ENTREPRENEURIAL ECOSYSTEM AND GROWTH OF SMALL AND MEDIUM MANUFACTURING ENTREPRISES IN KENYA

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Entrepreneurial Ecosystem and Growth of Small and Medium Manufacturing Entreprises in Kenya

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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 thesis is dedicated to my late dad, Bedan Mwaniki who would have loved to see me to where I am today. R.I.P. To my mum, Anne Mwaniki for her counsel, moral support and encouragement. To my husband, John Kibunja and to my children Dennis and Ruby for their love, patience and unwavering support during the entire period of the study.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

ACRONYMS AND ABBREVIATIONS

ANOVA	One-Way Analysis of Variance
BDS	Business Development Services
BKBK	Buy Kenya Build Kenya
CBK	Central Bank of Kenya
CDASED	Committee of Donor Agencies for Small Enterprise
CED	Community Economic Development
EAC	East African Community
EO	Entrepreneurial Orientation
GDP	Gross Domestic Product
GOK	Government of Kenya
ET	Entrepreneurial Team
ICT	Information Communication Technology
IPO	Initial Public Offer
KAM	Kenya Association of Manufacturers
KITP	Kenya Industrial Transformation Program
KNBS	Kenya National Bureau of Statistics
MANOVA	Multivariate Analysis of Variance
MSE	Micro and Small Enterprises
OECD	Organization for Economic Cooperation and Development
R&D	Research and Development
ROA	Return on Assets
ROE	Return on Equity
SDGs	Sustainable Development Goals
SEEP	Small Enterprise Education Program
SEM	Structural Equation Modeling
SME'S	Small and Medium Enterprises
SO	Support Organizations
SPSS	Statistical Package for Social Sciences

DEFINITION OF OPERATIONAL TERMS

Business Development Services These are non-financial services and products offered to entrepreneurs at variousstages of their business needs which are intended to help improve the performance of an enterprise by improving its ability to compete (Okeyo, 2014).

Entrepreneurial Ecosystem It is defined as a set of factors and actors that are interdependent and are coordinated in a way that they promote productive entrepreneurship (Stam, 2015).

Entrepreneurial Orientation It is the character traits of the entrepreneur that involves risk taking behavior, pro- activeness and innovativeness that acts as an important ingredient for enterprise growth (Pratono & Mahmood, 2015).

Entrepreneurial Team An entrepreneurial team consists of two or more people who have a shared interest and participate in the growth and development of an entrepreneurial venture (Seyedalikhan, 2022).

Firm Growth Firm growth is defined quantitatively as an increase in size, sales, output and the number of employees or improvement in quality as a result of improvement in the operations of a firm. (Arthur- Aidoo, Aigbavboa & Thwala, 2016).

Manufacturing Small and Medium Enterprises These are enterprises that transforms raw materials as input into finished products, employs between 11–99 people and generates less

than Ksh10 million in annual sales (ROK, 2012).

Seed Capital This is the initial amount of money required to start up a new entrepreneurial venture which usually comes from the business owner(s), friends and family and venture capitalists to enable the entrepreneur carry out the preliminary activities required before start-up such as market research, product research and development (R&D) and business plan development (Metrick & Yasuda, 2010).

Social Culture Social culture is sets of values, beliefs and attitudes commonly shared in a society which underpin the notion of an entrepreneurial way of life as being desirable and in turn support the pursuit of effective entrepreneurial behavior by individuals or groups (Akuegwu & Nwi- ue, 2016)

ABSTRACT

This study intended to find out the relationship between entrepreneurial ecosystem and the growth of manufacturing small and medium enterprises (SMEs) in Kenya. The manufacturing SMEs have been identified as one of the economic pillars to help Kenya achieve Vision 2030. However, it has been undergoing premature de-industrialization. This informed the need for this study. The study was guided by the following theoretical underpinnings: Pecking Order Theory, Social Network Theory, Human Capital Theory and Cochran's social culture Theory. The general objective of the study was to establish the relationship between entrepreneurial ecosystem and growth of manufacturing SMEs in Kenya. The specific objectives of the study were: To determine the relationship between seed capital, business development services, entrepreneurial team and social culture on the growth of manufacturing SMEs in Kenya. Entrepreneurial orientation was used as the moderating variable. The study adopted a descriptive survey design. The target population was 422 manufacturing SMEs in Nairobi County who are members of Kenya Association of Manufacturers (KAM). The sampling methods used in the study were; Purposeful, stratified and simple random sampling methods. Structured open and close ended questionairres were used to collect primary data while secondary data was collected using desk review. Structured interviews with key informants were used for data triangulation. A Pilot study was conducted on 20 manufacturing SMEs in Kiambu County to improve on the validity and reliability of research instruments using factor analysis and Cronbach's alpa Coefficient respectively. Data collected was coded and stored in tabular form using Microsoft Excel. Diagnostic tests for a regression model were carried out to determine data normality, auto-correlation, multi-collinearity, homoscedasticity and linearity. Data was analyzed using both quantitative and qualitative data analysis methods. Quantitative data was analyzed using Statistical Package for Social Sciences (SPSS) Version 25 software through descriptive statistics (measures of central tendency and measures of dispersion) and inferential statistics (Pearson correlation coefficient (r), multiple linear regression models and ANOVA). T- test was used to test the hypothesis. Thematic analysis was used for qualitative data. Analyzed data was presented using percentages, frequencies and tables. The study established that there was a significant positive relationship between seed capital, business development services, entrepreneurial team, social culture and growth of manufacturing SMEs. The study also established that there was a significant moderating effect of entrepreneurial orientation on seed capital, business development services, entrepreneurial team, social culture and growth of manufacturing SMEs. The aggregated model results indicated that, 49.2% of the growth of maufacturing SMEs was influenced by seed capital, business development services, entrepreneurial team and social culture and the interactions between the moderating variables and the independent variables. The study recommended that the government should formulate supportive policies for entry, survival and growth of manufacturing SMEs such as favorable terms and conditions for accessing finance, entrepreneurial education and training and research and development. Further research should be carried out to assess how entrepreneurial ecosystems affect the growth firms in other sectors of the economy, other entrepreneurial ecosystem factors other than the ones used in this study and a longitudinal study should be carried out to track the ups and downs in business cycle.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

This study sought to establish the relationship between entrepreneurial ecosystem and growth of manufacturing SMEs (SMEs) in Kenya. A manufacturing SME is defined as an enterprise that transforms raw materials as input into finished products, employs between 11–100 people and generates less than ksh. 10 million in annual sales (Republic of Kenya, 2012, KNBS, 2016). In many national economies, manufacturing is a key driver of economic growth and structural change through generation of productive jobs and sustainable economic development (Naudé & Szirrmai, 2012). According to the micro, small and medium enterprises (MSME) basic report of 2016, manufacturing SMEs are among the most active sectors of the Kenyan economy (ROK, 2016).

Globally, SMEs plays a very crucial role in the economic development of any country through the fact that they provide goods and services needed by the society and they create employment to majority of its citizens. In fact, large enterprises alone cannot meet the demand for goods and services with the increasing customer base (Katua, 2014). In Kenya, SMEs are key drivers to economic development through promotion of innovation, creation of employment opportunities thus assisting in alleviation of poverty and increasing competition hence improved standards of living. They also act as an important source of goods and services (KNBS, 2016; Nasr & Rostom, 2013). They however face several challenges that impede on their growth and subsequent increase in death rates of the start-ups leading to de-industrialization (KNBS, 2016). This justifies the need to study how the entrepreneurial ecosystem factors relate to the growth of manufacturing SMEs.

1.1.1 The Manufacturing Sector

The Manufacturing sector has played a significant role in the prosperity of nations due to its multiplier effects with both forward and backward linkages and its spillover

effects (Loto, 2012). According to World Economic Forum (2013), globalization of manufacturing has been a key driver of higher-value job creation and arising standard of living for the growing middle class in emerging economies around the world such as China, India, South Korea, Mexico and Brazil. Globally, the sector plays a significant role in realizing the Sustainable Development Goals (SDGs) by stimulating inclusive and sustainable economic growth and employment creation (Veugelers, 2013). It is the engine that drives world economies and acts as the bridge to industrialization, both for developing and developed economies (WEF, 2012). In the United States of America (USA), it contributes to 52% of the private work force and 51% to their GDP, in the United Kingdom (UK), it is associated with 62% of total employment and 25% to GDP while in Italy, France and Germany, it contributes to 79%, 63% and 60% in employment respectively (Petty, Hoy, Longenecker & Palich, 2012). In China, it employs 80% of urban population and contributes to 60% of GDP (Sham, 2014).

The sector is a key driver to Kenya's economic growth due to its potential to grow productive jobs and its ability to increase the purchasing power of consumers. It has the ability to increase the share of Gross Domestic Product (GDP) and increase profits (KAM, 2018). In 2016, the sector recorded an employment growth rate of 1.8 % accounting for 11.8% of the 2.55 million wage employment compared to 11.9% of the 2.48 million wage employment in 2015 (KNBS, 2016). Over 82% of the Kenya's manufactured products are consumed locally, while 6.1% and 12% is exported to East African Community (EAC) and other parts of the world respectively (KAM, 2018). In 2017, the GDP growth was projected at 6.4% with manufacturing SMEs contributing to 3%. Thus, the manufacturing sector is an important driver to Kenya's long term economic strategy, the Vision 2030 and one of the big Four Agenda for the Jubilee government.

According to MSME Survey (2016), the manufacturing sector has the second highest concentration of SMEs with 11.2% and 12.0% of the licensed and unlicensed economic activities respectively. The government of Kenya's Vision 2030 critically aims to double the share of manufacturing value-added to 20% from 10% through prioritization of the SME sector hence the importance of manufacturing SMEs.

However, the sector faces various challenges despite its crucial role in economic development leading to slowed growth rate. These challenges include: costly and unreliable electricity; inadequate access to finance; difficulties in trading across borders and competition from the informal sector (Enterprise Survey, 2013); inadequate investment in human capital; poor financial system; market failures; inadequate investment in research and development (R&D), organizational changes, poor social culture, inadequate business development services and technological changes which are drivers of innovation and productivity growth (OECD, 2013; OECD, 2016).

1.1.2. Small and Medium Enterprises (SMEs)

Globally, Small and Medium Enterprises (SMEs) definition varies according to the sector. The indicators used to define them include: the number of employees, total number of assets, annual turnover and capital investments (Adisa, Abdulraheem & Mordi, 2014). They range from very small (micro) enterprises run by one or two persons with very slow growth or no growth to fast growing medium manufacturing businesses earning millions of dollars and employing up to 250 employees (Fjose, Grunfeld & Green, 2010). In Canada and USA, medium manufacturing enterprises have less than 500 employees while small enterprises have less than 100. In Germany, medium enterprises have up to 250 employees and in Belgium, Small enterprises have less than 100 employees, (Katua, 2014).

Regionally, SMEs are firms employing up to 249 persons, with micro (1- 9), small (10-49) and medium (50-249) employees (OECD, 2016). It is observed that, more than 50% of businesses in underdeveloped and developing economies have fewer than 100 employees (Beck & Cull, 2014). It is estimated that 80% of the world's population earn their income from SMEs with small scale enterprises at 20% while medium enterprises at 10% (Fjose *et al.*, 2010). In Africa, they account for more than 90% of businesses and contribute to 50% of GDP, (Kamunge, Njeru & Tirimba, 2014).

In Kenya, the official definition of SMEs is according to the employment size with small (10-49) and medium (50-99) employees (KNBS, 2016). The Kenya vision 2030 underscores the importance of SME subsector in the country's industrial

transformation agenda. They have been recognized for their significant role in provision of goods and services, promotion of healthy competition, fostering innovation and generation of employment thus poverty alleviation. The SMEs cut across all the sectors of the economy and provide one of the main sources of employment as well as generating widespread economic benefits (KNBS, 2016). According to the National Economic Survey (2017), SMEs constitute 98% of all businesses in Kenya, create 30% of the jobs annually and contributes 3% of GDP. While the sector continues to create numerous jobs and boost the country's GDP, it faces a myriad of challenges that hamper its growth with failure rate estimated at close to half a million small enterprises (KNBS, 2017). Both financial and other environmental factors such inadequate skills, poor social culture, unfavorable regulatory framework, poor access to market, poor finance systems, inadequate support systems and inadequate investment in research and development has been sighted as some of the causes for the high failure rate (KNBS, 2016).

Due to the importance of the sector and its high failure rate in Kenya, various policy papers have been developed to promote entrepreneurship and create a supportive entrepreneurial environment to help increase the survival rates of SME's hence their growth. Among them is the Micro and Small Enterprise Act No. 55 of 2012 which aims at promoting Micro, Small and Medium enterprises through promotion of policy and institutional frameworks (Republic of Kenya, 2012). Regardless of these efforts, the share of manufacturing SMEs has been declining over time, hence undergoing premature de-industrialization (KNBS, 2018).

1.1.3 Concept of Growth

Firm growth is measured both quantitatively and qualitatively. Quantitatively, it is assessed through increases in sales, output, profitability, or employment. Qualitatively, it is evaluated based on improvements in the quality of goods and services, market position, and customer goodwill. Firms can grow either through internal expansion (organically) or through integration (inorganically) (Arthur-Aidoo, Aigbavboa & Thwala, 2016). Firm growth is an open process with unpredictable outcomes related to adaptation and learning, which occur as firms navigate the business environment

(Welter, 2001).

The United States is the largest manufacturer globally, holding a 20.2% share of the world's manufacturing output. China follows closely, having increased its manufacturing output from 3% in 1990 to 18.9% in 2010. Japan ranks third with an 11.1% share, and Germany is fourth with 6.4%. The top 10 countries account for 72.3% of the world's manufacturing output (UN, 2010). The African continent has recently made significant strides in developing manufacturing firms compared to the rest of the world, with a growth rate exceeding 5% over the past decade, outpacing America, Europe, and South America (Hirst, Thompson & Bromley, 2015). Countries like Angola, Rwanda, and Malawi have shown remarkable progress, while others like Zimbabwe have struggled. This positive change has attracted various investors, particularly from the USA, China, and India, contributing to Africa's long-term economic development (Abor & Quartery, 2010).

Despite these advancements, Sub-Saharan Africa experiences low levels of manufacturing, with output per person 30% lower than other developing regions. In South Africa, manufacturing output decreased from 0.61% in 1990 to 0.5% in 2010 of the total international output (OECD, 2017). Consequently, the African region lags behind other parts of the world in development, with an overall decline in GDP, leading to de-industrialization in several countries (Were, 2016). In Kenya, the number of manufacturers has grown over the years, with output increasing by 69% from Ksh. 1.2 million in 2010 to Ksh. 2.1 million in 2016. However, annual growth rates have declined from 5.8% in 2010 to 5.2% in 2012, falling short of the 10% growth rate aspired under Vision 2030 (KAM, 2017). This indicates a reduction in the share of manufacturing over time, leading to premature de-industrialization.

To address this, several policy strategies have been developed, including the Kenya Industrial Transformation Program (KITP), National Trade Policy, Investment Policy, and Buy Kenya Build Kenya (BKBK). These initiatives aim to promote entrepreneurship and create a supportive entrepreneurial environment, fostering a robust entrepreneurial ecosystem (MPA, 2018). These policy strategies aim to enhance industrialization by providing financial support, infrastructure development, capacity

building for SMEs, enhancing market access for SMEs, encouraging both domestic and foreign investments in SMEs through incentives and regulatory support, and promotion of the consumption of locally manufactured goods, thereby boosting demand for products from Kenyan SMEs. These policy strategies benefit manufacturing SMEs in Kenya by providing comprehensive support system that addresses their financial, operational, human capital and cultural needs thus fostering a robust entrepreneurial ecosystem, driving sustainable growth. The growth indicators adopted in this study were number of employees, sales volume, net profit margin and return on invetment.

1.1.4 Entrepreneurial Ecosystem

Entrepreneurial ecosystem refers to a set of interdependent actors and factors that are co-ordinated in such a way that they contribute to development and growth of entrepreneurial ventures. The concept is drawn from the biological concept of the interaction between living organisms in their physical environment (Stam, 2015). Stam, posited that, just like the biological ecosystems, an entrepreneurial ecosystem consists of different elements, which can be individuals, groups, organizations and institutions that form a community by interacting with one another together with environmental determinants that have an influence on how these actors work and interconnect. It is a recently emerged concept that helps to balance focus on entrepreneurs as individual actors and the system-level conditions as contextual factors with the recognition that individual entrepreneurial actions are largely influenced by the local business environment (Mason & Brown, 2014).

Globally, many countries offer a variety of incentives for start-ups such as Babson Entrepreneurship Ecosystem Project and Global Entrepreneurship Program for the U.S. Department of State which outlines six key domains of the entrepreneurship ecosystem: conducive social culture, enabling policies and leadership, availability of appropriate finance, quality human capital, venture- friendly markets for products, and a range of institutional and infrastructural supports. The idea rests on the premise that no single factor alone can spur and sustain entrepreneurship (CIPE, 2014). In Africa, case studies of entrepreneurial ecosystem have shown a positive effect on growth of

firms. For example, start-ups in South Africa, Angola, Rwanda and Ethiopia have incredibly been vibrant with support infrastructure from investors, government, and private institutions contrary to Senegal, Ivory Coast and Botswana which has recorded low growth due to retrogressive social culture, low intake of technology and innovation due to high entry barriers and high government regulations (Mason & Brown, 2014).

In Kenya, although much has been done to improve entrepreneurship ecosystem since 2010, with increase in the number of hubs, co-working spaces, incubation and acceleration centers, there has been low growth of firms due to limited connections to networks of international mentors, angel investors, venture capitalists (VCs), poor managerial practices, information failures, inadequate technology difficulties in connecting to global and regional value chains. These internal constraints continue to hold back Kenyan manufacturing SMEs from growing (KNBS, 2019). In this realization, the Kenyan government has formulated various policies in form of Sessional papers such as sessional paper No. 2 and No. 55 of 2005 and 2012 respectively, which provides for promotion and development of small businesses through creation of an enabling environment for new venture creation and growth. This enabling environment constitutes the entrepreneurial ecosystem factors that form the basis of this study.

Despite these efforts by the government, the manufacturing SMEs in Kenya have continued to perform poorly as evidenced by an estimated total of 2.2 million SMEs in Kenya that closed, with 46.3% of them closing during the first year of operation (KNBS, 2017). This poor growth has been attributed to fluctuating supply of raw materials, marketing problems, inadequate entrepreneurial team development, poor seed capital, poor social culture and competition with large-scale companies (Makokha, 2015). Whereas entrepreneurial ecosystem factors are important drivers of enterprise development (Stam, 2015), there are scarce empirical studies on the relationship between them and growth of enterprises that this study intends to establish. Entrepreneurial orientation (EO) which is the entrepreneur's risk-taking behavior, pro-activeness and innovativeness have been found to be important ingredient for enterprise growth (Pratono & Mahmood, 2015), will be used as the

moderating variable.

1.2 Statement of the Problem

The manufacturing sector is crucial for economic development and job creation worldwide, regionally, and specifically in Kenya. Despite its importance, the sector has faced significant challenges over the past 15 years, leading to a marked decline in its contribution to GDP and the phenomenon of premature de-industrialization (KAM, 2018). This decline is evidenced by a consistent reduction in the number of manufacturing firms and employment levels, coupled with an increasing share of the service sector in GDP (KNBS, 2017). Historically, the sector's contribution to GDP has stagnated, averaging 10% from 1964-1973 and only increasing marginally to 13.6% from 1990-2007 (KAM, 2018). More recently, the share dropped from 11.8% in 2011 to 9.2% in 2018, with growth rates declining from 7.2% in 2011 to 3.5% in 2016. Employment growth also fell from 11.9% in 2015 to 11.8% in 2016 (KNBS, 2018). As of 2021, the growth rate remains below the targeted annual rate of 10% set by Vision 2030, achieving only 6.9% growth and a 7.17% contribution to GDP (KNBS, 2022). This decline persists despite various government policy interventions aimed at revitalizing the sector.

Globally, much of the existing research on entrepreneurial ecosystems has concentrated on developed economies, often overlooking the unique challenges faced by emerging markets (Mason & Brown, 2014; Stam, 2015; Spigel, 2017). Regionally, studies have primarily focused on the entrepreneurial landscape without adequately exploring the interplay between ecosystem factors and enterprise growth, leaving a significant gap in understanding how these relationships function in different contexts (Sheriff & Muffatto, 2015; Rahatullah, 2013). Within Kenya, research has largely centered on technology start-ups, neglecting the broader manufacturing sector and its specific needs (Hain & Jurowetzki, 2017; Bramann, 2017; Ankarcona & Holm, 2016). Furthermore, empirical studies on manufacturing SMEs have typically examined isolated elements of the ecosystem rather than adopting a holistic approach (Bunyasi, 2012; Kimando, Sakwa & Njogu, 2012; Bwisa & Ndolo, 2011).

Additionally, there is a lack of comprehensive studies that integrate various ecosystem

components such as access to finance, market opportunities, and regulatory frameworks and their collective impact on the growth of manufacturing SMEs. According to Park, Martins, Hain, and Jurowetzki (2017), understanding these interactions is essential for identifying both strengths and weaknesses within the ecosystem. Given this context, there is a pressing need to investigate the relationship between the entrepreneurial ecosystem and the growth of manufacturing SMEs in Kenya. This study aimed to address the identified research gaps by providing a holistic examination of how various ecosystem factors influence the performance and growth of manufacturing enterprises in Kenya.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of this study was to establish the relationship between entrepreneurial ecosystem and growth of manufacturing SMEs in Kenya.

1.3.2 Specific Objectives

1 To establish the relationship between seed capital and growth of manufacturing SMEs in Kenya.
2 To find out how business development services affect the growth of manufacturing SMEs in Kenya.
3 To examine the effect of entrepreneurial team on growth of manufacturing SMEs in Kenya.
4 To determine the relationship between social culture and growth of manufacturing SMEs in Kenya.
5 To assesss the moderating effect of entrepreneurial orientation on the relationship between entrepreneurial ecosystem and growth of manufacturing SMEs in Kenya.

1.4 Research Hypotheses

H_{01}: There is no statistical significant relationship between seed capital and growth of manufacturing SMEs in Kenya.

H$_{02}$: There is no statistical significant relationship between business development services and growth manufacturing SMEs in Kenya.

H$_{03}$: There is no statistical significant relationship between entrepreneurial team and growth of manufacturing SMEs in Kenya.

H$_{04}$: There is no statistical significant relationship between social culture and growth of SMEs in Kenya.

H$_{05}$: Entrepreneurial orientation has no statistical significant moderating effect on the relationship between entrepreneurial ecosystem and growth of manufacturing SMEs in Kenya.

1.5 Significance of the Study

The rationale for undertaking this study was to provide investigate and shed light regarding entrepreneurial ecosystems factors on the growth of manufacturing SMEs with reference to seed capital, business development services, entrepreneirial team, and social culture. The concept of firm growth is dynamic and involves various factors such as entrepreneurial imagination, vision, administrative, technical and managerial competences, change in the firm's range of products and demand conditions for the existing products (Jones & Pitelis, 2015). Small and Medium Enterprises play a key role in spurring the economic growth while contributing to poverty alleviation and reduction. This therefore presents the need for research on the entrepreneurial ecosystem factors influencing growth of manufacturing SMEs in order to facilitate the growth process. The study was carried out in maufacturing SMEs in Kenya. The findings from this study will also help reduce the high failure rate of manufacturing SMEs and facilitate their growth.

1.6 Justification of the Study

The reason behind this study was to establish the the effect of entrepreneurial ecosystem to the growth of maufacturing SMEs. This was driven by the fact that despite the importance of manufacturing SMEs in the economy, there have been pre-

mature de-industrialisation. The research findings are of benefit to various groups among them: the government, manufacturing entrepreneurs, donors, research institutions, Scholars and Academicians who directly or indirectly influence the growth of manufacturing SMEs and can therefore increase their growth in order to increase emplyment opportunities, grow the share of Gross Domestic Product (GDP) and reduce poverty in the country.

1.6.1 Government of Kenya

The study findings will inform the Kenyan government through the relevant ministries on key policy issues affecting the growth of manufacturing sector hence assisting in policy formulation. The study provides critical insights that can help the government develop policies to support SME growth, fostering economic development and job creation. The findings will also assist the Kenyan government in Economic Planning: Understanding the entrepreneurial ecosystem will aid the government in strategic economic planning to ensure resources are allocated effectively to boost the manufacturing sector. The information will also help the government in Regulatory Improvements. This is where the gornment will be able to identify regulatory barriers in oeder to come up with solutions that can streamline processes, making it easier for SMEs to thrive. This will help the govrnment to achieve its agenda of becoming industrialized by the year 2030 as envisioned in the Vision 2030.

1.6.2 Manufacturing Entrepreneurs

The study findings will provide critical feedback and insight to manufacturing entrepreneurs in developing appropriate business Strategies that may assist in enhancing competitiveness and innovation. The study findings will assist them make informed decisions on resource allocation, Insights on ecosystem dynamics help entrepreneurs make informed decisions about resource allocation, partnerships, and market expansion. The study findings will also be useful to practicing entrepreneurs and other potential entrepreneurs in overcoming Challenges facing entrepreneurs. The study highlights common challenges and provides actionable recommendations on how to overcome them, fostering business resilience.

1.6.3 Donors

The findings will be of great assistance to donors since they will be able to engage in suitable economic development programs that will benefit small and medium manufacturing entrepreneurs. From the findings, the donors will be abe to make targeted funding. Donors can use the study to identify key areas where financial support is most needed, ensuring their contributions have maximum impact. The donors will be in a position to have program development. This is because insights from the study can guide the development of programs that support SME growth, aligning with broader development goals. The donors will also be able to assess the impact of their development programs. The study provides a framework for assessing the impact of donor-funded initiatives on SME growth and the entrepreneurial ecosystem.

1.6.4 Research Institutions

The study findings will benefit research institutions in knowledge expansion. The study contributes to the body of knowledge on entrepreneurship and SME growth, providing a foundation for further research. The research institutions are also able to identify collaborative opportunities since from the study findings they are able to identify potential areas for collaboration with government, industry, and donors to enhance the entrepreneurial ecosystem. The study also offers valuable data and insights that can be used for academic purposes to enrich the research community.

1.6.5 Scholars and Academicians

The findings in this study adds to the academic literature on entrepreneurship and SME growth. This in turn offers new perspectives in the field of entrepreneurship. The study also adds on to the teaching materials. Thus, scholars can use the study findings as a teaching resource, providing real-world examples and case studies for students. The scholars and academicians also will get research opportunities. This is because the study identifies gaps and areas for further research, encouraging scholars to explore new dimensions of the entrepreneurial ecosystem.

1.7 Scope of the Study

The study was a descriptive survey which investigated the relationship between entrepreneurial ecosystems and growth of manufacturing SMEs in Kenya. Specifically, the study focused on establishing the relationship between seed capital, business development services, entrepreneurial team, social culture and growth of manufacturing SMEs in Kenya with entrpreneurial orientation as the moderating factor. Manufacturing SMEs were chosen because of the government's emphasis on the sector's crucial role in the economic development of the country. Additionally, the sector has been identified as a key driver to achieving Vision 2030 with an aim of economic development by creating employment, wealth creation and poverty reduction.

The sampling frame was the list of all manufacturing SMEs in Kenya who are members of Kenya Association of manufacturers. According to KNBS (2017) and KAM (2018), 80% of manufacturing SMEs in Kenya are located in Nairobi making it a hub of manufacturing SMEs in Kenya. The information from manufacturing SME owners and managers was obtained through administration of questionnaires and responses recorded and analyzed for presentation. Owner managers/ CEOs of manufacturing SMEs who are members of KAM were targeted. This is because owner mangers/ CEOs are involved in day to day running of the firms hence in a better position to give informed responses. In addition, KAM being a manufacturer's advocacy body, its likely to share with its members the different challenges that affect them and thus KAM members are able to give more informed responses. Stratified random sampling was adopted where the manufacturing SMEs were categorised into 10 sub-sectors according to KAM categorisation to select representative samples from the categories. Secondary data was obtained from journals and other published articles in libraries and the internet. The analysis was done using SPSS version 25 using both qualitative and quantitative data analysis. Quantitatively, data was analysed using both descriptive and inferential statistics. The findings presented in form of graphs and tables for easy interpretation.

In addition, the study was a cross-sectional study since it was administered at just one

point in time and was intended to give an idea about how things were for the manufacturing SMEs at the particular point in time that the study was administered.

1.8 Limitations of the Study and Delimitations of the Study

The researcher was limited by the fact that it was not possible to investigate all the entrepreneurial ecosystem factors and growth of manufacturing SMEs in one study since it studied seed capital, business development services, entrepreneurial team and social culture as indicated in the conceptual framework while there are other entrepreneurial eosystem factors. Nevertheless, the research investigated these factors in depth so as to generate a deeper understanding of the same.

Time was also a key challenge to the researcher and even the SME owners and managers some of whom took long to fill up the questionnaires because of their busy schedules. This was overcome by the researcher seeking assistance from two research assistants who personally took the questionnaires to the respondents and left the questionaires to pick them at a later date to give the respondents adequate time to give their responses without being rushed or pressurized This gave them adequate time to respond thus providing accurate responses.

In addition, some respondents were not comfortable in giving out some information relating to their enterprises. This was overcome by the resaerch assistants explaining to them the use of the information and how the findings would contribute to the growth of their entreprises. The respondents were also promised cofidentiality and that the information provided would not be used for any other purposes apart from academic purposes outlined in the introduction letter from the institute. This buillded trust and confidence in the respondents and thus they willingly gave the asked for information.

Whereas there are many sub-sectors in the economy, the manufacturing sub-sector was purposively selected as the object of this research. This is due to its contribution to the economic development of the country. The researcher recommended for further resaerch in other sectors of the economy to establish whether the same will hold for the other sectors.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

A literature review is a comprehensive summary of previous research on a topic. It surveys scholarly articles, books, and other sources relevant to a particular area of research. It helps the researcher to give a theoretical base for the research and helps in determining the nature of research (Machi & McEvoy, 2016). This chapter contains the theoretical and empirical literature related to variables, the conceptual framework and critique of the existing literature, summary and the research gaps in the study.

2.2 Theoretical Framework

A theory is a scientifically acceptable general principle offered to explain a phenomenon that provides reason why something may occur or explain patterns in behavior. Theoretical framework relates to the philosophical basis on which the research will be carried out and forms the link between the theoretical aspects and practical components of the problem under investigation (Kothari, 2004). It serves as a blueprint for the study and helps to clarify the focus and direction of research. Its primary purpose is to provide a coherent structure that connects the research to existing knowledge and helps researchers to articulate their assumptions, justify their methodological choices and interpret their findings within a broader context (Creswell & Creswell, 2017). This study was supported by five theories which include: Penrose theory of firm growth, pecking order theory of capital structure, social networking theory of entrepreneurial ecosystem, Human capital theory and Cochran's theory of social culture as discussed below.

2.2.1 Penrose Theory of Firm Growth

This theory was proposed by Penrose in 1959 who defined a firm as an administrative planning unit whose activities are interrelated and coordinated by policies which are framed in the light of their effect on the whole enterprise (Adomako, & Mole, 2018). The theory states that, the firm's existing resources provide both an incentive and a

limit to the rate of firm growth. The theory argues that firms are enterprises that are created by entrepreneurs to serve their specific purpose and entrepreneurs are motivated by the need for achievement, firm survival and the need to generate both creative innovations and adaptive responses for firm growth. The theory elaborates on the link between growth and profitability and views profits as a necessary condition for expansion or growth of a firm. It also emphasizes on entrepreneurs' experiences and knowledge as vital for identifying growth opportunities and executing growth of the firms (Kor, Mahoney, Siemsen, & Tan, 2016).

Firm growth is dynamic and involves various factors such as entrepreneurial imagination, vision, administrative, technical and managerial competence, change in the firm's range of products and demand conditions for the existing products (Jones & Pitelis, 2015). The theory argues that limited nature of entrepreneurial resources is the main cause of enterprise failure. It further argues that the amount of the capital requirements is not a barrier for growth by itself if a robust business idea is coupled with competent and skilled entrepreneurial team. According to Penrose, the term growth may sometimes denote a mere increase in amount of output, export, and sales or it may imply an increase in size or improvement in quality as a result of process of development. Davidsson and Gartner (2003) argued that firm growth is a multi-dimensional phenomenon rather than uni-dimensional and that different modes of growth may have different antecedents and effects. They further argued that growth may take different forms such as vertical integration, related or unrelated diversification, entering new, non-overlapping product-markets and use of licensing.

Penrose emphasized on the importance of entrepreneurial team as one necessary condition for firm growth though in her argument, it is not a sufficient condition for continued growth. The theory has made a major contribution to the modern resource-based view of the firm. However, Rugman and Verbeke (2004) criticized the theory by arguing that it does not make direct contributions to the resource-based thinking. However, their arguments did not under-estimate the relevance of the theory in relation to the growth of the firm. The basic goal of the study was to investigate the relationship between the entrepreneurial ecosystem and growth of small and medium manufacturing firms in Kenya. The dependent variable of the study was the growth of

manufacturing SMEs.

2.2.2 Pecking Order Theory of Capital Structure

Capital structure refers to how a firm finances its overall operations and growth by using different sources of funds (Frank & Goyal, 2003). This study used pecking order theory of capital structure. The theory was first suggested by Donaldson in 1961 and later modified by Myers & Majluf in 1984. It is based on the understanding that managers know more about their firm's prospects, risks and value more than the outside investors. This affects their choice of either internal or external sources of finance and whether to go for debt financing or issue equity (Brealey, Myers & Allen, 2011). The theory states that, firms prioritize their sources of funds ranging from internal to equity funding depending on the cost of financing. Firms will therefore first opt for internal sources followed by debt finance if internal funds are not sufficient while equity financing will be used as a financing option of last resort when it can no longer issue any more debt (Matemilola, Bany & Azamn, 2012).

The theory has been criticized that it assumes that firms' pecking order is the same for surpluses and deficits. However, Myers, Stewart, Majluf, and Nicholas, (1984) argued that, if a firm generates more funds internally than the desired investment outlays, then the firm first pays off debt or invests its cash in marketable securities. Hence, a firm's financing behavior is different for both surpluses and deficits in firms. The theory suggests that firms give highest preference to internal sources of finance as opposed to external funding because internal funding does not require flotation costs and firm's financial information does not have to be disclosed hence, they are able to retain their competitive advantage (Brealey, Myers, Allen, & Mohanty, 2012). If a firm a firm's internal sources are insufficient hence the need for external funds, the order of preference is debt, then convertible securities and finally stock and common stock (Myers, 1984). The idea behind this order of preference is that the financial manager needs to retain control of the firm, reduce of agency costs of equity and wants to avoid the possible negative market reaction caused by announcement of new equity issues (Hawawini & Viallet, 1999). This theory contributed to the second objective of establishing the relationship between seed capital and growth of manufacturing SMEs

in Kenya.

2.2.3 Social Networking Theory of Entrepreneurial Ecosystem

Network is defined as groups or systems of interconnections between people and organizations whose aims and purposes is provision of services. A social network consists of a set of actors (nodes) and the relations (ties or edges) between these actors (Muijs, West & Ainscow, 2010). The theory was founded in 1930 by Durkheim and states that, the availability of social networks that connect entrepreneurs with advisors, investors and human resources makes it possible for knowledge and skills to flow. The theory focusses on relationships between entrepreneurs and others that provide the resources that are important in establishing a business. They get support, knowledge and access to distribution channels through their social networks (Ogunnaike & Kehinde, 2013).

Entrepreneurs today are not looked at as autonomous in their behavior and in the decisions, they make but are embedded in their social networks (Defourny & Nyssens, 2010). Thus, the theory views social relationships in terms of nodes (individual actors within the network) and ties (relationships between the actors). Network researchers have identified broad range of types of ties such as communication ties (who talks to whom, or who gives information or advice to whom), formal ties (who reports to whom), affective ties (who likes whom, or who trusts whom), material or work flow ties (who gives money or other resources to whom), proximity ties (who is spatially or electronically close to whom) and cognitive ties (Jaafar, Abdul, & Sahari, 2009).

According to Fatoki (2011), social relationships are crucially important to the entrepreneurial process because the information needed to start and grow a business is passed to the entrepreneur basically through the existing social networks. The entrepreneurs therefore must build relationships which can enhance their reputation with external resource providers who are ready to share information, technology, goods and finance that are valuable to the entrepreneur (Jaafar & Sahari, 2013). Entrepreneurs have ideas, knowledge and competence to run the business, but for them to succeed, they require complementary resources that will help them improve on the production and delivery of their goods or services. They are also linked to people and

organizations that interact among themselves and these contacts can widen the availability of resources that sustain a new firm (Clarysse, Tartari & Salter, 2011). This theory contributed to the objective number two of finding out the relationship between business development services and growth of manufacturing SMEs in Kenya.

2.2.4 The Human Capital Theory

Human capital refers to the competences, knowledge and personal attributes embodied in the ability of a firm's workforce to efficiently and effectively perform their tasks and deliver desirable results and are mainly gained through education, training and experience (Collings, Wood & Szamosi, 2018). According to Hessels and Terjesen (2008), entrepreneurial human capital refers to an individual's knowledge, skills and experiences related to entrepreneurial activity. Human capital theory was first conceived by Adam Smith in 1776 which formed the basis of what later became the science of human capital. The theory was proposed by Schultz (1961) and later developed extensively by Becker (1964).

According to Becker (2007), human capital is similar to physical means of production such as factories and machines thus a means of production into which additional investment yields additional output. However, it is substitutable but not transferable like land, labor or fixed capital. It was first generally applied on employees but Bruderl, Preisendorfer and Ziegler (1992) looked at it in an entrepreneurial context and termed it as entrepreneurial human capital. Bruderl *et al.* (1992) argued that entrepreneurs with higher general and specific human capital are likely to perform better than their counterparts with much lower levels. According to Hessels and Terjesen (2008), entrepreneurial human capital is important to entrepreneurial development. The theory hypothesis that; education level, line of training, past entrepreneurial and business experience and skills have great influence on the choice of business sector and its eventual performance (Brush & Hirsrich, 1991).

The theory has largely been criticized by sociologists of education that it encourages individualism, has system defects, creates pseudo-capitalists out of workers and that it causes conflict of interest between socialist and capitalist workers. Despite these criticisms, the theory is regarded as the basis for the rational-exchange theory and that

it gives explanations of economic phenomena (Fitzsimons, 2015). The theory contributed to objective number three of assessing the relationship between entrepreneurial team and growth of manufacturing SMEs in Kenya.

2.2.5 Cochran's Theory of Social Culture

Social culture is defined as a set of values, beliefs and expected behaviors that are commonly shared across people within or from a given geographic region and are conducive to entrepreneurial behavior (Hayton & Cacciotti, 2013). Stuetzer, *et al.* (2018) posited that, a social culture is more likely to emerge in areas with high employment shares in small businesses. Thus, workers in small firms are in closer contact with an entrepreneurial role model and can acquire entrepreneurial skills more easily than workers in large firms. Such role model effects may trigger a positive perception of entrepreneurship and hence stimulate a personal decision to start a firm. Cochran's theory was proposed by Cochran in 1971. The theory looked at the supply of entrepreneurship from the sociological point of view. Cochran suggested that the cultural values, social and role expectations have a very crucial role to play in the determination of supply of entrepreneurs in any given society (Kilby, 1971). The theory suggests that the problems associated with economic development include non-economic issues and thus, social factors play an important role in determining the entrepreneurial dynamism and the supply of entrepreneurs. Cochran opined that, entrepreneurs are not extraordinary persons or super normal persons who are deviant from the society but rather they represent role models of the society.

Cochran was of the opinion that the intrinsic character and behavior of the executive is highly dependent and conditioned by the type of childbearing and schooling. Thus, all social and cultural factors are very significant in influencing the expectation levels, personality and behavior of everyone in the society and entrepreneur's role specifically (Altinay & Wang, 2011). Cochran posited that, the attitude of a person towards his/her own occupation, the role expectations conceived and expected by the sanctioning group and the operational requirements of the concerned job influence the performance of the entrepreneurs. The theory has been criticized that it does not provide a satisfactory explanation of the supply of entrepreneurs in an economy, it concentrates

only on the social factors and their impact, it ignores the influence of important elements like risk, profit and innovation and that it has ignored the multiple roles associated with the entrepreneur (Hayton & Cacciotti, 2013). The theory contributed to objective number four of assessing the relationship between social culture and growth of manufacturing SMEs in Kenya.

2.3 The Conceptual Framework

A conceptual framework is a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation (Babbie, 2015). It is a less developed form of theory that consists of statements which link abstract concepts to empirical data and graphically displays independent and dependent variables of a study. This study focused on four components of entrepreneurial ecosystem namely: seed capital, business development services, entrepreneurial team and social culture as the independent variables while growth of manufacturing SMEs was the dependent variable. Entrepreneurial orientation was used to moderate the relationship between entrepreneurial ecosystem and growth of manufacturing SMEs. This relationship is illustrated in the figure 2.1.
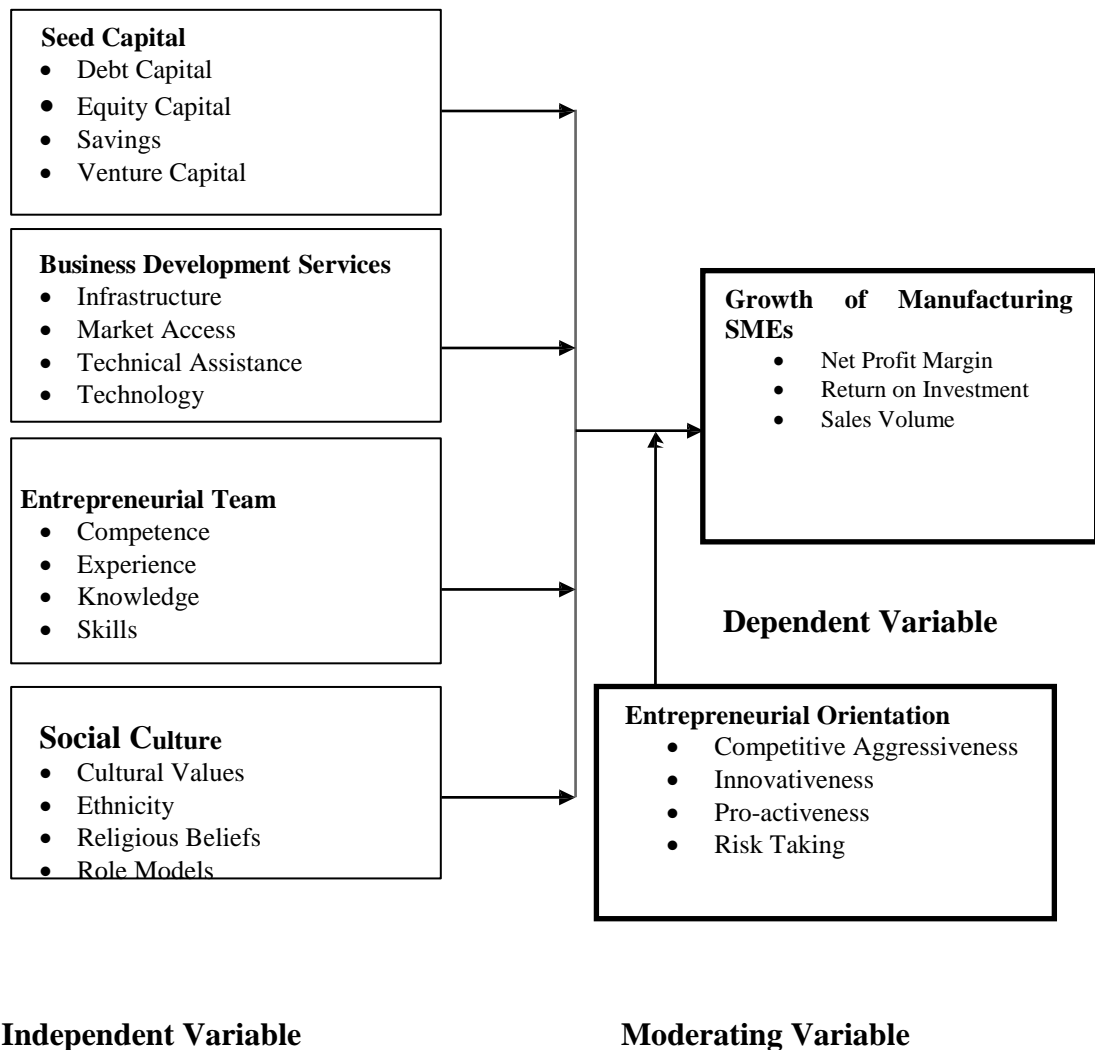
Figure 2.1: Conceptual Framework

Seed Capital
- Debt Capital
- Equity Capital
- Savings
- Venture Capital

Business Development Services
- Infrastructure
- Market Access
- Technical Assistance
- Technology

Entrepreneurial Team
- Competence
- Experience
- Knowledge
- Skills

Social Culture
- Cultural Values
- Ethnicity
- Religious Beliefs
- Role Models

Growth of Manufacturing SMEs
- Net Profit Margin
- Return on Investment
- Sales Volume

Dependent Variable

Entrepreneurial Orientation
- Competitive Aggressiveness
- Innovativeness
- Pro-activeness
- Risk Taking

Independent Variable   Moderating Variable

2.3.1 Seed Capital

Availability of capital is among the most critical features in any ecosystem since its key driver to the creation, survival and growth of ventures. Seed capital refers to the initial sources of funds required to start a new venture. It usually comes from the business owner(s), friends, family and venture capitalists to support preliminary activities such as market and product research and development (R&D) and business plan development (Metrick & Yasuda, 2010). Its sources may be either internal (own savings) or external (angel investors, debt and equity). According to, Isenberg (2011), own savings and borrowing from friends and relatives, provide funds at early stages

of enterprise development while at later stages, funds can be obtained from other sources like venture capitalists, financial institutions and sale of shares. Firms start with internal sources and turn to external sources when internal sources are insufficient to enable the firm to continue with its operations efficiently. However, lack of internal finances can be a problem to the manufacturing SMEs since external finances are difficult to access due to the terms and conditions set by the financiers (Becchetti & Garcia, 2011). The seed capital variables that were used in this study included: Debt capital, equity capital, savings, and venture capital.

Debt capital is when an entrepreneur borrows money to be paid back at a future specified date with an agreed rate of interest and at agreed intervals. It can either be secured or unsecured loan (Cumming & Groh, 2018). It is a major source of capital for majority of entrepreneurs since their retained earnings are insufficient or not available. However, too much debt is risky and thus, the entrepreneurs must make a decision on the level of debt-to-equity ratio which they are comfortable with (Hirsch & Walz, 2011). Manufacturing SMEs depend on debt financing because it is relatively cheap compared to equity financing. However, they should consider terms and conditions of the debt facility (Baum, Checherita-Westphal & Rother, 2013; Sun, 2010).

Equity capital refers to that portion of entrepreneur's capital, which is raised in exchange for the share of ownership/owner's investment in the enterprise known as equity shares. The equity shareholders are the owners of the enterprise and have significant control over its management. They enjoy rewards of the enterprise in form of dividends and bear the risk of ownership (Vismara, 2016). Equity capital can be increased through retention of profits. Normally, an entrepreneur will first consider equity finance from the owners or promoters of that enterprise before looking for other investors and issue fresh equity shares (Akingunola, 2011). Finance theory argues that borrowed fund is only appropriate for profitably operated businesses with the rate of return on investment higher than the cost of external funds (Brigham, Ehrhardt, Nason, & Gessaroli, 2016). This study will use venture capital, own savings, debt capital and equity as a measure of independent variable, seed capital and their relationship with manufacturing SMEs growth.

Savings refers to the money that may have been put aside in cash for future use or/ and deposited in a bank account either in fixed deposit account, a pensions account or an investment fund to earn interest or profit or it may be used to purchase assets to start and grow a venture. (Bime & Mbanasor, 2011; Virani & Kaur, (2016). Savings are considered to be low-risk source of capital (McKinnon, 2010). Fisher, (2010) observed that personal savings from household (individual) are used by the entrepreneur to invest hence encouraging the saving and investment habit of an entrepreneur thus enhancing individual entrepreneurial development. The use of personal funds to start or expand a small business is the main source of funds. This form of finance is ideal for micro and small enterprises since its simple to obtain and its safe. It also helps to keep the business private and growing at a moderate but steady pace for a reasonable period until there is the capacity to seek finance from other sources (Imevbore, 2008).

Venture capital is financing that is provided to start-up and small firms with long-term growth potential by investors. It mainly comes from well-off investors, investment banks and any other financial institutions (Della & Yermo, 2013). It can be formal (corporations or partnerships operating in an investment group) or informal (angel investors) (Metrick & Yasuda, 2010). Venture capitalists look for promising intangible features in a firm such as competent management, competitive advantage and growth potential among other factors (King, 2008). The venture capital sector is less formal, and it's built on trust relationship between the entrepreneur and the angel investor where the entrepreneurs negotiate with angel investors and agree on a personalized investment package that is beneficial to both parties (Winton and Yerramilli, 2008). Therefore, in choosing a venture capitalist, the entrepreneur focuses mainly on the ability of the financier to create value (Mbhele, 2012). However, there is a major drawback to this source of finance since it's quite difficult to find business angels since the angel market is fragmented and not well structured and also not well supported by the government (Fairchild, 2011).

2.3.2 Business Development Services (BDS)

Business development services (BDS) was devised in the 90's by Donor Agencies for Small Enterprise Development (CDASED) to supplement the term 'non-financial

services and defined them as services that improve market accessibility, competitiveness and overall performance of an enterprise. BDS is a means through which SMEs can overcome market failure by providing information needed by businesses, availing consultancy services, enhancing skills and business training, improving quality through technology transfer, providing access to subsidized infrastructure, improving market accessibility and helping it gain a competitive edge (Brijlal, 2008; Okeyo, 2014). This study used market access, infrastructure, technical assistance and technology as indicators of BDS.

Infrastructure refers to the physical structures that enable enterprises to run smoothly. They are viewed as the basic structures (physical and organizational) that provides support for development of an organization or economy. It is regarded as an essential linkage between an enterprise and its markets which can have the potential to impact on the enterprise revenues and overall effectiveness (Price, *et al.*, 2013). In manufacturing SMEs, infrastructure facilities consist of the factory, equipment, warehousing, transport and delivery, incubators, banking facilities, internet access, computer and secretarial services. According to Okeyo, Gathungu and K'Obonyo, (2014), well-developed infrastructure facilities reduce the impact of inter-regional distances, integrating the local markets as well as connecting them at low cost to markets in other countries and regions. White, O'Connor and Rowe (2004), argued that, unavailability of appropriate infrastructure could lead to excessive capital investments, support levels and inadequate organizational flexibility. Thus, strained access to infrastructure components may have adverse implication for performance in a manufacturing SME.

Market access can be achieved through market management which is postulated to have the ability to enhance an enterprise's competitive advantage through increased market outreach. Management of markets through continuous innovation, products or processes in anticipation of, and response to, dynamic customer requirements, competitors and supply analysis is the essence of SME survival and growth (Price, Stoica & Boncella, 2013). Small Enterprise Education Program, SEEP, (2001) argued that market access consists of: market linkages, trade fairs and exhibitions, market information, outsourcing, market research, packaging and advertising. According to

Mahmoud (2011), market development enables firms to try new ideas, seize the opportunity which are essential during market access and gain competitive advantage.

Technical assistance encompasses rendering a wide range of services such as marketing, management, finance and strategic planning technical assistance efforts help to develop sustainable and financially stronger business enterprises thus enabling the entrepreneur to start up, grow or expand their enterprises (Abor & Quartery, 2010). The most predominant need for SMEs to survive and grow is its ability to access capital and thus, most technical assistance efforts assist businesses by helping them obtain financing for operations or for larger or new facilities. Technical assistance programs are not income generating on their own and are not self-sufficient and thus their effectiveness should be measured on the basis of support they offer to the enterprises. Technical assistance providers help SMEs through programs such as: mentoring, feasibility studies and business plans, exchange visits and business tours, franchising, technical training, counseling/advisory services, legal services, financial and taxation advice, accountancy and book- keeping, management, marketing plans, licenses and permits among others (Community Economic Development, 2011).

Technology is a broad term which involves creation of tools, processing actions and extracting materials. Technology is an important aspect in the growth of manufacturing enterprises in that it helps to simplify day to day lives. It is applicable in many areas such as in communication, transportation, learning, and manufacturing, securing data and scaling businesses among others (Ramey, 2013). Amaral, Anderson and Parker (2011) posited that, proper application of technology results in product development and thus, manufacturing SMEs will require technology to remain competitive hence creating and delivering new products and services to their customers efficiently and effectively. According to Hanadi and Aruna (2013), new technologies are often developed in research and development institutions which transfer these to the market to be adopted by all growing institutions through incubation facilities. Technology helps to improve communication both within and outside the firm, encourages innovation and creativity in doing business thus improving efficiency of operations hence improved productivity (Scott, 2011; Hackbert, 2010; Holford, 2015).

26

2.3.3 Entrepreneurial Team

A team is defined as a group of individuals that share interdependent tasks and outcomes associated with these tasks. It is therefore a social unit. Entrepreneurial team is therefore a group of individuals who are responsible for decisions making in a new venture (Klotz, Hmieleski, Bradley & Busenitz, 2014). It is the underlying characteristics possessed by entrepreneurs that enable them perform entrepreneurial tasks more efficiently and effectively (Omri & Boujelbene, 2012). Entrepreneurial team incorporates factors such as knowledge, skills, competencies, education, experience and other attributes embodied in an individual or group of individuals and are used to produce goods, services and ideas in market circumstances (OECD, 2017; Renko, Shrader & Simon, 2012). The entrepreneurial team factors that were used in this study included: competences, experience, Knowledge and skills.

Competence refers to that which an individual working in a given occupational area is able to achieve. It is an action, behavior or outcome which a person exhibits while performing a particular task (Mitchelmore & Rowley, 2010). Aulia (2020b) states that entrepreneurial competence includes managerial abilities, conceptual abilities and decision-making abilities. According to them, entrepreneurial competencies include characteristics such as specific knowledge, motives, traits, self-images, social roles and skills which result in birth and growth of entrepreneurial ventures. According to OECD (2014), entrepreneurial competencies are important for venture birth, survival and/or growth since they enable individuals to identify, create and act upon opportunities in order to create value by marshaling resources, demonstrating self-efficacy and confidence in ability to achieve and persist in the face of obstacles.

Experience is the process or fact of personally observing, encountering or undergoing something. Through experience, people gather information and develop skills that are useful across different occupations (Ucbasaran, Westhead & Wright, 2008). Storey (1994) and Shane (2007) identified three types of experience namely: entrepreneurial experience (the number of previous new ventures and the role played by entrepreneur in these ventures), management experience (experience in management regardless of the industry) and industry experience (the experience in the industry to which the

current firm belongs). In their research, they acknowledged the importance of previous experience for the growth of SMEs. Entrepreneurs with industrial experience have a higher probability of being successful compared with their counterparts who lack this experience since they have a better understanding on the demand and the strategies to take to beat competition, they are able to gather crucial information for their enterprise than outsiders, they have useful contacts and sufficient experience to know the kinds of products and services that meet customer demand within the context of their business (Dobbs & Hamilton, 2007; Smallbone & Wyer, 2000). Entrepreneurs with more management experience are able to manage their firms better because previous experience in management provides training in the skills needed for recognizing and acting on entrepreneurial opportunities, including negotiation, decision making styles, ways to serve markets and methods for dealing with customers and employees (Shane, 2007).

Knowledge is defined as the information owned by a person about a particular field, firm's specific asset causing a fundamental heterogeneity in productive potential and embedded in individual's expertise, organization routines and practices. It is information that can be utilized and turned into action (Kirsimarja & Aino, 2015). According to Sarabia and Obeso (2012), knowledge is gained through experiences and it is associated with tacit and explicit learning of specific individuals. Knowledge reflects the cognitive ability of an entrepreneur in order to recognize, understand, realize and comprehend a task/job. It can be developed through formal and non-formal education, as well experience (Ardiana *et al.*, 2010). According to Blanchard and Thacker (2004), knowledge is categorized into declarative (information obtained and placed in our memory), procedural (how is the information collected and used to thing we already know and strategic (understanding how, when and why the information is useful and can be used.

Knowledge is an important asset for SMEs due to its non-replicability (Teece, 2012). When entrepreneurs use their knowledge, they can adapt to contexts, to question practices and to consult a wide range of information sources. They are willing to correct mismatches in experience by reflecting on their underlying values, as well as on their technical solutions (Argyris, 2003).

Skill refers to the ability to perform a particular task both physically and mentally easily and meticulously (Soetjipto, 2002). It refers to the application of knowledge and abilities demonstrated through action (Phelan & Sharpley, 2012) and acquired through education, training, experience, mentoring and coaching (Boyles, 2012). Skills are an important ingredient to successful entrepreneurial venture (Ibrahim & Lucky, 2014). They are categorized into technical, managerial, entrepreneurial and personal skills. Technical skills are necessary to produce the company's product or service, or required for the industry, trade, certification, licensure, or to perform a job function, Managerial skills are necessary for the daily operation and administration of the business, Entrepreneurial skills is the entrepreneur's ability to recognize and exploit opportunities while personal skills are human and social abilities and traits developed by the entrepreneur over time (Elmuti, Khoury & Omran, 2012; Auchter & Kriz, 2013).

2.3.4 Social Culture

Social culture means a set of values, beliefs and attitudes which underpins certain norms of behavior in society as a whole or in groups within a particular society (Trompenaars & Hampden-Turner, 2011). Pinillos and Reyes (2011) defined social culture as the system of values for a particular group or society that brings about the development of certain personality traits and propels individuals to behave in a certain unique way. social culture is thus a set of values, beliefs and attitudes commonly shared in a society which underpin the notion of an entrepreneurial way of life as being desirable and in turn it supports the pursuit of effective entrepreneurial behavior by individuals or groups (Akuegwu & Nwi-ue, 2016). This study focused on the following four indicators of social culture: cultural values, religious beliefs, role models and ethnicity.

Value refers to the degree of importance attached to something or action, which determines the actions one will take, what is the best way to live, or describe the significance of different actions (Chan, Satterfieldm & Goldstein, 2012). Values relate to the norms of a social culture and they identify what should be judged as good or evil while norms provide rules, standards, patterns and guides of expected behavior in

specific situations. Values are generally received through cultural means by diffusion, transmission or socialization from parents to children. Cultural values differ since parents from different social cultures have different values (Hofstede, 2011). Cultural values affect the degree to which a society considers entrepreneurial activities acceptable and worthwhile (Dennis, 2011). Entrepreneurial activity is embedded in social and cultural norms and values hence a supportive social culture may lead to social legitimation, making the entrepreneurial career more valued and socially recognized in that social culture. In this case more people will venture into business without regard to their personal beliefs and attitudes (Linan, Urbano & Guerrero, 2011; Krueger, Francisco &Ghulam, 2013).

Religious beliefs are a set of practices generally agreed upon by a group of people that concern the cause, nature and purpose of the universe and it involves devotional and ritual observances (Oulad, 2015). Ames, Rosner and Erickson (2015) defined it as a set of beliefs zealously held by a group of people and it is reflected in their ritualized beliefs and actions. According to Pew Research Center (2015), religious beliefs have a great influence on people's daily lives, the choices they make and broadly their decisions and behavior. It therefore shapes people's choices and level of entrepreneurship at an individual level and hence the religiosity of a country would also shape the countries level of entrepreneurship and policies they are likely to make (Audretsch, Bönte & Tamvada, 2013). Zelekha, Avnimelech and Sharabi (2014) concluded that, the religion of a country has a significant effect on the level of entrepreneurship.

A role model refers to an individual who set examples to be emulated by others, a person who stimulates or inspires other individuals to make certain career decisions and achieve certain goals (Bosma, Hessels, Schutjens, Van Praag, & Verheul, 2012). They posited that, individual decisions to engage in a certain behavior are often influenced by the behavior and opinions of others, the demonstration of their identity and by the examples they provide, hence their occupational choice and specifically, the decision to engage in entrepreneurship. According to Liñán and Fayolle (2015), for many entrepreneurs, the decision to start and develop a business venture is highly influenced by other famous entrepreneurs, former colleagues, family members, peers

and networks. However, Chlosta, Patzelt, Klein, and Dormann (2010) postulated that, although the decision to become an entrepreneur is positively correlated with having parents who are or were entrepreneurs, genetic heritage and the actual possibilities for learning on the job provided by a family business or financial support may also underlie the observed association between the choice for entrepreneurship of parents and their children. Bosma, *et al.* (2012) and Falck, Heblich, and Luedemann, (2010), further postulated that, role models also influence the degree of entrepreneurship at regional level other the individual level in that a region with high levels of entrepreneurship may encourage new entrepreneurial initiatives because it is easier to find an appropriate example or obtain information or resources from other entrepreneurs In conclusion, role models perform the function of inspiration and motivation, increases self- efficacy, learning by example and learning by support.

Ethnicity refers to a shared social culture and a way of life which can be reflected in language, religion, material social culture such as clothing and cuisine and cultural products such as music and art (Samovar, McDaniel, Porter, & Roy, 2015). Healey, Stepnick and O'Brien (2018) posited that, ethnicity is usually a major source of social cohesion as well as social conflict and that, an ethnic group usually possess a shared history, language, religion and social culture that provide group members with a common identity. Cultural elements that define a particular ethnic group are taught, not inherited and therefore, boundaries between ethnic groups are, to some extent, fluid, thus individuals can to move between groups (Jandt, 2017).

2.3.5 Entrepreneurial Orientation

The term orientation as used in organizational research connotes an individual's or organization's inclination or state towards a certain philosophy or behavior. Philosophical orientations are attitudes that add value to an entity while behavioral orientations are action-based stances (Pett & Wolff, 2010). Moreno and Cassilas (2008) defined it as the organizational decision-making inclination that favors entrepreneurial activities. Entrepreneurial orientation comprises of five dimensions which include being pro-active, risk taking, autonomy, being innovative and having competitive aggressiveness (Lumpkin & Dess, 2001). This study used innovativeness,

pro-activeness, risk-taking behavior and competitive aggressiveness as the measurement variables.

Innovation is the means by which entrepreneurs exploit change as an opportunity for a different business or a different service (Dees, 2017). Schumpeter (1934) described innovation as creative destruction where new firms grow and create wealth by disrupting existing market structures through the introduction of new goods and services that shifts available resources away from existing firms. Innovativeness is thus a firm's tendency to engage in and support new ideas, novelty, experimentation and creative processes that may result in new products, services, or technological processes (Lumpkin & Dess, 1996). Entrepreneurs need to search for sources of innovation, the changes and the symptoms that indicate opportunities for successful innovation and they need to know and to apply the principles of successful innovation (Schillo, 2011). According to Bleeker (2011), small firms adapt more quickly to innovation since they are more flexible and non-bureaucratic.

Pro-activeness is the ability to bring about change in an environment by predicting trends through the exploration of opportunities, hence the introduction of new products and services (Boohene, Marfo-Yiadom & Yeboah, 2012). It is thus a distinctive entrepreneurial activity to antedate imminent prospects, both in terms of products or technologies as well as in markets and consumer demand (Schillo, 2011). It is forward looking and seeks for opportunities that may be available in the environment such as the introduction of new products and services ahead of the competitions and acts in anticipation of future demand. Firms that are proactive reap the first mover advantage usually associated with high profits, as well as a head start in creating brand recognition (Bleeker, 2011).

Risk is defined as a probability that loss, injury or an undesirable situation may arise or a situation involving such a possibility (Aven, 2012). It is also looked at as the variance in outcomes while the expected value remains constant (Mishra, 2014). Risk taking propensity is therefore a person's tendency to engage in behavior that may have negative consequences such as harm, injury or loss. All human endeavors have a probability of risk and thus, no one can venture into entrepreneurship without taking a

risk. Risk taking may be situational and influenced by environmental characteristics and also domain specific. (Scholer, Zou, Fujita, Stroessner, & Higgins, 2010; Figner & Weber, 2011). According to them, an entrepreneur is likely to take more risks in domain where he is an expert and more risk-averse in areas where they have little knowledge to estimate the probabilities for different outcomes.

Competitive Aggressiveness is the power of a firm's efforts to beat industry rivals, portrayed by a confrontational stance and an intense reaction to competitors' actions (Lumpkin & Dess, 1996). Lumpkin and Dess (2001) posited that it is combative posture that involves a forceful response to competitors' actions. In their argument, they postulated that, it involves seizing the rival's strategy through an aggressive move or responding to the rival's competitive activities. Some aggressive strategies adopted by competing firms are; aggressive price competition, market entry with a new or superior offering, fast-following a rival into a market, continuously exploiting information, using unconventional surprise tactics (Hughes & Morgan, 2007).

2.3.6 Small and Medium Enterprise Growth

Firm growth refers to the way the owner/ manager perceives the performance of the firm against the firm's objectives (Blackburn, Hart & Wainwright, 2013). Davidsson, Achtenhagen and Naldi (2010) argued that, the desire for growth is the only medium through which SMEs can become larger organizations. They also posited that; firm growth is closely linked to employment creation. Firm growth is measured quantitatively by considering factors such as increases in total sales volume, production capacity, number of employees, quantity of output, use of raw material and power, profits and profit margins, return on equity, return on assets and increase in the value of the company as perceived by the entrepreneur in relation to his competitors (Sarwoko & Frisdiantara, 2016; Leona, Davidsson & Naldi, 2010). This study used increase in number of employees, increase in sales volume, increase in return on investment and increase in profits as the measurement variables for SME growth.

2.4 Empirical Literature Review

Empirical literature review gives a comprehensive survey of past research studies

based on empirical evidence obtained from data gathered through observation, questionairre or experimentation. It helps to synthesize quantitative and qualitative findings from various studies to identify trends, gaps and areas for further research (Booth & Papaioannou, 2016).

2.4.1 Seed Capital and Growth

Tshabalala (2017) investigated the relationship between internal finance and firm growth in South Africa. The study employed a sample of SMEs registered on the AltX section of the Johannesburg Stock Exchange. Panel data set was used together with simple and multiple linear regression analysis to obtain results. The study findings were that there was a negative relationship between internal finance and firm growth with a significant impact of equity, debt, and taxes. Mateev, Poutziouris, and Ivanov (2013) in their study on the determinants of SME capital structure in Central and Eastern Europe employed a panel of 3175 SMEs in 7 European countries. They found that small sized enterprises tended to use more short-term bank loans and trade credit whereas medium sized enterprises used more long-term loans and also had higher leverage, indicating that large enterprises have more bargaining power th of manufacturing SMES is concerned, 60% indicated that entrepreneurial team needs to cope with attitude of the society, 20% indicated that entrepreneurial team needs to provide moral support to entrepreneurs while 20% indicated that entrepreneurial team needed to provide good leadership and inspire others.over loan creditors.

Nguyen (2014) carried out a survey of 487 SMEs in Hanoi to investigate SMEs accessibility to various sources of financing, covering both formal and informal finance and SMEs growth in Vietnam. The study found out that, SMEs network with lenders played a significant role in determining the access to different sources of credit for SMEs start-up financing, SMEs are more likely to borrow from informal sources if their owners are younger, less educated and experienced and firm size significantly affected SMEs credit access, SMEs tended to use more external financing as they grew older and formal financing was largely available for larger sized firms. They also found out that, collateral and assistance from government proved to be the strongest determinants of external financing but the SMEs networks to access external credit for

business operation were less important at the start-up period. The study through the growth determinants model of SMEs suggested that the access to credit did not influence SMEs growth and thus, credit should not be considered as the miracle of growth but priority should be given to enterprise's internal resources such as owner's, Entrepreneurial team, export, and customer relationship development rather than external financing.

Fatoki and Odeyemi (2010) in their study sought to investigate the determinants of access to trade credit by new SMEs in the Eastern Cape Province of South Africa. They used self-administered questionnaires for data collection. They used logistic regression method of data analysis. The results indicated that managerial competency, the availability of business plan, belonging to trade associations, previous relationships, location, business size, insurance and incorporation are significant determinants of access to trade credit by new SMEs in South Africa. They found out that, non- availability of finance especially trade credit is one of the primary reasons for the high failure rate of new SMEs in South Africa. Bunyasi (2012) carried out a study to investigate the effects of entrepreneurial finance on the growth of small and medium enterprises in Thika Municipality, Kenya. The study adopted structured and semi structured questionnaires which were administered to the owners and managers of SMEs and interview guides as a means of data collection. The findings of the study were that access to entrepreneurial finance had a positive influence on the growth of SMEs and hence, the government should be supportive to the legal and regulatory framework that strengthens the financial infrastructure and also build capacity of the financial institutions to enhance SMEs access to finances.

Mbugua, Njeru, and Ondambu (2014) carried out a descriptive study in Limuru town market in Kiambu County, Kenya. The study sought to establish the factors that affect the performance of small and medium enterprises (SMEs) traders. Questionnaires were used for data collection and statistical package for social sciences (SPSS) was used for data analysis. The study concluded that access to finance and availability of management experience are the key socio-economic factors affecting the performance of businesses in Limuru Town Market.

2.4.2 Business Development Services

Ishengoma and Kappel (2011) in their study intended to analyze changes in Uganda's business environment between 2004 and 2010 by carrying out a survey on SME owner-managers. The study employed the use of secondary data and the findings revealed a significant deterioration during the study period. The study highlighted external factors such as limited access to finance, corruption, deficient public services, high taxes, and inefficient administrative services which restricted business development. The results of the study revealed a positive correlation between SME growth and access to business development services and financing resources. The study concluded that, limited access to the market and productive resources (financing, business development services), and high taxes, were both negatively correlated with SME growth.

Okeyo, Gathungu and K'Obonyo (2014) studied the effect of business development services on performance SMEs in Nairobi, Kenya using market access, procurement services and infrastructure facilities as measures of BDS. The study was a cross sectional survey. Data was analyzed using inferential statistics, descriptive statistics and measures of central tendency and dispersion to establish relationships between variables. The study found out that, procurement services and infrastructure facilities had a positive and significant influence on performance of the enterprises while market access did not show any relationship. The study also revealed that three variables joined together had a great effect on performance than each individual effect and thus enterprises should adopt strategies that enhance procurement and improve infrastructure facilities to experience better performance.

Kimando, Sakwa and Njogu (2012) investigated the impact of business development services on entreprises in Murang'a town. The objective of the study was to determining the impact of training by business development services providers (BDS).The study established that training offered by the BDS impacted MSEs positively and that organizations attend training to enable their business perform well. The study recommended that MSEs players should be trained on the management skills, financial planning and the financial management for them to survive and have

a competitive edge with the competitors.

Onyango, Kamau and Tanui (2022) carried out a study on influence of business development services on micro enterprises performance in Kenya in Eldama Ravine Sub County, Baringo County. The purpose of this study was to examine the influence of business development services on Micro Enterprises performance in Kenya. The study examined the influence of training services, business mentorship, market access information and business linkage on success of Micro Enterprises. The study adopted stratified sampling on a target population of 89 Micro Enterprises registered with Micro Enterprises Support Programme Trust in Eldama Ravine. Data was collected using questionnaires. Data was analysed using both descriptive and inferential statistics. The results showed that training services, business mentorship, market access and business linkage on micro-enterprise performance had a significant positive regression with Micro Enterprise performance.

2.4.3 Entrepreneurial Team

Mubarik (2015) carried out a study to establish the role of human capital (HC) and performance of small and medium enterprises (SMEs) in the manufacturing sector of Pakistan. The study employed productivity, export, innovation, technological progress and survivability of firms as measurement variables for firm performance while skills, experience, employee stability, personal abilities, training, attitude, compliance and health were used as the parameters to measure human capital. Data was collected using close ended questionnaire while One-way analysis of variance (ANOVA), multivariate analysis of variance (MANOVA), t-test and Structural Equation Modeling (SEM) were used for data analysis. The study found out that education ranked at the top, followed by experience, skills, personal abilities, training, employee stability, attitude, health and compliance. It also revealed that there is a significant positive impact of human capital on firm performance.

Ojokuku and Sajuyigbe (2015) in their study sought to investigate the effect of human capital development on the performance of Small and Medium Scale Enterprises in Nigeria. Data was collected by the use of structured questionnaires while Pearson Product Moment Correlation Coefficient and Multiple Regression Analysis was used

for data analysis. The study found out that, human capital development variables: on-the-job training; level of formal education; level of participation in seminars, conferences and workshops and level of participation in trade fairs and exhibitions had significant effect on SMEs performance and thus, SME operators should actively promote those strategies to enhance their capacity for growth and survival.

Akande (2012) conducted an explorative case study to establish the influence of strategic entrepreneurial skills on service delivery of small businesses in Nigeria using multistage probability technique of selected block. Self-administered questionnaires were used for data collection while Chi-square and ANOVA were used to analyze the data collected. The study concluded that there was a positive relationship between the performance of SMEs and strategic entrepreneurial skills. Thaimuta and Moronge (2014) carried out a study to investigate on the factors that affect the performance of Matatu para-transit Venture in Small and Medium Enterprises (SMEs) in Nairobi County, Kenya. Management skills, entrepreneurial skills, training, and government policies were used as the measurement variables. Questionnaires were used for data collection and multiple regressions using SPSS software were used to analyze the data. The study concluded that, management skills, entrepreneurial skills, training and the role of government policies have an influence on the performance of matatu para-transit sector in Nairobi County Kenya.

2.4.4 Social Culture

Kibler, Kautonen, and Fink, (2014), carried out a study on regional social legitimacy of entrepreneurship in Austria and Finland. The study was a longitudinal survey where data was collected from 65 regions. Econometric analysis was used to capture regional socio-economic characteristics. The study demonstrated that, regional social legitimacy influenced the relationships between individual entrepreneurial beliefs, intentions and start-up behavior. Ahmed, Ali, and Kamran (2015) explored the contributions and relationships that roles of the family and social culture play in the improvement of private SME's. The study concluded that entrepreneurs ventured into business for the need of independence in working. The study also found out that female entrepreneurs relied heavily on family member support and participation to set up and

maintain their enterprises.

Riaz, Farrukh, Rehman, and Ishaque (2016) investigated the impact of religion on entrepreneurial intentions of the final year business students in private higher educational institutes of Pakistan. Data was collected by use of a structured questionnaire. The tool used for data analysis was Structural Equation Modelling (SEM) using SmartPLS version 2 software. The empirical results of the study revealed that, religion has a high significant impact on entrepreneurial intention (beta=0.316 t=5.1125). The conclusion was that government should consult the Islamic scholars and religious leaders to consolidate an entrepreneurial model in order to promote entrepreneurship and ultimately alleviate poverty.

A study by Bwisa and Ndolo (2011) examined the role of social culture on entrepreneurship development with reference to the Kamba social culture in Kenya. They found out that differences in value systems and cultural orientations towards entrepreneurship affect entrepreneurship. The study adopted a qualitative research design that was conducted by means of observations and interviews to a randomly selected entrepreneurs operating in Machakos town. The study utilized the Hofstede's cultural dimensions. The key variables were tribe values and traits, Child rearing practices, attitude towards failure and risks, attitude towards responsibility, values from childhood and gender involvement. A factor analysis was done to analyze data. The study findings based on Hofstede's dimensions was that Kamba social culture is largely collectivistic, has moderate power distance, high uncertainty avoidance and moderate masculinity. They concluded that the current Kamba social culture does not exhaustively support entrepreneurial tendencies.

2.4.5 Entrepreneurial Orientation

Alembummah (2015) sought to examine the influence of entrepreneurial orientation on the growth of SMEs in Ghana's food processing sector. The study adopted Lumpkin and Dess's (1996) multidimensional entrepreneurial orientation concept. The study employed a survey research design using structured questionnaire and multiple regressions and one tail test to analyze data. The study findings indicated that, SMEs in the food processing sector exhibited high levels of pro-activeness and competitive

aggressiveness whereas innovativeness, risk-taking and autonomy seemed to be non-existent when the environment is unstable. The study, therefore, recommended that firms should encourage employee creativity in the performance of assigned tasks and also invest in current technologies and research and development.

Mahmood and Hanafi (2013) carried out a study to assess the relationship between entrepreneurial orientation and performance of women- owned small and medium enterprises in Malaysia. The study employed entrepreneurial orientation and competitive advantage as study variables. Regression analysis was used for analysis. The study revealed a significant correlation between entrepreneurial orientation and business performance while competitive advantage was found to have a slight mediating effect between entrepreneurial orientation and business performance relationship. Mwangi and Ngugi (2014) in a study that sought to examine the influence of entrepreneurial orientation on growth of Micro and Small Enterprises in Kerugoya, Kenya adopted a descriptive research design using both Secondary and primary data collection tools. Descriptive, inferential and multivariate regression model were used for data analysis and measurement of relationships between the variables. The study found that the dimensions of entrepreneurial orientation (innovativeness, risk taking, pro-activeness) and both entrepreneurial and managerial competence had a significant positive influence on growth of Micro and Small Enterprises with innovativeness having the most significant correlation. The study recommended that MSE owners should be open and keen to take up EO at higher levels in order to boost their growth, competitiveness, profitability and survival. They should also innovate and strive to identify emerging problems and find solutions for them, to gain competitive advantage.

Walobwa, Ngugi, and Chepkulei (2013) in their study sought to investigate on the effect of the type of innovation on the growth of small and medium enterprises on garment enterprises in Jericho, Nairobi, Kenya. They carried out a census on the whole population. Self-administered Questionnaires were used for data collection while both descriptive and inferential statistics were used for data analysis. The study found out that that innovation is very critical for SMEs to become and remain competitive in the global market. However, marketing innovation contributed most to the growth of

garment SMEs in Jericho market, Nairobi. Fatoki (2014) carried out a survey on retail sector to investigate the entrepreneurial orientation of micro enterprises in South Africa. Data was collected through the use of self- administered questionnaires while descriptive statistics and factor analysis were used to analyze data. The Cronbach's alpha was used to measure reliability. The results indicated that the retail enterprises in South Africa introduced new product lines and made changes to the product line. However, they were weak in the area of research and development, pro- activeness, risk- taking and were more of followers rather than leaders.

2.5 Critique of Existing Literature Relevant to the Study

Researchers and scholars alike have unanimously agreed on the important role that SME's play in economic growth, wealth creation, employment creation and poverty reduction. However, there is no general agreement as to what factors are most important or contribute most to firm's growth. Most of the studies that have been carried out on growth of SME's have adopted a rather individualistic view instead of a holistic view (the ecosystem view) on the determinants of SME's growth as it is the case in this study.

On seed capital, majority of the studies were carried out Small and medium entreprises in genaral while this study specifically focuses on manufacturing SMEs. (Tshabalala, 2017; Mateev, Poutziouris, and Ivanov, 2013; Nguyen, 2014; Fatoki and Odeyemi, 2010; Bunyasi, 2012 & Mbugua, Njeru, and Ondambu, 2014). On BDS, the study variables used in the studies were different from the once used in this study. This study used infrastructure, market access, technical assistance, technology as the study variables The studies also focussed on Micro and Small entreprises while this study focussed on Small and medium manufacturing entreprises (Ishengoma and Kappel, 2011; Kimando, Sakwa and Njogu, 2012; Onyango, Kamau and Tanui, 2022). Studies on entrepreneurial team focused on other variables other than competence, experience, knowledge and skills that this study focussed on ((Mubarik, 2015; Ojokuku and Sajuyigbe, 2015; Akande, 2012 and Thaimuta and Moronge, 2014). On social culture, the various studies carried out used structural modeling, and econometric modelling while this study used multiple regresion analysis as the study model (Kibler, Kautonen,

and Fink, 2014 and Riaz, Farrukh, Rehman, and Ishaque, 2016). Bwisa and Ndolo (2011) used Hofsted theory while this study used Cochran theory of social culture. Entrepreneurial orientation has majorly been uses as an independent variable while this study used as a moderating variable to determine the moderating effect of entrepreneurial orientation on the relationship between entrepreneurial ecosystem and growth on manufacturing SMEs (Alembummah, 2015; Mahmood and Hanafi, 2013; Mwangi and Ngugi, 2014 and Fatoki, 2014).

Additionally, studies that have been carried on on entrepreneurial ecosystem are focused on regions and countries in the developed parts of the world (Napier & Hansen, 2011; Audretsch & Belitski, 2016). Little has been done on developing economies while this study was carried out in Kenya which is a developing economy. In majority of the studies, the focus has been on business incubators which are part of the ecosystem and the role they play on growth and development of enterprises (Wachira & Ngugi, 2017; Mungai & Njeru, 2015; Al-Mubaraki, 2013) while this study focused a more comprehensive approach on entrepreneurial ecosystem. Other studies in Kenya focussed on ICT Entrepreneurship Ecosystems and ignored other sectors (Bramann, 2017) while other studies used a qualitative approach in data collection and analysis (Ankarcona and Holm, 2016) as opposed to this study that used a combination of qualitative and quantitative methods of data collection and analysis.

2.6 Summary of Reviewed Literature

The chapter presented the literature review on the relationship between entrepreneurial ecosystem factors and the growth of SMEs in Kenya. The theories discussed in this chapter include: Penrose theory of firm growth, Pecking order theory of capital structure, social networking theory of entrepreneurial ecosystem, Human capital theory and Cochran's theory of social culture. The chapter also presents past studies done on various entrepreneurial ecosystem factors influencing growth of SMEs. Literature has revealed that, seed capital, business development services, entrepreneurial team, social culture and entrepreneurial orientation have an influence on the growth of manufacturing SMEs. Growth of SMEs in this study will be determined by a combination of measurements which include increase in number of

employees, increase in sales volume, increase in return on investment and increase in profits.

2.7 Research Gaps

This chapter reviewed the available literature on entrepreneurial ecosystem and growth of manufacturing SMEs. Recently, entrepreneurial ecosystem has been seen as a critical tool for creating and growing entrepreneurial ventures as they are seen as enablers that support entrepreneurial activities. However, majority of the studies have been done in developed countries with little attention to developing economies (Napier & Hansen, 2011; Audretsch & Belitski, 2016) hence creating a gap of knowledge in developing countries and more specifically, the Kenyan manufacturing SMEs which have been recognized as an important engine to economic development. Evidence from literature review also revealed that in majority of the studies, one component of the ecosystem factors has been considered in isolation from the others (Bunyasi, 2012; Kimando, Sakwa & Njogu, 2012; Bwisa & Ndolo, 2011; Wachira & Ngugi, 2017; Mungai & Njeru, 2015), while according to Park, *et al.* (2017) and Motoyama & Watkins (2014), a more holistic view of the ecosystem factors is useful in determining the weak and strong elements to enable the policy makers on the policy areas to lay more emphasis. To bridge this gap, this study drew attention to the relationship between the elements of the ecosystem in a more holistic view.

This study also addressed another important shortcoming of the previous studies which have focused more on the state of entrepreneurial ecosystems. Audretsch and Belitski (2016) argue that, a quantitative analysis of the ecosystem factors is important in order to differentiate between a more supportive factor from a less supportive one. Majority of the studies in Kenya are focused on determining the state of entrepreneurial ecosystems in technology start-ups using qualitative analysis (Hain & Jurowetzki, 2017; Bramann, 2017; Ankarcona & Holm, 2016). To fill this gap, this study focussed on entrepreneurial ecosystem and growth of manufacturing SMEs in kenya using seed capital, business development services, entrepreneurial team and social culture. No other study has been done in Kenya that has focused on the entrepreneurial ecosystem factors with exactly the same variables as the ones used in this study. This study used

quantitative techniques of data analysis to determine the correlation between the independent and dependent variables and the strength of that correlation. This helped determine which factors are more significant and to what extent.

Finally, Majority of the studies carried out did not include a moderating variable (Ngunyen, 2014; Fatoki & Ondeyemi, 2010; Bunyasi, 2012; Okeyo, Gathungu & K'Obonyo, 2014; Kimando, Sakwa & Njogu 2012; Ojokuku & Sajuyigbe, 2015; Bwisa & Ndolo, 2011; Mwangi & Ngugi, 2014; Fatoki, 2014; Wachira & Ngugi, 2017; Mungai & Njeru, 2015). This study filled this gap by using entrepreneurial orientation as a moderator variable to determine its moderating effect on the relationship between entrepreneurial ecosystem and growth of manufacturing SMEs in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology refers to the specific procedures or techniques that will be used to identify, select, process, and analyze information about a topic. This section helped to answer two main questions about how the data collected and analyzed (Kumar, 2019). This chapter addressed the following: research philosophy, research design, target population, sampling frame, sampling techniques and sample size, data collection instruments and procedures, pilot study, data processing and analysis, diagnostic tests, and measurement of variables.

3.2 Research Philosophy

A research philosophy refers to the way in which data about a phenomenon should be collected, analyzed and used. According to Saunders, Lewis and Thornhill (2012), there are five major philosophies used in business and management. These include: positivism, critical realism, interpretivism, postmodernism and pragmatism. Positivism approach emphasizes on obtaining knowledge through believing in description rather than questioning. It majors more on observations and has little account of feelings and believes of the participants. It however considers quantitative data (Jankowicz, 2005). Critical realism focuses on explaining what is seen and experienced, in terms of the underlying structures of reality that shape the observable events. Critical realists see reality as external and independent, but not directly accessible through what is observed and knowledge of it. It is also subjective. critical realism focuses on explaining what we see and experience, in terms of the underlying structures of reality that shape the observable events. Critical realists see reality as external and independent, but not directly accessible through our observation and knowledge of it. Interpretive research aims at creating new and richer understanding and interpretation of social world and context. This research philosophy is subjective and thus interpretivists' own values and beliefs play an important role in the research process (Creswell & Creswell, 2017).

Post-modernism approach emphasizes the role of language and of power relations, seeking to question accepted ways of thinking and give voice to alternative marginalized views. The final philosophical approach is pragmatism. This approach emphasizes that multiple realities exist in any given situation and that, the researcher's choice of research design depends on the research questions the study wishes to solve (Saunders, Lewis & Thornhill, 2012). The pragmatic approach provides for the use of both qualitative and quantitative methods of data collection to collect information and make inquiry into complex phenomenon of social and natural contexts. It also allows areas to be studied that are of interest, embracing methods that are appropriate and using findings in a positive manner in harmony with a recognized value system (Creswell & Creswell, 2017). In this study, the researcher adopted pragmatism philosophical approach. The choice of this philosophy was guided by the fact that the researcher collected both qualitative and quantitative data.

3.3 Research Design

The study employed a descriptive survey design to determine the relationship between entrepreneurial ecosystem and growth of manufacturing SMEs in Kenya. According to Groves, *et al.* (2011), descriptive survey, is a systematic method for gathering information from a sample of entities for the purpose of constructing quantitative descriptors of the attributes of the larger population of which the entities are members. Thus, descriptive surveys describe phenomena associated with a subject population and/or estimate proportions of the population that have certain characteristics (Akporhonor & Akpojotor, 2016). This survey design was considered the most appropriate research design for this study because in the study, the researcher collected information on the state of affairs in the field, without manipulating any variables, that is, the research was free from manipulation by the researcher as it happens in experimental design. The descriptive survey design was chosen on the basis of the fact that the independent variables in the study could not be actively manipulated and that the participants could not be randomly assigned to treatment conditions.

3.4 Target Population

The target population is the whole set of available objects for which the data obtained can be used to make conclusions and get relevant information that will be used in the research (Kothari, 2004). The target population for this study was 422 owner/ managers or chief executive officers (CEOs) of the manufacturing SMES in Kenya who are registered members of Kenya Association of Manufacturers (KAM). The sampling frame was 1072 manufacturing firms in Kenya who are registered members of KAM. The unit of analysis for this the study was 422 manufacturing SMEs located in Nairobi County that employed between 10–99 employees and are members of KAM. According to KAM (2018) and KNBS (2017), 80% of manufacturing SMEs in Kenya are located in Nairobi County hence making the manufacturing SMEs in Nairobi County a representative sample of manufacturing SMEs in Kenya.

3.5 Sampling Techniques and Sample Size

Sampling technique is defined as the process of selecting units that will be studied from a population of interest and the results are generalized back to the population from which they were chosen from (Denscombe, 2014). On the other hand, a sample is a sub-set of individuals drawn from a population that the researcher uses to get some information and make predictions based on statistical inferences about the whole population (Bornstein, Jager & Putnick, 2013). It is a part of the entire population that is to be studied to obtain information on the whole, that is the set of respondents from the population (Saunders *et al.*, 2012). Sampling ensures cost effectiveness, speed, accuracy and quality of the data being collected (Neuman, 2013). A sample size is the number of observations that constitute the sample. In this study, it referred to the specific number of manufacturing SMEs that were employed so as to enable the researcher make inferences about the entire manufacturing SMEs in the area of study.

Purposive sampling technique was used to select Nairobi County as the geographical location for the study. This sampling technique is a non- probability technique where the researcher uses his or her own judgment to determine the members of the population that will participate in the study (Mubarik, 2015). It is an appropriate method where the researchers often believe that they can obtain a representative

sample by using a sound judgment. It results in saving time and money (Saunders *et al.*, 2012). Manufacturing SMEs in Nairobi County were purposely selected because, according to KAM (2018) and MSME report of 2016, (KNBS, 2016), 80% of the manufacturing SMEs in Kenya are located in Nairobi County. According to Mathworks (2013), a sample of 80% of the estimated population is sufficient to cover any errors resulting from the chosen sample. The owner managers/CEOs of the said manufacturing SMEs were also purposively chosen since they are involved in the day to day running of the firms and hence at a better position to give more informed responses.

Stratified random sampling technique was then used to select the representative sample from each stratum. This is a sampling method where the researcher divides the population into smaller homogenous groups based on members' shared attributes or characteristics referred to as strata (Arber, 2001). It is an appropriate sampling technique in cases where the population is not homogenous. This sampling technique was appropriate for this study since the manufacturing SMEs are not homogenous and they were categorized into 10 sub- sectors (strata) that are in processing and value addition as per the KAM (2018) categorization. The sub- sectors included: building, mining and construction; chemical and allied; energy, electrical and electronics; food and beverage; leather, textile and apparels; metal and allied; pharmaceutical and medical equipment; plastics and rubber and wood, furniture and paper as illustrated in the table 3.1.

Simple random sampling was then used to select the specific SMEs from each stratum that was included in the study, through the lottery method. Simple random sampling is a sampling technique where each member of the population has equal chances of being selected to be part of the sample. It is the simplest and most popular probability sampling method. It is most preferred because it removes bias from the selection procedure, it is easy to administer and it results in representative samples (Gravetter & Forzano, 2011). Thus, each manufacturing SME had an equal chance of being included in the study thus there was no bias. From the target population of 422 manufacturing SMEs in Nairobi County, a sample size of 201 SMEs were selected using the table developed by Krejcie & Morgan (1970) as illustrated in appendix II based on the

formulae presented in equation 3.1 to compute the sample size (S), from a given finite population (P) such that the sample was within plus or minus 0.05 of the population proportion with a 95 per cent level of confidence.

$$S = \frac{X^2.N.P(1-P)}{d^2\ (N-1) + X^2\ P\ (1-P)} \qquad \textbf{3.1}$$

S = Sample size

X = Z-score at 95% confidence level (1.96)

 N = population size,

P = population proportion (assumed to be 0.5 since this would provide the maximum sample size)

d = degree of accuracy expressed as a proportion (0.05).

This sample represented 48% of the target population which was appropriate sample size according to Mugenda & Mugenda, (2003) who posited that, at least 30% sample size of the target population is an adequate sample size for a research study. The target population and sample size were as illustrated in the table 3.1.

Table 3.1: Target Population and Sample Size

Type of manufacturing SME	Population	Sample Size(s)
1. Building, mining and construction	12	6
2. Chemicals and allied	58	28
3. Energy, electrical and electronics	30	14
4. Food and beverage	85	40
5. Leather, Textile and apparels	34	16
6. Metal and allied	46	22
7. Motor vehicle and accessories	24	10
8. Pharmaceutical and medical equipment	17	9
9. Plastics and rubber	51	25
10. Wood, furniture and paper	65	31
Total	**422**	**201**

Source: (KAM, 2018)

3.6 Data Collection Instruments

Data collection involves collecting information from all the relevant sources in order to find answers to the research problem, test the hypothesis and interpret the results (Saunders, *et al.*, 2012). Data collection instrument refers to the device or tool that is used to collect both quantitative and qualitative data. It is also defined as the methodologies used to identify information sources and collect information during an evaluation. They include: questionnaires, interviews, observation, focus group, expert opinions, case studies and literature search (U.S. Census Bureau, 2010). This study employed both secondary and primary data collection methods to generate both quantitative and qualitative data.

Primary data is data collected from first-hand sources by the researcher and uses methods like surveys, interviews, or experiments with the research project in mind. This study used a semi-structured questionnaire with both open and closed ended questions. The use of questionnaire was preferred over other methods because, as pointed out by McLeod (2014), questionnaires provide a relatively cheap, quick and efficient way of obtaining large amounts of information from a large sample of people and can be analyzed through use of a software package. For closed ended questions, a five-point Likert scale was designed with (1= strongly disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= strongly agree) in order to measure the responses to the various indicators of the variables being investigated. The interpretation was that, the higher the score the higher the factor influenced growth of the manufacturing SMEs.

The questionnaire was divided into seven main sections. The first section gathered the background data of the owner managers/CEO and their businesses, including age, gender, academic qualifications and business type. The other four sections focused on each of the four components of entrepreneurial ecosystem – seed capital, business development services, entrepreneurial team and social culture. Section six gathered data on entrepreneurial orientation, which was the moderating variable while the seventh section collected data on the growth of manufacturing SMEs.

Secondary data on the other hand is data gathered from other studies, surveys or experiments that have been run by other people or for another research (Driscoll &

Brizee, 2010). Secondary data refers to data has been collected by someone else other than the user and for other purposes. Sources of secondary data include census, information collected by government departments, organizational records and data that was originally collected for other research purposes (Englander, 2012). The data is readily available from other sources and thus it is economical, time saving, helps to improve on the understanding of the problem and also helps to identify the research gaps (Silverman, 2013). Secondary data for this study was obtained from carrying out desk research from published documents in the libraries and internet on the growth of manufacturing SME.

For data triangulation, the researcher carried out structured interviews with five purposively selected key informants using an interview schedule. Triangulation is a means of reducing bias in research. It increases the rate of certainty and also serves as a check on the validity and reliability of the research findings (O'Cathain, Murphy & Nicholl, 2010). The informants were drawn from: KAM, Micro and Small Enterprises Authority (MSEA), Ministry of Industrialization & Enterprise Development and two selected financial institutions. Interviews with key informants was carried out in order to give more detailed information and thus allowed the researcher to understand better the issues and cross-check the reliability of the responses received from the questionnaires.

3.7 Data Collection Procedures

The questionnaires were self-administered to the owners/managers or the chief executive officers of manufacturing SMEs with the help of two research assistants who were graduates and had basic social science research experience. The questionnaires were dropped and picked at a later date to increase the response rate. According to Cooper & Schindler (2011), drop off system provides a higher response rate than mail survey. It also helps to control the sample and the respondents are well identified to identify those who fall outside the pre-defined sample frame.

3.8 Pilot Test

A pilot test is defined as a small-scale test of the methods and procedures to be used on a large scale (Porta, 2008). It is used as a small version of a full-scale study or trial run in preparation for a main study (Polit, Beck & Hungler, 2001). Its purpose is to improve the quality and the efficiency of the main study and to reveal logistic issues in the research instrument before embarking on the main study in order to inform feasibility and identify modifications needed in the main study. It also helps to check the words and statements of the used scales in order to refine and develop proper scales items (Leon, Davis & Kraemer, 2011). According to Hill (1998), 10 to 30 participants is an appropriate number for pilot study in survey research. Pilot testing in this study was conducted on 20 manufacturing SMEs in Kiambu County. This represented 10% of the target population which according to the American Psychological Association (APA), 10% of the final study size is appropriate for pilot study since it helps in providing preliminary data that can be used to estimate validity and reliability of research instrument. The pilot study data was useful in determining the reliability and improving validity of the instruments and in the adjustment of the questionnaire where necessary.

3.8.1 Reliability of Research Instruments

Reliability refers to the degree to which a research instrument produces consistent results of data after repeated trials (Mugenda, 2003). It ensures that there is consistency in measurement across time and across the various items in the instruments (Bajpai & Bajpai, 2014). Data from the pilot study was used to assess the clarity of the questionnaire items so as to make modifications or discard those items that were found to be inadequate or vague. This helped to improve the quality of the research instrument thus increasing its reliability. To ensure the study's reliability, the questionnaire was pre-tested on the pilot sample and a Cronbach's Alpha coefficient calculated using the formulae illustrated in the equation 3.2 using Statistical Package for Social Sciences (SPSS). A coefficient of 0.7 and above is justifiable for a tool to be accepted as reliable (Khalid, Irshad & Mahmood, 2012). Cronbach's alpha was computed by correlating the score for each scale item with the total score for each

observation and then compared with the variance of all individual item scores.

$$\alpha = \frac{N * \overline{c}}{\overline{v} + (N-1) * \overline{c}}$$ ………………………………….3.2

N = the number of items

v = average variance

c = average covariance between item-pair

3.8.2 Validity of Research Instruments

Validity measures the degree of accuracy and meaningfulness of inferences, which are based on the research results (Mugenda & Mugenda, 2008). It is the extent to which the results of data analysis actually represent the phenomena under study. The pilot study helped to improve both face and content validity of the instruments. Content validity of this study was improved through expert judgment where the researcher sought the assistance of the supervisors, who are experts in research who examined the items. The recommendations from the experts and the pilot study respondents were incorporated to refine and improve thevalidity of the data collection instrument.

3.9 Data Analysis and Presentation

Data analysis involves actions and methods that are performed on data to help describe facts, detect patterns, develop explanations and test hypotheses. It's the process of systematically applying statistical and/or logical techniques to describe, illustrate, condense, recap and evaluate data. It also involves ensuring data quality, statistical data analysis, modeling, and interpretation of results in order to make inductive inferences (Shamoo & Resnik, 2015). After data collection, the filled questionnaires were cleaned in order to determine inaccurate, incomplete or unreasonable data to detect errors and omissions, coded and entered into Statistical Package for Social Sciences (SPSS). SPSS was preferred for analysis since it is able to handle large amount of data, has a wide spectrum of statistical procedures and it is quite efficient (Martin & Acuna, 2002). Quantitatively, data was analyzed through descriptive and

inferential statistics. In descriptive statistics, measures of central tendency (mean) and measures of dispersion (standard deviation) were employed for analysis. For inferential statistics, correlation analysis, multiple linear regression analysis and analysis of variance (ANOVA) were used for analysis. Qualitative data was analyzed qualitatively using content analysis based on analysis of meanings and implications emanating from respondent information and comparing responses to documented sources.

In correlation analysis, Pearson's correlation coefficient (r) was used to establish the strength of association between the various independent variables (seed capital, entrepreneurial team, business development services and social culture) and the dependent variable (growth of manufacturing SMEs). According to Kothari (2014), the correlation coefficient can range from 1^{-ve} to 1^{+ve}, with 1^{-ve} indicating a perfect negative correlation, 1^{+ve} indicating a perfect positive correlation, and 0 indicating no correlation at all. Kothari (2014) furtherstated that the importance of correlation is to determine the extent to which changes in the value of an attribute is associated with changes in another attribute. Linear and multiple regression analysis were conducted to test and establish the form of relationship between variables. The linear models and multiple linear regression model took the following forms:

$$Y = \beta_0 + \beta_i X_i \quad\text{...} \textbf{Equation 3.3}$$

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon \text{ …………………………} \textbf{Equation 3.4}$$

$$Y = \beta_0 + \beta_1 X_1 Z + \beta_2 X_2 Z + \beta_3 X_3 Z + \beta_4 X_4 Z + \varepsilon \text{……………………} \textbf{Equation 3.5}$$

Where:

X_1 = Seed capital

X_2 = Business development services

X_3 = Entrepreneurial team

X_4 = Social Culture

Z = Entrepreneurial orientation (moderating variable)

ε = Error term

Analysis of Variance (ANOVA) was carried out to determine whether the whole

model has a significant fit of the data. ANOVA tests the assumption that there is no significant difference among sample means. It tests the assumption about means by comparing two different estimates of the population variances (Hinkelmann & Kempthorne, 2008). ANOVA consists of calculations that provide information about the levels of variability within a regression model and forms a basis for test of significance. Pagano, (2004) indicated that ANOVA test can be used to determine the impact that the independent variables have on the dependent variable in a regression model.

T test was used to test the hypotheses using a p-value of 0.05 which corresponds to a 95% confidence level. The test helps to determine whether to accept or reject the hypothesis. For p- values < 0.05, the hypotheses were rejected while for p values > 0.05, we failed to reject the hypothesis. Analyzed data was presented using frequencies, tables, charts and graphs. This mode of presentation assisted in bringing out comparisons between the various pieces of data collected during the study, assisted in making inferences and consequently come up with conclusions and recommendations.

3.9.1 Diagnostic Tests

The researcher carried out various statistical tests to determine the normality of data, correlation and associations between variables. Normality tests were done using both visual methods and through statistical tests. For visual tests, the Q-Q plot (quantile-quantile plot) was used. However, this method is unreliable and does not guarantee the normality of the distribution (Oztuna, Elhan & Tuccar, 2006). To counter this, Shapiro-Wilk normality test using SPSS was used. This method of normality test is preferred because it has a better power and has the ability to detect whether a sample comes from a non- normal distribution (Ghasemi & Zahediasl, 2012).

Multi-collinearity test was carried out to determine if predictor variables are highly correlated with each other. The variance inflation factor analysis (VIF) was used to test this correlation and the strength of that correlation (Midi, Sarkar & Rana, 2010). A value of 1 indicates that there is no correlation between independent variables. VIFs between 1 and 5 suggest a moderate correlation, which is not severe enough to warrant

corrective measures while VIFs greater than 5 represent critical levels of multi-collinearity where the coefficients are poorly estimated, and the p-values are questionable (Jim, 2019).

Homoscedasticity refers to whether the residuals are equally distributed, or whether they tend to bunch together at some values and at other values, spread far apart. The opposite of homoscedasticity is heteroscedasticity (Field, 2013). This study used Breusch–Pagan test using SPSS to compute the p- value in order to test for heteroscedasticity in a linear regression model. It tests whether the variance of the errors from a regression model is dependent on the values of the independent variables. If the test statistic has a p-value of less than 0.05 ($p < 0.05$) then the null hypothesis of homoscedasticity is rejected and heteroscedasticity assumed.

Linearity means that the predictor variables in the regression have a straight- line relationship with the outcome variable. Testing for non-linearity is important because correlation, regression and general linear model assume linearity (Garson, 2012). This study used ANOVA test of linearity. It F-value for the non-linear component is less than 0.05; ($F < 0.05$), then there is significant non-linearity.

Auto-correlation refers to a situation where the values of adjacent observations in a data set either in time or space are related or there is clustering of similar values, with observations that are proximate in space and/or time having similar values (Anselin & Ray, 2010). It is carried out to identify any repeating patterns or trends in a data set. This study used Durbin-Watson test to detect autocorrelation in determine the suitability of data for regression analysis. The Durbin-Watson Statistic (DW) of should fall within the range of 1.5-2.5 for the data set to be suitable for regression analysis.

3.10 Operationalization of Variables

The dependent variable of the study was growth of manufacturing SMEs. It was assessed through five independent variables namely: seed capital; business development services; entrepreneurial team, social culture and entrepreneurial orientation. Growth was measured in terms of increase in: the number of employees; sales volume; return on investment and net profit margin. Seed capital was measured

using the following parameters: venture capital; savings; debt capital and equity capital. Business development services was measured using these sub-variables: market access, infrastructure, technical assistance and technology. Entrepreneurial team was measured using these parameters; knowledge, experience, competence and skills. Social culture was measured using cultural values, religious beliefs, role models and ethnicity while entrepreneurial orientation was measured using the following sub-variables: innovativeness, risk taking, pro-activeness and competitive aggressiveness. This is illustrated on Table 3.2.

Table 3.2: Operationalisation of Variables

Variable	Conceptual Definition (Measurement Parameters)	Nature	Measurement Scale	Type of Analysis
Seed Capital	Venture Capital Savings Debt Capital Equity Capital	Independent	Ordinal scale	Quantitative, qualitative
Business Development Services	Market access Infrastructure Technical assistance Technology	Independent	Ordinal scale	Quantitative qualitative
Entrepreneurial Team	Knowledge Experience Competence skills	Independent	Ordinal scale	Quantitative qualitative
Social Culture	Cultural Values Religious Beliefs Role Models Ethnicity	Independent	Ordinal scale	Quantitative and qualitative
Entrepreneurial Orientation	Innovativeness Risk Taking Pro-activeness Competititative Aggressiveness	Independent	Ordinal scale	Quantitative and qualitative

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents responses from owners/managers of manufacturing SMEs in Nairobi County that formed the sample of the study. The study's main objective was to investigate the relationship between entrepreneurial ecosystem and growth of manufacturing SMEs in Kenya. Both primary data and secondary data was used in this study to make reliable conclusions. The chapter provides a detailed analysis of reliability test of the research, descriptive analysis of each variable and inferential statistics that were performed in order to establish whether there was significant linear relationship between the dependent variable and the independent variables.

4.2 Response Rate

This study was conducted on the manufacturing SMES in Nairobi County who are members of KAM and targeted a population of 422 owner/managers or CEOs of these manufacturing enterprises. Questionnaires were self- administered to 201 respondents. Out of these, 149 questionnaires were properly filled, returned and found suitable for analysis. This represented an overall response rate of 74% as shown on table 4.1. This was achieved by dividing the total number of questionnaires returned by the sample size and multiplying it by one hundred (De Vaus, 2002). This is indicated in the formulae 4.1 below.

$$Response\ Rate = \frac{149}{201}\ x\ 100\ = 74\%\dots\dots\dots\dots\dots\dots\dots\textbf{Formulae 4.1}$$

According to Cooper and Schindler (2011) and Rogers, Miller, & Judge (2009), a response rate of above 50% is acceptable to analyze and publish, 60% is good, 70% is very good while above 80% is excellent. The same was asserted by Mugenda and Mugenda (2008) and therefore, the response rate in this study of 74% was very good and sufficient for analysis, inferential conclusions and reporting.

Table 4.1: Response Rate

Rate Response	Respondents	Percentage
Response	149	74%
Not response	52	26%
Total	**201**	**100**

4.3 Pilot Study

A pilot study was conducted on 20 manufacturing SMEs in Kiambu County which formed 10% of the sample size. Out of the 20 questionnaires distributed, 15 were returned giving a 75% response rate. The aim of the plt study was to detect any weaknesses in design and instrumentation in order to improve the validity and reliability of the data collection instrument.

4.3.1 Reliability Analysis

Reliability of the questionnaire was tested by calculating Cronbach's Alpha coefficient using the Statistical Package for Social Sciences (SPSS) version 25. According to Leech, Barrett and Morgan (2014), a Cronbach's alpha coefficient of 0.90 is considered excellent, 0.80 considered very good and 0.7 adequate for measuring reliability. Thus, an Alpha Coefficient of 0.7 and above is justifiable for a tool to be considered as reliable. For this study, the Cronbach's alpha was computed by correlating the score for each scale item with the total score for each observation and then compared with the variance of all individual item scores. If Cronbach's alpha did not meet a threshold of 0.7, a reliability test was done to show the Cronbach's alpha if an item is deleted to inform on what item is to be omitted to make the questionnaire reliable. The Cronbach's Alpha values then obtained for the four independent variables ranged from 0.700 to 0.906 and hence were accepted. This is as indicated in the table 4.2.

Table 4.2: Reliabity Test

Variable	Cronbach's Alpha	Comment
SeedCapital	709	Acceptable
Business development services	.700	Acceptable
Entrepreneurial team	.736	Acceptable
Entrepreneurial social culture	.906	Acceptable
Seed Capital	.791	Acceptable
Growth	.748	Acceptable

4.3.2 Validity of Data Collection Instruments

For validity, the study used both construct and content validity. Construct validity was assessed by dividing the questionnaire into several sections to ensure that each section asses information for a specific objective and also to ensure that the same closely relates to the conceptual framework in this study. Content validity was ensured by subjecting the questionnaire to a panel of experts in entrepreneurship who evaluated the statements in the questionnaire for relevance and whether they were meaningful, clear and not offensive. Factor analysis was then used to confirm that indicators belonged to the variables they are measuring. According to Leandre (2012), under moderately good conditions, factor loading of 0.40–0.70 and at least three items for each factor is acceptable. Thus, any indicator with factor loadings above 0.4 was accepted, while any factor below 0.4 and positive was expunged from the questionnaire. Any negative factor loading was re-framed. The range of factor loading values obtained from independent variables was seed capital (0.437-0.768), business development services (0.540-.0796), entrepreneurial team (0.415-0.939), entrepreneurial social culture (0.415-0.960), and entrepreneurial orientation (.682-.0.814). The dependent variable loadings ranged from 0.220 for the number of employees while the other sub-variables ranged from 0.616-0.911. Thus, the number of employees was dropped as a measure of growth. From the factor loadings, the constructs that had a negative loading were reframed while the ones which had a factor loading of less than 0.4 were omitted from the questionnaire. The collected data was coded and keyed in SPSS software version 25.

4.3.3 Sampling Adequacy

Kaiser-Meyer-Olkin test (KMO) and Bartlett's test of sphericity were used to measure the sampling adequacy of the data. KMO is a statistic that indicates the proportion of variance in the variables. KMO values closer to 1 indicates a strong partial correlation and hence suitable for further analysis while values less than 0.5 are considered unacceptable (Cooper & Schindler, 2011). Bartlett's test of sphericity is used to test hypothesis that correlation matrix is an identity matrix meaning that the variables of the study are unrelated and thus ideal for factor analysis. Small values (< 0.05) of the significance level indicate that factor analysis may be useful with one's data and the data is statistically significant. The Kaiser-Meyer-Olkin measures of sampling adequacy showed that the value of test statistic was 0.786 which is greater than 0.5 implying that factor analysis would yield distinct and reliable factors. Bartlett's test of sphericity obtained a p-value of less than 0.05 level of significance hence there was relationship among variables. This is illustrated in the table 4.3.

Table 4.3: Kaiser-Meyer-Olkin and Bartlett's Test

Test		Value
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.786
Approx. Chi-Square		326.105
Bartlett's Test of Sphericity	df	66
	Sig	.000

4.3.4 Multi-Collinearity

Multi-collinearity is a situation where there is high degree of association between independent variables. In such cases, the standard errors of the coefficients associated with the affected variables is large. According to Mugenda and Mugenda (2012), multi-collinearity occurs in multiple regression models where independent variables are significantly correlated amongst themselves. In parametric tests, it is assumed that independent variables should not be highly correlated with each other but should correlate highly with the dependent variables. Variance Inflation Factor (VIF) is used to test for multi-collinearity where VIF of above 5 and tolerance value (1/VIF) of below 0.2 is an indication that there is a problem of multi-collinearity among the

variables (Makori & Jagongo, 2013). In this study, the VIF obtained was less than 5 and a tolerance of more than 0.2 indicating non-existence of multicollinearity. This assumptionis illustrated in the table 4.4.

Table 4.4: Test for Multi-collinearity

ModelVariables	Collinearity Statistics	
	Tolerance	VIF
X_1	.695	1.438
X_2	.608	1.645
X_3	.553	1.809
X_4	.509	1.966
X_5	.560	1.785

4.3.5 Test for Normality

For a linear regression, it is assumed that the error term (residuals) has to be normally distributed in order to fit in a linear model (Lapan *et al.,* 2012). To check this assumption, this study used the Shapiro-Wilk 's test since according to Ghasemi and Zahediasl (2012), this test has greater power and ability to detect whether a sample comes from a non-normal distribution. It is also suitable for samples below 2000. The findings revealed that the error terms were normally distributed as indicated by the large p values greater 0.05. Therefore, the normality assumption was not violated in this study. This is illustrated in table 4.5 below.

Table 4.5: Test for Normality

	Kolmogorov-Smirnov[a]		Shapiro-Wilk	
	Statistic	Sig.	Statistic	Sig.
Standardized Residual	.102	.090	.889	.120

4.3.6 Test for Heteroscedasticity

Heteroscedasticity in linear regression models refers to when linear regression errors have non-constant variance. The opposite of heteroscedasticity is homoscedasticity which refers to constancy of variance (Anglin & Gencay, 1996). Heteroscedasticities tend to increase the variance of the regression coefficient estimates which violates one

of the assumptions of a linear regression model. For any linear regression analysis, the error terms are assumed to be the same across all values of the independent variables hence should assume homoscedasticity. In this study, Breusch Pagan Test was used to test for heteroscedasticity. As indicated, the p values are bigger than 0.05 hence we fail to reject the null hypothesis of homoscedasticity and conclude that the homoscedasticity assumption was not violated. This is as illustrated in table 4.6.

Table 4.6: Breusch Pagan Test for Heteroscedasticity

Chi-square test	P value
.71	0.405

4.3.7 Linearity Test

Linearity test is carried out to establish linear relationship between two variables. As indicated all the p values were bigger than 0.05 hence, the conclusion that there is a linear relationship between the dependent variable and each independent variable. ANOVA was used to test for linearity. F less than 0.05; (F < 0.05), then there is significant non- linearity. This is as illustrated in table 4.7.

Table 4.7: For Linearity Test

ANOVA Test	P- Value
Y-X$_1$	0.178
Y-X$_2$	0.188
Y-X$_3$	0.441
Y-X$_4$	0.437
Y-X$_5$	0.837

4.3.8 Auto-Correlation Test

Auto-correlation refers to a situation where the values of adjacent observations in a data set either in time or space are related or there is clustering of similar values, with observations that are proximate in space and/or time having similar values (Anselin & Ray, 2010). It is carried out to identify any repeating patterns or trends in a data set. This study used Durbin-Watson test to detect autocorrelation in determine the suitability of data for regression analysis. The results showed Durbin-Watson Statistic

(DW) of 1.675 which falls within the range of 1.5-2.5 and thus the researcher concluded that there was no significant autocorrelation between the residuals of the regression model. This is as demonstrated in table 4.8.

Table 4.8: Autocorrelation Test

Variable	Durbin-Watson Statistic
Autocorrelation	1.675

4.4 Demographic Information

Demographic information refers to the characteristics of a population that have been categorized by distinct criteria such as age, gender and income among others as a means to study the attributes of a particular group. Demographic information helps the researcher to have a better understanding of the population of interest to their research. (Kothari, 2003). The demographic factors considered in this study were gender and level of education. This research targeted 422 owner/managers and chief executive officers who are registerd by Kenya Association of manufacturers (KAM, 2017). This data was useful in analyzing the necessary information about respondents in the study.

4.4.1 Gender of the Respondent

Out of the 149 respondents, 79 of them constituting 53.4% of the sample were females while 70 of them constituting 46.6% of the sample were males. This finding agrees with a study that was carried out by Kamunge, Njeru & Tirimba (2014), on factors affecting the performance of Small and Micro Enterprises in Limuru Town Market of Kiambu County, Kenya where females engage more in SMEs than males. It is also an indicator that the gender mainstreaming policies by the government and the Kenya Association of Manufacturers (KAM) efforts to increase participation of women in the manufacturing sector through providing a platform for mentorship, networking, skills, business, and market development through Women in Manufacturing Programme (KAM, 2017), MSE Act, no 55 of 2012 (ROK, 2012), Constitution of Kenya 2010 (ROK, 2010) are slowly bearing fruits since majority of studies that have been carried out previously showed a situation where the manufacturing sector were dominated by

men. It also agrees with a KAM study that even male owners are preferring women managers. This is illustrated in the table 4.9 below.

Table 4.9: Gender of the Respondent

	Frequency	Percent
Male	70	46.6
Female	79	53.4

4.4.2 Level of Education of the Respondent

The study found out that 36.2% of the respondents had post graduate qualification while 20.8% were undergraduates. In addition, 16.9% had a tertiary level qualification. The study also established that 16.9% of the respondents had a secondary school certificate while 9.2% had a primary school certificate. This is indicated in figure 4.1 below. The findings indicate that majority of the respondents in the survey had achieved post-secondary school education and above. The implication is that they clearly understood the research questions hence they provided relevant and reliable responses. This agrees with a study that was carried out by Mageto (2018), on logistics outsourcing and performance of small and medium-sized manufacturing enterprises in Nairobi.
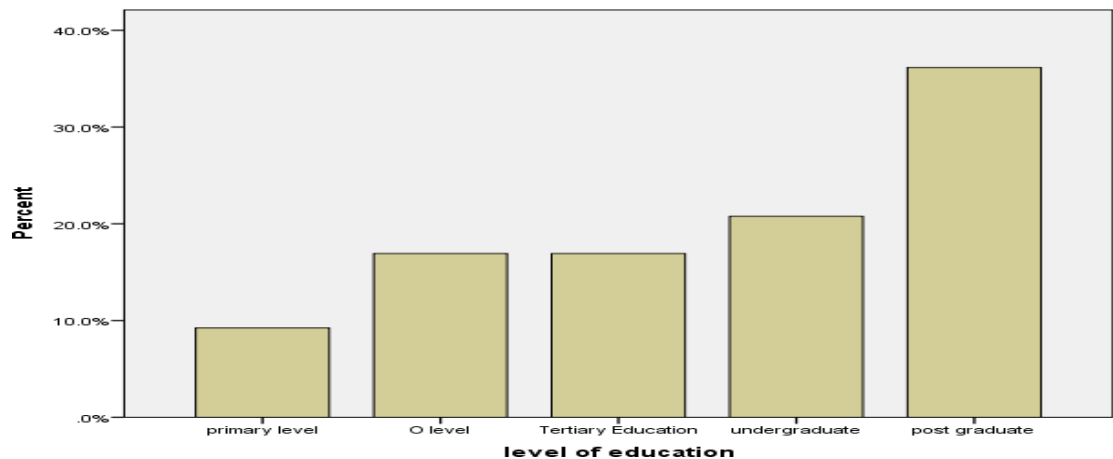
Figure 4.1: Level of Education of the Respondent

4.5 Firm Characteristics

According to Kandiru *et al.* (2015), firm characteristics are the demographic and managerial variables comprising internal environment of the firm can influence the performance of the firm. According to O'Sullivan *et al.* (2009), firm characteristics can be determined by variables such as business age, measured by the length of firm existence, size of the firm measured by the total number of employees; and the firm's ownership structure. This study used length of firm's existence, the manufacturing sector that the firm belongs to and the form of business organization that the firm belongs to as the variables for firm characteristics. The sampled manufacturing SMEs were analyzed to establish their characteristics.

4.5.1 Length of Firm Existence

Table 4.10 gives information on the length of time the firm has been in existence. Majority of the firm 40.0% have been in existence for a period of between 3-5 years, 30.9% have been in existence for a period of between 6-10 years, 22.7% have been in existence for a period of less than 2 years and 7.3% have been in existence for a period of more than 10 years. This indicates that most of manufacturing SMEs have been in existence for more 2 yrs and above years and were hence considered as mature firms. In relation to growth, figure 4. illusttrates that the average length of the firm is between 3.42 years with a standard deviation of 1.57 years. The average growth rate is 1.45 with a standard deviation of 0.37. the range is between 1 to 0.33. this indicated that most firms have low growth

Table 4.10: Length of Firm Existence

Number of Years	Frequency	Percent
< 2 years	25	22.7
Between 3-5 years	44	40.0
Between 6-10 years	34	30.9
More than 10 years	30	27.3

4.5.2 Type of Manufacturing Sector of the Firm

The manufacturing firms were further categorized into ten sub-sectors according to

KAM (2018) categorization. The results are illustrated in the table 4.11 below. According to the findings, majority of the manufacturing enterprises belonged to the food and beverages sector with 22.8%, wood, furniture and paper product sector, building, mining and construction sector and metal and allied were 12.1%, 10.1% belonged to the energy, electrical and electronics sector while theleast 5.4% belonged to the motor vehicle accessories and pharmaceutical and medical equipment sector.

Table 4.11: Type of Manufacturing Sector of the Firm

Manufacturing sector	Frequency	Percent
Pharmaceutical and Medical Equipment	8	5.4
Chemicals and Allied	10	6.7
Wood, furniture and paper product	18	12.1
Leather, Textile and Apparel	9	6.0
Energy, Electrical and Electronics	15	10.1
Plastics and Rubber	10	6.7
Building, Mining and Construction	18	12.1
Motor vehicle accessories	8	5.4
Food and beverages	34	22.8
Metal and Allied	18	12.1

4.5.3 Form of Business Organization

Studies have shown notable relationship between firm's ownership and firm's performance. Ownership determines the nature of legal protection and control of the firm thus affecting decision making, hence performance (Mangena, Tauringana and Chamisa, 2012). The table 4.12 describes the form of business organization that the manufacturing SMEs involved in the study belonged to. The results indicated that majority of the firms were solely owned with 32.9%, 28.2% were partnerships, 14.1% were private limited companies, 10.7% were public limited companies. Further 8.1% were cooperatives while 4.7% were other forms of business organizations.

Table 4.12: Form of Business Organization

Form of Business Organization	Frequency	Percent
Sole proprietorship	49	32.9
Partnership	42	28.2
Private Limited Company	21	14.1
Public Limited Company	16	10.7
Cooperative	12	8.1
Other	7	4.7

4.5.4 Role Played by Selected Key Informant Organizations.

Key informants were requested to indicate the role they played in the SME sector. Results in Table 4.13 indicate that, one firm was involved in advocacy role and representing the interests of manufacturing SMEs (20%), two (40%) were involved in formulation of policies while two others (40%) indicated that they provided funding and training assistance to manufacturing SMEs.

Table 4.13: Role of Key Informant Organizations

Roles	Frequency	Percent
Advocating and representing the interests of manufacturing SMEs	1	20%
Formulation, monitoring and evaluation ofpolicies and regulations for SMEs	2	40%
Funding and training assistance to SMEs	2	40%

4.6 Descriptive Analysis

Descriptive stastistics helps in describing or summarizing raw data and making it interpretable. In this study, it involved measures of central tendency (mean), measures of dispersion (standard deviation), and measures of frequency (count, percentages and frequency).

4.6.1 Descriptive Statistics on Seed Capital

Table 4.14 gives the descriptive statistics on a how the respondents agreed or disagreed with statements relating to seed capital and growth of manufacturing enterprises. A Likert Scale of 1-5 was used to represent the responses in categories comprising of

Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree respectively. From their responses, 54.3% (43%, 11.3%) of the respondents agreed that availability of capital is critical to creation, growth and survival of their firms, 24.6 % were neutral, while 21.2% disagreed. On venture capital, 39% (8.9%, 30.1%) of the respondents agreed that venture capital had provided an affordable source of capital thus promoting growth for their firm, 26.7% were neutral while 34.2% (13.7%, 20.5%) disagreed. Respondents were further requested to indicate whether they agreed or disagreed with statements that their firms used venture capital which had promoted the growth of their firms. 51.4% (15.5%, 35.9 %) agreed with the statement, 18.3% were neutral while 30.3% (9.2%, 21.1%) disagreed. Respondents were further requested to indicate whether they agreed or disagreed with the statement that their venture capital partners have experience that has aided their firms to grow. From the responses, 49.7% (29.5%, 19.2%) agreed with the statement, 17.8% were neutral while 33.3% (14.4%, 19.2%) disagreed.

On savings, 59.2% agreed with the statement that savings had not only enhanced growth of their firms but also their individual entrepreneurial development, 18.4% were neutral, while 22.4 % (12.2%, 10.2%) disagreed. Respondents were requested to indicate whether they agreed or disagreed with the statement that savings kept their business private and growing at a moderate rate hence reducing chances of collapsing. From the responses, 32.6% (10.6%, 22%) of the respondents agreed, 16.3% were neutral while 51% (18.4%, 32.6%) disagreed with the statement. On the statement that personal savings had been a cheaper source of capital leading to cost saving hence improving their firm's growth, the respondents almost equally agreed and disagreed with 36.4% agreeing, 27.1% neutral while 36.5% disagreed with the statement. On whether debt capital had been a major source of capital in their firms, 37.5 % (11.1%, 26.4%) agreed, 40.3% (12.5%, 27.8%) disagreed while 22.2% were neutral. On the statement that debt capital contributed to the growth of their firm, 49.4% agreed, 33.6% disagreed while 16.4% were neutral. 51.4% (35.9%,15.5%) of the respondents agreed that their firms avoided risks by setting acceptable level of debt-to-equity ratio, 26.8% were neutral while 21.3% (4.9%,16.4%) disagreed. 39.7% (26.7%,13%) of the respondents agreed to the statement that terms and conditions of debt capital have limited their access to it, 42.5% (11%, 31.5% disagreed, while 17.8% were neutral.

59.9% (36.1%,23.8%) agreed that share capital from promoters provided affordable share capital enabling the firms to grow, 16.3% (6.1%, 10.2%) disagreed while 23.8% were neutral.

The results showed that respondents generally agreed on the importance and impact of various sources of capital on firm growth, as indicated by the consistent mean of 3.23. However, the standard deviation of 1.51 revealed varying levels of agreement or disagreement among respondents, highlighting differing experiences and perceptions which is crucial for understanding the entrepreneurial ecosystem and the factors influencing SME growth in Kenya. The Thurstone scores of between 2.0-4.0 suggested a neutral position, indicating that respondents had a balanced view on all the constructs. These results agreed with the findings of Bunyasi (2012) and Fatoki & Ondeyemi, (2010) who from their studies concluded that access to entrepreneurial finance contributed to growth of small and medium enterprises.

Key informants' interviews from selected organizations were asked to indicate the form of capital that would be of great assistance to the growth of the manufacturing SMEs. They were further asked to indicate what needs to be done as far as capital and growth of manufacturing SMES is concerned. Majority indicated that human and financial capital played a grest role in the growth of manufacturing SMEs. Hence, need to increase access to information related to capital opportunities, SMEs need to form strategic partnerships with other stakeholders so as to increase their access to capital, SMEs should emphasize on improving their credit rating so as to get financial support and professional development of workers. They were all in agreement on the importance of seed capital in the growth of manufacturing SMEs.

Table 4.14: Descriptive Statistics on Seed Capital

	SD	D	N	A	SA	Mean	SD
Availability of capital is critical to creation, growth and survival of our firm.	9.2	12	24.6	11.3	43.0	3.67	1.37
Venture capital has provided an affordable source of capital thus promoting growth of our firm.	3.7	20.5	26.7	30.1	8.9	3.00	1.91
Our firm uses Venture capital which has promoted growth of our firm	9.2	21.1	18.3	35.9	15.5	2.92	1.20
Our venture capital partners haveexperience that have aided ourfirm to grow	4.4	19.2	17.8	19.2	29.5	3.27	1.22
Savings has not only enhancedgrowth of our firm but also our individual entrepreneurial development.	2.2	10.2	18.4	28.6	30.6	3.30	1.44
Savings keeps our businessprivate and growing at a moderate rate hence reducing chances of collapsing	18.4	32.6	16.3	10.6	22	3.46	1.06
Personal savings has been acheaper source of capital leadingto cost saving hence improving our firm's growth.	13.6	22.9	27.1	25	11.4	3.55	1.35
Debt capital has been our majorsource of capital in our firm	12.5	27.8	22.2	26.4	11.1	2.85	1.43
Debt capital has contributed tothe growth of our firm	15.1	18.5	16.4	24.7	24.7	2.98	1.22
Our firm has set acceptable levelof debt-to-equity ratio to avoid business risk	4.9	16.4	26.8	35.9	15.5	3.22	1.27
Terms and conditions of the debtfacility have limited our access todebt capital.	11	31.5	17.8	26.7	13	2.96	1.22
Share capital from promoters hasprovided us with affordable sharecapital enabling us to grow.	6.1	10.2	23.8	36.1	23.8	3,60	4.43

4.6.2 Descriptive Statistics on Business Development Services

Table 4.15 gives the descriptive statistics on a how the respondents agreed or disagreed with statements relating to business development services and growth of manufacturing enterprises. A Likert Scale of 1-5 was used to represent the response in categories comprising of Strongly Disagree, Disagree, not sure, Agree and Strongly Agree respectively. From the findings, 53.5% (31.7%, 21.8%) of the respondents agreed that market development services helped their firms to come up with new ideas and seize opportunities, 21.8% were neutral while 24.5% (7.7%,16.9%) disagreed. 55.9% (27.6%, 28.3%) agreed that they ventured in both domestic and international markets, 24.1% were neutral, while 19.9% (5.4%, 14.5%) disagreed with the statement. On the statement whether trade fairs, exhibitions and market research led to growth of their firms, 48.6% (26.4%,22.2%) agreed, 19.4% were neutral, while 32% (14.6%, 17.4%) disagreed.

On the statement whether the firms had a well-developed infrastructure thus reducing their cost of production, 52.8% (34.5%, 18.3%) agreed, 20.9% were neutral while 26.4% (9.5%, 16.9%) disagreed. On the statement that well- developed infrastructure provided essential linkages between their firms and markets, 52.5% (35.9%, 16.6%) agreed, 20.9% were neutral while 18.2% (8.3%, 15.9%) disagreed. On the statement that infrastructure policies facilitated affordable business premises and equipment thus increasing the level of operations, 53.1% (3.6%, 22.5%) agreed, 20.4% were neutral while 26.5% (14.3%, 12.2%) disagreed. 50.4% (32%, 18.4%) of the respondents agreed with the statement that technical assistance programs had helped their firms to be sustainable and financially stable hence growth. However, 26.5% were neutral while 23.1% (8.8%, 14.3%) disagreed. 49.7% (21.1%, 28.6%) of the respondents agreed that their firms were able to access capital when in need due to the technical assistance which helped the firms to grow, 15.6% were neutral, whereas 34.4% (21.5%, 12.9%) disagreed with that statement. On the statement that mentorship programs, feasibility studies, business plans and advisory services had enabled the firms to increase their level of operations hence growth, 42.4% (29.2%,13.2%) agreed to the statement, 22.9% were neutral, while 34.7% (10.4%,24.3%) disagreed. 55.3 % (28.7%, 26.6%) of the respondents agreed to the statement that easy access to technology providers led to the adoption of new technologies hence firm's growth. 30.8% were neutral while 13.8% (5.4%, 8.4%) disagreed. On the statement that the firms were able to procure and install new technologies leading to efficient production methods hence growth of the firms, 52% (21.9%,30.1%) agreed to the statement, 14.8% were neutral while 32.9% (10.3%, 22.6%) disagreed with the statement.

The results revealed that various factors related to market development services, infrastructure, technical assistance, and access to capital and technology are perceived to have moderate positive effect to the growth of manufacturing SMEs in Kenya with the mean values of 3.18. The standard deviations of 0.54 showed some variability in experiences among the firms while the Thurstone score ranging between 2.0 to 4.08 consistently suggested moderate positive impacts, highlighting the importance of these factors in promoting manufacturing SME growth. These findings agree with the findings of Kimando, Sakwa, and Njogu (2012) who concluded that business development services improved MSE's performance. However, it disagreed with the

findings of Okeyo, Gathungu and K'Obonyo (2014) who found that market access did not influence performance of SME's. They however agreed that infrastructure had a positive influence on the same. Key informants were asked to indicate the forms of business development services that were mainly accessible to the manufacturing SMEs, business development services with greatest assistance to manufacturing SMEs and what needs to be done as far as business development services are concerned. Key informats indicated that market access was key to the growth of manufacturing SMEs. They also felt that improvement in technology and infrastructure and technical assistance were also important in the growth. They also indicated that manufacturing SMEs needed to introduce new products in the market to meet the changing customer demands, know the competitors strategies in order to counter competition.

Table 4.15: Descriptive Statistics on Business Development Services

	SD	D	N	A	SA	Mean	SD
Our firm has market development services which have helped our firm to come up with new ideas and seize opportunities hence growth of our firm.	7.7	16.9	21.8	31.7	21.8	3.59	1.20
We have ventured in both domestic and international markets leading to growth our firm	5.4	14.5	24.1	27.6	28.3	3.24	1.37
Trade fairs, exhibitions and marketresearch has led to growth of our firm	14.6	17.4	19.4	26.4	22.2	3.54	2.73
We have a well-developedinfrastructure facility thus reducing our cost of production	9.5	16.9	20.9	34.5	18.3	3.37	1.18
The well-developed infrastructure has provided essential linkages betweenour firm and markets	8.3	15.9	23.4	35.9	16.6	3.69	4.46
Our infrastructure policies have facilitated affordable business premises and equipment thus increased level of operations.	14.3	12.2	20.4	30.6	22.5	3.37	1.20
Technical assistance programs havehelped our firm to be sustainable and financially stable hence our firm's growth	8.8	14.3	26.5	32.0	18.4	3.40	1.32
Mentorship programs, feasibility studies, business plans and advisory services has enabled us to increase ourlevel of operations hence growth of our firm.	10.4	24.3	22.9	29.2	13.2	3.10	1.21
Our firm have been able to accesscapital whenever in need due to the technical assistance which havehelped to grow our firm	2.9	21.5	15.6	21.1	28.6	3.31	1.42
Easy access to technology providers has led to our adoption of new technologies hence improved productivity.	5.4	8.4	30.8	28.7	26.6	3.62	1.13
We have been able to procure andinstall new technologies leading to efficient production methods hence growth of our firm.	10.3	22.6	14.8	21.9	30.1	3.40	1.39

4.6.3 Descriptive Statistics on Entrepreneurial Team

Table 4.16 gives the descriptive statistics on a how the respondents agreed or disagreed with statements relating to entrepreneurial team and growth of manufacturing SMEs. A Likert Scale of 1-5 was used to represent the response in categories comprising of Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree respectively. From

the findings in the table below, 48.9% (37.9%,11%) of respondents agreed with the statement that, having a pool of employees with business knowledge led to growth of their firm, 35.9% were neutral, while 15.2% (6.2%, 9.0%) disagreed. On the statement whether training of employees on entrepreneurship and management of business had assisted in growth of their firms, 62.4% (22.7%, 39.7%) agreed, 19.1% were neutral while 17.5% (5.4%, 12.1%) disagreed. The respondents were further asked to agree or disagree with the statement that having a managerial team who had prior knowledge in business had helped in the growth of their firms. 55.5% (19.9%, 35.6%) agreed, 19.2% were neutral while 25.4% (15.8%, 9.6%) disagreed with that statement. Majority of the respondents also agreed to the statement that, having a team with capacity to identify new business opportunities and quickly take advantage of it has led to growth of their firms with 57.6% (45.1%,12.5%) agreeing, 22.9% being neutral while 19.5% (13.2%,6.3%) disagreed. They were also asked to agree or disagree with the statement that their managerial team has skills that have contributed to efficient management and hence growth of their firms. 60.4% (40.3%, 20.1%) agreed, 20.1% were neutral while 9.4% (6.0%, 3.4%) disagreed. On the statement that they have continuous training for their management team which led to the growth of their firms, 55.4% (18%, 37.4%) agreed, 22.3% were neutral while 22.3% (10.1%, 12.2%) disagreed. They were further asked to agree or disagree with the statement that the ability of their team to apply the acquired skills has led to development of better-quality products hence growth of their firms. 54.8% (30.8%, 24.7%) agreed, 22.6% were neutral while 21.9% (10.3%, 11.6%) disagreed. On whether their managerial team had been managing firm's operations competently and efficiently hence growth of their firms, majority of the respondents 58.5% (19.4%, 35.4%) agreed, 28,5% were neutral while 16.7% (4.9%, 11.8%) disagreed. They were further asked to agree or disagree on the statement that their managerial team hired employees with the required skills for the firm hence growth. 57.5% (15.5%,43.0%) agreed, 17.6% were neutral while 14% (8.5%, 15.5%) disagreed. 57.5% (36.3%,21.2%) of the respondents also agreed on the statement that their team was able to strategically plan and implement the organization's goal, 14.4% were neutral, while 24.7% (10.3%,14.4%) disagreed. On the statement that their team had adequate experience in making proper decisions hence the growth of their firms, 53.8% (18.2%, 28.7%) agreed, 31.5% were neutral

while 21.7% (4.2%, 17.5%) disagreed. 63.1% (15.9%, 37.9%) agreed with the statement that their team had adequate experience in negotiating with financiers and suppliers thus improving access to credit 20.7% were neutral while 25.5% (8.3%, 17.2%) disagreed. On the statement that their team were experienced enough to meet the changing demands of their customer hence growth of our firm 63.4% (33.1% 30.3) 20.7% were neutral while 15.8 (5.5%, 10.3%). On the statement that there has been consistent motivation of to their employees, by the management leading to improved production, 31.1% (18.9%, 12.2%) agreed with the statement, 21.6% were neutral while 47.3% (17.6%,29.7%) disagreed.

The responses indicated that, entrepreneurial team factors such as the various competences, various types of experiences, Knowledge and types of skills perceived as beneficial for the growth of SMEs in Kenya. The mean scores of 3.23 generally indicated positive views on the contribution of entrepreneurial team to the growth of manufacturing SMEs, while the standard deviations of 0.49 showed some variability in experiences among firms. The Thurstone scores ranged from range from 2.0 to 4.0 consistently suggested moderate to strong positive impacts, highlighting the importance of these factors in promoting manufacturing SMEs' growth. These findings agreed with the findings of Studies that were carried out by Thaimuta and Moronge (2014), Akande (2012) and Ojokuku and Sajuyigbe (2015) which concluded that, management skills, entrepreneurial skills and training had a positive influence on the performance of SMES.

Key informants from selected organizations were asked to indicate the entrepreneurial team factors that contributed most to the growth of manufacturing SMEs and what more needs to be done as far as entrepreneurial team is concerned. They indicated that, knowledge, experience, skills and competence of the team was crucial to the growth of manufacturing SMEs. On what more needs to be done as far as entrepreneurial team and growth of manufacturing SMES is concerned, they indicated that, entrepreneurial team needs to maintain a positive attitude towards their customers, understand and meet their customers' needs and expectations, build customer loyalty through quality goods and creating good customer relations. This indicated that the key informants were in agreement that the entrepreneurial team contributed to the growth of

manufacturing SMEs.

Table 4.16: Descriptive Statistics on Entrepreneurial Team and Growth

	SD	D	N	A	SA	Mean	SD
Having a pool of employees with business knowledge has led to growthof our company from education and training	6.2	9.0	35.9	37.9	11	3.59	2.73
Training our employees on entrepreneurship and management of business has assisted in growing the business	5.4	12.1	19.1	39.7	22.7	3.61	1.14
Having a managerial team who have prior knowledge in business has helped in the growth of our business	15.8	9.6	19.2	19.9	35.6	3.50	1.45
Having a team with capacity to identify new business opportunities and quickly taking advantage of it hasensured efficiency leading to growth of our firm	6.3	13.2	22.9	45.1	12.5	3.44	1.07
Our managerial team has skills that have contributed to efficientmanagement of our firm.	6.0	3.4	20.1	40.3	20.1	3.55	1.13
Our team is continuously trained togain new skill	10.1	12.2	22.3	37.4	18	3.77	4.54
The ability of our team to apply the acquired skills has led to developmentof better-quality products.	10.3	11.6	22.6	24.7	30.8	3.54	1.31
Our team is able to manage the firm'soperations competently and efficientlyhence growth of our firm	4.9	11.8	28.5	35.4	19.4	3.53	1.08
Our managerial team hires employeeswith the required skills for our firm hence growth	8.5	15.5	17.6	43.0	15.5	3.42	1.17
Our team is able to strategically plan and implement the organization's goals which have led to growth of ourfirm.	10.3	14.4	17.8	21.2	36.3	3.59	1.37
The ability of our team to apply the acquired skills has led to developmentof better-quality products.	10.3	11.6	22.6	24.7	30.8	3.54	1.31
Our team is experienced enough tomeet the changing demands of ourcustomers hence growth of our firm.	5.5	10.3	20.7	30.3	33.1	3.75	1.18
There has been consistent motivation of our employees from the management leading to improved production	17.6	29.7	21.6	12.2	18.9	2.85	1.37

4.6.4 Descriptive Statistics on Social Culture

Table 4.17 gives the descriptive statistics on a how the respondents agreed or disagreed with statements relating to social culture and growth of manufacturing enterprises. A Likert Scale of 1-5 was used to represent the response in categories comprising of Strongly Disagree, Disagree, Moderately Agree, Agree and Strongly Agree respectively. The respondents were asked to state whether they agreed or disagreed to the statement that the society where they came from highly valued entrepreneurship which inspired them into business. 57.7% (16.4%, 41.1%) agreed to the statement, 32.9% were neutral, while 9.6% (5.5%, 4.1%) disagreed. On the statement that their need for independence and autonomy has helped to steer their firm to greater heights, 58.1% (19.6%, 38.5%) agreed to the statement, 11.9% were neutral while 30.1% (11.9%, 18.2%) disagreed with that statement. They were further asked to agree or

76

disagree with the statement that the need for achievement has played a big role in the expansion of their firms. 55.7% (22,4%, 33.3%) of the respondents agreed, 23.8% were neutral while 20.4% (6.1%, 14.3%) disagreed. On the statement that entrepreneurship was their desirable career of choice, 38.8% (18.2%, 17.6%) agreed with the statement., 15.5% were neutral while 48.7% (22.3%, 26.4%) disagreed. 31.7% (10.3%, 21,4%) of the respondents agreed to the statement that their religious beliefs had a great influence on their choice to venture into business, 15,5% were neutral while 33.8% (6.9%,26.9%) disagreed with the statement. On whether their religious beliefs influenced the choice of businesses they ventured into 52.4% (17.2%, 35.2%) agreed, 22,8% were neutral while 24.8% (4.1%, 20.7%) disagreed. 45.3% (17.6%, 27.7%) agreed with the statement that religion motivated them into growing their firms because it believes in hard- work. 23% were neutral while 31.8% (17.6%, 14.2%) disagreeing. On whether their religious beliefs had shaped their ethical behavior in business which led to the growth of their firms, 50% (25%, 25%) agreed to the statement, 18.9% were neutral, while 31.8% (11.5%, 18.9%) disagreed.

On the statement that successful entrepreneurs from the society motivated the owner/manager to venture into successful businesses, 51.4% (10.3%, 41.1%) agreed to the statement, 23.3% were neutral while 25.3% (8.2%, 17.1%) disagreed. On the statement that family members and peers who are in successful businesses had been a great encouragement to growth of their firms, 57.8% (21.4%,36.4%) agreed to the statement, 20% were neutral while 22.1% (7.1%,15) disagreed. On the statement that their family members supported them in the growth of their firms, 33.1% (18.2%.14.9%) agreed, 23% were neutral while 43.9% (8.8%, 35,1%) disagreed. 38.5% (27%,11.5%) of the respondents agreed to the statement that the community they came from helped to shape their entrepreneurial orientation.33.8% were neutral while 27.7% (4.7%,4.7%) disagreed. On the statement that their need to prove that people from their ethnic groups can be successful in business had motivated them in the growth of their firms, 47.9% (20.9%, 27%) agreed, 16.9% were neutral while 35.1% (10.1%, 25%) disagreed. On the statement that the traditional practices of their ethnic groups had a great influence on the growth of their firms. 45.2% (29.7%, 15.5%) agreed, 18.9% were neutral while 35.8% (15.5%.20.3%) disagreed with the statement.

From the responses, social cultural factors used in this study: societal values, religious beliefs, role models and ethnicity were generally percieve to have positive influence on the growth manufacturing SMEs given the mean of 3.06. The standard deviation was 0.43 which indicated variability in experiences among the respondents. The Thurstone scores ranged from 2.08 to 4.0 suggested moderate to strong positive impacts, highlighting the importance of cultural factors in promoting manufacturing SMEs. These study findings agreed with the findings of Riaz, Farrukh, Rehman, and Ishaque (2016) who found in their study that, religion had a high significant impact on entrepreneurial intention. The findings also agree with the findings of Ahmed, Ali, and Kamran (2015) that entrepreneurs ventured into business for the need of independence in working. It however disagrees with their findings that entrepreneurs rely heavily on family member support to set up and maintain their enterprises. The study findings also agree with the findings of Kibler, Kautonen, and Fink (2014), that the societal beliefs have an influence entrepreneurship. It also agreed with the study by Bwisa and Ndolo (2011) who found out that differences in value systems and cultural orientations towards entrepreneurship affected entrepreneurship. Key informants from selected organizations were asked to indicate the social cultural factors that contributed most to the growth of manufacturing SMEs and what needs to be done as far as social culture and growth of manufacturing SMES is concerned. They indicated cultural values, religious beliefs, ethnicity and role models as important social ciltural factors in the growth of manufacturing SMEs. On what more needs to be done as far as social culture and growth of manufacturing SMES is concerned, they indicated that entrepreneurial team needs to cope with attitude of the society, provide moral support to entrepreneurs and provide good leadership and inspiration to the other menbers of the entreprise.

Table 4.17: Descriptive Statistics on Social Culture

	SD	D	N	A	SA	Mean	S D
The society where I come from a highly values entrepreneurship which has really inspired me into business	5.5	4.1	32.9	41.1	16.4	3.59	1.00
Having a need for independence and autonomy steers our firm to greater heights	1.9	18.2	11.9	38.5	19.6	3.36	1.31
My need for achievement has played a big role in the expansion of our firm.	6.1	14.3	23.8	33.3	22.4	3.52	1.17
My belief in entrepreneurship as a desirable career choice has led to the growth of our firm.	22.3	26.4	15.5	17.6	18.2	2.83	1.43
My religious beliefs have had a great influence on my choice to venture into business	6.9	26.9	34.5	21.4	10.3	3.01	1.09
My religious beliefs have had a great influence on my choice of business to venture into.	4.1	20.7	22.8	35.2	17.2	3.41	1.12
My religion highly believes in hard work which has motivated me into growing my firm.	7.6	14.2	23	27.7	17.6	3.14	1.35
My religious beliefs have really shaped my ethical behavior in business which has had a great influence in the growth of our firm	1.5	18.9	18.9	25	25	3.47	2.16
Successful entrepreneurs from my society have been a great inspiration to me which has motivated me to venture into a successful business	8.2	17.1	23.3	41.1	10.3	3.28	1.12
Having family members and peers who are in successful businesses encourages me to grow our firm.	7.1	15	20	36.4	21.4	3.50	1.19
Support from my family members have helped to grow our firm	8.8	35.1	23	14.9	18.2	2.99	1.26
The community in which I grew up encouraged my entrepreneurial orientation	4.7	23	33.8	27	11.5	3.18	1.06
My need to prove that people from my ethnic group can be successful in business has motivated me to grow our firm.	10.1	25	16.9	27	20.9	3.24	1.31
The traditional practices my ethnic group has had a great influence on the growth of our firm.	15.5	20.3	18.9	15.5	29.7	3.24	1.46

4.6.5 Descriptive Statistics on Entrepreneurial Orientation

Table 4.18 gives the descriptive statistics on a how the respondents agreed or disagreed with statements relating to entrepreneurial orientation and growth of manufacturing SMEs. A Likert Scale of 1-5 was used to represent the response in categories comprising of Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree respectively. 58.9% (10.3%, 48.6%) of the respondents agreed to te statement that their ability to realize a change in the environment ahead of their competitors has helped in their firm's growth, 25.3% were neutral while 15.8% (5.5%, 10.3%) disagreed with the statement. On the statement that their ability to adapt to new market trends enabled them to improve their operations, 46.5% 16.4%.30.1%) agreed, 24.7% were neutral while 28.8% (10.3%,18%) disagreed with the statement. There was also agreement among 52,7% (14.9%,37.8%) of the respondents, 23.0%, were neutral while 24.3 (8.1%,16.2%) disagreed to the statement that they are able to adopt to new changes in

79

technology thus are more efficient in production leading to growth of their firms.The respondents were asked to agree or disagree with the statement that their ability to anticipate changes in consumer demand has enabled them to change the design of their products to meet their customer's expectations in time with 48.3% (14.3%,34%) agreeing, 16.3% being neutral and 35.4% (13.6%, 21,8%) disagreeing. On the statement that their ability to do product differentiation have led to increased demand of their products hence growth, 49.3% (26.7%, 22.6%) agreeing on the statement, 24.7% being neutral while 26% (14.4%.11.6%) disagreed. 50.3% (12.9%, 37.4%) of the respondents also agreed to the statement that there was growth in their firms due to their ability to embrace employees' ideas on business improvement,26.5% were neutral while 23.1% (7.5%,15.6%) disagreed. On the statement that their ability to customize technology for the firm's specific needs have led to efficiency in operations hence growth, 51.7% (19.7%,32.0%) of the respondents agreed to the statement,22.4% were neutral while 25.2% (10.2%, 15.6%) disagreed.

The respondents were further asked to agree or disagree with the statement that their ability to come up with innovative products has helped in meeting customer's changing preferences hence growth of their firms where 47.9% (21.2%, 26.7%) agreed with the statement, 17.1% were neutral while 34.9% (14.4%, 20.5%) disagreed. There was also 56.4% (19.7%, 36.7%) agreement that committing resources to product changes to overcome customer dissatisfaction led to the firm's growth, 21.8% neutral while 21.7% (6.1%, 15.6%) of the respondents disagreeing with the statement. The respondents were further asked to agree or disagree with the statement that venturing into new opportunities without fear of unknown has helped in firm's expansion. 55.5% (12.3%, 43.2%) of the respondents agreed to the statement, 20.5% were neutral while 23.7% (8.9%, 14.8%) disagreed with the statement. On the statement that seeking finance from external sources enabled the firms to increase their production capacity hence growth, 51.3% (18.2%,33.1%) of the respondents agreed to that statement, 18.2% were neutral while 30.4% (14.2%, 16.2%) disagreed. 50.3% (17.0%,33.3%) of the respondents also agreed that their ability to adopt to new marketing strategies enabled their firms to overcome competition hence growth, 24.5% were neutral while 38.7% (8.2%, 17.0%) disagreed with the statement.

On the statement that seeking to meet customer demands and specifications enabled the firms to produce a portfolio of products and services hence growth, 50% (16.9%, 33.1%) of the respondents agreed, 24.3% were neutral while 25.7% (9.5%, 16.2%) disagreed. The respondents were also asked to agree or disagree with the statement that their ability to provide quality products at reasonable prices enabled them to retain existing customers and acquire new customers hence the growth of their firms. 49.3% (23.2%, 26.1%) of the respondents agreed to the statement, 12.0% were neutral while 38.7% (21.1%, 17.6%) disagreed with the statement. From the responses, entrepreneurial orientation factors used in this study: innovativeness, pro-activeness, risk taking and competitive aggressiveness had positive influence on the growth manufacturing SMEs given the mean of 3.4. The standard deviation of 1.48 indicated variability in experiences among the respondents. The Thurstone scores ranged from 2.08 to 4.0 suggested moderate to strong positive impacts, highlighting the importance of entrepreneurial orientation factors in promoting manufacturing SMEs.. thus, there is overall agreement with the findings by Mwangi and Ngugi (2014), Alembummah (2015) who found out that the dimensions of entrepreneurial orientation (innovativeness, risk taking, pro-activeness) had a significant positive influence on growth of Micro and Small Enterprises with innovativeness having the most significant correlation. Key informants from selected organizations were asked to indicate whether entrepreneurial orientation factors contributed the growth of manufacturing SMEs. They indicated that, entrepreneurial orientation factors contributed to the growth of manufacturing SMEs. They were further asked to indicate the entrepreneurial orientation factors that contributed most to the growth of manufacturing SMEs. They indicated pro-activeness and innovativeness. They were also asked to indicate what needs to be done as far as entrepreneurial orientation and growth of manufacturing SMES is concerned. They indicated that, entrepreneurial team needs to explore new opportunities, invest in new business ideas and embrace autonomy.

Table 4.18: Descriptive on Entrepreneurial Orientation

	SD	D	N	A	SA	Mean	SD
Our ability to realize a change in the environment ahead of our competitors has really helped our firm to grow.	5.5	10.3	25.3	48.6	10.3	3.48	1
Our ability to adapt to new market trends enables us to improve our operations.	10.3	18.5	24.7	30.1	16.4	3.24	1.23
We are able to adopt to new changes in technology thus improving on our efficiency in production hence growth of our firm.	8.1	16.2	23.0	37.8	14.9	3.35	1.16
Product differentiation in our firm has increased demand of our products hence growth	14.4	11.6	24.7	22.6	26.7	3.7	4.49
Employees' ideas for business improvement are encouraged in ourfirm	7.5	15.6	26.5	37.4	12.9	3.33	1.12
Our ability to customize technology for our specific needs leads to efficiency of operations	10.2	15.6	22.4	32.0	19.7	3.35	1.25
Our ability to come up with innovative products helps us to meet customer's changing preferences hence growth of our firm.	14.4	20.5	17.1	26.7	21.2	3.24	1.51
Committing resources to product changes to overcome customer dissatisfaction has enabled us to grow	6.1	15.6	21.8	36.7	19.7	3.48	1.15
Venturing into new opportunities without fear of unknown has helped us expand.	8.9	14.8	20.5	43.2	12.3	3.35	1.15
Seeking finance from external sources enables us to increase our production capacity	14.2	16.2	18.2	33.1	18.2	3.25	1.32
Adopting new marketing strategies enables the business overcomecompetition hence growth of our firm	8.2	17.0	24.5	33.3	17.0	3.34	1.18
Seeking to meet customer demands and specifications has enabled us to produce a portfolio of products andservices hence growth of our firm	9.5	16.2	24.3	33.1	16.9	3.32	1.21
Our ability to provide quality products at reasonable of prices enables us to retain existing customers and acquire and new customer hence growth of our firm.	21.1	17.6	12.0	26.1	23.2	3.13	1.49

4.6.6 Descriptive Statistics on Growth Indicators

Table 4.19 gives the descriptive statistics on a how the respondents agreed or disagreed with statements relating to growth of their manufacturing enterprises.A Likert Scale of 1-5 was used to represent the response in categories comprisingof Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree respectively.Respondents were requested to indicate whether they agreed or disagreed with statements relating to growth of their manufacturing enterprises. From theresponses, majority of the respondents 53.9 % (14%, 39.9%) agreed that their firm's assets had really increased thus increasing firm's capital employed, 19.6% were neutral while 16.5% (11.9%,14.7%) disagreed. On the statement that their firm's profitability had improved over the last 5 years. Majority of the respondents 61% (38.3%, 22.7%) agreed, 20.6% were neutral while 18.4% (10.6%, 7.8%) disagreed. On the statement on whether they agreed or disagreed with statement that their market share had greatly increased over the last 5 years, majority respondents

61.6% (23.8%, 37.8%) agreed, 11.9% were neutral while 16.5% (10.5%,16.1%) disagreed. Respondents were further requested to indicate whether they agreed or disagreed with statement that the quality of their goods had really improved over the last 5 years. From the responses, 63.1% (38.3%, 24.8%) agreed, 17% were neutral 19.8% (9.9%, 9.9%) disagreed. The mean score of above 3 in all the responses indicated an overall agreement with the statements. Hence there is hope for the manufacturing SMEs in Kenya if proper mechanisms were put in place. The table 4.20 indicates the growth of manufacturing firms in terms of sales volume, number of employees, net profit margin and return on investment for five years from the first year of operation.

Key informants from selected organizations were asked to express their opinion on whether the manufacturing sector in Kenya was growing or declining. They indicated that, while a few were growing, majority were stagnating while for others the growth rate was very low. They were further asked to indicate the factors that contributed to the growth. Majority indicated the need for seed capital as a very important factor while the other entrepreneurial ecosystem factors: business development services, entrepreneurial team and social culture followed. On whether there were any government efforts to rejuvenate the sector, they affirmed that the government was maling efforts to grow the sector such as funding efforts, improvement of infrastructure and formulating policy guidelines that would favour the sector growth. Howevwer, they felt that the efforts were not sufficient. They indicated that the funding should be made cheaper and accessible by making the terms and conditions more favourable to the manufacturing SMEs, lower the rates of taxation and minimise the registration requirements. On the general advice they would give to the owner/ managers of the manufacturing SMEs concerning the growth of their firms, they felt that owner /magers should embrace employee motivation, be more innovative and pro-active and enhance training for skills development. They were finally asked to indicate the future plans they had concerning growth of SMEs. They indicated that they would provide more advisory services, financial assistance, create more platforms to present challenges faced by SMEs to the relevant authorities and come up with more strategies promote overall growth of manufacturing SMEs.

Table 4.19: Descriptive Statistics on Growth

	SD	D	N	A	SA	Mean	SD
Our firm's assets have really increased thus increasing firm'scapital employed	11.9	14.7	19.6	39.9	14.0	3.29	1.23
Our firm's profitability hasimproved over the last 5 years	10.6	7.8	20.6	22.7	38.3	3.70	1.33
Our market share has greatlyincreased over the last 5 years	10.5	16.1	11.9	37.8	23.8	3.48	1.30
The quality of our goods hasreally improved over the last 5 years	9.9	9.9	17.0	24.8	38.3	3.72	1.33

4.6.7 Growth in the Past Five Years

The table 4.20 showed the growth of a company over a period of five years, from its first year of operation to 2021. From the table, the sales volume shows a consistent upward trend throughout the five years. However, while growth is evident, the rate of increase slowed down, especially between 2020 and 2021. the number of employeess generally increased but with fluctuations. There was a notable increase from the first year to 2018, followed by smaller increases and even a slight drop in 2020. This suggests potential hiring freezes or layoffs, perhaps in response to economic conditions or automation efforts. The increase in 2021 could indicate renewed expansion. Net profit margin, a key indicator of profitability, fluctuated over the years but generally trended upwards. The fluctuations could be due to various factors like changes in pricing strategies, cost of goods sold, or operational efficiency. ROI saw a significant jump from the first year to 2018 and then remained relatively stagnant. This suggests that initial investments yielded good returns, but subsequent investments might not be generating the same level of profitability. The manufacturing SMEs seem to be in a growth phase, as evidenced by increasing sales volume. However, the slowing growth rate of sales and the fluctuations in employee count and profitability suggest potential challenges and areas for improvement.

Table 4.20: Descriptive Statistics on Growth Indicators

Year	Sales Volume (Sh in Millions)	Number of Employees	Net Profit Margin	Return on Investment
1st year of operation	24.3	20.5	10	0.6
2018	30.2	26.8	11.7	0.9
2019	33.6	27.4	12.6	0.9
2020	34.9	26.9	11.6	0.9
2021	37.1	28.4	12.7	0.7

4.7 Correlation Analysis

Correlation analysis was carried out to determine the relationship between seed capital (X_1), business development services (X_2), entrepreneurial team (X_3), social culture (X_4), entrepreneurial orientation (X_5) and growth of manufacturing SMEs (Y). To achieve this, Pearson's correlation coefficient was computed since both the independent and dependent variables were in a ratio scale. The nature of the relationship was determined by the coefficient of correlation while the significance of the relationship at 5% levels of significance is explained by the p-value. According to Mugenda and Mugenda (2008), Pearson's correlation coefficient ranges from positive one to negative one. According to them, a positive correlation coefficient that is close to one indicates the presence of a strong positive relationship between two variables while a negative correlation coefficient that is close to negative one indicates the presence of a strong negative relationship between two variables.

From the results in table 4.21, the correlation between seed capital and growth of manufacturing SMEs was r=0.298, p-value=0.000<0.05. This implies that the variables have a weak positive relationship that is significant at 0.05% levels ofsignificance. For correlation between business development services and growth of manufacturing SMEs, the correlation coefficient was r=0.486, p=0.000<0.05.This implies that the variables have a moderate positive relationship that is significant at 0.05% levels of significance. The correlation between entrepreneurial team and growth of manufacturing SMEs, the correlation coefficient was r=0.493, p=0.00<0.05. This implies that the variables have a moderate positive relationship that is significant at 0.05% levels of significance. For social culture, and growth of manufacturing SMEs,

the correlation coefficient was r=0.454, p=0.00<0.05. This implies that the variables have a moderate positive relationship that is significant at 0.05% levels of significance. Finally, the correlation coefficient for entrepreneurial orientation and growth of manufacturing SMEs, was r=0.630, p=0.00<0.05. This implies that entrepreneurial orientation has a strong positive relationship that is significant at 5% levels of significance.

Table 4.21: Correlation Analysis

		Y	X_1	X_2	X_3	X_4	X_5
Y	Pearson Correlation	1					
	Sig. (2-tailed)						
X_1	Pearson Correlation	.298**	1				
	Sig. (2-tailed)	.000					
X_2	Pearson Correlation	.486**	.384**	1			
	Sig. (2-tailed)	.000	.000				
X_3	Pearson Correlation	.493**	.392**	.440**	1		
	Sig. (2-tailed)	.000	.000	.000			
X_4	Pearson Correlation	.454**	.514**	.499**	.587**	1	
	Sig. (2-tailed)	.000	.000	.000	.000		
X_5	Pearson Correlation	.630**	.395**	.555**	.551**	.478**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	

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

4.8 Regression Analysis of Entrepreneurial Ecosystem Factors

Further inferential statistical tests were carried out using regression analysis to explain the relationship between seed capital, business development services, entrepreneurial team, social culture and entrepreneurial orientation on growth of manufacturing SMEs. Regression analysis helps in generating equation that describes the statistical relationship between one or more predictor variables andthe response variable (Green & Salkind, 2003). This was done by testing suitability of the data for regression analysis using Analysis of Variance (ANOVA), determining the regression coefficient (R^2) and the regression equation. The regression analysis results were presented using

regression model summary, Analysis of Variance (ANOVA), and beta coefficients.

4.8.1 Seed Capital and Growth of Manufacturing SMEs

The first objective of the study was to establish the relationship between seed capital and growth of manufacturing SMEs in Kenya. The literature that was reviewed in this study as well as theoretical reasoning associated with seed capital and growth indicators. The following hypothesis was formulated and tested:

H $_{01}$: There is no Significant Relationship between Seed Capital and Growth

To test this hypothesis, Analysis of Variance (ANOVA), model summary and Beta coefficient were tabulated and illustrated in table 4.22. From the table, F-calculated =13.738 which is greater than F-critical (3.84), and p-value was 0.000 which is less than 0.05 hence, seed capital had a significant explanatory power on growth of manufacturing SMEs in Kenya. In the regression model summary, R=0.298 indicated weak positive correlation between seed capital and growth of manufacturing SMEs. The coefficient of determination was indicated by Adjusted R square which is equal to 0.082 implying that 8% of growth of manufacturing SMEs in Kenya is explained by seed capital as illustrated in the table. This implies that, there are other aspects of entrepreneurial ecosystem that promotes growth of manufacturing SMEs other than seed capital. This agrees with studies carried out by Bunyasi (2012) and Mbugua, Njeru & Ondambu (2014), who concluded that access to entrepreneurial finance, had a positive influence on growth of small and medium enterprises. Njeru (2013) postulated that, the cost of the source of capital influences the choice of source of capital for an enterprise. Bunyasi (2012) further argued that access to financial capital enables a firm to expand and improve its operations and enable a firm to come up with innovative initiatives hence having a competitive edge inthe market promoting the firm's growth. From the table of Beta Coefficients, the simple regression model for seed capital can be written as:

Y= 2.247 + 0.397 X$_1$………………………………………………. **Equation 4.1**

Where: X_1 = Seed Capital

Y = Growth of manufacturing SMEs.

The regression model above shows that, when seed capital is held constant at zero, growth of manufacturing SMES would be 2.247 units. Thus, there is an influence of seed capital on growth of small and medium enterprises. A unit increase in seed capital increases growth of small and medium enterprises by 0.397 Units. Since the p-value is less than 0.05 and T-computed is 3.706 which is greater than the T-critical (1.96). We reject the null hypothesis and conclude that there is a significant but weak positive relationship between seed capital and growth of manufacturing SMEs. This is supported by study by Bunyasi (2012) that entrepreneurial finance had a positive influence on the growth of SMEs.

Table 4.22: Model Statistics for Seed Capital and Growth

ANOVA

	SS	df	MS	F	Sig
Regression	7.779	1	7.779	13.738	.000
Residual	79.843	141	.566		
Total	**87.622**	**142**			

Model Summary

Model	R	R²	Adjusted R²	Std. Error of the Estimate
1	.298ª	.089	.082	.75250

Regression Coefficient

Predictor	B	SE	Beta	t	Sig
(Constant)	2.247	.356		6.319	.000
X_1	.397	.107	.298	3.706	.000

a. Predictors: (Constant), X1: seed capital

4.8.2 Business Development Services and Growth

The second objective of the study was to establish whether there is a relationship between business development services and growth of manufacturing SMEs in Kenya. From literature review in this study as well as theoretical reasoning, business development services is associated with growth indicators. The following hypothesis

was formulated and tested:

H$_{02}$: There is no Significant Relationship between Business Development Services and Growth

To test this hypothesis, Analysis of Variance (ANOVA), Model summary and Beta coefficient were tabulated and illustrated in Table 4.23 respectively. From the Table, F- Calculated =43.584 and p-value is .000 which is less than 0.05 hence, business development services had a significant explanatory power on growth of manufacturing SMEs in Kenya. In the regression model summary, R=0.486 indicated moderate positive correlation between business development services and growth of manufacturing SMES. The coefficient of determination is indicated by Adjusted R^2 is 0.231 implying that 23.1% of growth of small and medium enterprises in Kenya is explained by business development services.

From Table of Beta coefficients, the simple regression model for business development services can be written as:

Y= 2.006 + .447 X$_2$……………………………………...…………………**Equation 4.2**
where: X_2 = Business development services

Y = Growth of small and medium enterprises.

The regression equation above shows that when business development services is held constant at zero, growth of manufacturing SMEs would be 2.006 units. Thus, there is a relationship between business development services and growth of small and medium enterprises. A unit increase in business development services increases the growth of manufacturing SMEs by 0.447 Units. Since the p-value is less than 0.05 and the F computed 0.583 which is less than the F-critical, we reject the null hypothesis and conclude that there is a significant positive relationship between business development services and growth of small and medium enterprises which concurs with findings of Okeyo, Gathungu and K'Obonyo (2014); Gathenya, Bwisa & Kihoro, (2011) and Kimando, Sakwa& Njogu (2012) on business developments services and growth of SMES who concluded that business development services such as

procurement services and infrastructure facilities had a positive and significant influence on performance of the enterprises. However, they found a negative relationship between market access and performance of SMEs. It also agrees with findings of Faustin & Rusibana, (2020) that enterprises benefit from training and technical assistance in areas such as policy and regulations awareness, infrastructure, operation or maintenance of markets, industrial parks or sheds, business incubators, storage and cooling facilities, power, information and communication technology (lCT) infrastructure; specialized services such as legal, financial management and auditing services and policy advocacy services among others.

Table 4.23: Model Statistics for Business Development Services

ANOVA					
	SS	df	MS	F	Sig
Regression	20.689	1	20.689	43.584	.000
Residual	66.933	141	.475		
Total	87.622	142			

Model Summary				
Model	R	R²	Adjusted R²	Std. Error of the Estimate
1	.486[a]	.236	.231	.68899

Regression Coefficient					
Predictor	B	SE	Beta	t	Sig
(Constant)	2.247	.356		6/319	.000
X_2	.447	.068	.486	6.602	.000

a. Predictors: (Constant), X_2 (Business development services)

4.8.3 Entrepreneurial Team and Growth

The third objective of the study was designed to establish the relationship between entrepreneurial team and growth of manufacturing SMEs in Kenya. The literature that was reviewed in this study as well as theoretical reasoning associated entrepreneurial team with growth indicators. The following hypothesis was formulated and tested:

H04: There is no Significant Relationship between Entrepreneurial Team and Growth

To test this hypothesis, Analysis of Variance (ANOVA), model summary and Beta coefficient were tabulated and illustrated in Table 4.24 respectively. As illustrated in Table, F=45.315 and p-value is .000 which is less than 0.05 hence, entrepreneurial team had a significant explanatory power on the growth of small and medium enterprises in Kenya. In the regression model summary, R=0.493 indicated moderate positive correlation between entrepreneurial team and growth of manufacturing SMES. The coefficient of determination is indicated by Adjusted R square (R2) is 0.238 implying that 23.8% of growth of small and medium enterprises in Kenya is explained by entrepreneurial team. The simple regression model for entrepreneurial team and growth of manufacturing SMEs can be written as:

$$Y= 2.066 + .424X_3 \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots Equation\ 4.3$$

Where:

X_3 = Entrepreneurial Team

Y = Growth of small and medium enterprises.

This regression equation shows that when entrepreneurial team is held constant at zero, growth of small and medium enterprises would be 2.066 units. Thus, there is a positive relationship between entrepreneurial team and growth of small and medium enterprises. A unit increase in entrepreneurialteam increases growth of manufacturing SMEs by 0.424 units. Since the p-value is less than 0.05, we reject the null hypothesis and conclude that there is a significant positive relationship between entrepreneurial team and growth of small and medium enterprises. This agrees with the study by: (Mubarik, 2015; Ojokuku & Sajuyigbe, 2015 and Thaimuta & Moronge, 2014). In their studies, they found out that, education, experience, personal abilities, training, entrepreneurial skills and management skills, had a significantpositive influence on performance and growth of SMEs. Bunyasi (2015) concluded that the greater the training and education and the higher the level of experience of the owners and managers of SMEs the higher the chances of growth. The aspects of entrepreneurial

team that were covered under this study included: knowledge, experience, competence and skills.

Table 4.24: Model Statistics for Entrepreneurial Team

ANOVA					
	SS	**df**	**MS**	**F**	**Sig**
Regression	21.311	1	21.311	45.315	.000[b]
Residual	66.311	141	.470		
Total	87.622	142			

Model Summary				
Model	**R**	**R²**	**Adjusted R²**	**Std. Error of the Estimate**
1	.493[a]	.243	.238	.68578

Regression Coefficient					
Predictor	**B**	**SE**	**Beta**	**t**	**Sig**
(Constant)	2.066	.227		9.100	.000
X_3	.424	.063	.493	6.732	.000

a. Predictors: (Constant), X_3: (Entrepreneurial Team)

4.8.4 Social Culture and Growth

The fourth objective of the study was designed to establish the relationship between social culture and growth of manufacturing SMEs in Kenya. The literature that was reviewed in this study as well as theoretical reasoning associated social culture with growth indicators. Following the theoretical arguments, the following hypothesis was formulated and tested:

H04: There is no significant Relationship between Social Culture and Growth

To test this hypothesis, Analysis of Variance (ANOVA), Model summary and Beta coefficient were tabulated and illustrated in Table 4.25 respectively. As illustrated in the table, F calculated =36.545 and p-value is .000 which is lessthan 0.05. Since the p-value is less than 0.05, then social culture had a significant explanatory power growth of small and medium enterprises in Kenya. In the regression model summary,

R=0.454 indicated moderate positive correlation between social culture and growth of manufacturing SMEs. The coefficient of determination is indicated by Adjusted R^2 is 0.200 implying that 20% of growth of small and medium enterprises in Kenya is explained by social culture. Simple regression model for social culture and growth of manufacturing SMEs can be written as:

Y= 1.505 + .625 X$_4$.. **Equation 4.4**

Where:

X$_4$ = Social Culture

Y = Growth.

This regression equation shows that when social culture is held constant at zero, growth of manufacturing SMEs would be 1.505 units. There is a positive relationship between social culture and growth of manufacturing SMES in Kenya. A unit increase in social culture increases growth of small and medium enterprises by 0.625 Units. Since the p-value is less than 0.05 we reject the null hypothesis and conclude that there is a significant positive relationship between social culture and growth of manufacturing SMES. This is in line with a study by Bwisa & Ndolo (2011) who found out that, tribe values and traits, attitude towards failure, risks, responsibility, values from childhood and gender involvement played a very significant role in the growth of enterprises. It also agrees with the findings of Riaz, Farrukh, Rehman & Ishaque (2016), who found out that religion played a significant role in the establishment and growth of SMEs. It also agrees with the findings of Ahmed, Ali & Kamran (2015) who found out in their study that the family and social culture played a significant role in start-up and growth of SME's.

Table 4.25: Model Statistics for Social Culture

ANOVA					
	SS	**df**	**MS**	**F**	**Sig**
Regression	18.036	1	18.036	36.545	.000[b]
Residual	69.586	141	.494		
Total	**87.622**	**142**			

Model Summary

Model	R	R²	Adjusted R²	Std. Error of the Estimate
1	.454[a]	.206	.200	.70251

Regression Coefficient

Predictor	B	SE	Beta	t	Sig
(Constant)	1.505	.342		4.393	000
X_4	.625	.103	.454	6.045	.000

a. Predictors: (Constant), X_4(Social Culture)

4.9 Regression Analysis of the Moderating Effect of Entrepreneurial Orientation

The fifth objective of the study was designed to establish the moderating effect of entrepreneurial orientation on the relationship between entrepreneurial ecosystem and growth of small and medium enterprises in Kenya. This was done by testing suitability of the data for regression analysis using Analysis of variance (ANOVA), determining the regression coefficient (R^2) and the Regression equation. The regression analysis results have been presented using Regression Model summary, Analysis of Variance (ANOVA), and Beta Coefficients.

4.9.1 Moderating effect of Entrepreneurial Orientation on Seed Capital

To assess the moderating effect of entrepreneurial orientation on seed capital and growth the following hypothesis was formulated and tested:

H$_{05a}$: There is no moderating effect of entrepreneurial orientation on the relationship between seed capital and growth

To test this hypothesis, Analysis of Variance (ANOVA), Model summary and Beta Coefficient were tabulated and illustrated in Table 4.26. From the table, F calculated was 34.614 which is greater than the critical value of 3.85. Since the p-value is less than 0.05, then seed capital and the interaction effect had significant explanatory power on manufacturing SMEs in Kenya (F=34.614 and p-value <0.05). As indicated in Table, R=0.654 indicating a positive correlation between seed capital and the interaction effect of entrepreneurial orientation and growth of manufacturing SMEs. The coefficient of determination adjusted R^2 is 0.415 this indicates that 41.5% of the

growth of small and medium enterprises is explained by seed capital, entrepreneurial orientation and the interaction effect of seed capital and entrepreneurial orientation. The table shows the regression coefficients of the regression model of growth of manufacturing SMES and seed capital (X_1), entrepreneurial orientation (Z) and the interaction effects of seed capital and entrepreneurial orientation (X_1Z). This is represented by regression model:

$$Y= -4.396+1.137 X_1 + 1.767 Z - 0.331X_1Z. \dots\dots\dots\dots\dots\dots\dots\text{Equation 4.5}$$

From the regression model, the dependent variable Y is predicted by X_1 and Z. The coefficients of X_1 and Z are 1.137 and 1.767 respectively, which means that a one-unit increase in X_1 will result in a 1.137 unit increase in Y, holding all other variables constant. Similarly, a one-unit increase in Z will result in a 1.767 unit increase in Y, holding all other variables constant. The interaction term X_1Z has a coefficient of -0.331 which means that the effect of X_1 on Y depends on the value of Z and vice versa. When Z is held constant, a one-unit increase in X_1 will result in a decrease of 0.331 units in Y. When X_1 is held constant, a one-unit increase in Z will result in an increase of 1.767 - 0.331 = 1.436 units in Y. Since the coefficient of the interaction effect is significant, we conclude that there is significant moderating effect of entrepreneurial orientation on the relationship between growth of manufacturing SMES and seed capital. The moderating effect of entrepreneurial orientation and seed capital increases the growth of manufacturing SMEs by 33.3%.

Table 4.26: Entrepreneurial Orientation and Seed Capital

ANOVA					
	SS	df	MS	F	Sig
Regression	37.468	3	12.489	34.614	.000[b]
Residual	50.154	139	.361		
Total	87.622	142			

Model Summary				
Model	R	R²	Adjusted R²	Std. Error of the Estimate
1	.654[a]	.428	.415	.60068

Regression Coefficient					
Predictor	B	SE	Beta	t	Sig
(Constant)	-4.396	1.456		-3019	0.003
X_1	1.137	0.421	0.854	2.700	0.008
Z	1.767	0.456	1.771	3.873	0.000
X_1Z	-0.331	0.128	-1.656	-2.576	0.011

a :Predictors:(Constant), X_1: (Seed Capital), Z:(Entrepreneurial Orientation)

4.9.2 Moderating Effect of EntrepreneurialOrientation on Business Development Services

The other objective of the study was designed to establish the moderating effect of entrepreneurial orientation on the relationship between business development services and growth of small and medium enterprises in Kenya Following the theoretical arguments, the following hypothesis was formulated and tested:

H05b: There is no moderating effect of entrepreneurial orientation on the relationship between business development services and growth

To test this hypothesis, Analysis of Variance (ANOVA), model summary and Beta coefficient were tabulated and illustrated in Table 4.27. As illustrated in the table, F Statistic was 37.612 which is greater than the critical value of 3.85. Since the p-value is less than 0.05, then business development services and the interaction effect had significant explanatory power on growth of manufacturing SMEs in Kenya (F=37.612 and p-value <0.05). As indicated in Table, R=0.669 indicating a positive correlation between business development services and the interaction effect of entrepreneurial orientation and growth of manufacturing SMEs. The coefficient of determination adjusted R^2 0.436 which indicates that 43.6% of the growth of small and medium enterprises is explained by business development services, entrepreneurial orientation and the interaction effect of business development services and entrepreneurial orientation. The table also shows the regression coefficients of the regression model of growth of small and medium enterprises and business development services (X_2), entrepreneurial orientation (Z) and the interaction effects of business development services andentrepreneurial orientation (X_2Z). This relationship is explained by the multipleregression model:

$$Y= -0.799+0.741X_2 +1.062Z-0.147X_2 Z$$………… …………………Equation 4.6

From the regression model, the dependent variable Y is predicted by X_2 and Z. The coefficients of X_2 and Z are 0.741 and 1.062 respectively, which means that a one-unit increase in X_2 will result in a 1.062 unit increase in Y, holding all other variables constant. Similarly, a one-unit increase in Z will result in a 1.062 unit increase in Y, holding all other variables constant. The interaction term X_2Z has a coefficient of -0.147 which means that the effect of X_2 on Y depends on the value of Z and vice versa. When Z is held constant, a one-unit increase in X_2 will result in a decrease of 0.147 units in Y. When X_2 is held constant, a one-unit increase in Z will result in an increase of (1.062 - 0.147) 0.915 units in Y. Since the coefficient of the interaction effect is significant, we conclude that there is moderating effect of entrepreneurial orientation on the relationship between growth of small and medium enterprises and business development services. The moderating effect of entrepreneurial orientation and business development services increases the growth of manufacturing SMEs by 20.5%.

Table 4.27: Entrepreneurial Orientation and Business Development Services

ANOVA					
	SS	df	MS	F	Sig
Regression	39.259	3	13.086	37.612	.000[b]
Residual	48.363	139	.348		
Total	**87.622**	**142**			

Model Summary				
Model	**R**	**R²**	**Adjusted R²**	**Std. Error of the Estimate**
1	.669[a]	.448	.436	.58986

Regression Coefficient					
Predictor	B	SE	Beta	t	Sig
(Constant)	.799	.839		.953	.000
X_2	.741	.237	.806	3.128	.002
Z	1.062	.231	1.065	4.591	.000
X_2Z	-.147	.059	-1.031	-2.479	.014

a :Predictors:(Constant), X_2: (Business Development services), Z:(Entrepreneurial Orientation)

4.9.3 Moderating Effect of EntrepreneurialOrientation on Entrepreneurial Team

The other objective of the study was designed to establish the moderating effect entrepreneurial orientation on the relationship between entrepreneurial team andgrowth of small and medium enterprises in Kenya Following the theoretical arguments, the following hypothesis was formulated and tested:

H_{05c}: There is no moderating effect entrepreneurial orientation on the relationship between entrepreneurial team and growth of small and medium enterprises in Kenya

To test this hypothesis, Analysis of Variance (ANOVA), model summary and Beta coefficient were tabulated and illustrated in table 4.28. As illustrated in Table, F Statistic was 46.351 which is greater than the critical value of 3.85.Since the p-value is less than 0.05, then entrepreneurial team and the interaction effect of entrepreneurial orientation and entrepreneurial team had significant explanatory power on growth of small and medium enterprises in Kenya (F=46.351 and p-value <0.05). As indicated in the table, R=0.707 indicating a strong positive correlation between entrepreneurial team and the interaction effect of entrepreneurial orientation and growth of manufacturing SMEs. The coefficient of determination adjusted R^2 is 0.489 which indicates that 48.9% of the growth of small and medium enterprises is explained by entrepreneurial team, entrepreneurial orientation and the interaction effect of entrepreneurial team and entrepreneurialorientation. The table also shows the regression coefficients of the regression model of growth of manufacturing SMEs and entrepreneurial team (X_3), entrepreneurial orientation (Z) and the interaction effects of entrepreneurial team and entrepreneurial orientation (X_3Z). This is presented bythe

following multiple regression model:

$$Y= -0.679+ 0.512X_3+ 1.145Z-0.114X_3Z$$………………………………**Equation 4.7**

From the regression model, the dependent variable Y is predicted by X_3 and Z. The coefficients of X_3 and Z are 0.512 and 1.145 respectively, which means that a one-unit increase in X_3 will result in a 0.512 unit increase in Y, holding all other variables constant. Similarly, a one-unit increase in Z will result in a 1.145 unit increase in Y, holding all other variables constant. The interaction term X_3Z has a coefficient of 0.114 which means that the effect of X_4 on Y depends on the value of Z and vice versa. When Z is held constant, a one-unit increase in X_3 will result in a decrease of 0.114 units in Y. When X_3 is held constant, a one-unit increase in Z will result in an increase of 1.145 - 0.114 = 1.031 units in Y. Since the coefficient of the interaction effect is significant, we conclude that there is moderating effect of entrepreneurial orientation on the relationship between growth of manufacturing SMEs and entrepreneurial team. The moderating effect of entrepreneurial orientation and entrepreneurial team increases the growth of manufacturing SMEs by 25.1%.

Table 4.28: Entrepreneurial Orientation and Entrepreneurial Team

ANOVA					
	SS	df	MS	F	Sig
Regression	43.820	3	14.607	46.351	.000[b]
Residual	43.803	139	.315		
Total	87.622	142			

Model Summary				
Model	R	R²	Adjusted R²	Std. Error of the Estimate
	.707[a]	.500	.489	.56136

Predictor	B	SE	Beta	t	Sig
(Constant)	.679	.475		1.429	.015
X_3	.512	.096	.596	5.308	.000
Z	1.145	.158	1.148	7.247	.000
X_3Z	-.114	.025	-.944	-4.484	.000

a. Predictors:(Constant), $X_{3:}$ (Entrepreneurial Team), Z:(Entrepreneurial Orientation).

4.9.4 Moderating Effect of Entrepreneurial Orientation and Social Culture

The eighth objective of the study was designed to establish the moderating effect entrepreneurial orientation on the relationship between social culture and growth of small and medium enterprises in Kenya Following the theoretical arguments, the following hypothesis was formulated and tested:

H$_{05d}$ There is no moderating effect of entrepreneurial orientation on the relationship between social culture and growth

To test this hypothesis, Analysis of Variance (ANOVA), model summary and Beta coefficient were tabulated and illustrated in Table 4.29. As illustrated in the table, F- Statistic was 35.102 which is greater than the critical value of 3.85. Since the p-value is less than 0.05, then social culture and the interaction effect of entrepreneurial orientation had significant explanatory power on growth of small and medium enterprises in Kenya (F=35.102 and p-value <0.05). As indicated in Table, R=0.657 indicating a positive correlation between social culture and the interaction effect of entrepreneurial orientation and growth of manufacturing SMEs. The coefficient of determination adjusted R^2 is 0.431 which indicates that 43.1% of the growth of small and medium enterprises is explained by social culture, entrepreneurial orientation and the interaction effect of social culture and entrepreneurial orientation. The results of regression coefficients showed that there is significant moderating effect of entrepreneurial orientation on the relationship between social culture and growth of manufacturing SMEs.The table also shows the regression coefficients of the regression model of growth of manufacturing SMEs and entrepreneurial team (X_4), entrepreneurial orientation (Z) and the interaction effects of social culture and entrepreneurial orientation (X_4Z). This is presented by the following multiple regression model

Y= -3.238 + 1.576X₄ + 0.912Z-0.502X₄Z………………………………Equation 4.8

From the regression model, the dependent variable Y is predicted by X_4 and Z. The coefficients of X_4 and Z are 1.576 and 0.912 respectively, which means that a one-unit increase in X_4 will result in a 1.576 unit increase in Y, holding all other variables constant. Similarly, a one-unit increase in Z will result in 0.912 unit increase in Y, holding all other variables constant. The interaction term X_4Z has a coefficient of 0.502 units which means that, the effect of X_4 on Y depends on the value of Z and vice versa. When Z is held constant, a one-unit increase in X_4 will result in an increase of 0.912-0.502= 0.410 units in Y. Since the coefficient of the interaction effect is significant, we conclude that there is moderating effect of entrepreneurial orientation and the relationship between growth of manufacturing SMEs and social culture. The moderating effect of entrepreneurial orientation and entrepreneurial team increases the growth of manufacturing SMEs by 22.5 %.

Table 4.29: Entrepreneurial Orientation and Social Culture

ANOVA					
	SS	df	MS	F	Sig
Regression	37.769	3	12.590	35.102	.000b
Residual	49.854	139	.359		
Total	87.622	142			

Model Summary				
Model	R	R²	Adjusted R²	Std. Error of the Estimate
	.657a	.431	.419	.59888

Regression Coefficient					
Predictor	B	SE	Beta	t	Sig
(Constant)	-3.238	1.188		-2.726	0.007
X₄	1.576	0.328	0.418	4.896	0.000
Z	0.912	0.394	0.915	2.313	0.022
X₄Z	-0.502	0.105	-0.526	-4.781	0.000

a. Predictors: (Constant), X₄ (Social Culture), Z(Entrepreneurial Orientation).

4.10 Multiple Linear Regression

This section focused on the main objective of this study which was to investigate the relationship between entrepreneurial ecosystem and growth of manufacturing SMEs in Kenya. This was achieved by performing a multiple linear regression model for testing the significance of the relationship between independent variables on the dependent variable.

4.10.1 Aggregated Research Model without Moderating Variable

The Table 4.30, ANOVA, Model summary and Beta coefficient were used to show the overall model significance. Since the p-value is less than 0.05, this means that the whole model is significant.(F = 18.088 and p value <0.05). In the model summary, R= .586 while the coefficient of determination as indicated by R^2 is 0.325. This implied that 32.5% of the growth of manufacturing SMEs was explained by seed capital, business development services, entrepreneurial team and social culture. The results in Table showed that without the moderating variable, all the independent variables combined produced statistically significant results with $P<0.05$. This was represented by the multiple regression model below:

Model 1: $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$ represented by the equation:

$Y = 1.505 + 0.076 X_1 + 0.116 X_2 + 0.179 X_4 + 0.723 X_3$.....................equation 4.8

The regression model above implies that without the moderating variable, if all the independent variables were held constant at zero, growth of manufacturing SMEs in Kenya would be 1.505. All the independent variables had a positive relationship with the dependent variable. A unit increase in seed capital would lead to growth of manufacturing SMEs by 0.076, a unit increase in business development services would improve growth of manufacturing SMEs by 0.116, a unit increase in the entrepreneurial team would improve growth of manufacturing SMEs by 0.723 while a unit increase in social culture would lead to 0.179 improvement in growth of manufacturing SMEs. The Stochastic Error Term was assumed to be zero. the conclusion was that the combined effect of all the independent variables had a moderate significant relationship between them and the growth of manufacturing

SMEs.

Table 4.30: Overall Model without Moderating Variable

ANOVA				
	SS	**MS**	**F**	**Sig**
Regression	30.138	7.535	18.088	.000[b]
Residual	57.484	.417		
Total	**87.622**			

Model Summary				
Model	**R**	**R^2**	**Adjusted R^2**	**Std. Error of the Estimate**
	.586[a]	.344	.325	.64541

Regression Coefficient					
Predictor	**B**	**SE**	**Beta**	**t**	**Sig**
(Constant)	1.505	.342		4.393	.000
X_1	.076	.117	.085	2.668	.019
X_2	.116	.031	.169	2.433	.002
X_3	.723	.145	.842	4.971	.000
X_4	.179	.059	.855	2.316	.003

a. Predictors: (Constant), X_1(Seed Capital) X_2(Business Development Services), X_3(Entrepreneurial Team), X_4 (Social Culture), Z(Entrepreneurial Orientation).

4.10.2 Aggregated Research Model with Moderating Variable

In the Table 4.31, ANOVA, Model summary and Beta coefficient were used to show the overall model significance with the moderating variable. Since F- calculated is more than F-critical and the p-value is less than 0.05, then, the whole model is significant. (F = 18.196 and p value <0.05). From the model summary, R = 0.875 while adjusted R^2=0.761, which implies that 76.1% of the growth of manufacturing SMEs was influenced by the interactions between seed capital, business development services, entrepreneurial team, social culture and entrepreneurial orientation (moderator). When compared to results in table 4.38 (without the moderator), where adjusted R^2 was 0.325 (32.5%), it is found that the introduction of entrepreneurial orientation as the moderator increases the amount of variation in growth by 43.6%. the regression coefficient table showed that, with moderating variable, all the independent

variables   produced statistically significantly results (seed capital) P<0.05 (business development services = P<0.04, entrepreneurial team= P<0.00, social culture= P<0.02). Thus, the conclusion is that there is significant moderating effect of entrepreneurial orientation on the relationship between entrepreneurial ecosystem and growth of manufacturing SMEs. This implies that, in the entrepreneurial ecosystem, seed capital, business development services, entrepreneurial team and social culture played a major role in the growth of manufacturing SMEs.

Table 4.31: Overall Model with Moderating Variable

ANOVA					
	SS	**df**	**MS**	**F**	**Sig**
Regression	30.138	4	7.535	18.088	.000[b]
Residual	57.484	138	.417		
Total	87.622	142			

Model Summary				
Model	**R**	**R²**	**Adjusted R²**	**Std. Error of the Estimate**
	.875[a]	.766	.761	.212132

Regression Coefficient					
Predictor	**B**	**SE**	**Beta**	**t**	**Sig**
(Constant)	1.084	.323		3.360	.001
X1Z	.053	.232	-.711	7.937	.003
X2Z	.179	.093	-.292	3.678	.004
X3Z	.832	.034	.941	.882	.000
X4Z	.755	.741	1.94	.092	.002

4.10.3 Optimal Model of the Study

The results of the aggregated research model with moderating variable show that all the independent variables had a positive relationship with the dependent variable. From the results, if all the independent variables were held constant at zero, growth of manufacturing SMEs in Kenya would be 1.084. A unit increase in seed capital would improve growth of manufacturing SMEs by 0.232, a unit increase in business development services would improve growth of manufacturing SMEs by 0.179, a unit increase in the entrepreneurial team would improve growth of manufacturing SMEs

by 0.832 while a unit increase social culture would lead to 0.755 increase in growth of manufacturing SMEs. The Stochastic Error Term was assumed to be zero.

Thus, overall model with the moderating variable for the study is:-

Model 2: $Y = \beta 0 + \beta_1 X_1 Z + \beta_2 X_2 Z + \beta_3 X_3 Z + \beta_4 X_4 Z + \varepsilon$

$Y = 1.084 + 0.179 X_2 Z + 0.832 X_3 Z + 0.755\ X_4 Z$…………………………equation 4.9

Where,

Y   = Dependent Variable (Growth of manufacturing SMEs)

X_i's =Independent variables with,

X_1 = Seed capital

X_2 = Business development services

X_3 = Entrepreneurial team

X_4 = Social Culture

Z = Entrepreneurial orientation (moderating variable)

ε = Error term

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This study sought to investigate the relationship between entrepreneurial ecosystem and growth of manufacturing SMEs in Kenya. The independent variables were; seed capital, business development services, entrepreneurial team and social culture as the independent variables while growth of manufacturing SMEs was the dependent variable. Entrepreneurial orientation was the moderating variable. The chapter presents a summary, conclusions and recommendations from the study findings. The conclusions and recommendations are based on the objectives of the study. Finally, the chapter proposes areas for further research.

5.2 Summary of Major Findings

Literature reviewed indicated that manufacturing SMEs in Kenya are undergoing premature de-industrialization. Entrepreneurial ecosystems factors have been recognized to play a significant role in promoting entrepreneurial activity and creating high growth entrepreneurial ventures. Hence the study sought to investigate the relationship between entrepreneurial ecosystem and growth of manufacturing SMEs in Kenya. It targeted 422 manufacturing SMEs in Nairobi County who are members of KAM. The sample population consisted of 201 manufacturing SMEs. A semi-structured questionnaire was self-administered to the respondents. A response rate of 149 manufacturing SMEs representing 74% response rate was obtained. Statistical Package of Social Sciences (SPSS) version 25 was used for data analysis. Diagnostic tests were performed in line with the multiple linear regression requirements. Quantitative data was analyzed and described using descriptive and inferential statistics. Qualitative data was content analyzed for themes and categories. Conclusions based on the statistical significance of the set of independent variables were drawn. The moderating effect of entrepreneurial orientation on the influence of entrepreneurial ecosystem was investigated. The summary of each is itemized based on the specific objectives of the study.

5.2.1 Seed Capital

The study tested the hypothesis that, there was no significant relationship between seed capital and growth of manufacturing SMEs. The key aspects of seed capital included seed capital, equity capital, venture capital and debt capital. The study found out that there was a significant positive relationship between seed capital and growth of manufacturing SMEs in Kenya and that 8% of growth of these SMEs is explained by seed capital. The study also found there was a significant moderating effect on the relationship between seed capital and entrepreneurial orientation and that 33.5% of the growth of manufacturing SMEs is contributed by the interaction effect of seed capital and entrepreneurial orientation. The findings showed that owners/managers preferred their own savings to other sources of capital but used the other sources to complement the savings.

5.2.2 Business Development Services

The study tested the hypothesis that, there was no significant relationship between business development services and growth of manufacturing SMEs. The factors that were in consideration were market access, infrastructure, technical assistance and technology. The results of the study showed that, there was a significant positive relationship between business development services and growth of small and medium enterprises in Kenya. According to the results, 23% of growth of these enterprises in Kenya is explained by business development services. The study also found there was a significant moderating effect on the relationship between business development services and entrepreneurial orientation and that 20.5% of the growth of manufacturing SMEs is contributed by the interaction effect of business development services and entrepreneurial orientation. Through BDS, manufacturing SMEs are able to find markets for their goods and services through networking, trade fairs and exhibitions, technology development and Transfer through assistance in research and development of appropriate technologies; promoting, distribution and installing such technologies, developing distribution channels for the technologies and advising on appropriate technologies.

5.2.3 Entrepreneurial Team

The study sought to find out the relationship between entrepreneurial team and growth of manufacturing SMEs. The entrepreneurial team factors considered in the study considered in the study include knowledge, experience, competence, entrepreneurial and managerial skills of the owners/managers and other employees contribute to the growth of manufacturing SMEs. The results showed that there was a significant positive relationship between entrepreneurial team and growth of small and medium enterprises. The conclusion from the results is that 23.8% of growth of small and medium enterprises in Kenya is explained by entrepreneurial team. The study also found there was a significant moderating effect on the relationship between entrepreneurial team and entrepreneurial orientation and that 48.9% of the growth of manufacturing SMEs is contributed by the interaction effect of seed capital and entrepreneurial orientation.

5.2.4 Social Culture

The study sought to find out the relationship between social culture and growth of manufacturing SMEs. The variables that measured social culture were: cultural values, religious beliefs, role models and ethnicity. From the findings, social culture had a positive relationship with growth of manufacturing SMEs in Kenya and that 20% of growth of small and medium enterprises in Kenya is explained by social culture. The study also found there was a significant moderating effect on the relationship between entrepreneurial team and entrepreneurial orientation and that 41.9% of the growth of manufacturing SMEs is contributed by the interaction effect of social culture and entrepreneurial orientation. The study concluded that, social culture contributed to the growth of manufacturing SMEs in Kenya.

5.2.5 Entrepreneurial Orientation, Entrepreneurial Ecosystem and Growth of Manufacturing SMEs

The results showed that, entrepreneurial orientation had a significant moderating effect on the growth of manufacturing SMEs and each of the independent variables: seed capital, entrepreneurial team, business development services and social culture. From

the results of the aggregated model without the moderating variable, 32.5% of the growth of manufacturing SMEs was explained by seed capital, business development services, entrepreneurial team and social culture. The regression analysis for the whole model also found out that seed capital, business development services, entrepreneurial team and and social culture had a significant statistical effect on the growth of manufacturing SMEs. From the results of the overall model with the moderating variable, the study found out that entrepreneurial orientation had a significant moderating effect on the relationship between seed capital, business development services, entrepreneurial team and social culture and the growth of manufacturing SMEs. The aggregated model results indicated that, 76.1 % of the growth of manufacturing SMEs was influenced by seed capital, business development services, entrepreneurial team, social culture and their interactions with entrpreneurial orientation.

5.3 Conclusion

The study sought to find out the relationship between entrepreneurial ecosystem and the growth of manufacturing SMEs in Kenya. The need for this study was necessitated by the fact that the growth of these enterprises has been going down as revealed by the literature hence their pre-mature de-industrialization despite the important role they play in economic development of the country. From the findings, the study concluded that: Seed capital which was measured by own savings, venture capital, equity and debt capital had a positive effect on the growth of manufacturing SMEs. The results indicated that seed capital increased growth of manufacturing SMEs by 8% while the intraction of seed capital and entrepreneurial orientation increased the growth by 41.5%. Thus, availability of capital is critical to creation, growth and survival of manufacturing SMEs. However, the cost of financing limits the owner/ manager's access to capital.

Business development services were foung to play a significant role in the growth of manufacturing SMEs. The results showed that 23.1% of growth was contributed by business development services while its interraction with entrepreneurial orientation increased the growth by 43.6%. Majority of the respondents agreed that market access

to both domestic and international markets played a very significant role in the growth. The study also indicated that trade fairs, exhibitions and market research contributed greatly to the growth of their firm. A well-developed infrastructure provided essential linkages between the firms and markets hence contributing to growth of the firms. It can also be concluded that, mentorship programs, feasibility studies, business plans and advisory services are enablers of firm growth. Technical assistance and access to appropriate technology are also crucial to the growth of firms.

The results also indicated that entrepreneurial team played a significant role in the growth of manufacturing SMEs. 23.8% of the growth was contributed by entrepreneurial team while 48.9% was contributed by interaction of entrepreneurial team and entrepreneurial orientation. Managerial and entrepreneurial skills were found to play the greatest role since entrepreneurial skills assisted the owner/ managers to be able to identify new business opportunities and quickly take advantage of these opportunities ahead of their competitors while managerial skills enabled the owner /managers to strategically plan and implement the plans, negotiate with financiers and suppliers and thus able to access credit. Managerial skills and competencies enable the managerial staff to hire, train and motivate their competent and skilled employees. Hence, the competent and skilled staff are able to produce quality products that meet the changing demands and expectations of the customers.

Social culture was found to have significant positive effect to the growth of manufacturing SMEs. According to the results, 20% of growth of manufacturing SMEs was contributed by social culture while its interraction with entrepreneurial orientation increased the growth by 41.9%. Societal values, need for achievement, independence and autonomy greatly inspired the owners/managers into business. Religious believes also had an influence on the choice of businesses and the manner in which they carried out their business activities including ethical practices. However, many owner/ managers admitted that, they did not venture into entrepreneurship as their career choice. This implies that, entrpreneurial culture is still lacking in Kenya. Entrepreneurial education should be enhanced to inculcate a culture that supports entrepreneurship. Role models and success stories from successful entrepreneurs from the society also played a significant role in the growth of manufacturing SMEs.

The study findings indicated that the combined effect of seed capital, business development services, entrepreneurial team and social culture without the moderating variable, had a statistical significant effect to the growth of manufacturing SMEs and that the growth rate increased by 32.5 % which was higher than each of the independent variables individually. The results also indicated that the combined effect of entrepreneurial orientation, seed capital, business development services, entrepreneurial team and social culture increased the growth of manufacturing SMEs by 76.1%. The conclusion is that, entrepreneurial orientation and entrepreneurial ecosystem factors would highly improve the growth of manufacturing SMEs and that the entrepreneurial ecosystem factors should not be provided in isolation since their combined effect is greater than each individual factor's effect.

These conclusions were also supported by key informant interviewees who indicated that manufacturing SMEs need to increase access to information related to capital opportunities and form strategic partnerships with other stakeholders so as to be able to access capital. They also stated that, SMEs need to focus on professional development of workers and also emphasize on improving their credit rating so as to get financial support. In addition, they indicated that there was need to improve infrastructure, introduce new markets both domestic and international, seek to meet and exceed customer's expectations through understanding their unique needs and use of role models and success stories of entrepreneurship to enhance growth.

5.4 Recommendations

The results of the study indicated that, the growth of manufacturing SMEs is significantly influenced by various factors, particularly seed capital, business development services, entrepreneurial orientation, and social culture. As a result, to enhance the growth of these enterprises, comprehensive strategies must be adopted by both government and private sectors. These include: initiatives to provide financial support tailored to the needs of these enterprises such as clear policies that facilitate access to funds, ensuring that the terms for securing loans are not prohibitive, encouraging financial institutions to relax their lending criteria and simplify the procedures for obtaining financing, making it more accessible for SMEs, Promoting

partnerships between donors and the business community to provide seed funding for innovative entrepreneurs willing to take risks, Formulating policies to create a structured venture capital market that supports high-risk manufacturing SMEs, Developing incentives to attract both local and foreign investors into the venture capital industry, thereby enhancing capital inflow and value addition.

Business development services are essential for fostering growth in manufacturing SMEs. Key recommendations include: Market access policies that enhance trade both locally and internationally, protecting local industries from unfair competition from cheap imports, investing in infrastructure such as transportation, electricity, and communication networks to facilitate smoother operations for SMEs, Providing legal, business, and accounting advice through governmental and non-governmental organizations to strengthen SMEs' operational capabilities, establishing policies that promote technology transfer and innovation through academia-industry collaborations.

On entrepreneurial team, proper training programs should be developed to enhance knowledge, skills, and coppetencies of owners/managers and all the employees in the manufacturing SMEs. On Social Culture, Practical Learning Approaches should be adopted including inviting successful entrepreneurs to share their experiences and act as role models, Government agencies should support innovative business ideas to reshape societal attitudes towards entrepreneurship as a viable career path. Owners/ managers of manufacturing SMEs should be proactive, have Risk-Taking Propensit and embrace risks as opportunities for growth rather than threats, be innovative in order to develop new products and modify the existing ones to meet changing consumer demands and mplementing strategies that counteract competitive threats through pricing tactics, quality improvements, and promotional efforts. In conclusion, there should be synergy between government initiatives, financial support mechanisms, and supportive social culture are vital for the growth of manufacturing SMEs. By addressing these areas comprehensively, stakeholders can significantly enhance the growth of manufacturing SMEs hence imrease economic growth in Kenya

5.5 Suggestions for Further Research

Further research should be carried out to assess how entrepreneurial ecosystems affect the growth of different industries in other sectors and sizes and in other locations other than Nairobi. Other studies should also look at other entrepreneurial ecosystem factors other than the ones used in this study. This study was across-sectional study and obtained data at one point in time. Future research should use longitudinal data to track the ups and downs in businesses cycle within a manageable time frame for properly understanding the effect of the entrepreneurial ecosystem. Different units of analysis (countries, regions, provinces, districts, cities, industrial clusters, etc.) should be used to identify and measure the composition and functioning of various types of entrepreneurial ecosystems.

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APPENDICES

Appendix I: Letter of Introduction

My name is **Zipporah Waithira Mwaniki**. I am a Doctor of Philosophy student in Entrepreneurship at Jomo Kenyatta University of Agriculture and Technology (JKUAT). I am undertaking research on **Entrepreneurial Ecosystem and Growth of Manufacturing SMEsin Kenya.**

I am kindly requesting you to provide me with responses to the questionnaire.Your responses will be treated with utmost confidentiality and will not be usedfor any other purpose apart from the academic purpose specified in this letter.For this reason, you are not required to disclose your identity unless you wishto have the findings of this research. The researcher will be glad to provide youwith them. Only then would you provide the researcher with your contacts.

Your responses will be highly appreciated.

Yours Faithfully,

Zipporah Waithira Mwaniki

0724546756

Appendix II: Questionnaire

PART A: Background Information (Please tick (√) where applicable)

1. Kindly indicate your gender: Male   (   )   Female   (   )

2. What is your highest level of education: Primary level   (   ) O level (   )

   Tertiary Education   (   )   Undergraduate   (   )   Post graduate   (   )

3. Kindly indicate for how long this firm has been in existence:

   Less than 2 years   (   )   Between 3-5 years   (   )

   Between 6-10 years   (   )   More than 10 years   (   ).

4. Which manufacturing sector does your firm belong to? *Please tick where appropriate*.

   Pharmaceutical and Medical Equipment   (   ). Chemicals and Allied   (   ).

   Wood, furniture and Paper products   (   )   Leather,Textile and Apparel (   ).

   Energy, Electrical and Electronics   (   ).   Plastics and Rubber   (   ).

   Building, Mining and Construction   (   ). Motor-vehicle accessories   (   ).

   Food and beverages   (   ).   Metal and Allied   (   ).

5. What form of business organization is your firm?

   Sole proprietorship   (   ).   Partnership   (   ).

   Private Limited Company   (   ).   Public Limited Company   (   ).

   Cooperative   (   ).   Other   (   ).

PART B: Seed Capital and Growth of Manufacturing SME's

6. Please indicate with a tick (√) the degree to which you agree or disagree with the following statements on seed capital in relation to growth of your firm on a scale of 1- 5 where1= Strongly Disagree, 2= Disagree, 3=Moderately agree, 4=Agree, 5=Strongly Agree.

Seed Capital	1	2	3	4	5
Availability of capital is critical to creation, growth and survival of our firm					
Statement on Venture Capital					
i) External financing (venture capital) has provided an affordable source of capital thus promoting growth of our firm.					
ii) Our firm uses Venture capital which has promoted growth of our firm					
iii) Our venture capital partners have experience that have aided our firm to grow					
Statement on Savings					
i) Savings has not only enhanced growth of our firm but also our individual entrepreneurial development.					
ii) Savings keeps our business private and growing at a moderate rate hence reducing chances of collapsing					
iii) Personal savings has been a cheaper source of capital leading to cost saving hence improving our firm's growth.					
Statement on Debt Capital					
i) Debt capital has been our major source of capital in our firm					
ii) Debt capital has contributed to the growth of our firm					
iii) Our firm has set acceptable level of debt-to-equity ratio to avoid business risk					
iv) Terms and conditions of the debt facility have limited our access to debt capital.					
Equity Capital					
i) Share capital from promoters has provided us with affordable share capital enabling us to grow.					
ii) We have been ploughing back profits to our firm leading to growth.					
iii) our firm avoids offering its equity share to the general public for huge capital investments					

7. Please describe other ways in which seed capital affects the growth of your firm?

………………………………………………………………..………………………

……..…………………………………………………………………………………

PART C: Business Development Services and Growth of Manufacturing SME's

8.Please indicate with a tick (√) the degree to which you agree or disagree with the following statement son business development services in relation to growth of your firm on a scale of 1- 5 where1= Strongly Disagree,2=Disagree,3=Moderately Agree,4=Agree,5=Strongly Agree.

Business Development Services	1	2	3	4	5
i) Business development services have provided support to our firm hence our growth.					
Market Access					
ii) Through networking, we have been able to access new markets hence the growth of our firm					
iii) Our ability to sell our products nationwide has helped our firm to grow					
iv) Trade fairs, exhibitions and market research has led to					
Infrastructure					
i) We have a well-developed infrastructure facility thus reducing our cost of production					
ii) The well-developed infrastructure has provided essential linkages between our firm and markets					
iii) Our infrastructure policies have facilitated affordable business premises and equipment thus increased level of operations.					
Technical Assistance					
i)Technical assistance programs have helped our firm to be sustainable and financially stable hence our firm's growth					
ii) Mentor ship programs, feasibility studies, business plans and advisory services has enabled us to increase our level of operations hence growth of our firm.					
iii) We get technical advice whenever we need it which has really assisted in the growth of our firm					
Technology					
i) Easy access to technology providers has led to our adoption of new technologies hence improved productivity.					
ii) We have been able to procure and install new technologies leading to efficient production methods hence growth of our firm.					

9.In your opinion, what other Business Development Services affects the growth of your firm?

....……………

…………………………………………………………………………………………

…………………………………………………………………………………………

PART D: Entrepreneurial Team and Growth of Manufacturing SME's

10.Please indicate with a tick (√) the degree to which you agree or disagree with the following statements on entrepreneurial team in relation to the growth of your firm on a scale of 1- 5 where1= Strongly Disagree, 2= disagree, 3= Moderately Agree, 4= Agree, 5= strongly Agree

Entrepreneurial Team	1	2	3	4	5
Knowledge					
i) Our employees have adequate business knowledge which has led to the growth of our firm.					
ii) We continually train our employees on entrepreneurship and business management which has assisted in the growth of our firm.					
iii) Having a managerial team who have prior knowledge in business has helped in the growth of our business					
Skills					
i)Having a team with capacity to identify new business opportunities and quickly taking advantage of it has ensured efficiency leading to growth of our firm.					
ii) Our managerial team has skills that have contributed to efficient management of our firm.					
iii) Our team is continuously trained to gain new skills					
The ability of our team to apply the acquired skills has led to development of better quality products.					
Competence					
i) Our team is able to manage the firm's operations competently and efficiently hence growth of our firm					
ii) Our managerial team hires employees with the required skills for our firm hence growth					
iii) Our team is able to strategically plan and implement the organization's goals which have led to growth of our firm.					
Experience					
i) Our managerial team has adequate experience in making managerial and business decisions hence the growth of our firm.					
ii) Our team has enough experience in negotiating with financiers and suppliers thus improving access to credit.					
iii) Our managerial team has adequate experience in anticipating the changing external environment and identifying and taking advantage of business opportunities hence the growth of our firm.					
iv) we employ people with prior industry experience hence the growth of our firm					

11. In your opinion, what other ways does entrepreneurial team contribute to the growth of your firm?---

----

. **PART E: Social Culture and Growth of Manufacturing SME'S**

12**.** Please indicate with a tick (√) the degree to which you agree or disagree with the following statements on entrepreneurial social culture in relation to growth of your firm on a 1- 5 where1= Strongly Disagree, 2=Disagree, 3= Moderately Agree, 4=Agree, 5= Strongly Agree

Social Culture	1	2	3	4	5
Values					
i). I come from a society that highly values entrepreneurship which has really inspired me into business					
ii) Having a need for independence and autonomy steers our firm to greater heights					
iii) My need for achievement motivates us to expand our firm.					
iv) My belief in entrepreneurship as a desirable career choice has led to the growth of our firm.					
Religion					
i). My religious beliefs have had a great influence on my choice to venture into business					
ii) My religious beliefs have had a great influence on my choice of business to venture into.					
ii) My religion highly believes in hard-work which has motivated me into growing my firm.					
iii) My religious beliefs have really shaped my ethical behavior in business which has had a great influence in the growth of our firm					
Role Models					
i) Successful entrepreneurs from my society have been a great inspiration to me which has motivated me to venture into a successful business					
ii) Having family members and peers who are in successful businesses encourages me to grow our firm.					
iii) Support from my family members have helped to grow our firm					
Ethnicity					
i)The community in which I grew up encouraged my entrepreneurial orientation.					
ii) My need to prove that people from my ethnic group can be successful in business has motivated me to grow our firm.					
iii) The traditional practices my ethnic group has had a great influence on the growth of our firm.					

13. In your opinion, which other elements of social culture contributes most to the growth of your firm?………………………………………………………………….

....

PART F: Entrepreneurial Orientation

14. Please indicate with a tick (√) the degree to which you agree or disagree with the following statements on entrepreneurial orientation on a scale of 1- 5 where1=StronglyDisagree, 2=Disagree,3=Moderately Agree,4=Agree, 5=Strongly Agree.

Entrepreneurial Orientation	1	2	3	4	5
Pro-activeness					
i) Our ability to realize a change in the environment ahead of our competitors has really helped our fir to grow.					
ii) Our ability to adapt to new market trends enables us to improve our operations.					
iii) We are able to adopt to new changes in technology thus improving on our efficiency in production hence growth of our firm.					
iv) we are able to anticipate changes in consumer demand hence change the design of our products to meet our customer's expectations					
iii) Product differentiation in our firm has increased demand of our products hence growth.					
Innovativeness					
i) Employees' ideas for business improvement are encouraged in our firm hence its growth					
ii)Our ability to customize technology for our specific needs leads to efficiency of operations.					
iii) Our ability to innovate and modify our products has helped us to meet customer's changing preferences hence growth of our firm.					
Risk-taking					
i) Committing resources to product changes to overcome customer dissatisfaction has enabled us to grow.					
ii) Venturing into new opportunities without fear of unknown has helped us expand.					
iii) Seeking finance from external sources enables us to increase our production capacity					
Competitive Aggressiveness					
i) Adopting new marketing strategies enables the business overcome competition hence					
ii) We are always keen on the marketing strategies used by our competitors in the industry which has helped us to always be ahead of our customers hence the growth of our firm					
iii) Our ability to provide quality products at reasonable of prices enables us to retain existing customers and acquire and new customer hence growth of our firm.					

PART G: Growth Indicators

15. Please fill in the table below the perfomance of your firm in terms sales volume,

net profit and amount invested.

Year	1st year of operation	2022	2021	2020	2019
Sales Volume (Sh in Millions)					
Net profit (Sh in Millions)					
Investment (Sh in Millions)					
Return on Investment					

THANK YOU FOR YOUR RESPONSES.

Appendix III: Interview Guide

My name is Zipporah Mwaniki a PhD student at Jomo Kenyatta University of Agri culture and Technology. I am carrying out an academic research on Entrepreneurial Ecosystem and Growth of Manufacturing SMEs. You have purposely been selected as a key informant for this study because of the key role you play in the development and growth of manufacturing SMEs (SMES). I specifically want information on the relationship between seed capital, business development services, entrepreneurial team, social culture and entrepreneurial orientation and their relationship with growth of manufacturing SMEs. I kindly request you to provide me with information for the questions below. The information obtained will be used for academic purpose only and it will be treated with utmost confidentiality. Your time and responses will be highly appreciated.

General Information

1.What role do you play in assisting in the start-up and growth ofmanufacturing SMEs…………………………………………………………………………..

2 a) In your opinion, is the manufacturing sector in Kenya growing or declining?...
....

b) In your opinion, which among the following factors do you think is a major contributor to the growth/ decline of manufacturing enterprises in Kenya.

Seed Capital ( )

Business Development Services ( )

Entrepreneurial Team ( )

social culture ( )

3. Has the government made any efforts as far as the above factors and growthof manufacturing SMEs is concerned?..

b) If yes, what are these efforts?...

c) In your opinion, are these efforts by the government sufficient. Please explain………………………………………………………………….............
………………………………………………………………………………………….

d) Suggest what more in your opinion the government should do to enhance the growth of manufacturing SMEs…………………………………………………..

4. What general advice would you give to the owner/ managers of these manufacturing SMEs concerning the growth of their firms? ……………………………………………………………………………………………
…………………………………………………………………………5. What are your future plans as far as the growth of manufacturing SMEs is concerned?...
....

Seed Capital

6. In your opinion, what form of capital can be of great assistance to the growth of these manufacturing MES……………………………………………………………..

7.What more in your opinion needs to be done as far as capital and growth of manufacturing SMES is concerned………………………………………………………

Business Development Services

8. What among the following forms of business development services are mainly accessible to the manufacturing SMEs?

Market Access   (   )

Infrastructure   (   )

Technical Assistance   (   )

Technology   (   )

9. In your opinion, what form of business development services above can be of great assistance to the growth of these manufacturing SMEs?..

10. What more in your opinion needs to be done as far as business development services and growth of manufacturing SMES is concerned?..

Entrepreneurial Team

11. In your opinion, which among the following entrepreneurial team factors pose a major challenge to the growth of manufacturing SMEs?

Knowledge   (   )

Experience   (   )

Competence   (   )

Skills   (   )

12. In your opinion, what more needs to be done as far as entrepreneurial team and growth of manufacturing concerned?...

Social Culture

13. In your opinion, which among the following social culture factors is a major contributor/ hindrance to the growth of manufacturing SMEs?

Cultural Values   ( )
Religious Beliefs   (   )
Role Models   (   )
Ethnicity   (   )

14. What more in your opinion needs to be done as far as social culture and growth of manufacturing SMEs concerned?...

………………………………………146……………………………………………….

Entrepreneurial Orientation

15 a) In your opinion, does entrepreneurial orientation contribute to the growth of manufacturing SMEs?..

b) Which among the following entrepreneurial orientation factors is a major contributor/ hindrance to the growth of manufacturing SMEs?

Innovativeness   ( )

Risk Taking   ( )

Pro-activeness   ( )

Competitive Aggressiveness   ( )

17. What in your opinion is the greatest hindrance to the owner/ managers of manufacturing SMEs as far as entrepreneurial orientation is concerned?.....................

………………………………………………………………………………………….

18. What in your opinion should be done as far as entrepreneurial orientation is concerned?...
....

19. Give a general comment on the state and growth of manufacturing SMEs in Kenya……………………………………………………………………………………
………………………………………………………………………………………….

THANK YOU

Appendix IV: Krejcie and Morgan Sample Size Table

Sample Size Table

N	S	N	S	N	S
	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

(Source: Krejcie and Morgan, 1970).

Note:

N = Population Size.

S = Sample Size

Appendix V: Hypothesis Testing

Hypothesis Testing

Null Hypothesis	Variable	Result	Conclusion
H_01: There is no Significant Relationship Between Seed Capital and Growth of Manufacturing SMEs in Kenya.	Seed capital	Rejected	There is a significant positive relationship between seed capital and growth of manufacturing SMEs.
H_02: There is no Significant Relationship Between Business Development Services and Growth of Small and Medium Enterprises in Kenya	Business Development services	Rejected	There is a positive significant relationship between business development services and growth of small and medium enterprises
H_03: There is no Significant Relationship Between Entrepreneurial Team and Growth of Small and Medium Enterprises in Kenya	Entrepreneurial Team	Rejected	There is a there is a positive significant relationship between Entrepreneurial Team and growth of small and medium enterprises.
H_04: There is no significant relationship between social culture and Growth of Small and Medium Enterprises in Kenya.	social culture	Rejected	There is a significant positive relationship between Entrepreneurial Team and growth of small and medium enterprises.
H_{05} a: There is no significant moderating effect of entrepreneurial orientation on the relationship between seed capital and growth of manufacturing SMEs in Kenya	Seed capital and entrepreneurial orientation	Rejected	There is a significant moderating effect of entrepreneurial orientation on the relationship between seed capital and growth of manufacturing SMEs in Kenya.
H_{05} b: There is no significant moderating effect entrepreneurial orientation on the relationship between business development services and growth of small and medium enterprises in Kenya	Business Development services and entrepreneurial orientation	Rejected	There is a significant moderating effect entrepreneurial orientation on the relationship between business development services and growth of small and medium enterprises in Kenya.
H_{05} c: There is no significant moderating effect entrepreneurial orientation on the relationship between entrepreneurial team and growth of small and medium enterprises in Kenya	Entrepreneurial team and entrepreneurial orientation	Rejected	There is a significant moderating effect entrepreneurial orientation on the relationship between entrepreneurial team and growth of small and medium enterprises in Kenya.
$H05_d$: There is no significant moderating effect of entrepreneurial orientation on the relationship between social culture and growth of small and medium enterprises in Kenya	social culture and entrepreneurial orientation	Rejected	There is a significant moderating effect of entrepreneurial orientation on the relationship between social culture and growth of small and medium enterprises in Kenya.
There is no significant moderating effect on the relationship between entrepreneurial orientation and entrepreneurial ecosystem on growth of manufacturing SMEs in Kenya.	Entrepreneurial ecosystem	Rejected	There is significant moderating effect on the relationship between entrepreneurial orientation, entrepreneurial ecosystem and growth of manufacturing SMEs in Kenya.

Appendix V: List of Manufacturing SMES

	Building, Mining & Construction :tor
1	Boyama Building Materials
2	Flamingo Tiles (Kenya) Ltd
3	Glenn Investments Ltd C/O The Mehta Group Ltd
4	International Green Structures
5	Kenbro Industries Ltd
6	Kenya Builders & Concrete Ltd
7	Orbit Enterprises Ltd
8	Rexe Roofing Products
9	Sandblasting & Coating (K) Ltd
10	Space and Style Ltd
11	Tile & Carpet Centre
12	Twyford Ceramics Ltd
	Chemical & Allied Sector
1	Anffi Kenya Ltd
2	Basco Products (K) Ltd
3	Basf East Africa Ltd
4	Bayer East Africa Ltd
5	Beiersdorf East Africa Ltd
6	Blue Ring Products Ltd
7	BOC Kenya Ltd
8	Buyline Industries Ltd
9	Carbacid (CO2) Ltd
10	Central Glass Industries Ltd
11	Chrysal Africa Ltd
12	Chryso Eastern Africa Ltd
13	Cooper K-Brands Ltd
14	Crop Nutrition Laboratory Services Ltd

15	Crown Paints (Kenya) Ltd
16	Decase Chemicals (Ltd)
17	Deluxe Inks Ltd
18	Desbro Kenya Ltd
19	Diversey Eastern and Central Africa Ltd
20	Dow Chemicals East Africa Ltd
21	Eastern Chemicals Industries Ltd
22	Elex Products Ltd
23	Enviro Hub Holdings Ltd
24	Evonik East Africa
25	Flame Tree Africa Ltd
26	Galaxy Paints & Coating Co. Ltd
27	H.B. Fuller Kenya Ltd
28	Haco Tiger Brands East Africa Ltd
29	Henkel Kenya Ltd
30	Chemical & Allied Sector
31	Henkel Polymer Company Ltd
32	Hi-Tech Inks & Coatings Ltd
33	High Chem East Africa Ltd
34	IMCD Kenya Ltd (Formerly Chemicals and Solvents (EA) Ltd)
35	Impact Chemicals Ltd
36	Instant Pest Control Services Ltd
37	Inter-consumer Products Ltd
38	Kanku Kenya Ltd
39	Kip Melamine Co. Ltd
40	L'Oreal East Africa Ltd
41	Maroo Polymers Ltd
42	MEA Ltd
43	Murphy Chemicals (E.A) Ltd
44	Norbrook Kenya Ltd
45	Odex Chemicals Ltd

46	Osho Chemicals Industries Ltd	24	King Plastic Industries
47	PolyChem East Africa Ltd	25	L.G. Harris & Co. Ltd
48	Procter & Gamble East Africa Ltd	26	Laneeb Plastic Industries Ltd
49	Protea Chemicals Kenya Ltd	27	Mega (EA) Plastics Ltd
50	PZ Cussons EA Ltd	28	Metro Plastics Kenya Ltd
	Rok Industries Ltd	29	Nairobi Plastics Ltd
51	Sadolin Paints (E.A.) Ltd	30	Packaging Industries Ltd
52	Sanergy Ltd	31	Packaging Masters Ltd
53	Style Industries Ltd (Previously Strategic) -Nairobi	32	Plastic Electricons
		33	Plastics & Rubber Industries Ltd
54	Syngenta East Africa Ltd	34	Polyblend Ltd
55	Synresins Ltd	35	Plastics and Rubber Sector
56	Tata Chemicals Magadi Ltd - Magadi	36	Polyflex Industries Ltd
57	Tropikal Brand (Afrika) Ltd	37	Premier Industries Ltd
	Plastics and Rubber Sector	38	Prosel Ltd
1	Betatrad (K) Ltd	39	Rushabh Industries Ltd
2	BlueSky Industries Ltd	40	Safepak Ltd
3	Bobmil Industries Ltd	41	Sameer Africa Ltd
4	Brush Manufacturers Ltd	42	Scandic Ltd
5	Canaaneast Company Ltd	43	Signode Packaging Systems Ltd
6	Complast Industries Ltd	44	Silafrica Kenya Ltd (Formerly Sumaria Industries)
7	Coninx Industries Ltd		
8	Dynaplas Ltd	45	Silpack Industries Ltd
9	Elgitread (Kenya) Ltd	46	Smartpack Ltd
11	Elgon Kenya Ltd	47	Solvochem East Africa Ltd
12	Eslon Plastics of Kenya Ltd	48	Styroplast Ltd
13	Finlay Brushware Ltd	49	Super Manufacturers Ltd
14	Five Star Industries Ltd	50	Techno-Plast Ltd
15	Flair Kenya Ltd	51	Techpak Industries Ltd
16	General Plastics Ltd	52	Torrent East Africa Ltd
17	Hi-Plast Ltd	53	Treadsetters Tyres Ltd
18	Jamlam Industries Ltd		**Leather, Textile & Apparels Sector**
19	Just Plastics Ltd	1	Africa Apparels EPZ LTD - Athi River
20	Kamba Manufacturing (1986) Ltd		
21	Kenpoly Manufacturers Ltd	2	Akinyi Odongo Ltd
22	Kenstar Plastic Industries Ltd	3	Alltex EPZ Ltd - Athi River
23	Kentainers Ltd	4	Blue Waves Enterprises Ltd

5	Brand Track Ltd	6	Kenya Wood Products Ltd
6	Fantex (K) Ltd	7	Little Cribs Ltd
7	Dharamshi & Co. Ltd	8	New Line Ltd
8	Forces Equipment (Kenya) Ltd	9	Panesar's Kenya Ltd
9	Insight Kenya	10	PG Bison (K) Ltd
10	Kema (EA) Ltd	11	Rosewood Furniture Manufacturing Ltd
11	Kenya Tents Ltd	12	Shamco Industries Ltd
12	Kenya Trading (EPZ) Ltd - Athi River	13	Timsales Ltd - Elburgon
13	Kikoy Co. Ltd	14	Wood Makers (K) Ltd
14	Le Stud Ltd	15	Woodtex Kenya Ltd
15	Manchester Outfitters Ltd	16	Adpak International Ltd
16	Midco Textiles (EA) Ltd	17	ASL Packaging Ltd
17	Mills Industry Ltd	18	Associated Paper & Stationery Ltd
18	Ngecha Industries	19	Avery Dennison Kenya Ltd
19	Oriental Mills Ltd	20	Bag and Envelope Converters Ltd
20	Panah Ltd	21	Bags & Balers Manufacturers Ltd
21	Roar Media Ltd	22	Capitol Printers
22	Penny Galore Ltd	23	Cempack Solutions Ltd
23	Spin Knit Ltd - Nakuru	24	Chandaria Industries Ltd
24	Enterprises Suman Shakti	25	Colour Labels Ltd
25	Sunflag Textiles and Knitwear Mills Ltd	26	Colour Packaging Ltd
26	Tarpo Industries Ltd	27	Colourprint Ltd
27	TSS Weaving and Spinning	28	D. L. Patel Press (Kenya) Ltd
28	United Aryan (EPZ) Ltd - Athi River	29	Digital Hub Ltd
29	Vajas Manufacturers LTD	30	Dodhia Packaging Ltd
30	Budget Shoes Ltd	31	East Africa Packaging Industries Ltd
31	C & P Shoes Industries Ltd	32	Economic Industries
32	Sandstorm Africa LTD	33	Elegant Printing Works
33	Zingo Investments	34	Elite Offset Ltd
	Wood and Wood Products, Furniture and Paper Sector	35	Ellams Products
1	Budget Furniture Ltd	36	English Press Ltd
2	Contrive Industries Ltd	37	Essential Manufacturing Co. Ltd
3	Fine Wood Works	38	Euro Packaging Ltd
4	Furniture International Ltd	39	General Printers Ltd
5	House of Sahara Ltd	40	Graphic Lineups Ltd
		41	Green Pencils Ltd

42	Guaca Stationers Ltd	12	East Africa Spectre Ltd
43	International Paper & Board Supplies Ltd	13	East African Foundry Works (K) Ltd
44	Kartasi Industries Ltd	14	East African Glassware Mart (Nairobi)
45	Kenafric Diaries Manufacturers Ltd	15	Easy Clean Africa Ltd
46	Kenafric Manufacturing Ltd	16	Eco-Steel Africa
47	Kenya Stationers Ltd	17	Elite Tools Ltd
48	Kim-Fay East Africa Ltd	18	Fit Tight Fasteners Ltd
49	Manipal International Printing Press Ltd	19	GZI Kenya Ltd
50	Mega Pack (K) Ltd	20	Heavy Engineering Ltd
51	Modern Lithographic (K) Ltd	21	Hebatullah Brothers Ltd (Formerly General Aluminium Fabricators)
52	Ndalex Digital Technology	22	Insteel Ltd
53	Paper House of Kenya Ltd	23	Iron Art Ltd
54	Pressmaster Ltd	24	Kab Kam Enterprises Ltd
55	Prime Cartons Ltd	25	Kens Metal Industries Ltd
56	Printpak Multi Packaging Ltd	26	Kenyon Pte Ltd
57	Ramco Printing Works Ltd	27	Khetshi Dharamshi & Co. Ltd
58	Shri Krishana Overseas Ltd	28	M-Kopa Kenya Ltd
59	Skanem Interlabels Nairobi Ltd	29	Mecol Ltd
60	Sketchers Design Promoters Ltd	30	Metal Crowns Ltd
61	Statpack Industries Ltd	31	Modulec Engineering Systems Ltd
62	Tetra Pak Ltd	32	Nails & Steel Products Ltd
63	Tissue Kenya Ltd	33	Napro Industries Ltd
64	Twiga Stationers & Printers Ltd	34	Orbit Engineering Ltd
	Metal and Allied Sector	35	Palak International Ltd
1	Agro Irrigation & Pump Services Ltd	36	Prime Steel Ltd
2	Allied East Africa Ltd	37	Red Oak Ltd
3	Alloy Steel Castings Ltd	38	Sheffield Steel Systems Ltd
4	Ashut Engineers	39	St Theresa Industries Kenya Ltd
5	ASL Ltd	40	Steel Structures Ltd
6	ASP Company Ltd	41	Steelmakers Ltd
7	Athi River Steel Plant Ltd - Athi River	42	Superfit Steelcon Ltd
8	City Engineering Works Ltd	43	Tensiles EA Ltd
9	Crystal Industries Ltd	44	Tononoka Rolling Mills Ltd
10	Davis & Shirtliff Ltd	45	Tononoka Steel Ltd
11	Devki Steel Mills Ltd - Ruiru	46	Top Steel Kenya Ltd

	Food & Beverages Sector		35	Farmers Choice Ltd
1	Afribon (K) Ltd		36	Frigoken Ltd
2	Africa Spirits Ltd		37	Frutarom Kenya Ltd
3	Afrimac Nut Company		38	Glacier Products Ltd
4	Agri Pro-Pak Ltd		39	Global Fresh Ltd
5	Agriner Agricultural Development		40	Gonas Best Ltd
6	Almasi Beverages Ltd		41	Green Forest Foods Ltd
7	Alpha Fine Foods Ltd		42	Honey Care Africa
8	Alpha Grain Millers Ltd		43	Insta Products (EPZ) Ltd
9	Alpine Coolers Ltd		44	Kamili Packers Ltd
10	Aviano East Africa		45	Kedsta Investment Ltd
11	Bakers Corner Ltd		46	Kenafric Industries Ltd
12	Bdelo Ltd		47	Kenchic Ltd
13	Bio Food Products Ltd		48	Kenya Co-Operative Coffee Dealers Ltd (KCCD)
14	Breakfast Cereal Company (K) Ltd (Formerly Weetabix)		49	Kenya Highland Seed Co. Ltd
15	British American Tobacco Kenya Plc		50	Kenya Sweets Ltd
16	C.Dormans Ltd		51	Kenya Wine Agencies Ltd
17	C.Czarnikow Sugar (EA) Ltd		52	Kirinyaga Flour Mills
18	Cadbury Kenya Ltd		53	Koba Waters Ltd/ Broomhill Springs Water
19	Candy Kenya Ltd		54	Kuguru Food Complex Ltd
20	Capel Food Ingredients		55	Kwale International Company Ltd
21	Chirag Kenya Ltd		56	Landeco Ltd
22	Coca-Cola Juices (K) Ltd		57	Manji Food Industries Ltd
23	Danone Baby Nutrition Africa and Overseas		58	Melvin Marsh International
24	DPL Festive Ltd		59	Monwalk Investment Ltd
25	East African Sea Food Ltd		60	Nairobi Bottlers Ltd
26	East African Seed Co. Ltd		61	Nairobi Flour Mills Ltd
27	Eastern Produce Kenya Ltd (Kakuzi)		62	NAS Airport Services Ltd
28	Edible Oil Products		63	Nestle Kenya Ltd
29	Elekea Ltd		64	Patco Industries Ltd
30	Elle Kenya Ltd		65	Pearl Industries Ltd
31	Food & Beverages Sector		66	Pembe Flour Mills Ltd
32	Erdemann Co. (K) Ltd		67	Pernod Ricard Kenya Ltd
33	Europack Industries Ltd		68	Premier Food Industries Ltd
34	Excel Chemicals Ltd		69	Proctor & Allan (E.A.) Ltd

70	Propack Kenya Ltd		2	Associated Battery Manufacturers (E.A.) Ltd
71	Rafiki Millers Ltd		3	Auto Ancilliaries Ltd
72	RAZCO Ltd		4	Auto Industries Ltd
73	Re-Suns Spices Ltd		5	Auto Springs Manufacturers Ltd
74	Sahara Venture Capital Company Ltd		6	Azad Automobile Trimmings Ltd
75	Salim Wazarani Kenya Company		7	Bhachu Industries Ltd
76	SBC Kenya Ltd		8	BMG Holdings Ltd
77	Shree Sai Industries		9	Choda Fabricators Ltd
78	Simply Foods Ltd		10	Chui Auto Spring Industries Ltd
79	Sky Foods Ltd		11	Cica Motors
80	Spice World Ltd		12	Dalcom Kenya
81	Stawi Foods and Fruits Ltd		13	Dodi Autotech
82	Tropical Heat Ltd (Formerly Deepa Industries)		14	Foton East Africa Ltd
83	Trufoods Ltd		15	General Motors East Africa Ltd
	Pharmaceuticals Sector		16	Harveer Bus Body Builders Ltd
1	Autosterile (East Africa Ltd)		17	Honda Motorcycle Kenya Ltd
2	Benmed Pharmaceuticals Ltd		18	Impala Glass Industries Ltd
3	Beta Healthcare International Ltd		19	Kibo Africa Ltd (formerly Koneksie Ltd)
4	Biodeal Laboratories Ltd		20	Labh Singh Harnam Singh Ltd
5	Biopharma Ltd		21	Load Trailers
6	Cosmos Ltd		22	Master Fabricators Ltd
7	Dawa Ltd		23	Megh Cushion Industries Ltd
8	Elys Chemicals Industries Ltd		24	Mobius Motors Kenya Ltd
9	Glaxo Smithkline Kenya Ltd		25	Passion Profit Ltd
10	KAM Industries Ltd		26	Pipe Manufacturers Ltd
11	Medivet Products Ltd		27	R.T. (East Africa) Ltd
12	Oss.Chemie (K) Ltd		28	Romageco Kenya Ltd
13	Pharm Access Africa Ltd		29	Ruidu (Kenya) Company Limited
14	Promed Industries Ltd		30	Scania East Africa Ltd (Merged with Kenya Grange Vehicles)
15	Questa Care Ltd		31	Simba Caetano Formula Ltd
16	Regal Pharmaceuticals Ltd		32	Skyline Holdings Ltd
17	SoSure AFRIpads Ltd		33	Sohansons Ltd
	Motor Vehicle Assemblers & Accessories Sector		34	Songyi Motocycles International Ltd
1	Alamdar Trading Company Ltd		35	Theevan Enterprises Ltd

36	Toyota Tshusho East Africa
	Energy, Electrical and Electronics Sector
1	East African Cables Ltd
2	Amedo Centre Kenya Ltd
3	Asano International Ltd
4	Assa Abloy East Africa Ltd
5	Aucma Digital Technology Africa Ltd
6	Avery (East Africa) Ltd
7	Azuri Technologies Kenya Ltd
8	Centurion Systems Ltd
9	Daima Energy Services
10	Holman Brothers (E.A) Ltd
11	Ibera Africa Power (EA) Ltd
12	Kenwest Cables Ltd
13	Libya Oil Kenya Ltd (Formerly Mobil Oil Kenya)
14	Manufacturers & Suppliers (K) Ltd
15	Metlex International Ltd
16	Metsec Cables Ltd
17	Mustek East Africa
18	Nationwide Electrical Industries Ltd
19	Oilzone (East Africa) Ltd
20	Optimum Lubricants Ltd
21	Patronics Services Ltd
22	Philips East Africa Ltd
23	Plenser Ltd
24	Powerex Lubricants Ltd
25	Premier Solar Solutions Ltd
26	Repelectric (K) Ltd
27	Siera Cables
28	Sloimppexs Africa Ltd
29	Synergy Lubricant Solutions Ltd
30	Synergy-Pro