1,560,500) being located in the County and the rest being distributed in the other 46 counties. Small and medium enterprises in Kenya are distributed in four main sectors being wholesale and retail trade, manufacturing, services and real estate activities (Kenya National Bureau of Statistics, 2016).

### **3.5 Sampling Frame, Sample size and Sampling Techniques**

#### **3.5.1 Sampling Frame**

Sampling frame refers to a list of elements from which a sample may be drawn (Cooper & Schindler, 2008). It is a list of all the items or objects from where a representative sample is drawn for the purpose of the research (Nachmias & Nachmias, 2008). For the purpose of this research, the sampling frame was all the 268,100 SMEs in Nairobi County under various sectors which the researcher categorized into four main sectors mainly manufacturing, real estate activities, wholesale and retail trade and services (Kenya National Bureau of Statistics, 2016).

#### **3.5.2 Sample size and Sampling Techniques**

A sample is a set of observations drawn from a population by a defined procedure. Samples are collected and statistics are calculated from the samples so that one can make inferences or extrapolations from the sample to the population (Neeru, 2012). The sample should be representative of the population to an extent that it exhibits the same distribution of characteristics as the population (Goodwin, 2010).

Sampling techniques are the strategies applied by researchers during the sampling process. This process was done when the researcher aims to draw conclusions for the entire population after conducting a study on a sample taken from the same population. According to Mugenda and Mugenda (2003) there are different types of sampling techniques which are applicable in sampling such as simple random sampling, purposive sampling and stratified sampling among others. Sampling is the process of selecting units from a population of interest so that by studying the sample one may fairly generalize the results back to the population from which they were chosen.

According to Trochim (2016) probability sampling is a sampling technique wherein the samples are gathered in a process that gives all the individuals in the population equal chances of being selected. A probability sampling scheme is one in which every unit in the population has a chance (greater than zero) of being selected in the sample, and this probability can be accurately determined (Saunders, Lewis & Thornhill,

2009). This study applied multi-stage probability sampling method. In the first stage stratified sampling method was used to divide the SMEs into 4 strata according to SME sectors (manufacturing, real estate activities, wholesale & retail trade and services) with each sector forming a stratum. Stratified random sampling was found to be appropriate as it enables the researcher to characterize not only the total population but also crucial sub-groups of the population. Stratification also helps reduce standard error by providing some control over variance. The technique also provides a better comparison across strata (Saunders *et. al.*, 2007).

In the second stage, a simple random sampling method was used to select representative samples from each sector. This allows equal probability of all individuals in the defined population to be selected as a member of the sample (Kombo & Tromp, 2006). This is important as it helps reduce biases that may arise otherwise. A sample of 400 SMEs was selected from a list of licensed SMEs in Nairobi County. This sample is calculated using the formula developed by Cochran (1963) as cited by Singh and Masaku (2014) used was selected. This formula is used to calculate the sample sizes where the population is large. The formula assumes a certain level of precision or confidence which normally ranges from 90% to 99% but 95% is the most commonly used. The following formula was used to calculate the sample size.

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

n – Sample size

N– Population size (268,100)

e– Level of precision (0.05)



### Sample size calculation

$$n = \frac{N}{1 + N(e)^2}$$
$$n = \frac{268,100}{1 + 268,100(0.05)^2}$$

**n = 399.4 which is approximately 400**

The sample size was therefore to be 400 SMEs randomly selected from various sectors as presented in Table 3.1.

**Table 3.1: Sampling Table**

<b>Industry</b>	<b>Population</b>	<b>Sample</b>	<b>Percentage</b>
Manufacturing	28,419	42	10.6
Real Estate Activities	7,480	12	2.79
Wholesale & Retail Trade	111,262	166	41.5
Services	120,939	180	45.11
<b>Total</b>	<b>268,100</b>	<b>400</b>	<b>100</b>

### 3.6 Data Collection Instrument

There are several ways of collecting data which differ considerably in terms of money costs, time and other resources at the disposal of the researcher (Rotich, 2016). The choice of a particular tool depends on the type of research. These include; focus group discussions, observations, interview and questionnaire. Since this study sought to examine effect of entrepreneurial mindset on the performance of SMEs in Kenya hence a research instrument which could investigate and measure entrepreneurial mindset was required. In this study, a questionnaire was the most appropriate tool.

A questionnaire is perceived as the most accurate tool for measuring self-sufficiency existing relationship, objects or events as well as self-reported beliefs and behavior (Newman, 1997). Further, the questionnaire was seen to be appropriate as it allows data to be collected in a quick and efficient manner. The use of questionnaires also makes it possible for descriptive, correlation and inferential statistical analysis (Saunders et al., 2007). The researcher developed the questionnaire used in this study on the basis of previous studies. A five-point likert scale was used for most questions in the survey except for the section dealing with general data, business background information and a few open-ended questions. Likert type scale is an ordinal scale comprising of a set of qualitative variations of a particular attribute or entity ordered sequentially from least to most (Nunnaly & Bernstein, 1994) and has been commonly used in business research (Sakaran, 2000).

Five choices were provided for every question or statement. The choices represent the degree of agreement to the given question. The choices range from strongly agree, through agree, neutral and disagree to strongly disagree. Other questions also provided respondents with choices ranging from lowest to highest in a scale of one to five. The Likert type of questions enabled the respondents to answer the questions easily. In addition, these allowed the researcher to carry out the quantitative approach effectively with the use of statistics for data interpretation. The other questions were open ended questions which enabled the researchers to gather more information from the respondents.

### **3.7 Data Collection Procedure**

Primary data was collected using semi-structured questionnaires which contained both closed-ended questions and few open-ended questions to encourage higher response rate. Open-ended questions accorded the respondents an opportunity to express their own personal opinions beyond the researcher's hypothesized position. These questions helped in enriching the qualitative methodology effectively.

The questionnaires further provide anonymity as they do not ask for the name of the entrepreneurs. Before starting the field study, the researcher recruited and trained ten research assistants so that they could collect quality data. The research assistants

visited the SME entrepreneurs at their business location and delivered the questionnaires which were collected later at an agreed time and date most convenient to the entrepreneurs. The face to face visit helped the research assistants with guidance by the researcher in clarifying any item that requires some explanation by the respondents. This approach also helped reduce delayed response usually associated with business owners where there is no personal contact.

### **3.8 Pilot Study**

The researcher carried out a pilot test with the questionnaire which was to be used for this study to test its validity. Mugenda and Mugenda (2003) suggests that a pilot test is needed for the validity of a study while Orodho (2003) states that the pilot study is required for testing the validity and reliability of data collection instruments. A pilot study is conducted by giving a few people from the sample population the questionnaire with the intention of pre-testing the questions in order to refine the questionnaire, identify loopholes in the questionnaire and anticipate any logistical problems during the actual survey. Cooper and Schindler (2008) indicate that a pilot test is conducted to detect weaknesses in design and instrumentation and to provide proxy data for selection of a probability sample. Isaac and Michael (1995) suggested 10 – 30 participants and Hill (1998) agreed on the same range of 10 to 30 participants for pilots in survey research. For this study 20 SMES formed the target sample for pilot testing. The validity and reliability of any research depends to a large extent on the appropriateness of the instruments (Mugenda & Mugenda, 2003).

#### **3.8.1 Reliability of Research Instrument**

Reliability refers to the repeatability, stability or internal consistency of a questionnaire (Cooper & Schindler, 2008). The reliability of the research instrument will be done so as to determine if the research instrument produces stable and consistent results. Regardless of the research procedure used and the method employed, researchers need to critically consider to what degree it is likely to consistently measure what it ought to measure accurately. According to Orodho (2003), reliability is the extent to which results are consistent over time and an accurate representation of the total population

under study is said to be reliable if the results of a study can be reproduced under a similar methodology then the research instrument is considered to be reliable.

Data reliability was measured using Cronbach's alpha method. The coefficient alpha is an appropriate measure of variance attributable to subjects and variance attributable to the interaction between subjects and items (Zikmund, 2003). Cronbach's alpha is a general form of the Kuder-Richardson (K-R) 20 formula. A threshold of 0.7 was adopted in this study because a reliability coefficient of 0.7 or higher is considered acceptable in most social science research situations (Cronbach, 1951). Variables with a Cronbach's Alpha of above 0.7 were considered reliable while those with below 0.7 considered unreliable.

The formula is as follows;

$$KR_{20} = \frac{(K) (S^2 - \sum s^2)}{(S^2) (K-1)}$$

$KR^{20}$  = Reliability coefficient of internal consistency

K = Number of items used to measure concept

$S^2$  = Variance of all scores

$s^2$  = Variance of individual items

### **3.8.2 Validity of Research Instrument**

During questionnaire development, various validity checks was conducted to ensure the instrument measures what it is supposed to measure. According to Zikmund (2003) Validity is the extent to which a construct measures what it is supposed to measure. There are three important approaches to assessing measurement validity: content validity (also referred to as face validity), criterion validity and construct validity. The current study utilized content and construct validities.

Content validity is the most important validity (Rotich, 2016). It is based on the extent to which a measurement reflects the specific intended domain of content. Validity is

not quantified using statistical methods, meaning that validity is a qualitative measure. The questionnaire was tested against content validity. This refers to the degree that the instrument covers the content that it is supposed to measure. It also refers to the adequacy of sampling of the content that should be measured (Yaghmale, 2009).

Therefore, content validity measures the comprehensiveness and representativeness of the content of a scale. To ensure content validity discussions were held with individuals of subject matter experts (SMEs) and my supervisors to review the questionnaire content. They were requested to review whether each item is appropriately matched to the content area indicated. Any items that were identified as being inadequately matched or flawed in any other way was either revised or dropped from the questionnaire (Orodho, 2003).

### **3.9 Diagnostic Tests**

#### **3.9.1 Linearity**

Linearity refers to a situation where a dependent variable has a linear relationship with one or more independent variables and, thus, can be computed as the linear function of the independent variable(s). It is the characteristic of data such that a straight line provides as good a fit (using the least-squares criterion) as any other mathematical function, as a description of the relationship between the dependent variable and the independent variable(s) (Howard, 2002). As a test for linearity, the Goodness of Fit test will be applied. This summarizes the discrepancy between the observed values and the values expected under a statistical model. One can also compute or come up with an Analysis of variance (ANOVA) table for the linear and nonlinear components of any pair of variables. If the F significance value for the nonlinear component is below the critical value (ex.,  $< .05$ ), then there is significant nonlinearity (David, 2012).

#### **3.9.2 Homoscedasticity**

Homoscedasticity means the relationship under investigation is the same for the entire range of the dependent variable. The test here is by graphical examination of the squared residuals. When the homoscedasticity assumption is met, residuals will form

a pattern less cloud of dots. Lack of homoscedasticity is most easily seen in a standardized scatterplot. The presence of heteroscedasticity was tested using Levene's test of homogeneity of variances. If the test is not significant (calculated probability value  $\geq .05$ ), the two variances are not significantly different and thus approximately equal (Gastwirth, Gel & Miao, 2009). The null hypothesis was that the error term was homoscedastic and the alternative hypothesis was that the error term was heteroscedastic. If the null hypothesis is rejected then it implies that there is presence of heteroscedasticity.

### **3.9.3 Multicollinearity**

One of the assumptions of linear regression analysis is that the independent variables are not correlated with each other meaning there is no linear relationship among the explanatory variables (Saunders, Lewis & Thornhill, 2009). Multicollinearity is a statistical phenomenon in which there exists a perfect or exact relationship between the predictor variables making it difficult to come up with reliable estimates of their individual coefficients (Joshi, Kulkarni & Deshpande, 2012). One way to estimate multicollinearity is using the variance inflation factor (VIF), which assesses how much the variance of an estimated regression coefficient increases when predictors are correlated. If no factors are correlated, the VIFs will all be 1 but if the VIF is greater than 1, the regressors may be moderately correlated. A VIF between 5 and 10 indicates high correlation that may be problematic and that would require the researcher to remove highly correlated predictors from the model. Likewise, high multicollinearity is signaled when high R-squared and significant F tests of the model occur in combination with non-significant t-tests of coefficients (David, 2012).

### **3.9.4 Autocorrelation**

According to Saunders, Lewis and Thornhill (2009) autocorrelation can be defined as correlation between members of observations ordered in time. One of the basic assumptions in linear regression model is that the random error components or disturbances are identically and independently distributed. So, in a regression model it is assumed that the correlation between the successive disturbances is zero. The Durbin Watson (DW) statistic is the most practiced test for autocorrelation which is based on

Ordinary Least Square (OLS) residuals with values ranging from 0 to 4. If the D value is 4 then there is negative autocorrelation, 2 means no autocorrelation and 0 means positive autocorrelation. In the event of autocorrelation, there is need to transform the model so that in the transformed model the error term is serially independent, then apply OLS to the transformed model to give the usual Best Linear Unbiased Estimator (BLUE).

### **3.9.5 Normality**

A normal distribution is assumed by many statistical procedures. Normal distributions take the form of a symmetric bell-shaped curve. According to Ghasemin and zahediasi (2012) the variables are supposed to be roughly normally distributed especially if the results are to be generalized beyond the sample. The study used Kolmogorov-Simonov and Shapiro test of normality test. Under the Shapiro test the null hypothesis  $H_0$ : data is usually normally distributed while the  $H_a$ : Data is not usually normally distributed. This study adopted Shapiro Wilk test for normality.

### **3.10 Data Analysis and presentation**

The data analysis included both descriptive and inferential statistics. The data collected on each construct of entrepreneurial mindset (creativity, innovativeness, propensity to take risk, awareness about SME support services and self -efficacy) will be scored to determine the entrepreneurial mindset level at each point. Likewise, performance of the SMEs was measured at the same time. The relationship between entrepreneurial mindset and performance was shown after data analysis. The five dimensions of entrepreneurial mindset- creativity, innovativeness, propensity to take risk, awareness about SME support services and self -efficacy were measured using a five likert-scale, the scale ranged from strongly disagree (1) to strongly agree (5) or lowest (1) to highest (5). Data was analyzed using statistical package for social science (SPSS) version 21. Cronbach coefficient alpha was used to check the goodness of the data leading to consistency and reliability of measures in the likert scale items. An alpha level of 0.70 or above is acceptable (Cronbach, 1951).

The variable relationship in the regression analysis was tested using inferential statistics. The ordinary least square regression analysis was used to determine the relationship that the independent variables had with the dependent variable. To test the linear relationship between the various independent variables of entrepreneurial mindset and the dependent variable of performance of the SMEs, Spearman's rho correlation was used. The designation  $r$  symbolizes the correlation coefficient which varies over a range of -1 to +1. The sign signifies the direction of the relationship. The coefficient is significant in circumstances where the significant level is at  $P < 0.005$ .

The hypotheses were tested from the regression model output where:  $H_{01}: \beta_i > 0$  ( $I = 1, 2, 3, \dots, 6$ ) versus  $H_{a1}: \beta_i > 0$ . The regression output provides  $t$  values and corresponding  $p$  values. If  $P$  value  $< 0.005$  then  $H_{01}$  was rejected which implies that  $X_1$  has a significant positive relationship with  $Y$ .

The performance of the SMEs was measured by obtaining information on the gross profit, annual sales and number of the employees. Other descriptive statistics included the category of the business, years of operation, business size, earnings and number of outlets. These statistics enable the researcher to establish whether the relationship between entrepreneurial mindset and performance varied according to size or type of business. Years of operation, business size, earnings, profit levels and number of employees was also used to rate the performance of each individual business.

Content analysis was used to analyze the open ended questions in the questionnaire. Content analysis is any technique for making inferences by systematically and objectively identifying special characteristics of messages (Holsti, 1968). There are three major approaches to qualitative data analysis: interpretative approaches, social anthropological approaches and collaborative social research (Miles & Huberman, 1994). Interpretative approaches provide a means for discovering practical understandings of meanings and actions. This was used to analyze the open ended questions as well as the findings collected during the interviews conducted. Qualitative analysis helps to triangulate quantitative analysis results.

Factor analysis was carried out to test construct validity of the questions in the questionnaire. The importance of conducting a factor analysis was to summarize the



information contained in a number of original variables into a smaller number of factors without losing much information. According to Gorsuch (1990) the implication of this is that the newly created variables should represent the fundamental constructs, which underlie the original variables factor. Loadings are an indication of how much a factor explains a variable in factor analysis. Hair, Anderson, Tatham and Black (1998) and Tabachnick and Fidell (2007) only factors with factor loading above 0.4 were retained for further study.

### **3.10.1 Hypothesis Testing**

Hypothesis is a formal statement that presents the expected relationship between an independent and dependent variable (Kaye & Freedman, 2011). It is an assumption about a population parameter that is to be proved or disapproved. It is also a conjecture used to guide the investigations or accepted as highly probable in the light of established facts. Such should be clear and precise, capable of being tested, capture the relationship between the variables, limited in scope and consistent with a substantial body of facts (Kothari, 2009). The researcher developed research hypotheses that need substantiation or verification and this calls for hypothesis testing. The testing of a statistical hypothesis is the application of an explicit set of rules for deciding whether to accept the hypothesis or to reject it. To prove that a hypothesis is true, or false, with absolute certainty calls for hypothesis testing and so one would need absolute knowledge about the population so as to judge if there is enough evidence that supports or not the hypothesis.

For testing each of the individual independent variables (creativity, innovativeness, propensity to take risk, awareness about SME support services and self -efficacy) against the dependent variable (performance of SMEs), t-test was used at a significance level of 0.05 and a *P* -value derived therefrom compared with the level of significance in order to make a decision on whether or not to reject the null hypothesis. As for the combined independent variables (all the independent variables together) against the dependent variable, F-test was used at significance level 0.05 and a *P* -value derived therefrom compared with the level of significance in order to make a decision on whether or not to reject the null hypothesis. A small *P* -value compared

with the level of significance indicates that observation of the test statistic would be unlikely if the null hypothesis is true. The lower the  $P$ -value in comparison to the level of significance, the more evidence there is in favor of rejecting the null hypothesis.

### 3.10.2 Multiple Regression Analysis

This study adopted the multiple regression model, a model which tries to predict the extent to which each of the five independent variables influence the performance of SMEs. The regression analysis helped the researcher to compare the relationship between each entrepreneurial mindset construct and performance of SMEs. The entrepreneurial mindset (creativity, innovativeness, propensity to take risk, awareness about SME support services and self-efficacy) as independent variables were regressed against the performance of the SMEs which include; size of the business, profit/ earnings, number of outlets and number of employees. This provided the magnitude and direction of relationship between each construct and SME performance.

The proposed regression model of the study was as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

This equation shows the relationship between the ordinary predictors  $X_1$  to  $X_5$  which are the five entrepreneurial mindset dimensions and the SME performance which is  $Y$ .

Where:  $Y$  is the performance of the SMEs

$\beta_0$  = Is a constant which represents the performance of SMEs when the independent variable under consideration are zero.

$X_1$  = Entrepreneur's Creativity Index

$X_2$  = Entrepreneur's Innovativeness Index

$X_3$  = Entrepreneur's Propensity to Take Risk Index

$X_4$  = Entrepreneur's Awareness about SME Support Services Index

$X_5$  = Self -Efficacy Index

$\beta_1, \beta_2, \beta_3, \beta_4,$  and  $\beta_5$  represent the coefficient of  $X_1, X_2, X_3, X_4,$  and  $X_5$

$\varepsilon$  represents the error term.

### 3.11 Variables Operationalization

This section presents variables operationalization which includes indicators used to measure the variables, scale of measurement and methods for data analysis to be used in analysis for each variable.

**Table 3.2: Variables Operationalization**

Variables	Operationalization	Measurement scale	Methods of analysis
Small and Medium enterprises performance (dependent variable)	<ul style="list-style-type: none"> <li>Gross profit</li> <li>Annual Sales</li> <li>Number of employees</li> </ul>	Nominal scale	Descriptive analysis
Creativity (Independent variable)	<ul style="list-style-type: none"> <li>Product Creativity</li> <li>Process creativity</li> <li>Business model creativity</li> </ul>	Nominal scale	Descriptive statistical analysis and inferential statistics
Innovation (Independent variable)	<ul style="list-style-type: none"> <li>Product innovation</li> <li>Process innovation</li> <li>Business model innovation</li> </ul>	Nominal scale	Descriptive statistical analysis and inferential statistics
Propensity to take risk (Independent variable)	<ul style="list-style-type: none"> <li>Resource allocation</li> <li>Risk avoidance</li> <li>Risk Perception</li> </ul>	Nominal scale	Descriptive statistical analysis and inferential statistics
Variables	Operationalization	Measurement scale	Methods of analysis
Awareness about SME support services (Independent variable)	<ul style="list-style-type: none"> <li>Credit support</li> <li>Market access</li> <li>Government support</li> </ul>	Nominal scale	Descriptive statistical analysis and inferential statistics
Self-efficacy (Independent variable)	<ul style="list-style-type: none"> <li>Coping with unexpected challenges</li> <li>Defining core purpose</li> <li>Adopting new products, services and markets</li> </ul>	Nominal scale	Descriptive statistical analysis and inferential statistics

### **3.11 Ethical Issues**

A researcher must confirm to the principle of voluntary consent where the respondents willingly participate in research. Informed consent should be based on the information regarding: identification of the researcher, the purpose of the research study, the beneficiaries of the research and any benefits that may be received. Participation in research is voluntary and respondents are at liberty or have the freedom to withdraw from the study at any time without any consequence (Mugenda & Mugenda, 2003). The researcher was required to communicate this to the respondents before the start of the study. The researcher through the trained research assistants ensured that all respondents fully understood all the details pertaining to the study. No respondent was forced to take part in the study; all the respondents voluntarily participated in the study. According to Nabintu (2013) plagiarism refers to passing off another person's work as if it were your own original work, by taking claim of credit for something that was done by someone else. It is taking, owning and using another person's thoughts as if they were your own. Utmost care was taken to ensure that all work borrowed from other scholars are acknowledged, cited and referenced accordingly.

## CHAPTER FOUR

### RESEARCH FINDINGS AND DISCUSSION

#### 4.1 Introduction

This chapter presents and discusses the results based on the objectives and hypotheses of the study as formulated in chapter one. The chapter is organized into various sections comprising of response rate, summary results of pilot test, data analysis, results presentation and discussion of the findings.

#### 4.2 Response rate

In this study a response rate of 84% (335 out of 400) was obtained as shown in Table 4.1. This response rate was considered to be high based on the proposition by Babbie (2004) who argued that a response rate of above 50% is adequate for a descriptive study. The response was attributed to readily available SMEs, managers and owners at the time of the study. The regions targeted by the study are crowded by SMEs who showed great interest in the study.

**Table 4.1: Response Rate**

	Response Rate	Percent (%)
Returned Questionnaires	335	84
Unreturned Questionnaires	65	16
Total	400	100

The distribution of SMEs that responded to the questionnaires by their sectors is shown in Table 4.2. The results show that 49% of the SMEs operated in service sectors, 35% were from wholesale and retail, 7% were from manufacturing sector, 4% were from real estate while 5% from others sectors. The finding implied that large percentage of the SMEs within the study area operated in service and wholesale and retail sectors. These findings could be justified on the basis that the service sectors is not capital

intensive hence attract many startups that in most case lack capital. Wholesale and retail sectors are easy to manage since they do not involve production and in most cases manufacturers offers products on credit and are paid later. The findings further implied that sectors that are less capital intensive attract many SMEs compared to those that are capital intensive such as manufacturing and real estate sector. This distribution mirrors that produced by KNBS (2018) reports that showed that most SMEs in Kenya focus on services, wholesale and retail businesses.

**Table 4.2: Response Rate Based on the Sectors**

Sector	Frequency	Percent
Manufacturing	24	7.2
Real estate activities	12	3.6
Wholesale & retail trade	118	35.2
Services e.g. Hotel, Hospital, Financial services etc	163	48.7
Others (Specify)	18	5.4
Total	335	100

### 4.3 Summary Results of the Pilot Test

A pilot study was conducted by giving 20 SMEs the questionnaire with the intention of pre-testing the questionnaire in order to refine the questionnaire, identify loopholes in the questionnaire and anticipate any logistical problems during the actual survey. In this study the main purpose of the pilot testing was to test the scale reliability using Cronbach’s Alpha coefficients. The summary of the Research Instrument Reliability Results and validity testing are presented in the following subsections.

#### 4.3.1 Summary of the Research Instrument Reliability Results

The data collected from questionnaires administered during pilot study was keyed in the SPSS software and scale reliability test conducted. The findings show that creativity indicators had a Cronbach’s Alpha of 0.782 which was considered reliable since it was above the threshold of 0.70. Innovation items had a Cronbach’s Alpha of 0.844; propensity to take risk had Cronbach’s Alpha of 0.754, awareness about SME

support services Cronbach's Alpha of 0.725, self-efficacy had a Cronbach's Alpha of 0.746 while SME Performance had Cronbach's Alpha of 0.802 (see Table 4.3).

These findings confirmed the scale used to measure the all the variables in this study was reliable. These findings are consistent with Orodho (2003) who posited that reliability is the extent to which results are consistent over time and an accurate representation of the total population under study is said to be reliable if the results of a study can be reproduced under a similar methodology then the research instrument is considered to be reliable.

**Table 4.3: Summary of the Research Instrument Reliability Results**

Variable	Reliability Statistics		
	N of Items	Cronbach's Alpha	
Creativity	8	0.782	Reliable
Innovation	8	0.844	Reliable
Propensity to take Risk	8	0.754	Reliable
Awareness about SME Support Service	8	0.725	Reliable
Self-Efficacy	8	0.746	Reliable
SME Performance	4	0.802	Reliable

#### 4.3.2 Summary of the Validity Results

Unlike reliability, the test for validity was qualitative in nature and mainly relied on expert reviews. To ensure content validity discussions were held with individuals of subject matter experts (SMEs) and university supervisors to review the questionnaire content. They were requested to review whether each item was appropriately matched to the content area indicated. Any item that was identified as being inadequately matched or flawed in any other way was revised or dropped from the questionnaire. The construct validity was achieved through analysis of both theoretical and empirical literature. Therefore, constructs used in the questionnaires were based on existing theoretical and empirical studies.

#### **4.4 Background Information**

The study further sought to understand the background information about the respondents and the business they worked for if they were managers or business they own if they were entrepreneurs. The following subsections present the results on background information of the respondents and business.

##### **4.4.1 Background Information on the Respondents**

The study sought to establish the demographic characteristics of the respondents in terms of their gender, age bracket, marital status and their level of education which enabled the study to describe the population and sample appropriately. On the gender of the respondents, the findings showed that 65.1% of the respondents were male while 34.9% of the respondents were female (see Table 4.4). These findings implied that majority of the owners or managers of the SMEs within the study area were male with the agree bracket of between 26 and 35 years. These findings implied youths who are facing high unemployment have resorted to starting or working in SMEs as alternative means of earning a livelihood. These finding support those of Fazalbhoy and Naik (2019) who argued that women entrepreneurs face a number of challenges to internationalisation and participation in the global economy. First, their business strategies may be particularly risk-averse with respect to certain international dimensions, and there are a number of explanations for this phenomenon. It may be due to a lack of previous entrepreneurial and management experience; for example, while it is quite clear that international careers in large enterprises prepare men and women for entrepreneurship in a global context, the number of women in high-level managerial positions with an international dimension remains very low.

The findings on the marital status of the respondents indicated that 47.2% and 44.8% of the respondents indicated they were single and married respectively. Those who were divorced and widowed were 4.5% and 3.6% respectively (see Table 4.4). These findings implied that majority of the owners and managers of SMEs are either married or single which also coincides with majority of the people in any given population. Dada and Fayomi (2017) that showed majority (96.9%) of the women in business were married, 0.6 percent were single while 2.5 percent were widow.



The study was also interested on the level of education of the respondents. The findings show that 48.1% had secondary education, 18.8% had college certificates while 17% were university graduate. Those with primary education were 9%, diploma were 6.3% while 0.9% had no formal education (see Table 4.4). The study finding implied that SMEs owners/managers had heterogeneous level of education, which further implied there is no specific set of education required for one to start and operate small and medium sized business in Kenya. All people with any level of education were capable of starting a small business but education is important in sustaining and growing businesses. This study findings concur with those of Arogundade (2011) who argued that education is paramount in shaping young people's attitudes, skills and culture, it is vital that entrepreneurship education is addressed from an early age. After all, entrepreneurship is not solely about business creation, but also about setting the right environment for the development of a skilled, innovative, entrepreneurial workforce able to anticipate change and face challenges.

**Table 4.4: Background Information on the Respondents**

	<b>Categories</b>	<b>Frequency</b>	<b>Percent (%)</b>
Gender	Male	218	65.1
	Female	117	34.9
	<b>Total</b>	<b>335</b>	<b>100</b>
Age Bracket	18-25 years	75	22.4
	26-35 years	128	38.2
	36-45 years	90	26.9
	46-55 years	30	9
	Over 56 years	12	3.6
	<b>Total</b>	<b>335</b>	<b>100</b>
Marital status	Married	150	44.8
	Single	158	47.2
	Divorced	15	4.5
	Widowed	12	3.6
	<b>Total</b>	<b>335</b>	<b>100</b>
Level of education	No formal Education	3	0.9
	Primary	30	9
	Secondary	161	48.1
	Certificate	63	18.8
	Diploma	21	6.3
	University	57	17
	<b>Total</b>	<b>335</b>	<b>100</b>

#### **4.4.2 Background Information on the Business**

The subsection presents the findings on the background information on the small and medium enterprises. These include legal structure, years of operations, number of employees in yours business, current total market value of the business (Kshs) and current annual turnover/annual sales (Kshs) of the business. On the legal structure, the findings showed that 64.8% of the SMEs were sole proprietorship, 20.6% were limited company while 14.6% were partnerships (see Table 4.5).

The study findings further showed that 63.9% of the SMEs had operated for less than 5 years, 23.6% had operated for between 6 and 10 years, 10.7% had operated for between 11 and 20 years and finally those that had operated for 20 years and above were only 1.8% (see Table 4.5). This finding supports the findings by KNBS (2016) that majority of the small business die prematurely in Kenya with estimated about 2.2 million SMEs being reported to have collapse in the last five years (between 2012 to 2016 inclusive).

The study further sought to find the number of employees employed by the SMEs that participated in the research. These study findings showed that majority (83%) of the business that participated in the research had less than 10 employees; those with between 11 and 40 employees were 14.3% (see Table 4.5). These finding corresponds with the findings that majority of the SMEs had operated for less than 5 years which implied that they were in their early stages of operations hence lacked the capacity to employ many people.

The finding on the current total market value of the Business (Kshs) shows that 62.1% had market value of below kshs 500,000, 17.3% had a current market value of between kshs 500,000 – 1,000,000. Similarly, the finding implied that majority of the SMEs were small as indicated by their low market values (see Table 4.5). The findings also showed that 68% of the SMEs had current annual turnover/annual sales of between kshs 0-5 million which reinforces their small nature.

**Table 4.5: Background Information on the Business**

	<b>Category</b>	<b>Frequenc y</b>	<b>Percent (%)</b>
Legal Structure	Sole proprietorship	217	64.8
	Partnership	49	14.6
	Limited company	69	20.6
	<b>Total</b>	<b>335</b>	<b>100</b>
Years of Operation	0-5 yrs.	214	63.9
	6-10 yrs.	79	23.6
	11-20 yrs.	36	10.7
	20 yrs. & above	6	1.8
	<b>Total</b>	<b>335</b>	<b>100</b>
Number of employees in your business	Less than 10	278	83
	11-40	48	14.3
	41-70	6	1.8
	71-100	3	0.9
	<b>Total</b>	<b>335</b>	<b>100</b>
Current total market value of the Business (Kshs)	Less than 500,000	208	62.1
	500,000 – 1,000,000	58	17.3
	1,000,001- 2,000,000	6	1.8
	2,000,001- 3,000,000	12	3.6
	Above 5,000,000	51	15.2
	<b>Total</b>	<b>335</b>	<b>100</b>
	Current annual turnover/annual sales (Kshs) of the business	0-5 Million	229
6-10 Million		33	10%
11-20 Million		25	7%
21-50 Million		23	7%
51-100 Million		15	4%
101-200 Million		10	3%
<b>Total</b>		<b>335</b>	<b>100</b>

## **4.5 Descriptive Statistics Results**

This section presents the descriptive results on the study variables. In this section the study analyses the level of creativity, innovation, propensity to take risks, awareness about SME support services and self-efficacy based on the indicators used in the questionnaires. The study used percentages, means and standard deviation to analyze the respondents' feedbacks on statements used to measure creativity, innovation, propensity to take risks, awareness about SME support services, self-efficacy and performance of SMEs. This analysis enables the assessment of SMEs based on their creativity, innovation, risk taking, awareness about SME support services and self-efficacy.

### **4.5.1 Analysis of Creativity among Small and Medium Enterprises**

The first objective of the study was to establish the effect of creativity on the performance of small and medium enterprises in Kenya. Creativity in this study was measured using product creativity, process creativity and business model creativity. The findings in this section sought to establish the level of creativity among SMEs in Nairobi County. First, the study sought to establish whether SMEs held meetings where employees brainstormed on new ideas and how often such meetings were held. The results indicate 33.9% agreed that they met with employees to brainstorm on new ideas. The findings further showed that 30% and 26% of the SMEs met monthly and weekly respectively. However, majority (65.1%) indicated they didn't hold such meetings to brainstorm on new ideas (see Table 4.6(a)).

The finding implies that majority of the SMEs in the study population didn't create a forum or platforms where creativity of employees could be harnessed and utilized for growth and expansion purposes. The finding further implied that SMEs owners relied on their own creativity to steer the business growth. This further explains why majority of the SMEs collapse when the owner runs out of ideas or is no longer with the business.

**Table 4.6 (a): Descriptive Results on Creativity**

		<b>Frequenc y</b>	<b>Percent (%)</b>
Do you hold meetings where employees present new ideas and solutions to challenges facing the business	Yes	117	33.9
	No	218	65.1
	Total	335	100
How often do you meet to come up with new products/services/ideas in the business	Weekly	30	26%
	Monthly	35	30%
	Quarterly	12	10%
	Twice year	22	19%
	Once a year	6	5%
	Rarely	12	10%
	Total	117	100

The descriptive results on the statement used to measure the level of creativity among SMEs in Nairobi County are presented in Table 4.6(b). The findings show that 59.9% and 19.9% of the respondents indicated that their businesses planned to introduce new and improved products in the next one year which implied increased products creativity. Similarly, more than half (54.8% and 16.3%) of the respondents agreed that they were in the process of introducing new equipment, machinery or technology. This was an indication of high process creativity among SMEs.

The study further sought to establish whether SMEs planned to automate their business processes e.g. accounts, human resources, and procurement and findings shows that statement had a mean of 3 which implied some of the SMEs agreed (31.0%) while other disagreed (31.3%). This finding further implied that some SMEs were in the process of adoption automation while others were not (see Table 4.6 (b)).

The study results further indicates that 56.7% and 17.9% of the respondents indicated that their SMEs planned to market their products/services through social media e.g. Facebook, emails, Instagram which was confirmed by the mean response of 3.73. Slightly more than half (37.6% and 20.6%) also agreed that in the next 1 year they had plans to open new branches which implied that their business was in the right direction as far growth was concerned. The results further indicates that majority of the

respondents as shown by the mean of 3.77 agreed that their business planned to use technology to acquire new customers and retain the existing (see Table 4.6 (b)). On customers' maintenance in the last 1 year and meetings with the staff members to discuss new ideas, the finding showed that SMEs had varying level of creativity.

On average, the SMEs in the study population showed above average level of creativity. This was shown by their plans to venture into new products and services, plans to introduce new equipment, machinery or technology in the next 1 year and adoption of creative ways of marketing through social media and use of technology to attract new and retain the existing customers.

The study findings support those of Weerasiri, Zhengang, and Perera (2012) who posited that creativity is the starting point for innovation and it is marked by the ability to create, bring into existence, to invent into a new form, to produce through imaginative skill, to make to bring into existence something new. Shalley, Zhou and Oldham (2004) on the other hand avers that creativity enables the entrepreneur to act on these opportunities in ways which can result in competitive advantage for the business such as adoption new technologies in the business process.

The study results also support the finding of Ranga, Murali and Swathi (2013) who contributed by asserting that an entrepreneur creativity is primarily concerned with developing new products, services, processes or markets and or the ability to bring something new into the market to ensure business growth. Creativity is a requisite of a high performing business, therefore SMEs that are creative stands a chance of achieving high performance in terms of improved profitability and business growth.

**Table 4.6 (b): Descriptive Results on Creativity**

	<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>	<b>Mea n</b>	<b>Std Dev</b>
Our business introduce new/improved products or services every year	1.8%	9.0%	9.3%	59.9%	19.9%	4	0.90
We always upgrade our equipment, machinery or technology	0.9%	13.6%	14.5%	54.8%	16.3%	4	0.92
We have continuously automated our business processes e.g. accounts, Human resources, procurement etc.	4.0%	31.3%	27.4%	31.0%	6.4%	3	1.02
We have invested in creative ideas of marketing our products/services through social media e.g. Facebook, emails, Instagram etc.	3.0%	13.4%	9.0%	56.7%	17.9%	4	1.00
Our creativity has enabled us to open new branches of our business.	2.1%	18.8%	20.9%	37.6%	20.6%	4	1.08
Using technology to acquire new customers and retain the existing customers had impact on our business growth	0.0%	10.3%	18.2%	55.9%	15.5%	4	0.84
Maintaining the same customers requires a lot of creativity from SMEs owner	4.5%	29.6%	26.0%	27.5%	12.5%	3	1.11
Holding meetings with the staff members to discuss new ideas stirs our business creativity	4.5%	34.0%	20.0%	25.4%	16.1%	3	1.18

SD (1)- Strongly Disagree D (2)-Disagree, , N (3)-Neutral, A (4)-Agree SA(5)- Strongly Agree

#### **4.5.2 Analysis of Innovation among Small and Medium Enterprises**

This section analysed the effect of innovation on the performance of small and medium size enterprises in Nairobi. The study sought to establish whether innovations in terms of product innovation, process innovation and business model innovation. Table 4.7 presents the findings on various innovations in the three categories highlighted above that have adopted by SMEs.

The findings showed that 38.0% of the SMEs had adopted internet banking services, 74.4% had adopted mobile platforms of payments such Mpesa paybill among others. The level of adoption of e-commerce was very low as indicated by 20.4% who had adopted e-buying and selling (see Table 4.7). The finding further indicates that majority (61.1%) of the SMEs had adopted social media marketing which was a common trends among small business. The level of adoption of accounting software, Human resources management systems, bulk SMS marketing and customer information data storage systems was very low among the study population (see Table 4.7).

The study findings implied that majority of the SMEs had innovated in digital payment services and marketing services but were yet to innovate in financial and human resources management. These findings can be explained by the small nature of majority of the SMEs that had few employees which didn't require human resource management systems. The findings further showed that majority of the employees were taking advantage of the rapid growth in the use of social media to market their product and services and reach wide range of customers.

The study finding supports the finding of Weerasiri, Zhengang and Perera (2012) who also posited that SMEs becomes very competitive in an emerging market when they give importance to innovative activities that build their reputation in the market environment. Sandvik and Sandvik (2003) similarly argued that innovation is one of the most vital competitive weapons and generally seen as a business's core value capability.



Bakar and Ahmad (2010) added that the capability in product and business innovation is crucial for a firm to exploit new opportunities and to gain competitive advantage. The findings of this study and those of the previous studies analysed reveals that innovation adoption among SMEs was a recipe for improved SME performance.

**Table 4.7: Types of Innovation Used by Small and Medium Enterprises**

	Yes	No
Internet banking services	38.0%	62.0%
Mobile platforms to collect revenue (Paybill, Lipa na Mpesa, Eazzy Pay etc.)	74.4%	25.6%
E-commerce i.e. buying or selling through ( Jumia, Kilimall, OLX, Masoko etc.)	20.4%	79.6%
Social Media marketing (Face book, Twitter, LinkedIn, Instagram, WhatsApp)	61.1%	38.9%
Accounting software e.g. QuickBooks, Sage, SAP etc	24.1%	75.9%
Human Resources Management Systems e.g. Perpay, HRMS etc	18.7%	81.3%
Bulk SMS marketing	16.6%	83.4%
Customer information data storage system e.g. East African Data Handlers, Safaricom etc	19.6%	80.4%

The findings on the descriptive results on level of innovation among the small and medium size enterprise in Nairobi County are presented in Table 4.8. On the product innovation, the study asked the respondents whether they had introduced new products/services or improvements on existing products/services in the last 5 years. The finding showed that 39.8% and 19.3% of the respondents agreed and strongly agreed respectively. The statement had a mean of 4 which confirmed that majority of the respondents agreed. On whether, SMEs had introduced new equipment, machinery or technology in the last 5 years, 32.5% and 15.0% agreed and strongly agreed while 28.5% and 1.8% disagreed and strongly disagreed respectively (see Table 4.8).

The study further sought to establish whether SMEs business processes are automated e.g. accounts, human resources, procurement. The findings showed that some SMEs had not automated their business process as shown by 43.2% who disagreed while other had automated their business process as shown by 24.0% of the respondents who

agreed. These findings implied that not all SMEs had innovations in their business processes. The findings further showed that 48.3% and 16.4% agreed and strongly agreed that they market their products/services through social media e.g. Facebook, emails and Instagram (see Table 4.8).

The findings further showed that more than half disagreed that they had opened branches in the last 5 years. On whether customer numbers have grown in the last 1 year and whether SMEs provide unique products/ services as compared to their competitors, the results showed that statement had mean response of 3 implying that respondents had varying opinion with some agreeing while other disagreeing (see Table 4.8).

Finally the mean of 4 implied that majority of the SMEs in the study population agreed that they used technology to acquire new customers and retain the existing customers. The study revealed that innovations adoption by SMEs improved operations and management of customers. Findings further showed that SMEs in Kenya had adopted product innovations and business process innovations and targeted to improve products and services they offered with the intention of boosting their performance.

The results of this study support those of Jones and Linderman (2014) who argued that product/service innovation can be an important source of competitive advantage that leads to improved performance. Nyang'au, Mukulu and Mung'atu (2014) added to this discourse by saying that entrepreneurial growth and development cannot be continued without further innovations usually in the product or services, processes or in its sales and marketing. With additional innovations, firms become eye-catching and bringing about new products and services is usually seen as part of the process of innovation, which is the engine driving sustained entrepreneurial growth and development. Therefore, innovation was a crucial component for SMEs to remain afloat.

**Table 4.8: Descriptive Results on Innovation Used by SMEs**

	<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>	<b>Me an</b>	<b>Std Dev</b>
Adopting innovations helps us introduce new products/services or improve on existing products/services	0.9%	22.0%	18.1%	39.8%	19.3%	4	1.06
Innovations lead to adoption of new equipment, machinery or technology	1.8%	28.5%	22.1%	32.5%	15.0%	3	1.09
Our business processes are completely automated e.g. accounts, Human resources, procurement etc	3.6%	43.2%	24.6%	24.0%	4.6%	3	0.99
Innovation adoption has enabled use to market our products /services through social media e.g. Facebook, emails, Instagram etc	4.9%	22.2%	8.2%	48.3%	16.4%	3	1.15
Opening new branches of our business have been as a results of adoption modern innovations	8.5%	48.3%	16.4%	16.7%	10.0%	3	1.15
Innovations help us to acquire new customers and retain the existing customers	2.7%	24.7%	17.2%	42.8%	12.7%	3	1.07
Innovations enable our business to provide unique products/ services as compared to our competitors	4.6%	15.6%	25.2%	41.4%	13.2%	3	1.05
Our customer numbers have grown in the last 1 year because on use of innovations	1.8%	14.5%	19.9%	33.4%	30.4%	4	1.09

SD (1)- Strongly Disagree D (2)-Disagree, N (3)-Neutral, A (4)-Agree SA(5)- Strongly Agree

### **4.5.3 Analysis of Propensity to Take Risk among Small and Medium Enterprises**

The third objective of the study was to determine the effect of propensity to take risk on performance of small and medium size enterprises in Kenya. The study sought to establish whether SMEs took risk in resources allocation, their level of risk avoidance and overall risk perception among the SMEs in the study population. The research required the respondent to indicate the percentage of profit they could attributed to risk behavior they had engage in.

The findings show that only 0.9% of the SMEs indicated that over 80% of their profits could be attributed to risk taking, 11.6% indicated 51 to 80%, 30.7% indicated 31 to 50%, 19.1% attributed 11 to 30% of the profit to risk taking while 34.9% attributed less than 10% of their profits to risk taking behavior (see Table 4.9).

The finding implied that majority of the SMEs indicated that risk taking resulted in less than 50% of their profits which points to reduced level of propensity to take risk among small and medium size enterprise in Kenya. Lack of risk taking or risk averse is risky in itself since its limits small business from exploiting more lucrative business opportunities and maybe a beginning of the business failure. This view is supported by Subrahmanya (2011) who argued that willingness to engage in relatively high levels of risk taking behavior enables SMEs to seize profitable opportunities in the face of uncertainty which leads to long term profitability.

Kimandu (2016) also suggested that risk taking is crucial for the achievement and development of an enterprise and how entrepreneurs identify and manage risks in their surroundings or environment. Kreiser and Davis (2010) also agreed that suggested that risk-taking has strong relationship with performance of entrepreneurial firms.

**Table 4.9: Percent of Profit Attributed to Risk Taking Behaviour**

What percentage of your profits is attributed to your risk taking behavior	
less than 10%	34.9
11-30%	19.1
31-50%	30.7
51-80%	11.6
Over 80%	3.7
<b>Total</b>	<b>100</b>

The descriptive results on the statements used to measure the level of propensity to risk among SMEs in Kenya are shown in Table 4.10. The study asked whether SMEs sought credit as a means of funding our business activities. The study finding showed that 51.3% and 26.3% of the respondents agreed and strongly agreed respectively. The statement had a mean of 4 which further confirmed that majority agreed (see Table 4.7). On whether SMEs had a strong tendency to commit resources for high risk, high return projects, the results showed that respondents had varying opinions as indicated by mean response of 3. These implied that some SMEs agreed (45.5%) that they committed resources for high risk, high return projects while other disagreed (19.3%).

The study findings further revealed that SMEs owner and managers handled big losses and disappointments with varying level of difficulty as indicated by 38.9% who agreed that they handled losses and disappointment with little difficulty and 23.8% who disagreed with the statement. The findings also showed that slightly below 50% disagreed that employees are encouraged to experiment and take business risks without reference to the manager/owner. These findings implied that in a large proportion of the SMEs in the study population employees were not allowed to engage in risk taking activities without the consent of the SMEs owner/managers.

The findings also showed that respondents were also divided on whether they would promote someone with unlimited potential but limited experience to a key position over someone with limited potential but more experience, with 25.6% agreeing, 33.4%

disagreeing and 32.5% remained neutral in regard to the statements. This was also an indication of risk averseness among the SMEs in Kenya.

The study sought to find out whether SMEs owners/managers never shy away from taking up an opportunity due to the risk of failure. The results showed that 37.6% of the respondents agreed, 25.4% disagreed while 26.9% remained neutral. The finding shows that 60% agreed that they always tend to venture into new business areas products or services (see Table 4.10). The finding finally showed that the respondents were divided as shown by mean response of 3 on whether taking business risks makes good sense only in the absence of acceptable alternatives with 35.0% and 10.0% agreeing and strongly agreeing respectively while 24.0% and 8.2% disagreeing and strongly disagreeing respectively.

These findings implied that SMEs owner/managers in Kenya had different levels of propensity to take risks. SMEs owner/managers that were found to be sensitive to risk avoided risk taking activities while those less risk averse engaged in the risk taking activities. However, majority of the SMEs were found to be risk averse which explains why there was high mortality among SMEs in Kenya as reported by KNBS, (2016).

Propensity to take risk among small and medium size enterprise is attributed to high performance. This position has been supported by previous study which include Subrahmanya (2011), Kreiser and Davis, (2010), Kimandu (2016) who argued that willingness to engage in relatively high levels of risk taking behavior enables SMEs to seize profitable opportunities in the face of uncertainty which leads to long term profitability. They further argued that risk taking is needed for a business to succeed and grow and how entrepreneurs perceive and manage risks in their environment has strong relationship with performance of entrepreneurial firms.

**Table 4.10: Descriptive Results on Propensity to Take Risk**

	<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>	<b>Mean</b>	<b>Std Dev</b>
We sometimes seek financial credit as a means of funding our business activities	1.8%	9.9%	10.7%	51.3%	26.3%	4	0.96
We always have a strong tendency to commit resources for high risk, high return projects	0.9%	19.3%	25.3%	45.5%	9.0%	3	0.93
I can handle big losses and disappointments with little difficulty	2.7%	23.8%	27.1%	38.9%	7.5%	3	0.99
Employees are encouraged to experiment and take business risks without reference to the manager/owner	9.0%	40.7%	22.6%	24.1%	3.6%	3	1.04
I would promote someone with unlimited potential but limited experience to a key position over someone with limited potential but more experience	3.6%	33.4%	32.5%	25.6%	4.8%	3	0.96
We never shy away from taking up an opportunity due to the risk of failure	0.9%	25.4%	26.9%	37.6%	9.3%	3	0.98
We always tend to venture into new business areas products or services	3.0%	10.7%	16.1%	60.0%	10.1%	4	0.91
Taking business risks makes good sense only in the absence of acceptable alternatives	8.2%	24.0%	22.8%	35.0%	10.0%	3	1.14

SD (1)- Strongly Disagree D (2)-Disagree, N (3)-Neutral, A (4)-Agree SA(5)-Strongly Agree

#### **4.5.4 Awareness about SME Support Services among Small and Medium Enterprises**

The study also sought to assess the effect of awareness about small and medium enterprises support services on the performance of small and medium enterprises in Kenya. The study sought to establish the level of SME awareness on credit support services, market access support services and government support services and how they affected the performance of small and medium enterprises in Kenya. Percentages mean and standard deviation were used in this section. The results indicate that 68.4% and 19.9% of the SMEs owner/managers agreed and strongly agreed respectively that they were aware about credit options available for their businesses. Similarly, 53.1% and 29.9% agreed and strongly agreed respectively that they had used some debt/loans to fund their business. The results on these two statements implied SMEs were aware on credit support services available to finance their enterprise (see Table 4.11).

The study further sought to find out whether SMEs owners or managers were aware of all the markets available in all counties locally for their products/services. The finding showed that 41.5% agreed, 25.1% disagreed while 29.9% were neutral. These findings implied that some SMEs owners and managers were aware of existing markets for their products and services while others lacked that awareness. The mean of 4 showed that majority of the SMEs were aware where to find raw materials and supplies for their products and service both locally and internationally (see Table 4.11).

On the government support services, the study sought to find out whether SMEs had necessary information on government institutions that support businesses in our industry, the finding showed that 39.1% agreed, 24.2% disagreed while 28.7% were neutral. The statement on whether SMEs were aware about all the licensing requirements for their business and whether they knew the taxation requirements for their business had mean responses of 4 which implied that SMEs owners were aware on licensing requirements and taxations requirements for their businesses. The study further sought to establish whether SMEs were members of any association that supported their industry. The findings show that 48.7% disagreed while 25.4% agreed.



These findings implied that majority of the SMEs were not members of any association and lacked awareness on the association support.

These findings on average implied that majority of the SMEs in Kenya had high awareness on credit support services, market information awareness and also understood government support services. Awareness about SME support services were found to have a lot of benefits to SMEs which helped in accelerating their growth because of accessibility to support needed from various stakeholders. This finding disagreed with the findings of Odhiambo (2013) who argue that many firms in the African continent function in an environment with poor information due to lack of adequate business support services and the poor information technological infrastructures.

The study finding supports Kinyua (2014) who found that SMEs enjoy easy access to business information services due to improvement in technology. Cant, Brink and Ligthelm (2003) similarly argue that support services are shown to be an important factor driving the performance of firms, with the number of connections and networks positively related to new firm performance.

**Table 4.11: Descriptive Results on Awareness about SME Support Services**

	<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>	<b>Mean</b>	<b>Std Dev</b>
We are aware about credit options available for our business	0.9%	9.0%	1.8%	68.4%	19.9%	4	0.81
We have used some debt/loans to fund our business	2.7%	9.9%	4.5%	53.1%	29.9%	4	0.99
We know all the markets available in all counties locally for our products/services	0.9%	25.1%	29.9%	41.5%	2.7%	3	0.88
We know where to find raw materials and supplies for our products and service both locally and internationally.	0.9%	13.4%	27.8%	49.9%	8.1%	4	0.86
We have necessary information on government institutions that support businesses in our industry	0.0%	24.2%	28.7%	39.1%	8.1%	3	0.93
We are aware about all the licensing requirements for our business	0.0%	9.9%	5.4%	73.7%	11.0%	4	0.73
We know the taxation requirements on our business	0.0%	19.7%	2.7%	63.0%	14.6%	4	0.94
We are a member of the association that supports our industry	9.0%	48.7%	9.9%	25.4%	7.2%	3	1.15

SD (1)- Strongly Disagree D (2)-Disagree, N (3)-Neutral, A (4)-Agree SA(5)- Strongly Agree

The study asked the respondent to indicate some of the external support service they had received for the last five. The most frequently mentioned support services include loans from commercial banks, credit from suppliers, borrowing from family and relatives.

#### **4.5.5 Analysis of Self-Efficacy among Small and Medium Enterprises**

The final objective of the study examined the effect of self-efficacy on the performance of small and medium enterprises in Kenya. Self-efficacy was measured using coping with unexpected challenges, defining core purpose and developing new products and markets. In this section descriptive statistics which include percentages, mean and standard deviation were used (see Table 4.12). The study sought to find out the opinion of SMEs owner/managers whether their business would survive turbulent business environment e.g. political instability. The finding showed that 37.9% agreed, 26.0% disagreed while 30.7% were not sure. This finding implied that not all SMEs in Kenya would survive turbulent business environment. The findings further showed that 50.4% agreed that they were carrying out their business just for profits while 29.6% disagreed (see Table 4.12).

The mean response of 4 further indicated that majority of the SMEs agreed and strongly agreed that they had worked productively under continuous stress, pressure and conflict which implied high self-efficacy among majority of the SMEs in the study population. On whether, SMEs considered themselves better and more unique than their competitors, 51.3% of the agreed while 10.7% and 30.7% disagreed and were neutral respectively. The finding further showed that 53.4% of the respondent agreed that their business could compete globally which also showed high level of self-efficacy among SMEs interviewed (see Table 4.12).

On whether all employees knew vision, mission, core values and objectives of the business, the finding showed that 34.6% agreed, 37.0% disagreed while 19.9% were not sure and stayed neutral. The finding further shows that respondent had varying opinions on whether their business had gone through unexpected changes in the last 5 years as shown by 26.0% who disagreed and 45.1% who agreed. The findings implied that some SMEs had gone through unexpected changes in the last 5 years while other

had not. The study finally sought to find out whether SMEs had discovered new ways to improve existing products and or introduced new products. The statement had a mean score of 4 which implied that majority of the respondents agreed (see Table 4.12). The study findings generally established that SMEs owners/managers had varying level of self-efficacy. Some respondents believed in the ability of their business to maneuver difficulties encountered along the way and that their business were positioned for greater opportunity which showed high level of self-efficacy while others showed low level of self-efficacy. Entrepreneur self-efficacy is the foundation on which other aspects such risk taking, innovativeness and creativity are built hence it is a good predictor of high business performance.

The proponents of this position include Mohd *et al.* (2014) who asserted that self-efficacy plays an important role in influencing a person to achieve their goals. Also added that self-efficacy helps people to understand why some business still fail although they employ the sufficient capabilities Shane, Locke and Collins (2003) also noted that a person still could not perform if they don't have the confidence that their business will be successful although they have all other relevant capabilities. Oyugi (2016) on the hand avers that that self-efficacy will make an entrepreneur even stronger even under a high uncertainty.

**Table 4.12: Descriptive Results on Self-Efficacy**

	<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>	<b>Mean</b>	<b>Std Dev</b>
Our business would survive turbulent business environment e.g. political instability	3.6%	26.0%	30.7%	37.9%	1.8%	3	0.92
We are carrying out our business just for profits	2.7%	29.6%	13.7%	50.4%	3.6%	3	1.00
In the past, we have worked productively under continuous stress, pressure and conflict	0.9%	20.6%	18.8%	45.1%	14.6%	4	1.01
We consider ourselves better and more unique than our competitors	1.8%	10.7%	30.7%	51.3%	5.4%	3	0.83
We believe we can compete globally	0.9%	26.0%	10.7%	53.4%	9.0%	3	1.00
All staff know our vision, mission, core values and objectives	1.8%	37.0%	19.9%	34.6%	6.6%	3	1.03
Our business has gone through unexpected changes in the last 5 years	0.9%	26.0%	17.0%	45.1%	11.0%	3	1.02
We have discovered new ways to improve existing products and or introduced new products	1.8%	19.0%	19.3%	41.6%	18.4%	4	1.05

SD (1)- Strongly Disagree D (2)-Disagree, N (3)-Neutral, A (4)-Agree SA(5)-Strongly Agree

The study probed the respondent on some of the challenges they faced for the last five years and how they overcame them. Majority of the SMEs owner and managers interviewed mentioned; insufficient finances, theft by employees and stiff competition.

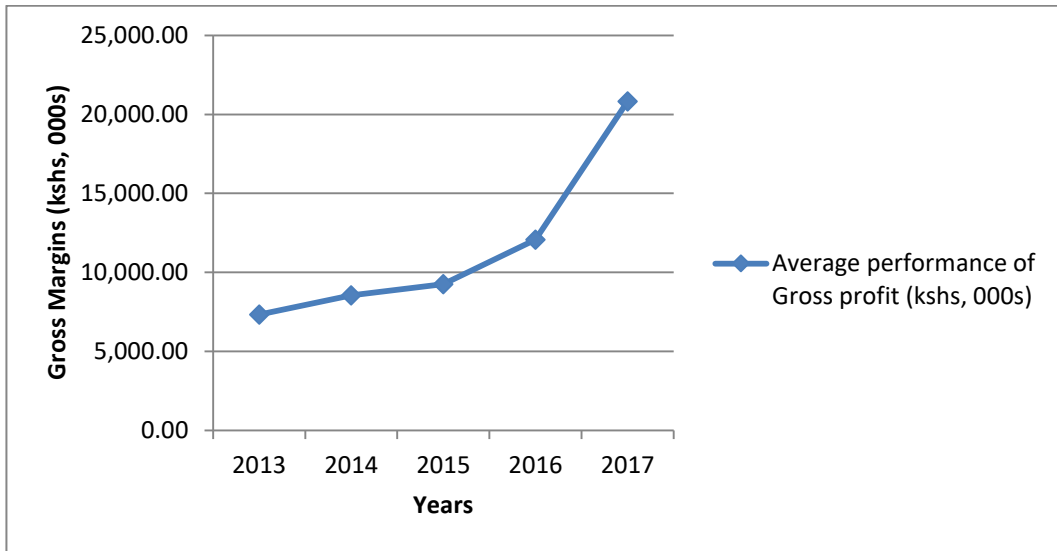
#### **4.5.6 Analysis of Performance of Small and Medium Enterprises**

In this section, analysis of the performance of small and medium size enterprise was conducted. The descriptive statistics as presented in Table 4.13, show that in terms of gross profits majority of the SMEs interviewed average had gross profits of Kshs 7,340,000. The SMEs with the least gross profits had Kshs 10,000 as indicated by the minimum value while highest performing had Kshs 800,000,000 as indicated by the maximum value across the study period. These findings confirmed that some of the SMEs recorded high performance in terms of gross profits while other recorded poor performance. This study sought to test whether discrepancies in gross profits as shown by high standard deviation was attributed to creativity, innovation, propensity to take risk, awareness about SME support services and self-efficacy.

Similarly, the performance in terms of annual sales for the SMEs varied with some firms recording high performance as indicated by maximum value of Kshs 800,000,000 while others recorded poor performance across the study period as indicated by minimum values of Kshs 1,000 (see Table 4.13 and Figure 1). The largest SMEs had 100 employees while the smallest had 1 employee as figures in Table 4.13 show.

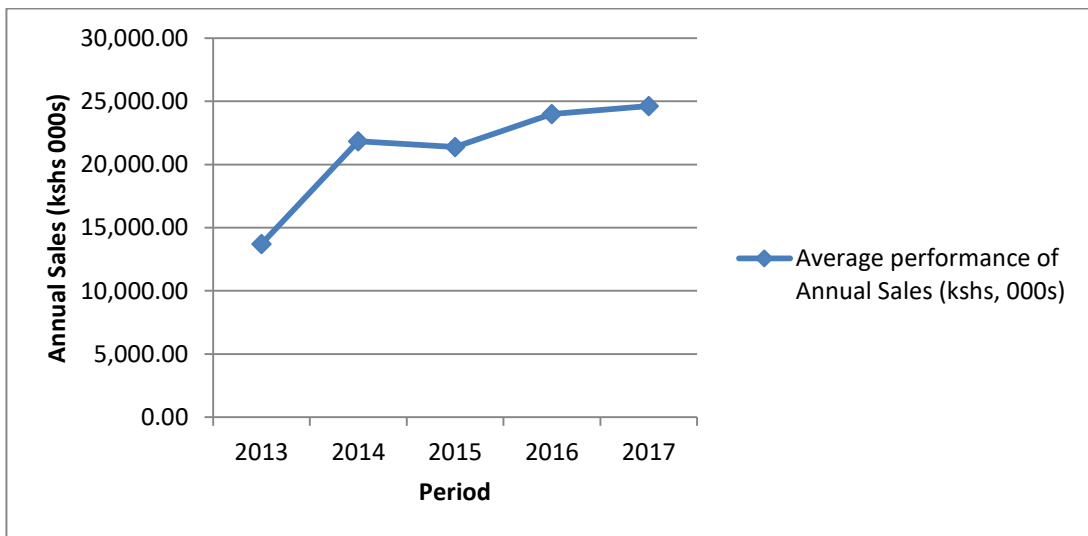
**Table 4.13: Descriptive Statistics of Performance of Small and Medium Enterprises**

	Years	Minimum	Maximum	Mean	Std. Dev
Gross profit (kshs, 000s)	2013	20	160,000.00	7,340.82	26,630.72
	2014	45	200,000.00	8,549.31	30,953.21
	2015	50	220,000.00	9,267.02	35,209.55
	2016	10	300,000.00	12,068.18	45,159.96
	2017	26	800,000.00	20,813.42	92,680.87
Annual Sales (kshs, 000s)	2013	40	300,000.00	13,713.27	50,311.34
	2014	50	550,000.00	21,826.63	83,238.83
	2015	50	650,000.00	21,386.35	85,133.28
	2016	1	700,000.00	23,988.71	92,445.60
	2017	1	800,000.00	24,615.53	99,760.77
Number of Employees	2013	1	50	10.55	9.7
	2014	1	66	5.85	10.65
	2015	1	81	6.86	13.346
	2016	1	100	7.22	13.64
	2017	1	98	7.71	14.249



**Figure 4.1: Average Performance of SMEs Gross profit (Kshs, 000s)**

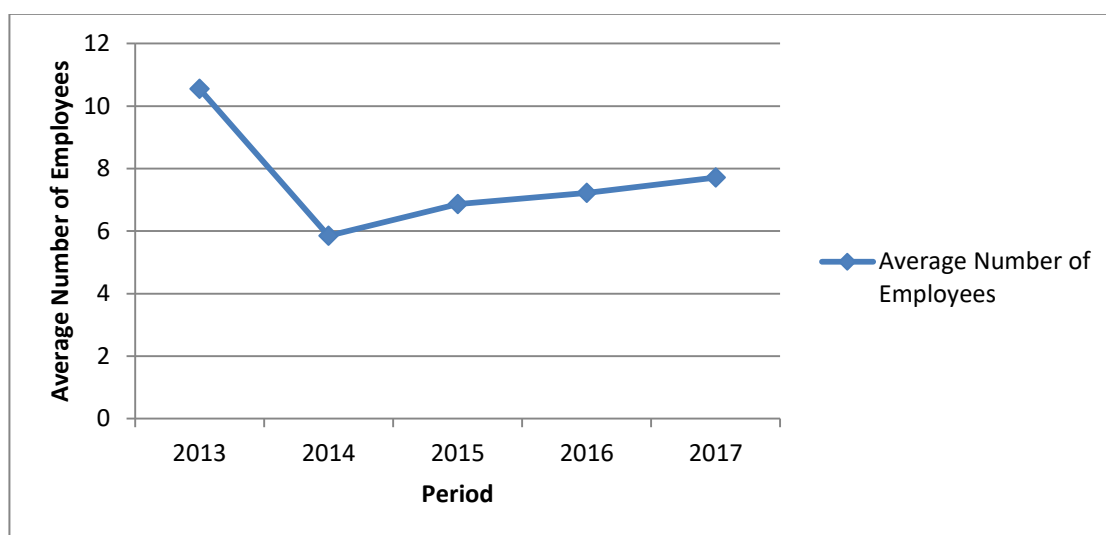
On average SMEs performance in terms of gross profits had increasing trend between 2013 and 2017. This finding agrees with Newberry (2006) who found that small and medium enterprises in emerging economies are becoming more competitive and increasingly crucial for economic growth (see Figure 4.1).



**Figure 4.2: Average Performance of SMEs Annual Sales (Kshs, 000s)**



On average SMEs performance in terms of annual sales had increasing trend between 2013 and 2017 (see Figure 4.2). This finding agrees with Newberry (2006) who found that small and medium enterprises in emerging economies are becoming more competitive and increasingly crucial for economic growth.



**Figure 4.3: Average Performance of Number of Employees**

The number of employees in SMEs dropped between 2013 and 2014 which could be attributed to hotly contested elections held in 2013 which may have affected performance of the SMEs (see Figure 4.3). The findings also implied that SMEs are sensitive to political instability which negatively affects the performance of SMEs. However, the subsequent years there was a rise in the number of people employed by SMEs in Kenya. This finding support the findings of KNBS (2016), that reported that SME sector contributed over 50 percent of new jobs created yearly.

The study asked the respondent to indicate the extent to which creativity, innovation, taking risks, awareness about SME support services and our beliefs and positive attitude affected the performance of their SMEs, as results are presented in Table 4.11. On the effect of creativity 31.9% indicated moderate extent, 14% indicated high extent, 16.4% indicated very high extent while 20.1% and 17.6% indicated lowest and low

extent respectively. The findings implied that SMEs owner/manager and varying opinion on the effect of creativity on the business performance (see Table 4.14).

The finding also showed that respondents had varying opinions on the relationship between innovation, risk taking and awareness about SME support services and performance of SMEs as shown by mean response of 3 but overwhelming agreed as indicated by the mean of 4 that beliefs and positive attitude affected the performance of SMEs to the highest extent. The finding implied that respondents rated self-efficacy as the most important entrepreneurial mindsets that significantly affected the performance of SMEs in Kenya.

This finding further confirmed that entrepreneur self-efficacy is the foundation on which other aspects such risk taking, innovativeness and creativity are built hence it is a good predictor of high business performance. These finding agreed with Mohd *et al.* (2014) who asserted that self-efficacy plays an important role in influencing a person to achieve their goals. Also added that self-efficacy helps people to understand why some business still fail although they employ the sufficient capabilities Shane, Locke and Collins (2003) also noted that a person still could not perform if they don't have the confidence that their business will be successful although they have all other relevant capabilities. Oyugi (2016) on the hand avers that that self-efficacy will make an entrepreneur even stronger even under a high uncertainty.

**Table 4.14: Descriptive Results of the independent variables on Performance of Small and Medium Enterprises**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Mean</b>	<b>Std Dev.</b>
Creativity	20.1%	17.6%	31.9%	14.0%	16.4%	3	1.33
Innovation	19.6%	29.4%	28.8%	14.7%	7.4%	3	1.17
Taking risks	22.1%	26.1%	23.0%	19.6%	9.2%	3	1.27
Awareness about SME support services	28.1%	34.7%	7.5%	21.2%	8.4%	2	1.32
Our beliefs and positive attitude	9.1%	10.9%	12.8%	30.7%	36.5%	4	1.30

**1=Lowest Extent, 2-Low Extent, 3-Moderate, 4-High Extent, 5-Highest Extent**

The respondents were also asked on some of the reasons that contributed to the performance of SMEs. The reasons mentioned by majority of the respondent include aggressive marketing, location of the business and demand availability.

#### 4.6 Diagnostic Tests

This section presents the findings on the test of regression assumptions conducted by the study before conducting inferential statistics. The purpose of conducting the test of assumptions is to ensure that the data was adequate for conducting regression analysis to avoid ending up with spurious regression results. The tests conducted include linearity test, test for normality, multicollinearity, homogeneity and test for autocorrelation.

##### 4.6.1 Linearity

To test for linearity, the study adopted two methods which include analysis of variance (ANOVA) table for the linear and nonlinear components of any pair of variables where if the F significance value for the nonlinear component is below the critical value (ex., <.05), then there is significant nonlinearity (David, 2012). The study also used scatter plot to test for linearity. Since the p-value was less than 0.05, the study rejected the null hypothesis of significant nonlinearity and concluded that variable adhered to linearity assumptions (see Table 4.15).

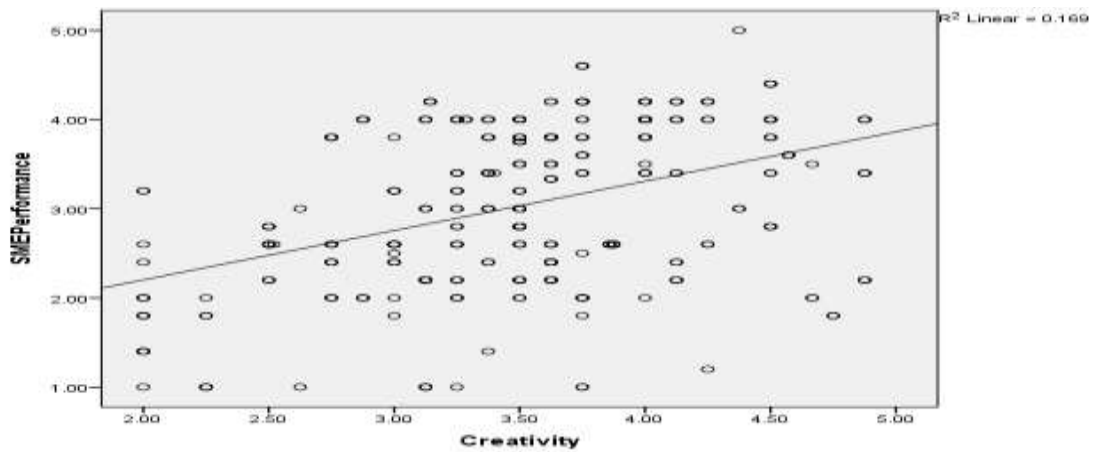
**Table 4.15: ANOVA Results for Linearity Testing**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	84.050	5	16.810	31.823	.000 <sup>b</sup>
	Residual	173.787	329	.528		
	Total	257.838	334			

a. Dependent Variable: Performance of SMEs

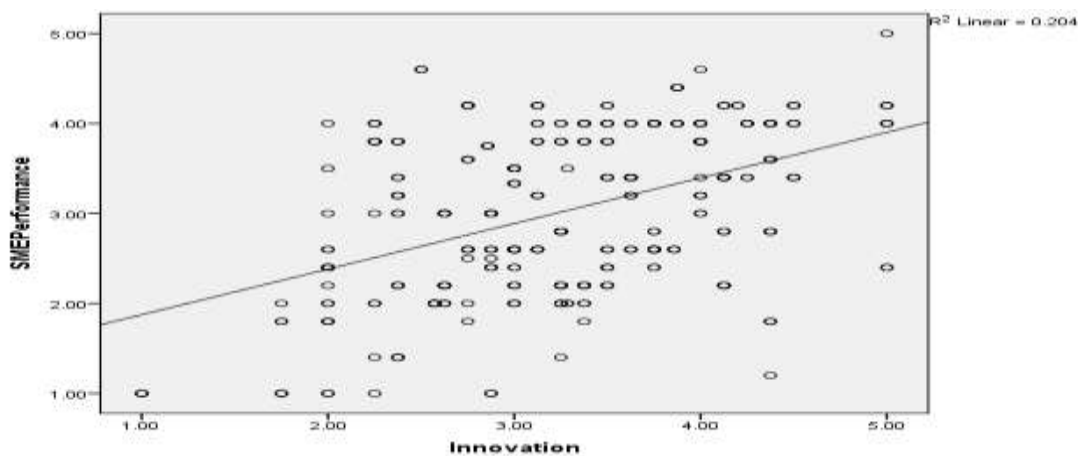
b. Predictors: (Constant), Awareness about SME Support Services, Self-Efficacy, Creativity, Innovation, Propensity To Take Risk

To test the linearity between independent variables and dependent variables the study adopted the scatter plots. Linearity in this test was indicated by upward or downward slopes meaning that linear relationship between that independent variables and dependent variable.



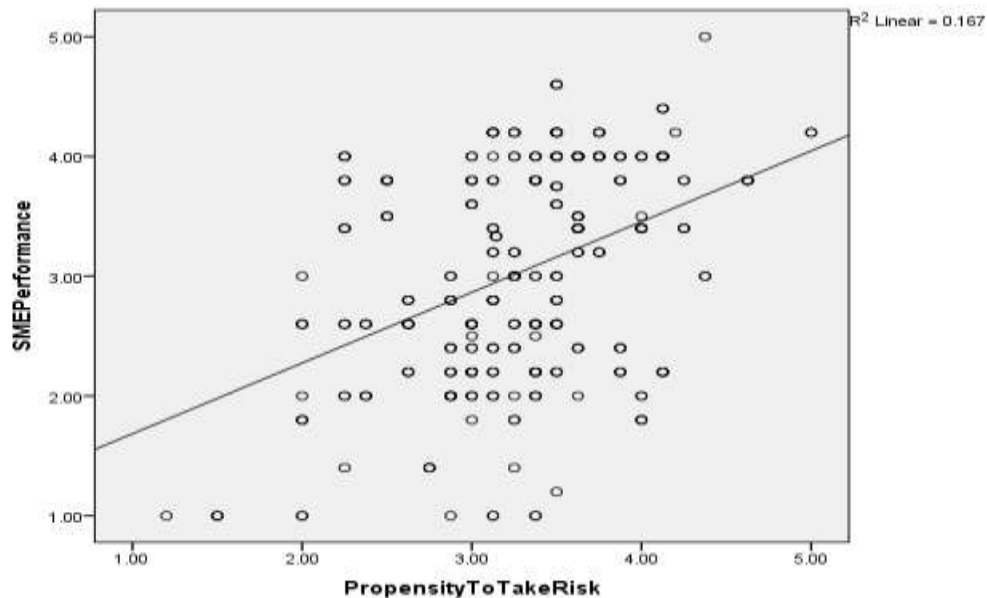
**Figure 4.4: Creativity and Performance of SME’s Scatter Plot**

Creativity and Performance of SMEs had a positive linear relationship and therefore adhered to linearity assumptions (see Figure 4.4). The findings therefore confirmed the linear analysis could be conducted to test the nature and significance of the relationship between creativity and performance of SMEs in Kenya.



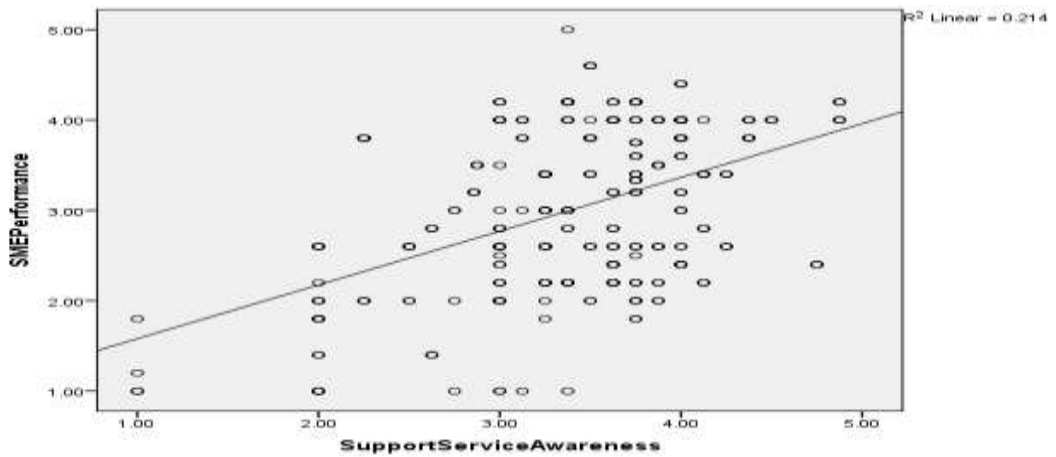
**Figure 4.5: Innovation and Performance of SME’s Scatter Plot**

Innovation and Performance of SMEs have a positive linear relationship as shown by upward sloping curve and therefore adhered to linearity assumptions (see Figure 4.5). The findings therefore confirmed the linear analysis could be conducted to test the nature and significance of the relationship between Innovation and performance of SMEs in Kenya.



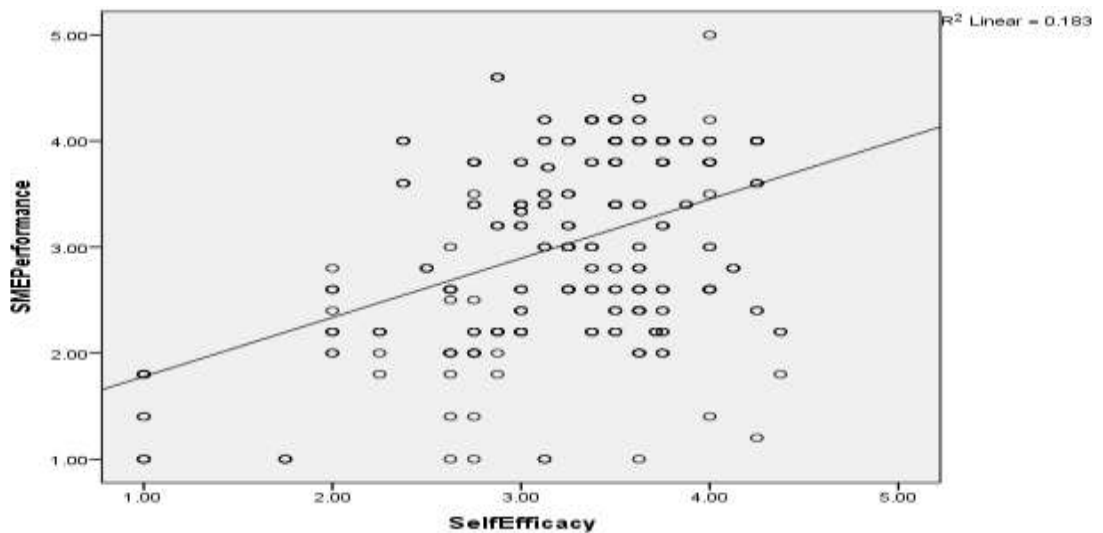
**Figure 4.6: Propensity to Take Risk and Performance of SME's Scatter Plot**

The finding further shows that propensity to take risk and Performance of SMEs have a positive linear relationship as shown by upward sloping curve and therefore adhered to linearity assumptions (see Figure 4.6). Similarly, the findings therefore confirmed the linear analysis could be conducted to test the nature and significance of the relationship between propensity to take risk and performance of SMEs in Kenya.



**Figure 4.7: Awareness about SME Support Services and Performance of SME’s Scatter Plot**

The results further show that awareness about SME support services and Performance of SMEs have a positive linear relationship as shown by upward sloping curve and therefore adhered to linearity assumptions (see Figure 4.7). The findings therefore confirmed the linear analysis could be conducted to test the nature and significance of the relationship between awareness about SME support services and performance of SMEs in Kenya.



**Figure 4.8: Self-Efficacy and Performance of SME’s Scatter Plot**

Finally, self-efficacy and Performance of SMEs have a positive linear relationship as shown by upward sloping curve and therefore adhered to linearity assumptions (see Figure 4.8). The findings further confirmed the linear analysis could be conducted to test the nature and significance of the relationship between self-efficacy and performance of SMEs in Kenya.

#### 4.6.2 Homoscedasticity

The second test conducted by the study was test for homoscedasticity which sought to test the variance of the errors term in the regression analysis. The presence of heteroscedasticity was tested using using Levene’s test of homogeneity of variances. If the test is not significant (calculated probability value  $\geq .05$ ), the two variances are not significantly different and thus approximately equal (Gastwirth, Gel & Miao, 2009). The null hypothesis was that the error term was homoscedastic and the alternative hypothesis was that the error term was heteroscedastic. If the null hypothesis was rejected then it implied that there was presence of heteroscedasticity (see Table 4.16).

**Table 4.16: Test of Homogeneity of Variances Results**

Test of Homogeneity of Variances				
Variable	Levene Statistic	df1	df2	Sig.
Creativity	0.246	1	333	0.620
Innovation	0.791	1	333	0.374
Propensity To Take Risk	0.211	1	333	0.647
Self-Efficacy	0.162	1	333	0.688
Performance of SMEs	2.008	1	333	0.157
Awareness about SME Support Services	2.696	1	333	0.121

Since the test–statistics were small with the p-values were greater than 0.05, the null hypothesis was not rejected and hence the study concluded that there was homoscedasticity in the data (that is, the data is not heterogeneous in variance), which satisfies the assumption of regression (see Table 4.16).

### 4.6.3 Multicollinearity

Multicollinearity is a statistical phenomenon in which there exists a perfect or exact relationship between the predictor variables making it difficult to come up with reliable estimates of their individual coefficients (Joshi, Kulkarni & Deshpande, 2012). A VIF between 5 and 10 indicates high correlation that may be problematic and that would require the researcher to remove highly correlated predictors from the model. The study adopted VIF to test (see Table 4.17).

**Table 4.17: Multicollinearity Test Results**

	Collinearity Statistics	
	Tolerance	VIF
Creativity	0.591	1.693
Innovation	0.51	1.963
Propensity To Take Risk	0.488	2.051
Self-Efficacy	0.697	1.435
Awareness about SME Support Services	0.608	1.644

a Dependent Variable: Performance of SMEs

The findings revealed that creativity had a VIF of 1.693, Innovation had a VIF of 1.963, propensity to take risk had a VIF of 2.051, self-efficacy had a VIF of 1.435, and Awareness about SME Support Services had a VIF of 1.644. These results indicated that the VIF values of the variables were within the threshold of 5. This indicated that there was no significant threat of multicollinearity and therefore, the study could include all the variables in linear regression analysis because there was no independent variable with a strong linear relationship with any other independent variable(s) (see Table 4.17).

According to Poole and O'Farrell (1971) if multicollinearity assumption is not satisfied and the independent variables are thus multicollinearity, the result is that the individual regression Coefficients for each variable are not identifiable: in fact, the closer the linear correlation between the independent variables, the less the certainty with which these coefficients may be identified. This imprecision in the estimate of the regression coefficients is generally revealed by the occurrence of high standard errors.



#### 4.6.4 Test for Autocorrelation

Durbin-Watson test was used to test for the presence of autocorrelation between variables. Gujarati (2003) observed that Durbin-Watson statistic ranges from 0 to 4. A value near 0 indicates positive autocorrelation while a value close to 4 indicates negative autocorrelation. A value ranging from 1.5 to 2.5 indicates that there is no presence of autocorrelation. The study revealed a Durbin-Watson =1.571 which indicated that there was no autocorrelation (see Table 4.18).

**Table 4.18: Test of Autocorrelation**

Model	Durbin-Watson
1	1.571

a Predictors: (Constant), Awareness about SME Support Services, Self-Efficacy, Creativity, Innovation, Propensity To Take Risk  
b Dependent Variable: Performance of SMEs

#### 4.6.5 Normality

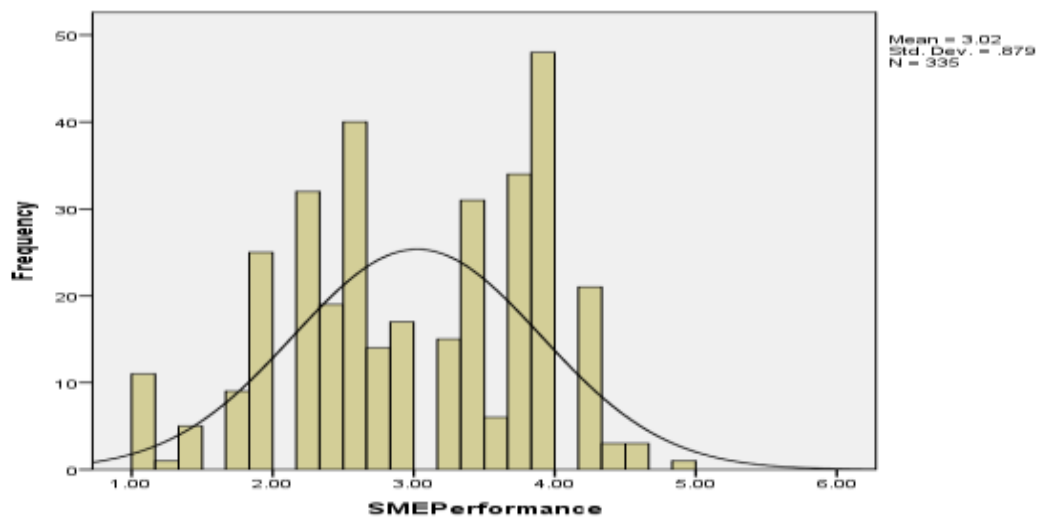
According to Ghasemi and Zahediasi (2012) the variables are supposed to be roughly normally distributed especially if the results are to be generalized beyond the sample. The study used Kolmogorov- Simonov and Shapiro test of normality test. Under the Shapiro test the null hypothesis H0: data is normally distributed while the Ha: Data is not normally distributed (see Table 4.19).

**Table 4.19: Test of Normality**

	Shapiro-Wilk		
	Statistic	df	Sig.
Creativity	0.977	335	0.563
Innovation	0.988	335	0.878
Propensity To Take Risk	0.983	335	0.873
Awareness about SME Support Services	0.945	335	0.345
Self-Efficacy	0.968	335	0.521
Performance of SMEs	0.991	335	0.896

a Lilliefors Significance Correction

Since the p-values for all the variables were greater than 0.05, the null hypotheses for all the variables were not rejected hence confirming that data was normally distributed and therefore fit for linear regression analysis. These findings are supported by Ghasemi and Zahediasi (2012) who argued that the variables are supposed to be roughly normally distributed especially if the results are to be generalized beyond the sample. The findings further confirmed that Performance of SMEs was normally distributed as shown by histogram shown (see Figure 4.9).



**Figure 4.9: Normality Testing for Performance of SMEs**

#### 4.6.5 Factor Analysis

The importance of conducting a factor analysis was to summarize the information contained in a number of original variables into a smaller number of factors without losing much information. According to Gorsuch (1990) the implication of this is that the newly created variables should represent the fundamental constructs, which underlie the original variables factor. Loadings are an indication of how much a factor explains a variable in factor analysis. Hair, Anderson, Tatham and Black (1998) and Tabachnick and Fidell (2007) note that only factors with factor loading above 0.4 should be retained for further study (see Table 20).

**Table 4.20: Factor Analysis for Creativity Indicators**

<b>Creativity Indicators</b>	<b>Factor Loadings</b>
Our business introduce new/improved products or services every year	0.641
We always upgrade our equipment, machinery or technology	0.555
We have continuously automated our business processes e.g. accounts, Human resources, procurement etc.	0.607
We have invested in creative ideas of marketing our products/services through social media e.g. Facebook, emails, Instagram etc.	0.529
Our creativity has enabled us to open new branches of our business.	0.584
Using technology to acquire new customers and retain the existing customers had impact on our business growth	0.726
Maintaining the same customers requires a lot of creativity from SMEs owner	0.716
Holding meetings with the staff members to discuss new ideas stirs our business creativity	0.668

**Extraction Method: Principal Component Analysis**

The study results show that indicators of creativity had factors loadings that range between 0.529 and 0.726. These factor loadings were above the threshold of 0.4 adopted by the study. The finding confirmed that all the creativity indicator loadings were significant. The finding also showed high construct validity among dimensions of creativity (see Table 4.20).

**Table 4.21: Factor Analysis for Innovation Indicators**

<b>Innovation Indicators</b>	<b>Factor loadings</b>
We have introduced new products/services or improvements on existing products/services in the last 5 years	0.633
We have introduced new equipment, machinery or technology in the last 5 years	0.641
Our business processes are automated e.g. accounts, Human resources, procurement etc	0.577
We market our products/services through social media e.g. Facebook, emails, Instagram etc	0.662
We have opened new branches of our business in the last 5 years	0.473
Our customer numbers have grown in the last 1 year	0.600
We provide unique products/ services as compared to our competitors	0.577
We use technology to acquire new customers and retain the existing customers	0.774

**Extraction Method: Principal Component Analysis**

The finding shows that dimension of innovation had factors loadings that range between 0.473 and 0.774. These factor loadings were above the threshold of 0.4 adopted by the study. The finding confirmed that all innovation indicators were significant. The finding also showed high construct validity among dimensions of innovation (see Table 4.21).

**Table 4.22: Factor Analysis for Propensity to Take Risk Indicators**

<b>Propensity to Take Risk</b>	<b>Factor Loadings</b>
We sometimes seek financial credit as a means of funding our business activities	0.559
We always have a strong tendency to commit resources for high risk, high return projects	0.704
I can handle big losses and disappointments with little difficulty	0.646
Employees are encouraged to experiment and take business risks without reference to the manager/owner	0.766
I would promote someone with unlimited potential but limited experience to a key position over someone with limited potential but more experience	0.754
We never shy away from taking up an opportunity due to the risk of failure	0.591
We always tend to venture into new business areas products or services	0.555
Taking business risks makes good sense only in the absence of acceptable alternatives	0.954

**Extraction Method: Principal Component Analysis**

Results show that propensity to take risk indicators had factors loadings that range between 0.555 and 0.954. These factor loadings were above the threshold of 0.4 adopted by the study. The findings confirmed that all the propensity to take risks indicator loadings were significant. The findings further showed high construct validity among propensity to take risk indicators (see Table 22).

**Table 4.23: Factor Analysis for Awareness about SME Support Service Indicators**

<b>Awareness about SME Support Services</b>	<b>Factor Loadings</b>
We are aware about credit options available for our business	0.492
We have used some debt/loans to fund our business	0.704
We know all the markets available in all counties locally for our products/services	0.573
We know where to find raw materials and supplies for our products and service both locally and internationally.	0.633
We have necessary information on government institutions that support businesses in our industry	0.549
We are aware about all the licensing requirements for our business	0.601
We know the taxation requirements on our business	0.682
We are a member of the association that supports our industry	0.509

**Extraction Method: Principal Component Analysis**

The finding shows that dimensions of Awareness about SME support services had factors loadings that range between 0.492 and 0.704. These factor loadings were above the threshold of 0.4 adopted by the study (see Table 23). The findings confirmed that all the awareness about SME support services indicator loadings were significant. The findings further showed high construct validity among dimensions of Awareness about SME support services.

**Table 4.24: Factor Analysis for Self-Efficacy Indicators**

<b>Self-Efficacy</b>	<b>Factor Loadings</b>
Our business would survive turbulent business environment e.g. political instability	0.672
We are carrying out our business just for profits	0.716
In the past, we have worked productively under continuous stress, pressure and conflict	0.599
We consider ourselves better and more unique than our competitors	0.572
We believe we can compete globally	0.529
All staff know our vision, mission, core values and objectives	0.617
Our business has gone through unexpected changes in the last 5 years	0.586
We have discovered new ways to improve existing products and or introduced new products	0.639

**Extraction Method: Principal Component Analysis**

The finding shows that dimensions of self-efficacy had factors loadings that range between 0.529 and 0.716. These factor loadings were above the threshold of 0.4 adopted by the study. The findings confirmed that all the self-efficacy indicator loadings were significant. The findings further showed high construct validity among dimensions of self-efficacy (see Table 4.24).

#### **4.7 Bi-variate Linear Relationship between Study Variables**

This section presents the finding of bivariate linear relationship between study variables. The study adopted correlation analysis to test the association between independent variables and dependent variables. The importance of Pearson correlation analysis is that it gives the strength of the association between two variables and takes on values ranging -1 and +1. The strength of the correlation increases as Pearson correlation values approach 1.

According to the results, the Pearson correlation value for creativity and Performance of SMEs was  $r=0.411$ ,  $p=0.000$  (see Table 4.25). These findings implied that creativity had positive correlation with Performance of SMEs in Kenya. These findings implied

that increasing creativity would result to increase or rise on Performance of SMEs. The finding further established that creativity is a requisite of a high performing business, therefore SMEs that are creative stands a chance of achieving high performance in terms of improved profitability and business growth. The study findings support those of Weerasiri, Zhengang, and Perera (2012) who posited that creativity is the starting point for innovation and it is marked by the ability to create, bring into existence, to invent into a new form, to produce through imaginative skill, to make to bring into existence something new. The study results also support the finding of Ranga, Murali and Swathi (2013) who contributed by asserting that an entrepreneur creativity is largely concerned with coming up with new products, services, process or markets, the ability to bring something new into the market to ensure business growth.

Pearson correlation analysis between innovation and Performance of SMEs revealed  $r=0.452$ ,  $p=0.000$ , which also implied that innovation had positive correlation with Performance of SMEs in Kenya (see Table 4.25). These findings implied that increasing innovation activities would result to increase in Performance of SMEs in Kenya. The study finding supports the finding of Weerasiri, Zhengang and Perera (2012) who also posited that SMEs becomes very competitive in an emerging market when they give importance to innovative activities that build their reputation in the market environment. Sandvik and Sandvik (2003) similarly argued that innovation is one of the most vital competitive weapons and generally seen as a business's core value capability. Jones and Linderman, (2014) also found that product/service innovation can be an important source of competitive advantage that leads to improved performance.

Pearson correlation analysis between propensity to take risk and Performance of SMEs revealed  $r=0.409$ ,  $p=0.000$ , which also implied that propensity to take risk had positive correlation with Performance of SMEs in Kenya (see Table 4.25). These findings implied that increasing propensity to take risks would result to increase in Performance of SMEs in Kenya. This view is supported by Subrahmanya (2011) who argued that willingness to engage in relatively high levels of risk taking behavior enables SMEs to seize profitable opportunities in the face of uncertainty which leads to long term profitability. Kimandu (2016) also hypothesized that risk taking is necessary for the

success, development and growth of a business and how entrepreneurs recognize and manage risks in their environment. Kreiser and Davis, (2010) also agreed that suggested that risk-taking has strong relationship with performance of entrepreneurial firms. Lack of risk taking or risk averse is risky in itself since it limits small business from exploiting more lucrative business opportunities and maybe a beginning of the business failure.

The finding also shows that the Awareness about SME support services ( $r=0.427$ ,  $p=0.000$ ) and self-efficacy ( $r=0.463$ ,  $p=0.000$ ) had positive correlation with Performance of SMEs in Kenya (see Table 4.25). These findings implied that increasing Awareness about SME support services and having self-efficacy would result to increase in Performance of SMEs. This finding disagreed with the findings of Odhiambo (2013) who argue that many firms in Africa operate in an information-poor environment due to lack of adequate business support services and the poor information technological infrastructures.

The proponents of this position include Mohd *et al.* (2014) who asserted that self-efficacy plays an important role in influencing a person to achieve their goals. Also added that self-efficacy helps people to understand why some business still fail although they employ the sufficient capabilities Shane, Locke and Collins (2003) also noted that a person still could not perform if they don't have the confidence that their business will be successful although they have all other relevant capabilities. Oyugi (2016) on the hand avers that that self-efficacy will make an entrepreneur even stronger even under a high uncertainty.



**Table 4.25: Correlation Matrix**

		X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>4</sub>	X <sub>5</sub>	Y
X <sub>1</sub>	Pearson Correlation	1					
X <sub>2</sub>	Pearson Correlation	.572**	1				
X <sub>3</sub>	Pearson Correlation	.545**	.602**	1			
X <sub>4</sub>	Pearson Correlation	.421**	.491**	.402**	1		
X <sub>5</sub>	Pearson Correlation	.429**	.461**	.586**	.417**	1	
Y	Pearson Correlation	.411**	.452**	.409**	.427**	.463**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	
	N	335	335	335	335	335	335

\*\* Correlation is significant at the 0.05 level (2-tailed).

X<sub>1</sub>-Creativity

X<sub>2</sub>-Innovation

X<sub>3</sub>-Propensity to take Risk

X<sub>4</sub>- Awareness about SME support services

X<sub>5</sub>-Self-Efficacy

Y- Performance of SMEs

#### 4.8 Effect of Independent Variables on Dependent Variable

In this section the study presents the findings on the multivariate linear regression model used to ascertain the effect of entrepreneurial mindsets on the performance of small and medium enterprises in Kenya. The findings on coefficient of determination, analysis of variance and regression coefficients are presented. The tests for hypotheses were also conducted based on the results for the multivariate regression model at the level of significance of 0.05.

##### 4.8.1 Model Summary and Coefficient of Determination

The findings of model summary revealed  $R=0.571$  and  $R\text{-square} = 0.326$  which implied that jointly awareness about SME support services, self-efficacy, creativity, innovation, propensity to take risk were strongly correlated with Performance of SMEs ( $R=0.571$ ). However,  $R\text{-square} = 0.326$  revealed that creativity, innovation, propensity to take risk, awareness about SME support services and self-efficacy accounted for 32.6% of the variation in Performance of SMEs. The finding therefore confirmed that entrepreneurial mindsets significantly influenced Performance of SMEs (see Table 4.26).

These findings support the findings of Mathisen and Arnulf (2014) who avers that people with entrepreneurial mindsets are often drawn to innovation, business opportunities and creation of new value. Likewise, McGrath and MacMillan (2000) further added that the zealous pursuit of profitable opportunities, being objective, having massive discipline and incubating a strong inner-drive, are also necessary characteristics of an entrepreneurial mindset. The characteristics of entrepreneurial mindset studied by the researcher include creativity, innovation, propensity to take risk, awareness about SME support services and self-efficacy.

**Table 4.26: Model Summary**

<b>Model</b>	<b>R</b>	<b>R-Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
1	.571a	0.326	0.316	0.72679

a Predictors: (Constant), Awareness about SME Support Services, Self-Efficacy, Creativity, Innovation, Propensity To Take Risk

#### **4.8.2 Summary of the ANOVA Results and Model Significance**

The study employed ANOVA to test the significance of the regression model used to ascertain the relationship between entrepreneurial mindsets and performance of small and medium size enterprises in Kenya. The null hypothesis tested was model is not statistically significant, therefore since  $f\text{-computed} = 31.823$  with  $p = 0.000 < 0.05$ . The F-critical (tabulated) according for f-distribution table was 2.241 hence  $f\text{-computed} 31.823 > f\text{-critical} 2.241$  the study rejected the null hypothesis and concluded that model used to link entrepreneurial mindsets to Performance of SMEs was significance meaning it had good fitness (see Table 4.27). At this point the null hypothesis that entrepreneurial mindsets do not significantly affect Performance of SMEs was rejected.

Similarly, the study finding supported the findings of Mathisen and Arnulf (2014) who avers that individuals with entrepreneurial mindsets are often drawn to business opportunities, innovation and new value creation. Similarly, McGrath and MacMillan (2000) further added that the passionate seeking of lucrative opportunities, being goal

orientated, having enormous discipline and incubating a strong inner-drive, are also essential characteristics of an entrepreneurial mindset characteristics include creativity, innovation, propensity to take risk, awareness about SME support services and self-efficacy.

**Table 4.27: ANOVA Results and Model Significance**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	84.050	5	16.810	31.823	.000 <sup>b</sup>
	Residual	173.787	329	.528		
	Total	257.838	334			

a. Dependent Variable: Performance of SMEs

b. Predictors: (Constant), Awareness about SME Support Services, Self-Efficacy, Creativity, Innovation, Propensity To Take Risk

#### 4.8.3 Regression Coefficients and Test for Hypotheses

The study used regression coefficients to test the effect of creativity, innovation, propensity to take risk; awareness about SME support services and self-efficacy on performance of small and medium size enterprises in Kenya. These findings were also the basis for hypotheses testing and optimization of the proposed multivariate regression model.

**Table 4.28: Regression Coefficients and Test for Hypotheses**

Variables	$\beta$	Std. Error	Beta	t	Sig.
(Constant)	0.119	0.268		0.446	0.656
Creativity	0.162	0.079	0.12	2.04	<b>0.042</b>
Innovation	0.184	0.071	0.164	2.582	<b>0.010</b>
Propensity to take Risk	0.042	0.094	0.029	0.451	0.652
Self-Efficacy	0.240	0.071	0.184	3.386	<b>0.001</b>
Awareness about SME support services	0.311	0.075	0.242	4.176	<b>0.000</b>

**a Dependent Variable: Performance of SMEs**

### **Model Optimization**

$$Y = 0.119 + 0.162X_1 + 0.184X_2 + 0.042X_3 + 0.240X_4 + 0.311X_5 + \varepsilon$$

$X_1$  = Entrepreneur's Creativity Index

$X_2$  = Entrepreneur's Innovativeness Index

$X_3$  = Entrepreneur's Propensity to Take Risk Index

$X_4$  = Entrepreneur's Awareness about SME Support Services Index

$X_5$  = Self -Efficacy Index

$\varepsilon$  = Error Term

$Y$  = Performance of SMEs

**H<sub>01</sub>: There is no significant positive effect of creativity on the performance of small and medium enterprises in Kenya**

The first research hypothesis was to test whether creativity had a significant effect on performance of small and medium size enterprises in Kenya. In the multivariate regression analysis creativity had regression coefficient  $\beta=0.162$ , with a corresponding  $p=0.042$ . The coefficient  $\beta = 0.162$  is also significantly different from 0 with a  $p$ -value= $0.042$  which is less than  $0.05$ . Similarly,  $t$ -statistics computed  $2.04$  was greater than  $t$ -critical  $1.96$  at  $0.05$  significance level, this implies that the null hypothesis  $\beta_1=0$  was rejected and the alternative hypothesis ( $H_{a1}$ )  $\beta_1 \neq 0$  was taken to hold implying that creativity had positive and significant effect on performance of small and medium size enterprises in Kenya. Based on these findings a unit increase in creativity would results to increase of  $0.162$  units in performance of small and medium size enterprises in Kenya (see Table 4.28).

The study finding agrees with the proponents of Knight's theory. According to this theory risk, uncertainty and profit brings out the link between risk and uncertainty and profits or performance of the SMEs in Kenya. Weerasiri, Zhengang, and Perera (2012) also argued that creativity is the starting point for innovation and it is marked by the ability to create, bring into existence, to invent into a new form, to produce through imaginative skill, to make to bring into existence something new.

The study results further conform to those of Harris (2012) who found that creativity is a crucial ingredient for the success of SMEs especially when advanced to innovation because it enables their businesses to survive and grow. Shalley, Zhou and Oldham (2004) on their part posited that creativity allows the organization to take advantage of opportunities which develop as the result of changing environmental conditions. Rukevwe (2015) similarly, view creativity as being able to do imaginative and non-routine things while also building on tradition to achieve profitable outcomes. The findings of this study and review of previous empirical studies shows that creativity is a requisite of a high performing business, therefore SMEs that are creative stands a chance of achieving high performance in terms of improved profitability and business growth.

**H<sub>02</sub>: There is significant positive effect of innovation on the performance of small and medium enterprises in Kenya**

The second research hypothesis was to test whether innovation had a significant effect on performance of small and medium size enterprises in Kenya. In the multivariate regression analysis innovation had regression coefficient  $\beta=0.184$ , with a corresponding  $p=0.010$ . The coefficient  $\beta = 0.184$  was also significantly different from 0 with a  $p$ -value= $0.010$  which was less than  $0.05$ . Similarly,  $t$ -statistics computed  $2.582$  was greater than  $t$ -critical  $1.96$  at  $0.05$  significance level, this implies that the null hypothesis  $\beta_1=0$  was rejected and the alternative hypothesis ( $H_{a2}$ )  $\beta_1\neq 0$  was taken to hold implying that innovation had positive and significant effect on performance of small and medium size enterprises in Kenya. Based on these findings a unit increase in innovation would results to increase of  $0.184$  units in performance of small and medium size enterprises in Kenya (see Table 4.28).

The study finding supports the finding of Weerasiri, Zhengang and Perera (2012) who also posited that SMEs becomes very competitive in an emerging market when they give importance to innovative activities that build their reputation in the market environment. Sandvik and Sandvik (2003) similarly argued that innovation is one of the most vital competitive weapons and generally seen as a business's core value capability. Jones and Linderman, (2014) also found that product/service innovation can be an important source of competitive advantage that leads to improved performance. The findings of this study and those of the previous studies analysed reveals that innovation adoption among SMEs was a recipe for improved Performance of SMEs.

**H<sub>03</sub>: There is significant positive effect of propensity to take risk on the performance of small and medium enterprises in Kenya**

The third research hypothesis was to test whether propensity to take risk had a significant effect on performance of small and medium size enterprises in Kenya. In the regression analysis propensity to take risk had regression coefficient  $\beta=0.042$ , with a corresponding  $p=0.652$ . The coefficient  $\beta = 0.042$  was not significantly different from 0 with a  $p$ -value= $0.652$  which was greater than 0.05. T-statistics computed 0.451 was less than t-critical 1.96 at 0.05 significance level, this implies that the null hypothesis  $\beta_1=0$  was not reject and the alternative hypothesis ( $H_{a3}$ )  $\beta_1\neq 0$  was rejected implying that propensity to take risk had insignificant effect on performance of small and medium size enterprises in Kenya (see Table 4.28).

The finding did not to agree with Subrahmanya (2011) who argued that willingness to engage in relatively high levels of risk taking behavior enables SMEs to seize profitable opportunities in the face of uncertainty which leads to long term profitability. Similarly, the study failed to concur with Kimandu (2016) also suggested that taking risks is needed for businesses to succeed and grow and how entrepreneurs distinguish and manage risks in their environment. Kreiser and Davis, (2010) also agreed that suggested that risk-taking has strong relationship with performance of entrepreneurial firms.

**H<sub>04</sub>: There is significant positive effect of awareness about small and medium enterprises support services on the performance of small and medium enterprises in Kenya**

The fourth research hypothesis was to test whether awareness about small and medium enterprises support services had a significant effect on performance of small and medium size enterprises in Kenya. In the multivariate regression analysis awareness about small and medium enterprises support services had regression coefficient  $\beta=0.311$ , with a corresponding  $p=0.000$ .

The coefficient  $\beta = 0.311$  was also significantly different from 0 with a  $p$ -value=0.000 which was less than 0.05. Similarly,  $t$ -statistics computed 3.386 was greater than  $t$ -critical 1.96 at 0.05 significance level, this implies that the null hypothesis  $\beta_1=0$  was rejected and the alternative hypothesis ( $H_{a4}$ )  $\beta_1 \neq 0$  was taken to hold implying that awareness about small and medium enterprises support services had positive and significant effect on performance of small and medium size enterprises in Kenya. Based on these findings a unit increase in awareness about small and medium enterprises support services would results to increase of 0.311 units in performance of small and medium size enterprises in Kenya (see Table 4.28).

This finding disagreed with the findings of Odhiambo (2013) who argue that many firms in Africa operate in an information-poor environment due to lack of adequate business support services and the poor information technological infrastructures. The study finding supports Kinyua (2014) who found that SMEs enjoy easy access to business information services due to improvement in technology. Cant, Brink and Ligthelm (2003) similarly argue that support services are shown to be an important factor driving the performance of firms, with the number of connections and networks positively related to new firm performance.

**H<sub>05</sub>: There is significant positive effect of self-efficacy on the performance of small and medium enterprises in Kenya**

The final research hypothesis was to test whether entrepreneur's self-efficacy had a significant effect on performance of small and medium size enterprises in Kenya. In

the multivariate regression analysis entrepreneur's self-efficacy had regression coefficient  $\beta=0.240$ , with a corresponding  $p=0.001$ .

The coefficient  $\beta = 0.240$  was also significantly different from 0 with a  $p$ -value= $0.001$  which was less than 0.05. Similarly,  $t$ -statistics computed 4.176 was greater than  $t$ -critical 1.96 at 0.05 significance level, this implies that the null hypothesis  $\beta_1=0$  was rejected and the alternative hypothesis ( $H_{a5}$ )  $\beta_1 \neq 0$  was taken to hold implying that entrepreneur's self-efficacy had positive and significant effect on performance of small and medium size enterprises in Kenya. Based on these findings a unit increase in entrepreneur's self-efficacy would results to increase of 0.240 units in performance of small and medium size enterprises in Kenya (see Table 4.28).

The findings concur with those Mohd *et al.* (2014) who asserted that self-efficacy plays an important role in influencing a person to achieve their goals. Also added that self-efficacy helps people to understand why some business still fail although they employ the sufficient capabilities Shane, Locke and Collins (2003) also noted that a person still could not perform if they don't have the confidence that their business will be successful although they have all other relevant capabilities. Oyugi (2016) on the hand avers that that self-efficacy will make an entrepreneur even stronger even under a high uncertainty.

#### **4.8.4 Summary of Hypotheses Testing**

This section presents the summary of the research hypotheses that the study sought to test. The hypotheses were tested at the level of significance of 0.05 and were based on the findings of multivariate linear regression analysis.



**Table 4.29: Summary of the Hypotheses Testing**

<b>Hypotheses</b>	<b>Results</b>	<b>Decision</b>
<b>H<sub>01</sub></b> : There is no significant positive effect of creativity on the performance of small and medium enterprises in Kenya	$\beta=0.162, p=0.042 < 0.05$	<i>Reject H<sub>01</sub></i>
<b>H<sub>02</sub></b> : There is no significant positive effect of innovation on the performance of small and medium enterprises in Kenya	$\beta= 0.184, p=0.010 < 0.05$	<i>Reject H<sub>02</sub></i>
<b>H<sub>03</sub></b> : There is no significant positive effect of propensity to take risk on the performance of small and medium enterprises in Kenya	$\beta=0.042, p=0.652 > 0.05$	<i>Failed to Reject H<sub>03</sub></i>
<b>H<sub>04</sub></b> : There is no significant positive effect of awareness about small and medium enterprises support services on the performance of small and medium enterprises in Kenya	$\beta=0.311, p=0.000 < 0.05$	<i>Reject H<sub>04</sub></i>
<b>H<sub>05</sub></b> : There is no significant positive effect of self-efficacy on the performance of small and medium enterprises in Kenya	$\beta=0.240, p=0.001 < 0.05$	<i>Reject H<sub>05</sub></i>

#### 4.9 Revised conceptual framework

The revised conceptual framework shows the remaining independent variables after the findings of the research were analysed and presented. The findings from the overall optimal model indicated that all the variables apart from propensity to take risk were significant in the study. The model coefficients as shown in Table 4.25 indicate that all the independent variables had significant P-values except for the propensity to take risk which had a P-value of 0.652 greater than the standard value of 0.05 hence declared insignificant ( $0.652 > 0.05$ ). The variable was therefore omitted from the revised conceptual framework. The variables with the least P-values are the most significant and are arranged as per the significant levels, awareness about SME support services; p-value = 0.000, self-efficacy; p-value = 0.001, innovation; p-value = 0.010 and creativity; p-value = 0.042. See Figure 4.10.

**Optimal model**

$$Y = 0.119 + 0.162X_1 + 0.184X_2 + 0.240X_4 + 0.311X_5 + \epsilon$$

$X_1$  = Entrepreneur's Creativity Index

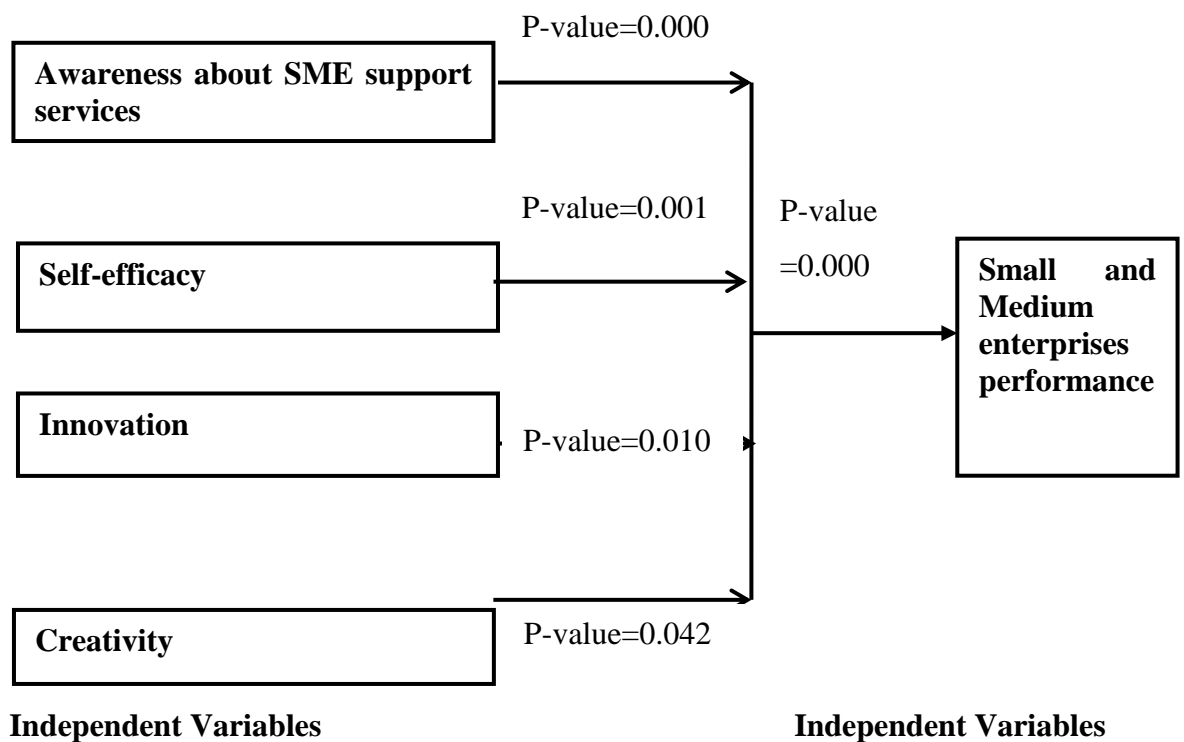
$X_2$  = Entrepreneur's Innovativeness Index

$X_4$  = Entrepreneur's Awareness about SME Support Services Index

$X_5$  = Self -Efficacy Index

$\epsilon$  = Error Term

$Y$  = Performance of SMEs



**Figure 4.10: Revised conceptual framework**

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents the summary of the major findings based on the research objectives. The chapter further presents the conclusions and recommendations made by the study based on the findings. The study finally suggested the areas for further research based on the existing research gaps and limitations of the current study.

#### **5.2 Summary of Findings**

##### **5.2.1 Objective 1: Effect of Creativity on Performance of SMEs in Kenya**

The first objective of the study was to establish the effect of creativity on the performance of small and medium enterprises in Kenya. Creativity in this study was measured using product creativity, process creativity and business model creativity. The findings of descriptive analysis showed that majority of the SMEs that in the study population didn't create a forum or platforms where creativity of employees could be harnessed and utilized for growth and expansion purposes. The results further established that SMEs in Kenya showed above average level of creativity. The majority of the SMEs had plans to venture into new products and services, plans to introduce new equipment, machinery or technology in the next one year and adoption of creative ways of marketing through social media and use of technology to attract new and retain the existing customers.

##### **5.2.2 Objective 2: Effect of Innovation on Performance of SMEs**

This section analysed the effect of innovation on the performance of small and medium size enterprises in Nairobi. The study sought to establish whether innovations in terms of product innovation, process innovation and business model innovation. The study findings showed that majority of the SMEs had innovated in digital payment services and marketing services but were yet to innovate in financial and human resources management. The findings further showed that majority of the SMEs were taking

advantage of the rapid growth in the use of social media to market their product and services and reach wide range of customers. The study revealed that innovations adoption by SMEs improved operations and management of customers. Findings further showed that SMEs in Kenya had adopted product innovations and business process innovations and targeted to improve products and services they offered with the intention of boosting their performance.

### **5.2.3 Objective 3: Effect of Propensity to take Risk on Performance of SMEs**

The third objective of the study was to determine the effect of propensity to take risk on performance of small and medium size enterprises in Kenya. The study sought to establish whether SMEs took risk in resources allocation, their level of risk avoidance and overall risk perception among the SMEs in the study population. The findings established that SMEs owner/managers in Kenya had different propensity to take risks. Small and medium size enterprise owner/managers that were more sensitive to risks avoided risk taking activities while those less risk averse engaged in the risk taking activities. However, majority of the SMEs were found to be risk averse which explained why there was high mortality among SMEs in Kenya.

### **5.2.4 Objective 4: Effect of awareness about SME support services on Performance of SMEs**

The study also sought to assess the effect of awareness about small and medium enterprises support services on the performance of small and medium enterprises in Kenya. The study sought to establish the level of SME awareness on credit support services, market access support services and government support services and how they affected the performance of small and medium enterprises in Kenya. The findings revealed that on average majority of the SMEs in Kenya had high awareness on credit support services, market information awareness and also understood government support services. Awareness about SME support services was found to have a lot of benefit to SMEs which helped in accelerating their growth because of accessibility to support needed from various stakeholders

### **5.2.5 Objective 5: Effect of Self-Efficacy on Performance of SMEs**

The final objective of the study examined the effect of self-efficacy on the performance of small and medium enterprises in Kenya. Self-efficacy was measured using coping with unexpected challenges, defining core purpose and developing new products and markets. The study findings generally established that SMEs owners/managers had different self-efficacy levels. Some respondents believed in the ability of their business to maneuver difficulties encountered along the way and that their business were positioned for greater opportunity which showed high level of self-efficacy while others showed low level of self-efficacy.

## **5.3 Conclusions**

### **5.3.1 Creativity and Performance of SMEs in Kenya**

The findings of this study showed that entrepreneurial mindset was a significant determinant of performance of small and medium size enterprise in Kenya. Based on the key findings of the study, the following conclusion were drawn; first, creativity is a significant component of entrepreneurial mindset that influenced performance of small and medium enterprises. Small and medium enterprises with more creative owners/managers outperformed those with less creativity. The study further concluded that creativity leads business enterprises into high returns investments which improves performance and sustainability of the small and medium enterprises.

### **5.3.2 Innovations and Performance of SMEs in Kenya**

The study also concluded that adoption of latest innovations in product production, process improvement and marketing process differentiated high performing and sustainable SMEs from the rest. Small and medium enterprises should take advantage of the rapid growth in the use of social media to market their product and services and reach wide range of customers to improve performance of their businesses. Innovations adoption by SMEs improves operations and management of customers. The innovations play a significant role in cost reduction and efficiency improvement

which leads to high customer satisfaction and consequently increase in return on investments.

### **5.3.3 Propensity to Take Risk and Performance of SMEs in Kenya**

On the effect of propensity to take risk on performance of small and medium sizes enterprises, the study established that propensity to take risk had positive but insignificant effect on performance of SMEs in Kenya. The study concluded that SMEs shy away from taking risks and majority prefers traditional and established revenue channels which limit the businesses from achieving competitive advantages over competitors. In addition, the study concluded that owners of SMEs that take risks also stands a chance of performing better than those that are risk averse.

### **5.3.4 Awareness about SME Support Services and Performance of SMEs in Kenya**

The study further concluded that SMEs owners or managers that seek to outperform their competition must seek information and be aware on support services from credit services, market information and government services. Awareness of these services had a significant effect on the performance of small and medium enterprises in Kenya. Majority of SMEs face a lot of challenges especially during the initiation stages, therefore they need support from institutions such as government agencies, local NGOs and professional consultants to boost their organizational performance.

### **5.3.5 Self-Efficacy and Performance of SMEs in Kenya**

This study finding demonstrated that self-efficacy significantly impacted on the performance of small and medium enterprises in Kenya. The study concluded that entrepreneur self-efficacy is the foundation on which all other entrepreneurial mindset such risk taking, innovativeness and creativity are built hence it is a good predictor of high business performance. Entrepreneurs with high self-efficacy steer their business to profitability even in turbulent business environment.

## **5.4 Recommendations**

### **5.4.1 Creativity**

The study recommends that SMEs owner or managers should invest in automation of their business processes e.g. accounts, human resources and procurement. This would improve efficiency in the way SMEs serve their customers to enhance customer loyalty. The study also recommends that SMEs should organize meetings with the staff members to discuss new ideas to enhance their creativity and finally the study recommends that SMEs owners or managers should come up with creative ways of maintaining the same customers as they continue attracting new customers.

### **5.4.2 Innovation**

On the relationship between innovation and Performance of SMEs, the study recommends that SMEs managers should invest more in e-commerce which include buying or selling through the internet to reduce the transactions cost and cost associated with keeping inventory, this will lead to improved performance. The study further recommends that SMEs owners or managers should adopt accounting software, bulk SMS marketing and customer information data storage system innovation to enhance their performance. The study also recommends that SMEs should provide unique products/ services as compared to our competitors to achieve competitive advantages.

### **5.4.3 Propensity to take risk**

Based on the findings, the study recommends that SMEs should take calculated risk and commit resources in high risk, high return projects, practice how to handle big losses and disappointments and finally encourage their employees to experiment and take business risks without reference to the manager/owner. This will ensure that they reap heavily from the risk taking activities.

#### **5.4.4 Awareness about SME support services**

The study further recommends that SMEs should invest in research to arm themselves with recent information on all the markets available in all counties locally for their products/services to widen their market scope and earn from new markets for their products and services.

#### **5.4.5 Self-efficacy**

The study finally recommends that SMEs owners or managers should have high beliefs in themselves and their ability to steer their business to high heights such beliefs will ensure they steer their enterprises with resilient during turbulent times. The study also recommends that government both national and county government should start initiative to train SMEs on ways of enhancing self-efficacy in entrepreneurship.

### **5.5 Areas for Further Research**

This study focused on the effects of entrepreneurial mindsets on the performance of small and medium size enterprises in Kenya. The study finding showed that entrepreneurial mindset which includes creativity, innovation, propensity to take risk; awareness about SMEs support services and self-efficacy accounted for positive variation in performance of SMEs. The study suggests that further studies should focus on other factors that contribute to performance of SMEs. Further studies may also widen the scope and focus on SMEs in other counties, countries and sectors to bridge the contextual gaps.

The study focused on five independent variables; creativity, innovation, propensity to take risks, awareness about SME support services and self-efficacy. Though these variables are critical elements of entrepreneurship mindset there is need to broaden this perspective by examining other variables that may affect the relationship between entrepreneurial mindset and performance of small and medium enterprises. The study focused on gross profit, annual sales and number of employees as the sub variables under performance of SMEs, further studies should be done to improve measures for performance by considering employee turnover rate or employee retention.



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## APPENDICES

### Appendix I: Introductory Letter to the Respondents

BETH MUKIRI KIMATHI

P.O. Box 104853 – 00101

Nairobi

Dear Respondent,

#### **RE: DATA COLLECTION**

I am a post graduate student studying for a Doctor of Philosophy (Ph.D.) Degree in Entrepreneurship at Jomo Kenyatta University of Agriculture and Technology. I am currently conducting research in the area of Entrepreneurship on the topic: “**Effect of Entrepreneurial Mindset on the Performance of Small and Medium Enterprises in Kenya**” You have been selected to participate in this study and I would highly appreciate if you assisted me by responding to all questions as completely, correctly and honestly as possible. Your response will be treated with utmost confidentiality and will be used only for the research purpose of this study only.

Thank you in advance for your time and co-operation.

Yours Faithfully,



**BETH MUKIRI KIMATHI**



## Appendix II: University Introductory Letter



**JOMO KENYATTA UNIVERSITY  
OF  
AGRICULTURE AND TECHNOLOGY**  
P.O. BOX 62000-00200 NAIROBI, KENYA. TELEPHONE: (020) – 221306

Nairobi CBD Campus

**Entrepreneurship & Procurement Department**

---

Date: 21<sup>st</sup> November, 2017

Ref:JKU/6/3/17a

To Whom It May Concern;

**SUBJECT: BETH MUKIRI KIMATHI – HD413-C004-5040/2015**

This is to introduce to you **Ms. Beth Kimathi** who is a student pursuing PhD in Entrepreneurship at Jomo Kenyatta University of Agriculture and Technology, Nairobi CBD Campus. The student is currently undertaking a research thesis entitled: **Effect of Entrepreneurial Mindset on the Performance of Small and Medium Enterprises in Kenya** in partial fulfillment of the requirement for the degree programme.

The purpose of this letter is to request you to give the student the necessary support and assistance to enable her to obtain necessary data for the thesis. Please note that the information given is purely for academic purpose and will be treated with strict confidence.

Do not hesitate to contact the undersigned for any more information.

Yours faithfully,

**Samson Nyang'au (Ph.D)**  
**Ag. ASSOCIATE CHAIRPERSON, EPD**



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## Appendix III: Questionnaire

### PART A: Background Information

This questionnaire is to collect data for purely academic purposes. The study seeks to investigate **effect of entrepreneurial mindset on the performance of small and medium enterprises in Kenya**. The questionnaire is divided into part A, B, C and D. please respond as accurately and honestly as possible to all questions by using a tick (√) or cross (×). All information will be treated with strict confidence.

1. Name of the business and contact  
.....(Optional)
2. Would you like a copy of the research findings? Yes [ ] No [ ]
3. Gender: Male [ ]  
Female [ ]
4. Age Bracket 18-25 [ ]  
26-35 [ ]  
36-45 [ ]  
46-55 [ ]  
Over 56 [ ]
5. Marital status Married [ ]  
Single [ ]  
Divorced [ ]  
Widowed [ ]
6. Level of education No formal Education [ ]

Primary [ ]

Secondary [ ]

Certificate [ ]

Diploma [ ]

University [ ]

**PART B: Business Information**

7. What is the legal structure of your company?

Sole proprietorship [ ]

Partnership [ ]

Limited company [ ]

Any other (Specify) [ ]

8. For how long has your company been in business?

0-5 yrs. [ ]

6-10yrs [ ]

11-20yrs [ ]

20yrs & above [ ]

9. What is the number of employees in your business?

Less than 10 [ ]

11-40 [ ]

41-70 [ ]

71-100 [ ]

101 & above [ ]

10. Estimate the current total market value of the Business (Kshs)

Less than 500,000 [ ]

500,000 – 1,000,000 [ ]

1,000,001-2,000,000 [ ]

2,000,001-3,000,000 [ ]

Above 5,000,000 [ ]

11. What is the current annual turnover/annual sales (Kshs) of the business?

0-5 Million [ ]

6-10 Million [ ]

11-20 Million [ ]

21-50 Million [ ]

51-100 Million [ ]

101-200 Million [ ]

Over 200 Million [ ]

12. To which sector does your business belong? Please tick appropriately.

S/No	Sector	Tick box
1	Manufacturing	<input type="checkbox"/>
2	Real estate activities	<input type="checkbox"/>
3	Wholesale & retail trade	<input type="checkbox"/>
4	Services e.g. Hotel, Hospital, Financial services etc.	<input type="checkbox"/>
5	Others (Specify)	<input type="checkbox"/>

### **PART C: Entrepreneurial Mindset**

#### **CREATIVITY**

13. Do you hold meetings where employees present new ideas and solutions to challenges facing the business?

Yes ( )

No ( )

If yes, how often do you meet to come up with new products/services/ideas in the business?

Weekly [ ]

Monthly [ ]

Quarterly [ ]

Twice year [ ]

Once a year [ ]

Never [ ]

14. To what extent do you agree with the following statements concerning CREATIVITY using the scale; **SA**= Strongly Agree, **A**=Agree, **N**=Neutral, **D**=Disagree, **SD**= Strongly Disagree.



<b>S/No</b>	<b>Statements</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
1.	Our business introduce new/improved products or services every year					
2.	We always upgrade our equipment, machinery or technology					
3.	We have continuously automated our business processes e.g. accounts, Human resources, procurement etc.					
4.	We have invested in creative ideas of marketing our products/services through social media e.g. Facebook, emails, Instagram etc.					
5.	Our creativity has enabled us to open new branches of our business.					
6.	Using technology to acquire new customers and retain the existing customers had impact on our business growth					
7.	Maintaining the same customers requires a lot of creativity from SMEs owner					
8.	Holding meetings with the staff members to discuss new ideas stirs our business creativity					

## INNOVATION

15. Do you currently use the following innovations in your business?

No.		Yes	No
1.	Internet banking services		
2.	Mobile platforms to collect revenue (Paybill, Lipa na Mpesa, Eazzy Pay etc.)		
3.	E-commerce i.e. buying or selling through ( Jumia, Kilimall, OLX, Masoko etc.)		
4.	Social Media marketing (Face book, Twitter, LinkedIn, Instagram, WhatsApp)		
5.	Accounting software e.g. QuickBooks, Sage, SAP etc.		
6.	Human Resources Management Systems e.g. Perpay, HRMS etc.		
7.	Bulk SMS marketing		
8.	Customer information data storage system e.g. East African Data Handlers, Safaricom etc.		

16. Tick (✓) or fill appropriately

To what extent do you agree with the following statements concerning **INNOVATION** using the scale; **SA**= Strongly Agree, **A**=Agree, **N**=Neutral, **D**=Disagree, **SD**= Strongly Disagree.

S/No	Statements	SA	A	N	D	SD
1.	Adopting innovations helps us introduce new products/services or improve on existing products/services.					
2.	Innovations lead to adoption of new equipment, machinery or technology					

3.	Our business processes are completely automated e.g. accounts, Human resources, procurement etc.					
4.	Innovation adoption has enable use to market our products/services through social media e.g. Facebook, emails, Instagram etc.					
5.	Opening new branches of our business have been as a results of adoption modern innovations					
6.	Innovations help us to acquire new customers and retain the existing customers.					
7.	Innovations enable our business to provide unique products/ services as compared to our competitors.					
8.	Our customer numbers have grown in the last 1 year because on use of innovations					

17. To what extent do you agree with the following statements concerning **PROPENSITY TO TAKE RISK** using the scale; **SA**= Strongly Agree, **A**=Agree, **N**=Neutral, **D**=Disagree, **SD**= Strongly Disagree.

### **PROPENSITY TO TAKE RISK**

<b>S/No</b>	<b>Statements</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
1.	We sometimes seek financial credit as a means of funding our business activities.					
2.	We always have a strong tendency to commit resources for high risk, high return projects.					
3.	I can handle big losses and disappointments with little difficulty.					
4.	Employees are encouraged to experiment and take business risks without reference to the manager/owner.					

<b>S/No</b>	<b>Statements</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
5.	I would promote someone with unlimited potential but limited experience to a key position over someone with limited potential but more experience.					
6.	We never shy away from taking up an opportunity due to the risk of failure.					
7.	We always tend to venture into new business areas products or services.					
8.	Taking business risks makes good sense only in the absence of acceptable alternatives.					

18. What percentage of your profits is attributed to your risk taking behavior?

10% [ ]

30% [ ]

50% [ ]

80% [ ]

100% [ ]

19. To what extent do you agree with the following statements concerning **AWARENESS ABOUT SME SUPPORT SERVICES** using the scale; **SA**= Strongly Agree, **A**=Agree, **N**=Neutral, **D**=Disagree, **SD**= Strongly Disagree.

**AWARENESS ABOUT SME SUPPORT SERVICES**

S/No	Statements	SA	A	N	D	SD
1.	We are aware about credit options available for our business.					
2.	We have used some debt/loans to fund our business.					
3.	We know all the markets available in all counties locally for our products/services.					
4.	We know where to find raw materials and supplies for our products and services both locally and internationally.					
5.	We have necessary information on government institutions that support businesses in our industry.					
6.	We are aware about all the licensing requirements for our business.					
7.	We know the taxation requirements on our business.					
8.	We are a member of the association that supports our industry.					

20. Which external support have you received for your business in the last five years.

.....

.....

21. To what extent do you agree with the following statements concerning **SELF-EFFICACY** using the scale; **SA**= Strongly Agree, **A**=Agree, **N**=Neutral, **D**=Disagree, **SD**= Strongly Disagree.

**SELF-EFFICACY**

S/No	Statements	SA	A	N	D	SD
1.	Our business would survive turbulent business environment e.g. political instability					
2.	We are carrying out our business just for profits.					
3.	In the past, we have worked productively under continuous stress, pressure and conflict..					
4.	We consider ourselves better and more unique than our competitors					
5.	We believe we can compete globally.					
6.	All staff know our vision, mission, core values and objectives.					
7.	Our business has gone through unexpected changes in the last 5 years					
8.	We have discovered new ways to improve existing products and or introduced new products.					

22. What challenges have you faced and over-come in the last five years

.....  
 .....

**PART D: BUSINESS PERFORMANCE**

23. Please indicate the amount in Kenya Shillings of Gross profit, sales and number of employees for each year in the last 5 years (2013 – 2017) as per the table below. Indicate the total amount or number at the end of each year.

<b>Year</b>	2013	2014	2015	2016	2017
<b>Gross profit</b>					
<b>Annual sales</b>					
<b>Number of employees</b>					

24. Tick (√) or fill appropriately relating to performance.

<b>Statements</b>					
Using the scale of 1 to 5; 1 = Lowest extent, 2 = Low extent, 3 = Moderate extent, 4 = high extent and 5 = very high extent; to what extent would you consider the following attributes to have an effect on the performance of your enterprise?	1	2	3	4	5
Creativity					
Innovation					
Taking risks					
Awareness about SME support services					
Our beliefs and positive attitude					

25. Indicate other reasons which have contributed to the performance of your business.

.....  
 .....

**END OF QUESTIONNAIRE**

Thank you for taking time to complete this questionnaire.

#### Appendix IV: List of SMEs Sampled

	<b>Name of the SME</b>	<b>Sector</b>
1	ABC Retail Shop	Wholesale & Retail Trade
2	Abet Auto Garage	Services
3	Abigail Company Limited	Wholesale & Retail Trade
4	Ace Cole Enterprises	Services
5	Ace Interiors	Real Estate Activities
6	Ace Technologies	Services
7	Adrem Technology Services	Services
8	Ad-Value Promotions	Services
9	Africa Journeys Escapes	Services
10	Agape Tailoring Shop	Services
11	Agchem Kenya Limited	Wholesale & Retail Trade
12	Agelinka Cyber Café	Services
13	Agrovet	Wholesale & Retail Trade
14	Aktech Solutions	Services
15	Alcon Medquip	Wholesale & Retail Trade
16	Alex Drink Mararo	Services
17	Alfazulu Limited	Services
18	Alivanje Ventures	Services
19	Allure Wines And Spirits	Wholesale & Retail Trade
20	Aloki Enterprises	Wholesale & Retail Trade
21	Alpha Medical Clinic	Services
22	Alphaland Investments	Real Estate Activities
23	Alphaya Logistics Services	Services
24	Amba Business Services	Services
25	Ameri Foods	Wholesale & Retail Trade
26	Anchor Building Technologies Limited	Real Estate Activities
27	Andsons Enterprises Limited	Wholesale & Retail Trade
28	Angel Beauty Salon	Services
29	Ann Beauty Connections	Services
30	Anstar Agencies Limited	Wholesale & Retail Trade
31	Aqua Chemist	Wholesale & Retail Trade
32	Ark Rabbit farm	Wholesale & Retail Trade
33	Astral Industries Limited.	Manufacturing
34	Auto Dream Dealers Limited	Services
35	Auto Master Limited	Services
36	AZ Bookshop	Wholesale & Retail Trade
37	Bahassan Enterprises	Wholesale & Retail Trade



38	Bamba Investments Limited	Wholesale & Retail Trade
39	Baraka Grocery Shop	Wholesale & Retail Trade
40	Beauty Bee Company	Services
41	Beauty Palour Salon & Kinyozi	Services
42	Bebeto Enterprises	Services
43	Belan Autoparts	Services
44	Benkate Services Limited	Services
45	Benma Technical Services Limited	Services
46	Benta Investments	Wholesale & Retail Trade
47	Benten Enterprises and Shop	Wholesale & Retail Trade
48	Bentra Travel	Services
49	Benwood General Hardware	Real Estate Activities
50	Beritt Enterprises	Wholesale & Retail Trade
51	Bessy's Shoe boutique	Wholesale & Retail Trade
52	Best Buy Traders Limited	Wholesale & Retail Trade
53	Best clothes Tailoring	Services
54	Beyond Limits Cabs	Services
55	Bhutan Limited	Wholesale & Retail Trade
56	Bidii Salon	Services
57	Binaline Enterprises	Wholesale & Retail Trade
58	Bizfirst Enterprises Limited	Wholesale & Retail Trade
59	Blackwood And Allied	Manufacturing
60	Blessed Salon	Services
61	Blue sky Energy	Wholesale & Retail Trade
62	Bola Associates Limited	Wholesale & Retail Trade
63	Bounty Community Butchery	Wholesale & Retail Trade
64	Brand Gallery Agency	Services
65	Brand Intex Supplies	Wholesale & Retail Trade
66	Brand Stop Limited	Services
67	Branded Space Limited	Services
68	Brands Africa Limited	Services
69	Break-Away Tours And Travels	Services
70	Britmit Enterprises Limited	Manufacturing
71	Brownhills Pride	Manufacturing
72	Bullet-Net Limited	Services
73	Bullionare Investments	Services
74	Buoyant Enterprises Company	Services
75	Bush Fire Investments	Services
76	Canopy Lawns & Gardens Ltd	Services
77	Cara's Beauty Complex	Services
78	Cate Bakers	Wholesale & Retail Trade

79	Catekaris Enterprises	Wholesale & Retail Trade
80	Cell Tours And Travel Limited	Services
81	Certex Investment Limited	Wholesale & Retail Trade
82	Challa Communications Limited	Services
83	Chanson Agencies	Services
84	Charinjwa Promotions	Services
85	Charnic Enterprises	Services
86	Chartered Brands Investments	Services
87	Chary Business Ventures	Services
88	Chatham Promotions Limited	Services
89	Cheko Saba Productions	Services
90	Chevis Company Limited	Services
91	Chewa Investments	Wholesale & Retail Trade
92	Chic Expression Limited	Services
93	Chrisamy Enterprises	Wholesale & Retail Trade
94	Chriven Enterprises	Services
95	Claycom Enterprises	Wholesale & Retail Trade
96	Close Proactive Unit	Services
97	CMG 254 Studios	Services
98	Colly Furniture Limited	Wholesale & Retail Trade
99	Conce Party Services	Services
100	Concise Architects Ltd	Real Estate Activities
101	Connkip Enterprises	Wholesale & Retail Trade
102	Contentworld Limited	Services
103	Contrax Limited	Real Estate Activities
104	Copypoint Limited	Services
105	Crystal Bulding Systems	Real Estate Activities
106	Crystal Motors (K) Limited	Services
107	Crystal Tiles Limited	Real Estate Activities
108	Crywan Enterprises Limited	Real Estate Activities
109	Dalmaric Agencies	Services
110	Danki Ventures Ltd	Services
111	Dannes Pharmacy Limited	Wholesale & Retail Trade
112	Davy Entertainment Company	Services
113	Deligent Logistics	Services
114	Demax Limited	Services
115	Denmar Plumbing Contractors Limited	Real Estate Activities
116	Depopharma Limited	Wholesale & Retail Trade
117	Derdols Tech Services	Services
118	Descar Investment	Wholesale & Retail Trade
119	Desirelands Limited	Wholesale & Retail Trade

120	Destination Freighters Limited	Services
121	Donn Consultants Ltd	Services
122	Eclipse 145 sports bar	Wholesale & Retail Trade
123	Emirate Enterprises	Wholesale & Retail Trade
124	Empex Engineering Company Limited	Real Estate Activities
125	Empire Tiles And Ceramics	Real Estate Activities
126	Endroof Building Contractors Limited	Real Estate Activities
127	Ephah General Agency	Wholesale & Retail Trade
128	Epiconsults Ltd	Services
129	Exclusiv Hardware	Real Estate Activities
130	Exline Printers And Stationers	Services
131	Extend Limited	Services
132	Extropica Food Limited	Manufacturing
133	Eye See Tee Investments	Wholesale & Retail Trade
134	Fabcon And General Equipment	Real Estate Activities
135	Fabunique Kenya	Services
136	Faces Investments	Services
137	Fahan Agencies	Services
138	Fanaka Salon and Beauty	Services
139	Fastcargo Handlers	Services
140	Fibreline Limited	Services
141	Fika Systems Limited	Services
142	Finetech Engineering Ltd	Services
143	First Option Limited	Services
144	Flagship Traders	Wholesale & Retail Trade
145	Flocix Enterprises	Wholesale & Retail Trade
146	Fomachal Investments	Wholesale & Retail Trade
147	Fortune Consulting Limited	Services
148	Fraband Enterprises	Wholesale & Retail Trade
149	Framago Enterprises	Wholesale & Retail Trade
150	Framari Exclusive Agencies	Services
151	Freet Agencies	Services
152	Fresh Choice Limited	Manufacturing
153	Freshnet Enterprises	Manufacturing
154	Gab Trading	Wholesale & Retail Trade
155	Gathaitis dairies	Manufacturing
156	Gathehu Investments	Real Estate Activities
157	Gatitu Pharmacy	Wholesale & Retail Trade
158	Gatmac Holdings Limited	Real Estate Activities
159	Gebo Metal Arts	Services

160	Gemura Enterprises	Wholesale & Retail Trade
161	Genius Links Communications	Services
162	Gentrack Development Limited	Services
163	Geo Con Limited	Wholesale & Retail Trade
164	Geonel Ventures	Wholesale & Retail Trade
165	Geosolar Enterprise	Wholesale & Retail Trade
166	Gibvard Enterprises	Wholesale & Retail Trade
167	Gicab Limited	Services
168	Githere Investments	Real Estate Activities
169	Glow Investment Company Limited	Wholesale & Retail Trade
170	Glumaven-Kenya	Wholesale & Retail Trade
171	Godma Enterprises	Wholesale & Retail Trade
172	Gofman Agencies Limited	Services
173	Gradmaks Enterprises	Wholesale & Retail Trade
174	Granjee Enterprises	Wholesale & Retail Trade
175	Greenfield Suppliers	Wholesale & Retail Trade
176	Greenfoods Supplies	Wholesale & Retail Trade
177	Hamtech Suppliers	Wholesale & Retail Trade
178	Hannwerth Securities Limited	Services
179	Harrisons Limited	Services
180	Hawy General Suppliers Limited	Wholesale & Retail Trade
181	Honey logic Farm	Wholesale & Retail Trade
182	Huruma Electronic shop	Wholesale & Retail Trade
183	Ideal Logistics	Services
184	Igiat Plumbing Solutions	Services
185	Jabali Ventures	Services
186	Japan Dairy and Milk ATM	Wholesale & Retail Trade
187	Japhmat General Suppliers	Wholesale & Retail Trade
188	Jatflora Ltd	Services
189	Jaw Jaw Malimali	Wholesale & Retail Trade
190	Jawabu Hardware	Real Estate Activities
191	Jaystars Limited	Wholesale & Retail Trade
192	Josphat Electronics	Services
193	Kabkam Ltd	Services
194	Kafura Communications	Services
195	Kakisu Caterprise	Services
196	Kals retail and wholesale	Wholesale & Retail Trade
197	Kamau's Butchery	Wholesale & Retail Trade
198	Kamukwa Enterprises	Wholesale & Retail Trade

199	Kanjani Investments Limited	Services
200	Karen Direct Brokers	Services
201	Karims Furnitures	Wholesale & Retail Trade
202	Kasee Scraps Limited	Wholesale & Retail Trade
203	Kendracom Limited	Services
204	Kenroma Enterprises	Services
205	Kenstar Contractors Limited	Real Estate Activities
206	Keon Enterprises	Services
207	Kiarie garage	Services
208	Kibs Shop	Wholesale & Retail Trade
209	Kilimani Communications	Services
210	Kilimani retail shop	Wholesale & Retail Trade
211	Koki Timber & Allied	Wholesale & Retail Trade
212	Kotinye Cyber Café	Services
213	Lags Electronics	Services
214	Lanamell Limited	Services
215	Laslies Kicks	Services
216	Lecryan Investments Limited	Manufacturing
217	Leenixy Services	Services
218	Leiwa Trading	Wholesale & Retail Trade
219	Lelo Limited	Services
220	Lemart Services Limited	Services
221	Licia Enterprises Limited	Services
222	Limax Holdings Limited	Services
223	Limcom Enterprises	Services
224	Logis-Tech Limited	Services
225	Luciana Fruits	Manufacturing
226	Lumut Enterprises	Wholesale & Retail Trade
227	Lusams Enterprises	Wholesale & Retail Trade
228	LynaChris Chemist	Wholesale & Retail Trade
229	Makave enterprises	Services
230	Manco Hardware	Real Estate Activities
231	Marega Petrol and gas	Wholesale & Retail Trade
232	Maremare shop	Wholesale & Retail Trade
233	Marks wines and spirit	Wholesale & Retail Trade
234	Mart Centre Limited	Services
235	Marto Movie shop	Services
236	Maryann Daycare	Services
237	Matuna Salon and beauty	Services

238	Mavumbi Hardware	Real Estate Activities
239	Mawea Milk Dairy	Manufacturing
240	Max Boutique	Wholesale & Retail Trade
241	Maxwell Studio	Services
242	Melcham Suppliers Enterprises	Wholesale & Retail Trade
243	Mercy Mpesa shop	Services
244	Mfuanji Enterprises	Services
245	Mica Pharmaceuticals Limited	Wholesale & Retail Trade
246	Microville Solutions Limited	Services
247	Milemma Enterprises	Services
248	Milleage Enterprises Limited	Services
249	Millinium Agencies	Services
250	Mindris Electronics	Services
251	Minuteman Auto World Limited	Services
252	Miramax International	Services
253	Mla Chake Trading Campany	Wholesale & Retail Trade
254	Moms Kitchen	Services
255	Morgan Hardware	Real Estate Activities
256	Morie Shop	Wholesale & Retail Trade
257	Moselli Industries Limited	Manufacturing
258	Mosmill General Supplies	Wholesale & Retail Trade
259	Mothercare Limited	Services
260	Mowels Motors	Services
261	Mowen Investments Limited	Manufacturing
262	Mucheke Wholesale And Retail Suppliers	Wholesale & Retail Trade
263	MUK & Associates	Services
264	MUL Mpesa	Services
265	Mulbison Technologies	Services
266	Mulemu Agencies	Services
267	Multiplex Professional Consulting Services Limited	Services
268	Mum Fresh Produce Exports Limited	Manufacturing
269	Mumbuni Transporters And General Supplies	Services
270	Mwamuki Company Limited	Wholesale & Retail Trade
271	Mwendi Cereal Shop	Wholesale & Retail Trade
272	Mwenyeemba Enterprise	Wholesale & Retail Trade
273	Mwika Auto Garage	Services
274	Mylan Labpharm	Wholesale & Retail Trade

275	Nakusa General Traders	Wholesale & Retail Trade
276	Nash Collections	Wholesale & Retail Trade
277	Nateh Enterprises	Wholesale & Retail Trade
278	Nazini Investments Limited	Wholesale & Retail Trade
279	Ndalex Digital	Services
280	Nectar restaurant	Wholesale & Retail Trade
281	Nelima Tailoring Shop	Services
282	Nerada Liquor shop	Wholesale & Retail Trade
283	Neshkam Pharmacy	Wholesale & Retail Trade
284	Nespa Investments Limited	Services
285	Ngumut Agencies	Services
286	Nice Suppies	Wholesale & Retail Trade
287	Nicmart Suppies	Wholesale & Retail Trade
288	Nigat Enterprises	Services
289	Njeri Mpesa shop	Services
290	Njoki Mpesa shop	Services
291	Olimax Ventures	Services
292	Omoyetutu Salon & Kinyozi	Services
293	Onyango's garage	Services
294	Orleans General Enterprises	Wholesale & Retail Trade
295	Pakspace Ltd	Manufacturing
296	Panake Investments	Manufacturing
297	Panice Creative Arts	Services
298	Paradise Mini Mart	Wholesale & Retail Trade
299	Peta General Merchant International	Wholesale & Retail Trade
300	Pewit Milk shop	Wholesale & Retail Trade
301	Pharmaplus Pharmaceutical	Wholesale & Retail Trade
302	Pikiki Investments	Services
303	Pinky Enterprises	Wholesale & Retail Trade
304	Pitstop Limited	Wholesale & Retail Trade
305	Plaminam Agencies	Services
306	Planet Works Limited	Wholesale & Retail Trade
307	Polmac Worldwide Agencies	Wholesale & Retail Trade
308	Popular Fabriq And Clothings Limited	Wholesale & Retail Trade
309	Porini Tours Limited	Services
310	Porticoh Construction Company	Real Estate Activities
311	Posner And Klein Company Limited	Manufacturing
312	Powerpoint Systems Ltd	Services
313	Primetime Holdings Company Limited	Services

314	Probranding Ventures	Services
315	Procal Services	Services
316	Proper 945 Station	Services
317	Punchlines Limited	Services
318	Quad Entertainment	Services
319	Radiance Pharmaceuticals Limited	Wholesale & Retail Trade
320	Ragos Trading Company Limited	Services
321	Rek Enterprise	Services
322	Reliance Infrastructure Systems Ltd	Services
323	Reline Enterprise	Services
324	Remule Company	Services
325	Rings hardware shop	Real Estate Activities
326	Ristem Enterprises Limited	Services
327	Robran Technologies	Services
328	Rockford Kinyozi	Services
329	Ron Investments	Wholesale & Retail Trade
330	Royal fresh Retail Shop	Wholesale & Retail Trade
331	Rugamba Enterprises	Services
332	Rukagi Investments Limited	Services
333	Ruskat Agencies	Services
334	S.Mwaura Hardware	Real Estate Activities
335	Sam Auto Tyres	Services
336	Sams beauty Palace	Services
337	Sam's Tattoos and Piercing shop	Services
338	Sare Agencies Limited	Services
339	Sarmac Investment	Manufacturing
340	Sassy Enterprises	Manufacturing
341	Savannah timber Products	Manufacturing
342	Shad Tech Auto	Services
343	Shallun Construction Ltd	Real Estate Activities
344	Shamji Hardware Supplies	Real Estate Activities
345	Shammah Enterprises Limited	Manufacturing
346	Shaqies Kenya Limited	Services
347	Shardia Enterprises	Manufacturing
348	Shirab Investments Limited	Manufacturing
349	Sianjo Enterprises	Services
350	Sitetech Engineering Limited	Services
351	Smarco Enterprises	Services
352	Smart Lock Agencies	Services



353	Smatika Beauty Salon	Services
354	Solutions Intergrated Systems	Services
355	Soy Mills posho mill	Manufacturing
356	Specialised Hardware Ltd	Real Estate Activities
357	Spot On Designs	Services
358	Star carwash and auto services	Services
359	Starvels Enterprises	Services
360	Steways Investments	Services
361	Supat Enterprises Kenya	Wholesale & Retail Trade
362	Super cutters Kinyozi	Services
363	Tecnel Enterprises	Wholesale & Retail Trade
364	Terry foods	Manufacturing
365	The Copy centre	Services
366	Timeless Designs Limited	Services
367	Timkaku Enterprises	Services
368	Toberto Trading Ltd	Services
369	Tomno Enterprises	Services
370	Torex Enterprises	Services
371	Total Security Ltd	Services
372	Toto Daycare	Services
373	Tracer Limited	Wholesale & Retail Trade
374	Treja Wines & Spirits Limited	Wholesale & Retail Trade
375	Trimate Investments Limited	Wholesale & Retail Trade
376	Truck Master Supplies	Wholesale & Retail Trade
377	Trudah Supplies	Wholesale & Retail Trade
378	Tumaini Dispensary	Services
379	Turista Limited	Services
380	Twinzzamm Enterprises	Services
381	Two by Two Mpesa Shop	Services
382	Umoja dispensary	Wholesale & Retail Trade
383	Vantage Point Enterprises	Services
384	Vekina Creations	Services
385	Velma Butchery	Wholesale & Retail Trade
386	Vicons Kenya	Services
387	Wacheis groceries	Wholesale & Retail Trade
388	Wajon electronics	Services
389	Wakamau Clothes	Wholesale & Retail Trade
390	Wakihui Batteries	Wholesale & Retail Trade
391	Wamata Posho Mill	Manufacturing

392	Wamickies Retailshop	Wholesale & Retail Trade
393	Wamutua Burtchery	Wholesale & Retail Trade
394	Waniki's Poultry	Wholesale & Retail Trade
395	Wanye's Mpesa	Services
396	Warembo Nail Artisan	Services
397	WarJan Studio Shop	Services
398	Wema Investment Agency	Services
399	Wembly studios	Services
400	Wendo Enterprises	Wholesale & Retail Trade

## Appendix V: NACOSTI research authorization Letter and Research License



### NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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2241349, 3310571, 2219420  
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When replying please quote

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

Ref No. **NACOSTI/P/19/83021/28408**

Date: **27<sup>th</sup> February, 2019**

Beth Mukiri Kimathi  
Jomo Kenyatta University of  
Agriculture and Technology  
P.O. Box 62000-00200  
**NAIROBI.**

#### **RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on "*Effect of entrepreneurial mindset on the performance of Small and Medium Enterprises in Kenya*" I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for the period ending **27<sup>th</sup> February, 2020**.

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

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

**GODFREY P. KALERWA MSc., MBA, MKIM  
FOR: DIRECTOR-GENERAL/CEO**


Copy to:

The County Commissioner  
Nairobi County.

The County Director of Education  
Nairobi County.

*National Commission for Science, Technology and Innovation is ISO9001:2008 Certified*

THIS IS TO CERTIFY THAT:  
**MS. BETH MUKIRI KIMATHI**  
**of JOMO KENYATTA UNIVERSITY OF**  
**AGRICULTURE & TECHNOLOGY, 0-101**  
**NAIROBI, has been permitted to conduct**  
**research in Nairobi County**  
**on the topic: EFFECT OF**  
**ENTREPRENEURIAL MINDSET ON THE**  
**PERFORMANCE OF SMALL AND MEDIUM**  
**ENTERPRISES IN KENYA**  
**for the period ending:**  
**27th February, 2020**

  
 Applicant's  
 Signature

Permit No : NACOSTI/P/19/83021/28408  
 Date Of Issue : 27th February, 2019  
 Fee Received :Ksh 2000



  
 Director General  
 National Commission for Science,  
 Technology & Innovation

**THE SCIENCE, TECHNOLOGY AND**  
**INNOVATION ACT, 2013**  
 The Grant of Research Licenses is guided by the Science,  
 Technology and Innovation (Research Licensing) Regulations, 2014.

**CONDITIONS**

1. The License is valid for the proposed research, location and specified period.
2. The License and any rights thereunder are non-transferable.
3. The Licensee shall inform the County Governor before commencement of the research.
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
5. The Licensee does not give authority to transfer research materials.
6. NACOSTI may monitor and evaluate the licensed research project.
7. The Licensee shall submit one hard copy and upload a soft copy of their final report within one year of completion of the research.
8. NACOSTI reserves the right to modify the conditions of the License including consultation without prior notice.

National Commission for Science, Technology and Innovation  
 P.O. Box 30633 - 00100, Nairobi, Kenya  
 TEL: 020 490 7000, 0714 700707, 0714 403344  
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 Website: [www.nacosti.go.ke](http://www.nacosti.go.ke)

  
**REPUBLIC OF KENYA**  
  
**National Commission for Science,  
 Technology and Innovation**  
**RESEARCH LICENSE**

Serial No. A 23376  
**CONDITIONS: see back page**