

**OPERATIONS MANAGEMENT AND GROWTH OF SMALL
AND MEDIUM ENTERPRISES IN KENYA**

BY

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FOR THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF
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DECLARATION

This research project is my original work and has not been presented in any other institution for any academic award.

Signed.....

Date.....

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Reg. No. D61/64426/2013

This research project has been submitted for examination with my approval as University Supervisor.

Signed.....

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DEDICATION

I dedicate this work to my wife Lucy Kagendo and my two children Collins Mutharimi and Clara Muthoni.

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ABSTRACT

The purpose of the study was to assess operations management and growth of small and medium enterprises in Kenya. The Study was based on following objectives: To determine operations management and growth SMEs in Kenya and to determine the effect of innovation on growth of SMEs in Kenya. Descriptive survey design was adopted to obtain a complete and an accurate description of situations, persons and events. The study was conducted on operations management issues in growth of small and medium enterprises in Nanyuki region, with target population being 300 respondents and sample size of 30 respondents. The data collection instruments were questionnaires. The study concluded that; Difficulties in accessing loans for business growth was reason for slow and retardation of business growth and that startup loan could have positive impact on the growth of the business. Study concludes that sales revenues had very largest achievement as result of loans accessibility due to availability of enough stocks, profitability had minimal achievement, and this could also mean the cost of accessing loan could be higher meaningless profit. SMEs operators has no training, education and or vocational training are better placed to adapt the constantly changing business environment. Technology and efficiency impact more positively on the growth of SMEs. The quality of management is important for small and medium-sized enterprises (SMEs), which must be able to adapt quickly to evolving markets and changing circumstances, but which often have limited resources. Agency banking has resulted in financial incursion in the region of the study, eliminating financing challenge that has been found to limit growth of small and medium enterprises. Study recommends that Given that accessing loans for business growth was reason for slow and retardation of business growth and that startup loan could have positive impact on the growth of the business. The study recommends that financial institution should make available financial resources to SMEs to enhance business growth. Government, relevant ministries in trade and industrialization should come up with policies on SMEs training on areas of financial management since the study found out that, SMEs operators has no training on the financial management. And given that training impact positively on growth of entrepreneurs with large stocks of capital that includes education and or vocational training are better placed to adopt the constantly changing business environment. Given that agency banking has resulted in financial incursion in the region of the study, eliminating financing challenge that has been found to limit growth of small and medium enterprises, the study recommends that the model can be replicated by government in financing SMEs in rural areas of Kenya.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The significance of entrepreneurship in the growth of the economy of Kenya and the attainment of vision 2030 is clearly emphasized. SME is used for specific group of enterprises which were getting very vital towards the end of 20th century. SMEs are considered as the backbone of national economies growth; the new job generator; the biggest potential of self-employment; companies greatly influencing regional, local and national development as prevention tool of the movement people from certain passive geographical areas and as companies which obtained international character due to their business in the wider market. SMEs are a fundamental source of the national economies growth (Sadler-Smith & Spicer 2006, p. 134).

Studies show that in both progressive economies and emerging countries SMEs add an average 60% of total white color employment in the manufacturing segment (Ayyagari et al, 2007). For United States economies, the impact of the SME sector to job prospects is even more imperative. Considering the contribution of the informal segment, SMEs account for about 75 percent of total jobs in manufacturing (Ayyagari et al, 2007). The significance of SMEs in Kenya was initially recognized in the Worldwide Labor Organization report on Employment creation, Income and Equity in the country in 1972. The report highlighted SMEs as an engine for employment creation and income progress. SMEs create about 85 % of Kenya's employment (African Economic Viewpoint, 2011 report).

The SME sector is serious to developed states too e.g. the America economy, according to the America small business manager's office of support, the SMEs represent more than 99 percent of entirely employers and provide around 75% of entirely upcoming jobs (Basefsky & Sweeney, 2010, p.2). In united states alone SMEs have generated 34 million new jobs while the big Fortune 500 companies have lost five million jobs. International trade as well as administration statistics show that, of the 302,000 American companies that exported merchandises in 2011, 98% (295,594) were small and medium sized companies (SMEs). The SMEs likewise accounted for 97% (178, 820) of known imports in 2011.

To the European Union, Latin America including the Caribbean, as termed by Gibson and Vaart (2008) SMEs account for 99 percent of entirely enterprises, generate 67percent of employment and create a wide diversity of products and services. They nevertheless have a limited involvement in the export market besides are more leaning towards the local market. The SME segment in these regionally is critical for the general economic performance of the different countries' economies especially in areas of job creation besides income distribution. No other segment has the prospective to generate a large sum of adequate income jobs. In Asia, as noted by the OECD (2010) the SME sector constitutes 90 percent of all enterprises in the nations while employing 60 percent of the individuals. The sector accounts 30 percent of all exports in the nations. A for instance of SME development in Asia is Infosys of India which was taking place with a capital of US Dollars 250 but now grown to become a worldwide business with revenues of US Dollars about 4 billion.

The challenges confronted by SMEs in a globalized atmosphere include low productivity, lack of financing, deficiency of administrative abilities, management access besides technology and substantial burdens of regulation (Nelson, 2006). Tam states that (2007) SMEs are not as flexible or effective as greater firms due to their inexperienced organizational structures. They have little power compared to larger firms. Therefore, they cannot be as challenging as larger firms, concerning product quality price. Consequently SMEs are often more susceptible and have to find further competitive advantages sources. (Tam et al, 2007).

For instance success of SME sector in Africa can be underscored by Yatu tea factory in Zambia established in 1999. The factory was acquired by Miriam and Chapotemo after selling their particular possessions and is now trading 3 blends of tea and produces 900-1000 packages per day. A study by the IFC (2011) In Ethiopia shows that SMEs in the Nascent flower export industry has created 25,000 permanent jobs in 2001 plus became one of the country's top foreign exchange earners. As portrayed by the Kenyan government economic survey of (2003), The Small as well as Medium Enterprise (SME) sector accounted for 74.2% of the population engaged in employment.

Considering the important contribution to jobs in the country's economy there it is essential for stakeholders to pay close care to this sector. The government has highlighted the importance of this segment by committing to develop 5 small and medium enterprise manufacturing parks in the key urban towns as outlined in Kenya's Vision 2030.

The government additionally has initiated the youth enterprise fund in addition established enterprise fund targeting women entrepreneurs in the SME segment. Entrepreneurs face diverse challenges in sourcing for the capital, business management and planning which are the main ingredients in the existence of a small business consequently there is need to examine the role of operations management and growth of medium and small enterprises in Kenya.

1.1.1 Operational Management of SMEs

Nowadays, companies must operate in unpredictable environments where the major resources are rare and where great uncertainty in commercial opportunities exists. The market enacts great efficiency principles and companies that don't realize meet them quickly relegated. In such instances, proper optimization of interior resources is essential for each company which wants to uphold a competitive advantage. This has to be supplemented by the constant improvement of core routines and processes. To realize this aim, knowledge supervision and skills improvement processes can show a major role, particularly for Medium and small sized Enterprises (SMEs). This is for the reason that SMEs frequently lack corporate meaning with which to accomplish these processes straight, and more regularly in favor of learning by undertaking process (Grimaldi et al., 2012).

SMEs' nature could convert them to being very operational and into taking concepts from practical matters in order to attain required information and to progress some certain skills. This causes inner knowledge to be more focused and strongly linked to the real sphere; such an approach is significant because it permits quick scrutiny and difficulties solution and also consciousness of the gap of knowledge that necessities to

be filled (Grimaldi et al., 2012). Nevertheless, missing know-how cannot always be learned by bringing in fresh resources (Greco et al., 2013), thus, training of employees is important, despite being overlooked by several entrepreneurs undertaking small businesses.

Past research shows that operations management in SME normally has little connection with some other corporate functions. Besides, individuals who implement operations management lack specific expertise are largely technologically unequipped and ill trained, (Sohal et al, 2000). Indeed the growth and persistence of SMEs are endangered by obstacles which occur in the operations management extent.

1.1.2 Innovation and SMEs Operations

As noted by to Casal (2011), markets globalization and growing competition internationally vigor SMEs' to look for fresh, flexible, innovative and better survival means. Thus, the statement above offers a relationship amongst SME and innovation existence. In the report of World Bank (2009) invention is viewed as vigorous in organizations' competitive advantage and extended loyalty.

The prominence of innovation as an economic development vital factor was also emphasized by Joseph Schumpeter according to his economic growth Theory (1912) who considered the duty of an entrepreneur and ability to realize new recipes of the factors of production such as innovation, as the theory basis.

Principal empirical innovation studies as cited by Oncioius (2003) view the investment in R&D as a departure theme by industry or nationally as output of the figure of patents and GDP percentage. These findings show a of hypothesize the connection between innovation as well as organizational growth which was reinforced by Oncioius et al (2003) who revealed innovation as an significant knowledge ingredients founded society in sustainability of SMEs .

A significant issue experienced by SMEs all-inclusive is unstoppable development. In current markets, customers inputs as well as their changing requirements makes necessity for enterprises to continuously progress on how to steer businesses. SMEs should consider endless improvement, costs creation, schedules of delivery, supplier connection, Productivity and engineering skills in every practice (De Wit, 2007).

1.2 Research Problem

Companies currently need to function in the changing surroundings where there is scarcity of fundamental resources and great uncertainty exists in business undertakings. Great efficiency standards are imposed by the market and companies which fail to meet them and are marginalized quickly. In such cases, a interior resource careful optimization is essential each company which wishes to remain competitive. To achieve this goal, skills and knowledge management improvement processes plays a main role, especially for (SMEs). This particularly effects internal knowledge and real biosphere to a large extent; such a method is very significant since it enables for the rapid solution and analysis of operative difficulties and also knowledge gap awareness that requires to be occupied (Grimaldi et al., 2012).

The expansion of Small Medium Enterprises (SMEs) is important for Kenya to attain Vision 2030, an initiative to be internationally prosperous and competitive country with high life quality by the year 2030. Statistics by G.O.K economic survey (2006) show that the SME segment contributed to 64 percent of the county's urban employment and 50 percent of the new jobs created in 2005 were from the SME segment. Therefore SMEs are critical for touching the country forward. This is particularly emphasized by the SMEs in Kenya Market who as indicated by Kenya National Bureau of Statistics economic study (2012) provide employment to 50,000 individuals and contribute to 18% of Kenya's GDP from micro small enterprises.

Over the years, the Taiwan's SME segment has been characterized by arguments like dynamic, diverse, innovative, as well as creative. Their influences to the Taiwanese economy are far and wide, bearing in mind SMEs make up 97.83% of all enterprises, with 1.4 million in process at the end of 2003 (Small plus Medium Enterprise Administration, 2004a). This number is expected to remain growing. According to Taiwan's Small and Medium Enterprise Administration (SMEA), SMEs have backed to the diversity of Taiwan's private sector, employment levels, as well as gross production.

In Zimbabwe, even though SMEs are currently under local financial developments are maintained to solve socio economic difficulties. Although entrepreneurs -SMEs may act as entire economy's' activity catalysts (Chichoni, 2011), most fail. Above 75% of new businesses fail in Zimbabwe (Chichoni, 2011)), though it hard to assess the true nature of failure in SME because of lack correct data on this aspect.

Furthermore, financial institutions tend not to lend SMEs because of inadequate collateral which is a barrier to growth ability of small enterprises to raise capital, market uncertainty, higher transaction costs and information asymmetries due to serving customers who are far thus restricting flow to finance to SMEs (URT-National Economic Empowerment Policy, 2009).

In Kenya, employment within the accounts sector for 87 percent of all the created new jobs and employs 77 percent of all employees in the country (GOK, 2005). Despite its relevance, in five SMEs businesses three fail within its first five years in operation. Of those that are left, four out of five fail within the next four years. They are either closed down, liquidated, merged, acquired, change direction or become a new business. Of the remaining businesses, only 15% will be making a profit, the remaining will barely be surviving (SMIDEC, 2009).

The SME's in Kenya experience some impeding factors that prohibit SMEs not accessing financial services from financial institutions like lack of collateral, lack of entrepreneur skills, poor documentations, and high interest rates. These impeding factors are assumed to be major practical problems particularly in Kenya. The SME's require financing and management skills for their day to day activities. The commercial banks provide initial as well as working capital, financial skills training, role models and mobilize savings to the SME sector. These services offered by commercial banks are expected to aid in the growth of SMEs eventually ensuring success of these businesses. What is the effect of operation management on growth of SMEs in Kenya?

1.3 Objectives

1.3.1 General Research Objective

The broad objective of the study was to assess effect of operations management in growth of small and medium enterprises in Kenya.

1.3.2 Specific research objectives

So as to achieve the general objective, the specific objectives of the study were as stated below:

- i. To determine operations management and growth of SMEs in Kenya
- ii. To determine the effect of innovation on growth of SMEs in Kenya

1.4. Value of the Study

It was expected to provide an insight of the role operations management small and medium enterprises growth in Kenya. An operations management issue plays a catalytic role of boosting SMEs. Normally, SMEs uses two source of finance; internal or external sources of financing.

The internal funds are always insufficient to undertake the required level of business hence the call is always made for external finance from relevant commercial institution to fill the financial gap. Over the years the failures of SMEs have been linked to the inability to access finance from commercial institutions. This study was therefore, important on providing empirical evidence about the operations management issues on growth of small and medium enterprises, because without such evidence no concrete strategies can be drawn regarding the development of SMEs.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

It contains theoretical basis of the study, literature review on the main operations management matters faced by SMEs in Kenya , effect of innovation on SMEs in Kenya and how operation management affect SMEs in Kenya.

2.1 Theoretical Framework

Adequate finance is a fundamental growth aspect for every organization, growth and success of SMEs (Haynes & Au, 2006 Cook, 2001). Approaches of finance adopted by SMEs range from first sources which are internal , such as retained profits and the individual savings of the owner manager (Zeng and Wu song , 2008) to sources which are outsourced ,along with family and family financial assistance, (Abouzeedan, 2003), venture capital, trade profit and angel financiers (Baker & He, 2007), and later to legal external sources which are represented by financial institutions and banks besides markets dealing with securities (Chittenden et al., 1996).

The financial development cycle model projected by Udell and Burger (1998) states that financial needs as well as the available financing options for SMEs vary through the various phases in the lifecycle of a company. This means that, at critical growth cycle of a firm, diverse financial approaches are needed. In overall, due to the specific landscapes that characterize SMEs at the initial phase, this type of informational (Udell & Berger, 1998), a lack of transaction history and the great failure risk (Van de Gucht, 2007 and Huyghebaert), this stage of SME heavily

funding sources of the insider. The commercial life cycle model adds essentials of trade off, pecking order theories and agency, as well as describing finance sources classically required by those funding in all stages of development of the company (Srinivas, 2015).

The commonly believed perception at start up is that firms strain to access debt finance because of opacity of information, low asset base as well as inexperience (Fjose, 2010). The most vital and usually used finance sources at this phase are steady owners' personal savings, and support from friends and family members (Gompers, 2010). The role of owner of the firm is not to restrict firms to limited to equity, but include the quasi equity provision.

If individual assets are used in securing debts of the business (Calice, 2012), the firm will attain enough capital to trade, forecasting inadequacy leads to problems of Undercapitalization in the initial stages. In particular cases in such as competition, the firm may collapse (Gompers, 2010).

2.1.1 Pecking Order Theory

The SME pattern of financing clarified by Udell and Berger (1998) differs with hypothesis given above theory of pecking order which was established by Myers in 1984 and proposes that the conclusions of capital structure of a firm are a function of the age of the firm. This theory claims that, internal funding foundations are ranked while those using external sources are blocked until the internal ones are finished.

Thus when looking for funds, a firm chooses interior equity to exterior debt, short term to long term debt, and external equity but exterior debt. Hence the preference order for firm support sources follows supplying debt, issuing equity and internal equity (Holmes and Cassar, 2003).

To relate to the theory, it is significant to recognize distinction between small public firms, private firms, as well and large public firms. Private companies use retained earnings as well as bank debts. Minor public firms utilize equity financing. Big public firms basically use retained earnings and corporate bonds. The available can be understood to mean, direct operation indirect bankruptcy charges and costs play significant roles in the choice of debt of the firm. The relative prominence of the other factors remains debatable. The principle of using the pecking order theory model in this study is that though the model focuses on internal funding sources while the external sources application is delayed until exhaustion of interior sources, as a firm desires internal equity to external debt, short term debts to long term debts, as well as external debt as compared to external equity. The orders of financing firms' foundation should follows debt issuing, as well as then issuing equity can be embraced to the success as well as growth of the firms plus thus contribute to the economic growth of the country.

2.1.2 Lifecycle Model

Consistent by means the theory of pecking order and different to the model of lifecycle. Gregory (2005) argues that old companies are less dependent on external sources of financing than fresher ones. They link this to the big firms having more opportunities for reserved earnings accumulation than new ones; a lot of internal

funds are able to finance their undertakings. Effort by Vidal-Sanchez as well as Martín Ugedo (2005) on SMEs in Spain also supports the theory of pecking order. In spite efforts to theorize SME financial behaviors in the varying financing patterns hidden by SMEs, different theories propose varying approaches. In this section study reviews services offered to SME's by commercial banks.

2.2 Innovation in Operations

Agency banking improves financial access of SMEs which removes experiments in financing found restrict development of small and medium enterprises. Djankov (2003) established that the major aspects affecting SMEs performance of the firm are the inadequate access to suitable financial services as well as products. Inadequate financial services and credit access provided by financial institutions may negatively influence the performance of SMEs due to two factors. SMEs with constrained capital have their capacity scaled down and low operation below the efficient production scale and high capital cost or little financing from outside will forces SMEs companies to substitute for physical capital (Quintin and Amara, 2006).

Agency banking model is intended to enhance financial access facilities by enabling small businesses to work as satellite branches. Based on early experiences, agency banking contributes largely towards financial all involvement in developing countries (Mwando 2013). This leads to development in agency banking as evident in republics such as in Australia where bank agents are represented by post office, corner stores being used in France , lottery outlets being used in Brazil in provision of financial services, South Africa , Philippines and Nigeria (Sidek, 2008).

Regulators and policy makers are demonstrating keen awareness in this field, although regulation in most countries continues to pressure the agency banking' emergence. Where, regulation authorities, new branchless banking solutions are being established by market participants (Leishman and Neil, 2010). However, agency is yet to show case pro-growth impact for SMEs businesses, pro-poor, communities, National economics and households (Mark and Morawczynski, 2009).

Mobile has progressively rendered itself in pervasive ways across all sectors of the economy. Banking environment which are not stable are considered a key enablers or pillars of economic development (Koivu. 2002). With the wave of information that is emerging continuously, the Kenyan banking industry has found itself engaging in technological indulgence.

The necessity for indulgence of accessing financial resources accessibility beyond conventional norms has observed the recent modernization and expansion of the banking sector and enabled big finance oriented services demands , other institutions part from the historical banks joined the league wishing to acquire an opportunity within the banking sector (Wells and Sacker, 2003) .

2.3 Operation Management Practices

The operations management is now a unique discipline in various organizations. These dynamic methods days as well as this approaches procedures appropriately react to all changes occurring both in the organizations' internal and external environment in addition thus fostering the attainment strategic objectives required for the business enterprise, which is the market value expansion, profitability,

competitiveness maintaining or increasing or simple organization survival (Hrzová, 1999).

Operations management is viewed as a process of transformation in which resources are process converted into outputs (services or products). There are two input categories; Resources such as materials and information, the state which modifications are a consequence of the conversion process are referred to as converted resources. inputs such as equipment buildings and employees that help contribute in the production process but do not change their state due to the process of conversion are called transforming resources (Slack, 2004). The transformation process includes planning and control, drafting operations systems, and improving necessary production activities and provision of customer's goods and services.

In the 1990s, managing operations were developed by the operations management across all the organizational boundaries. So as to upgrade within particular divisions or plans specified to be attained, efficiency had to be attained by operations through different ways. So as to look within the borders of the organization the focus shifted to external, with attention on supply management through and into the organization. The suggestions brought forward in the 1990s were concerned with efficiency creation both through and into the organization.

2.4 Operations management and growth of small and medium enterprises in Kenya

A critical element in the SME sector development is finance access, mainly financing of bank sector, given the existing banking sector reputation in this segment. The data collected by the World Bank on firm levels indicate that the biggest challenge to transacting business is access to finance. Several studies have indicated financing as a great obstacle for SMEs than it is for larger firms especially in the developing world, and that finance access affects adversely the SME sector growth more than those of large companies (Weder and Schiffer, 2001; 2005; Beck et al., Beck et al., 2006). It is thus not surprising that SME was listed by the international development access to finance as a vital priority of policy.

Beck et al., (2010) offers the first attempt in appreciating SME financing from the side of supply. Based on a survey of a total 91 banks among 45 countries, authors provided a characterized by bank SMEs financing and found that SME are perceived by banks segments to be profitable and serve it through many lending organizational setups and technologies. The authors realized little changes in the SMEs served by banks based on the structure of its ownership (private, foreign-owned or public). They however find reasonable differences across banks in developed ,developing economies as well as underdeveloped economies, and concluded that a favorable environment is vital than the firms' size or ownership of the firm in shaping financing of banks to to SMEs.

According to study by Rodriguez and Stephanou (2008) analyzing, both structure and trend of the Colombian SME financing markets. They find that those banks located in the country regard the SME segments as attractive business opportunities though their sophistication levels in form of business risk management tools and models which remain modest. They concluded that the market is has many policy and institutional constraints inhibiting growth lending by SMEs. According to Ahiawodzi and Adede (2012) in a study of Ho-Municipality of Ghana indicate that credit access exerts significant positive effects on SMEs growth. Regression model results show positive relationship between access to credit and the growth of the SMEs while this study addresses effect of access to credit on growth of SMEs it does not specifically mention commercial banks operations.

2.5 Summary of the Literature Review and Gap to be filled

This chapter reviews literature related to several study areas. It was conducted mainly on growth and operation management of Kenyan SME's and revealed operation management research gaps and growth of Kenya's' SME's. According to Djankov et al, (2003) the factors affecting the performance of SME firms is inadequate access to appropriate financial services and products. Limited outside financing and high capital cost forces SMEs firms substitute (low skilled) -labour for physical capital (Quintin and Amaral, 2006).

Previous experiences, agency banking largely contributes to financial inclusiveness in countries that are developing (Mwando, 2013). A good banking environment is a major enabler and pillar of economic growth (Koivu, 2002). (Morawczynski and Mark, 2009) agency banking is yet to demonstrate, pro-growth impact for SMEs

businesses, pro-poor households, National economics and communities. Ahiawodzi and Adede (2012) in a study of Ho-Municipality of Ghana concur with Djankov et al., (2003) and (Amaral and Quintin, 2006) that credit access positively effects SMEs growth.

Operational management is the management of processes which transform inputs of given quality to outputs required (Okumbe 1999:9). Hanagan (2002:8-9) suggests that it involves organization, supervision, and control of processes in the transformation of inputs which add value to outputs. But according to (Slack et al., 2004) inputs e.g equipment , buildings and employees which contribute to the process of transformation but do not change their state as result of the conversion process are referred to as transforming resources. A study by Rodriguez and Stephanou (2008) analyzes both structure and trend of the Colombian SME financing.

2.6 Conceptual Framework

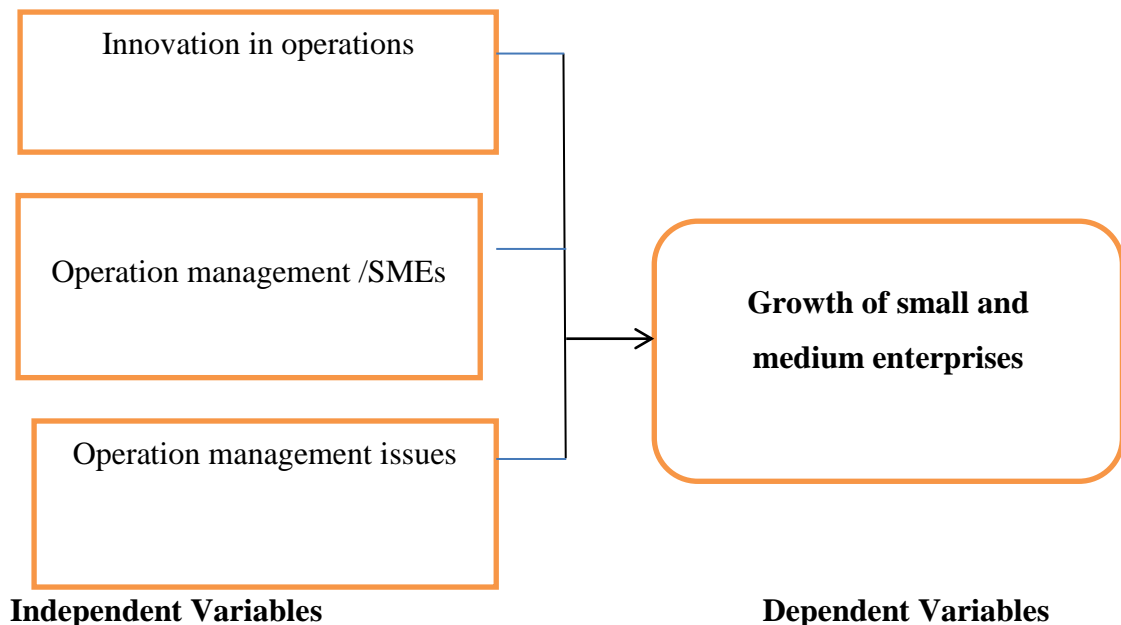


Figure 2.1 Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter emphasized the methods that were used in this study which comprised the research design, target population, sample size, data collection instruments, as well as reliability plus data a technique used to analyze data.

3.2 Research Design

The cross-sectional design was the most appropriate for this study since data collected was based on a number of SMEs across the industry in Kenya Descriptive research design is valid for conducting research on specific subjects and acts as quantitative studies' precursor. The design was thought suitable as it helped in describing the state of affairs as they presented themselves without manipulating of variables.

3.3 Population of the Study

The target population of this research was on all the Small and Medium Enterprises in Nanyuki region. Different small and medium enterprises which included traders, transporters, agricultural, hospitality, professional services, health, entertainment and factories that were beneficiaries of operations such as Innovation, operation management /SMEs financial skills training across the industry .In gathering data on operations management issues in growth of small and medium enterprises in Kenya related to the research. The population in this study was 300 SMEs within Nanyuki region.

3.4 Sample Size and Sampling Techniques

From the population of 300 SMEs in Nanyuki region Kenya, study participants were selected using stratified random sampling. Respondents were stratified according to the business types to ensure that all the SMEs were represented and random samples were drawn from each of the strata. According to Gay et, al., (2009), when undertaking descriptive study, 10 % of the total population yields an adequate sample. 30 SMEs study samples in this study represented 10% of the target population was used.

3.5 Data Collection Instruments

Primary data was gathered using questionnaires as they were inexpensive plus the researcher could distribute them easily. Walliman (2005, p.281), comments that using questionnaires helps a researcher in organizing questions as well as receive replies talking to each respondent. Therefore this study made use questionnaires as they could be easily distributed and also due to their impersonality. The questionnaires were reorganized according to the objectives as well as were close ended to ensure effective analysis. The respondents were entrepreneurs (business community) and local administration as key informants in the area under study Nanyuki region.

3.6 Data Analysis Methods

The researcher perused through filled questionnaires to document sheets used to record analysis. Quantitative data that was gathered by use of questionnaire and analyzed using descriptive statistics using SPSS and presented using, means, percentages, frequencies and standard deviation. The information was displayed using pie charts and graphs, prose-form and bar charts. This was done through tallying up of

responses, percentage computing, response variation as well as description and interpretation of the data in line with the study assumptions and objectives through use of SPSS. The subsequent regression model was used to show the effect of innovation, operation management/SMEs and operation management issues on the Growth of SMEs in Nanyuki region.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \dots \dots \text{Equation 1)}$$

Variable for:

Y= Growth of small and medium enterprises

X₁= Innovation in operations

X₂= Operation management /SMEs

X₃= Operation management issues

β = Constant

e = Error

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND PRESENTATION

4.1 Introduction

The main objective of this study was assessing operations management and growth of medium and small enterprises in Kenya. The research sought to achieve the following specific objectives: To determine the key operations management issues faced by SMEs in Kenya and to ascertain effects of innovation on SMEs in Kenya.

The study targeted 30 SMEs respondents within Nanyuki region in Kenya and 25 questionnaires answered and returned contributing to the response rates of 83 percentages this response rates represents and conforms to Mugenda and Mugenda (1999) stipulation that a 70 percentage response rate is excellent. This good response rate was due to additional efforts made through visits and calls to request return of questionnaires.

4.2 Demographic Information

The study inquired information on various factors on the background or respondents, i.e. the age of the respondent age, highest academic qualification and business experience. This set of information tested the respondents' appropriateness in answering the questions concerning operations management issues in growth of medium and small enterprises in Kenya.

4.2.1 Respondents Age Bracket

The researcher inquired on the respondent age bracket and the outcome is as shown in figure 4.1.

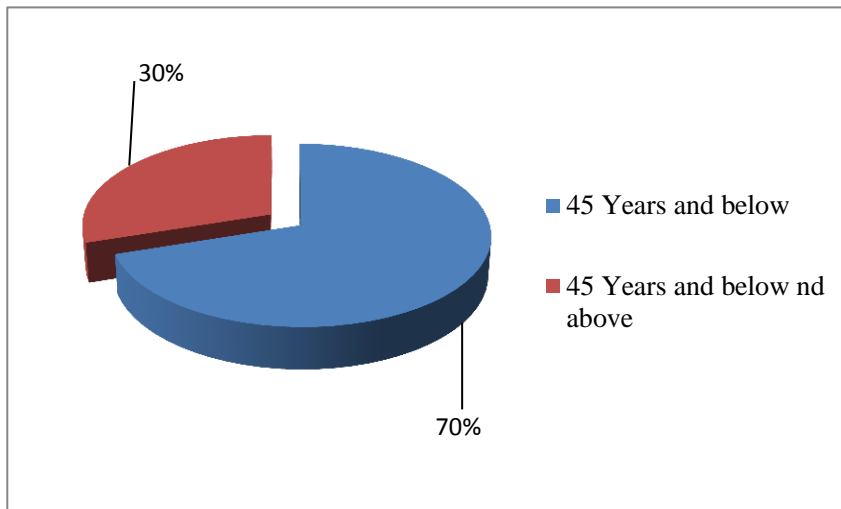


Figure 4.1 Respondents Age Bracket

Study findings show that majority of the respondents were aged below 45 years as shown in the figure 4.1 represented by 70 percent. The rest of the respondents representing 30 percent were above 45 years of age. This finding depict that most of SMEs entrepreneur's in Nanyuki region were middle aged people. Meaning they were vibrant and easily adopted and understood technology and other operations management issues affecting SMEs.

4.2.2 Highest Education Qualification

He also wanted to know the respondents' educational qualification and the findings are shown in the figure 4.2.

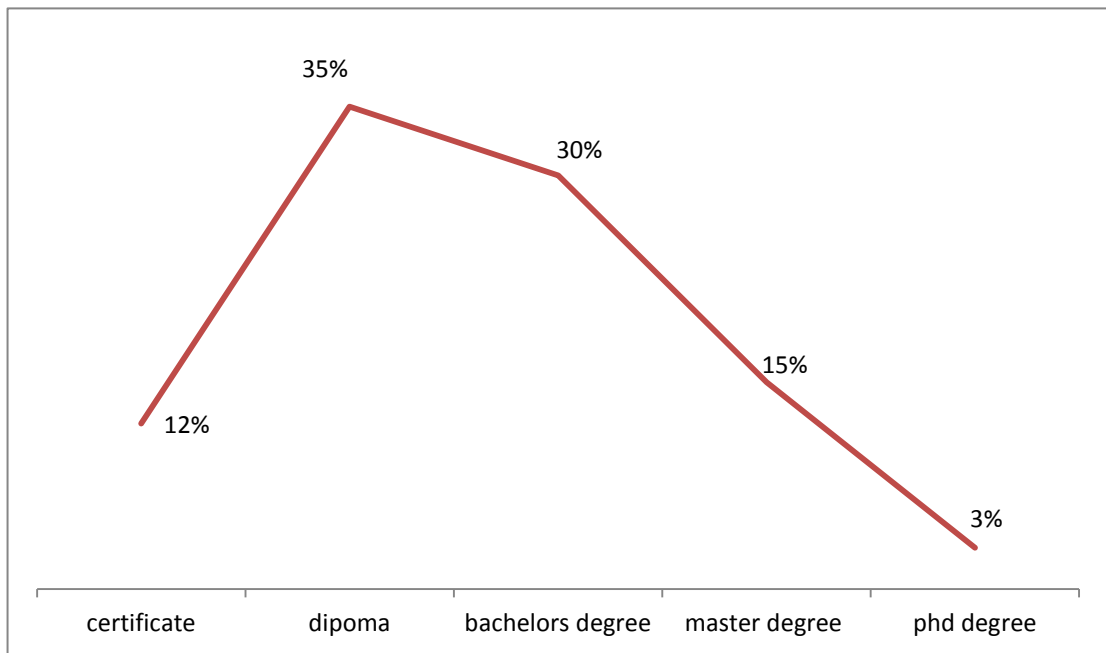


Figure 4.2 Highest Education Qualifications

From the study findings 35 % respondents had attained diploma level of academic qualification, 30 percent had bachelor’s degree qualification, and 15 percent of the respondents had attained master’s degree in academic qualification, 12 percent had certificate in academic qualification while only 3 percent had PhD as the highest academic qualification. This finding showed that most of the respondents in this study were highly qualified having attained academic qualification above basic education, which could have translated to mean better understanding of operation management issues in growth of SMEs.

4.2.3 Respondents’ Business Experience

The researcher sought to enquire on the business experience for respondents and the findings are shown in the Table 4.2.

Table 4.1 Respondents' Business Experience

Years	Frequency	Percentage
0-5	7	28
6-10	10	40
11-15	5	20
Over 15	3	12
Total	25	100

The findings in the table show that 4.1; 40% of the respondents had operated their business for a period of between (6-10) years, 28% of the businesses had been operational for a period of 5 years and below, 20% of the enterprises had been operated for a period of between (11 -15) years while only 12 percent had been operational for over 15 years. This finding depicted that most of respondents had adequate business experience, therefore, this could mean a positive customer experience that not only makes good business sense but is also essential to the enterprise success.

4.2.4 Respondents' Business Ownership

The study also explored on the form of business ownership, and the responses are illustrated on the Figure 4.3.

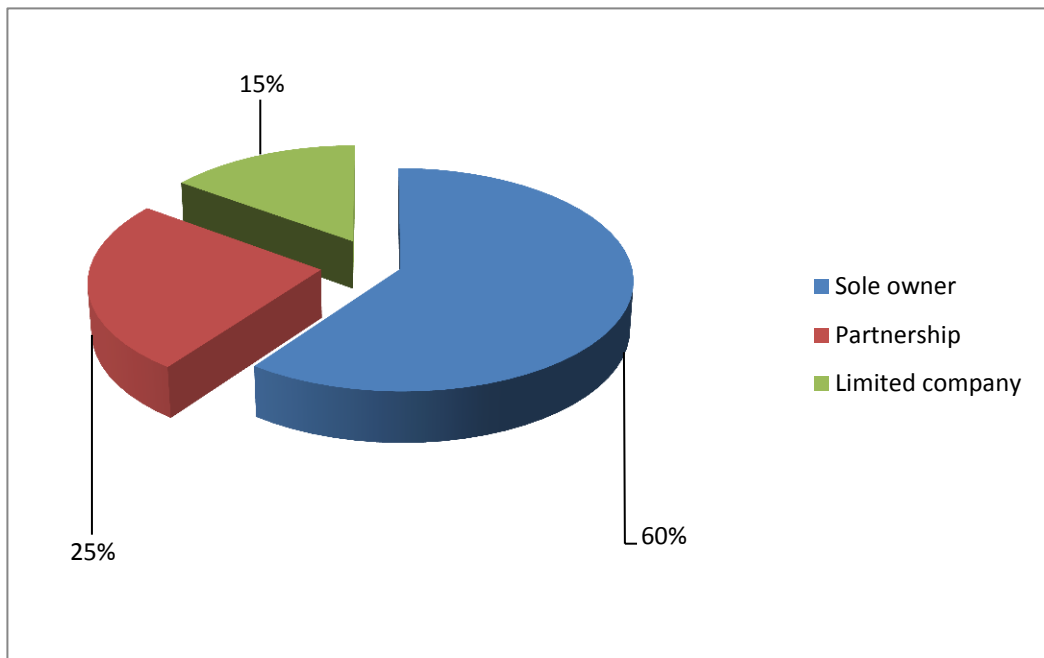


Figure 4.3 Respondents' business ownership

From the study findings majority of the enterprises in the study were sole owned as shown by 60 percent, 25 percent who responded had partnership form of businesses ownership while the rest of the respondents represented by 15% had limited companies It meant that it is easier to start and operate individual businesses factoring operations management issues that assist in growth of SMEs. Also sole proprietorship was easier to operate due to hands on management style.

4.3 Demographics of SMEs

The researcher enquired on the demographics of the SMEs involved in the study and the findings are represented on the table 4.3.

Table 4.2 Demographics of SMEs

SMEs Demography	Frequency	Percentage
Constructions co ltd	2	8
Service offering businesses	9	35
Wholesalers	3	12
Hardware's	4	18
Supermarkets	2	8
Dispensing Chemists	5	19
Total	25	100

According to the findings, 35 percent of the SMEs that were involved in this study were service offering industries that included salons, Saccos and matatu investments among others. 19 percent of SMEs were dispensing chemists within the region, 18 percent of SMEs were hardware's, 8 percent represented supermarkets and construction companies in the region, while 12 percent's were wholesalers. These findings showed that most of these SMEs in this particular study were service industry which meant that the contribution of service offering businesses influenced the study findings.

4.3.1 Operation Management Issues

4.3.2 Loan Accessibility and Business Growth

Respondents were asked to state their sources of loans, the findings are illustrated on the figure 4.4.

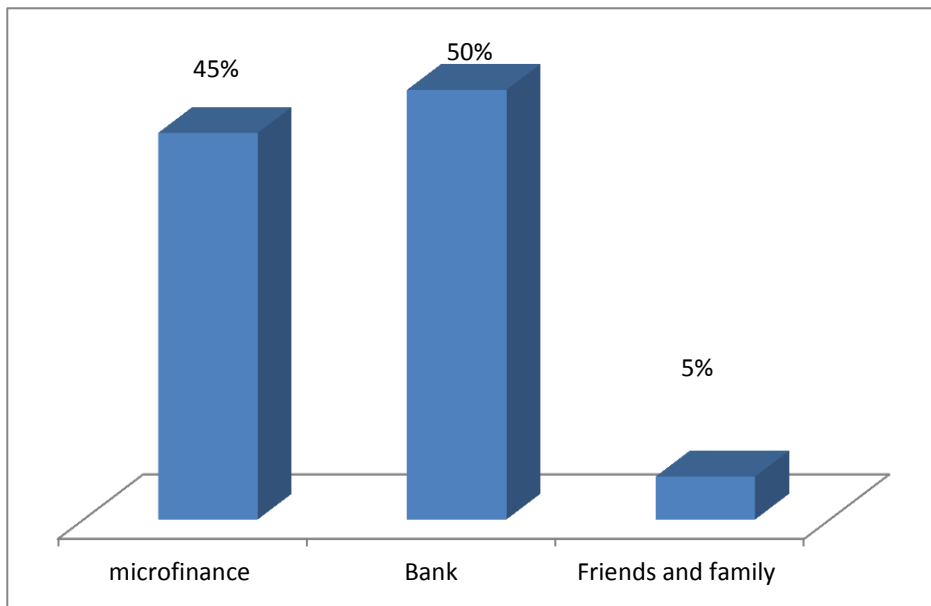


Figure 4.4 Loan Accessibility and Business Growth

According to the study findings half of the respondents had borrowed from banks, 45 percent had accessed loan for business growth from microfinance, while only 5 percent had accessed loan from friends and relatives. This depicts those businesses in the Nanyuki region that participated in the study had opted for microfinance and banks for financing. This data showed that a majority of the enterprises were boosted by funds from financial institution and banks with Microfinance and banks helping a very large group of entrepreneur’s access loans for growth. It meant also entrepreneurs opted for funding from financial institutions to grow their business,

4.3.3 Difficulties in Loan Accessibility

The study enquired on the difficulties encountered while accessing loans, for the business growth and the findings are shown on the figure 4.5.

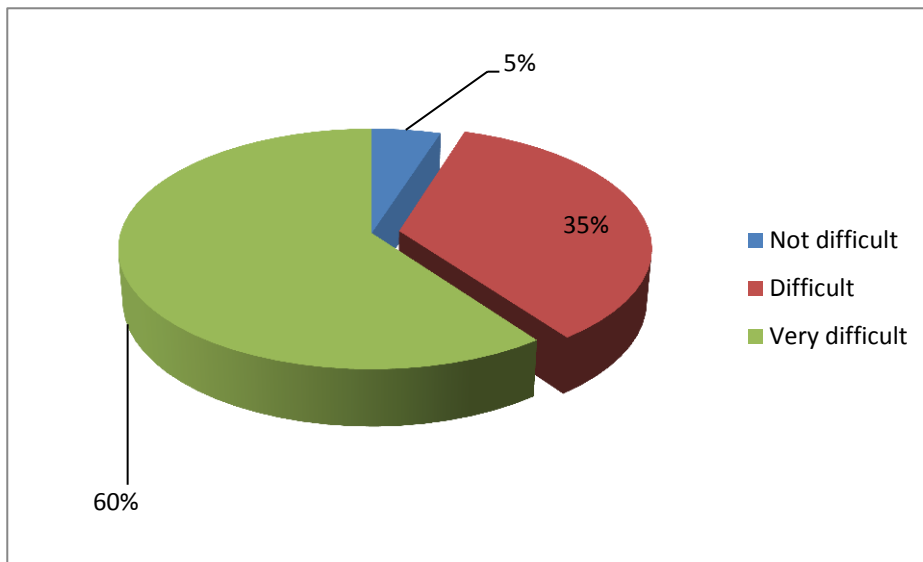


Figure 4.5 Difficulties in Loan Accessibility

The study findings established that 60 percent of the respondent indicates there were great difficulties in accessing loans for business growth these were the majority, 35 percent indicated that there were difficulties in accessing loans, while only 5 percent of the respondents had no difficulties in accessing loans for business growth. This can be interpreted to mean that difficulties in accessing loans for business growth was reason for slow and retardation of business growth. This finding concurred with Agency banking model is intended to enhance access to financial facilities by allowing small businesses to work as satellite branches. Based on early experiences, agency banking takes a large contribution to make towards financial all-inclusiveness in developing countries Mwando, (2013).

4.3.4 Importance of Accessing Startup Loans

The researcher sought to enquire on the importance of accessing startup loans for business growth, the findings are shown on figure 4.6.

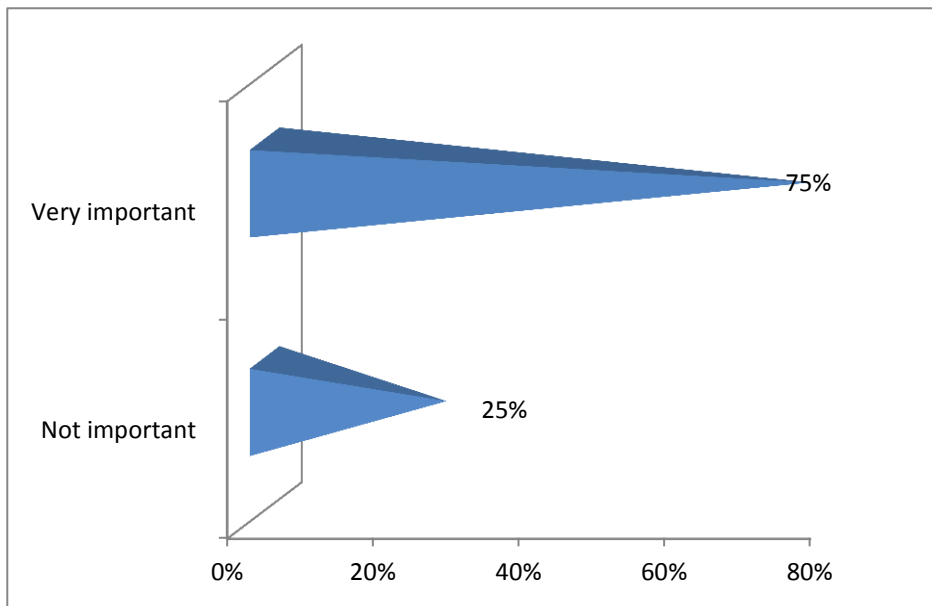


Figure 4.6 Importance of Accessing Startup Loans

Study findings show that 75% respondents indicated that it was very important to access the startup loan for the business growth while 25 percent were for the opinion that startup loan was not important in the business growth. This depicts that startup loan had a positive impact on the growth of the business, therefore banks and other financial institutions need to make available startup loans to SMESs to facilitate their growth.

4.3.5 Business Achievement as Result of Loan Accessibility

Business achievement as a result of loan accessibility; the responses were rated on a five-point Likert scale where 1 = not at all, 2 = less extent, 3 = moderate extent, 4 = large extent, 5 = very large extent. The standard deviations and mean were generated using SPSS and are as illustrated in Table 4.3.

Table 4.3 Business Achievement as Result of Loan Accessibility

Business Achievement as Result of Loan Accessibility	Mean	Std. Deviation
Sales revenues	4.510	0.012
profitability	2.380	0.588
Physical assets	4.140	0.016
Financial assets	3.438	0.323
Market coverage	4.100	0.017

Respondents were to rate the above business achievement as result of loan accessibility, the findings indicate that Sales revenues had the largest achievement as result of loan accessibility, shown by mean of 4.5, Physical assets and Market coverage had large achievement due to loan accessibility as shown by point 4 on the scale, financial assets had moderate achievement as result of loan accessibility shown by mean of 3 while profitability has less achievement due to financing as shown by mean of 2. These findings illustrate that sales revenues had largest achievement as result of loans accessibility due to availability of enough stocks, profitability had minimal achievement, and this could also mean the cost of accessing loan could be higher meaning less profits. Therefore the banks and other lending financial institutions need to consider lowering the rate of lending to SMEs so as to increase the profitability margins for entrepreneurs.

4.4 Operation Management /SMEs

4.4.1 Training on the Financial Management

Researcher enquired on the whether the respondents had any training on the financial management. The responses are illustrated on the figure 4.7.

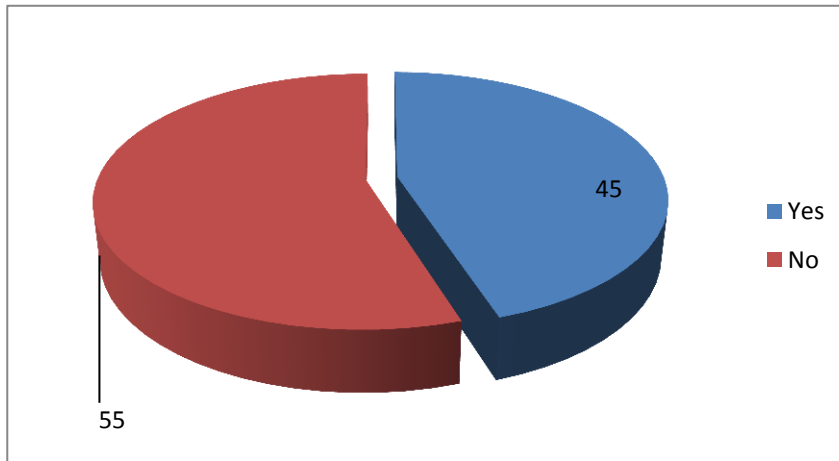


Figure 4.7 Training on the Financial Management

From the findings majority of the respondents 55% had no any training on the financial management skills, while only 45% of the respondents had training on the financial management skills. Findings concludes that SMEs operators has no training on the financial management this contradicts the study by King & McGrath (2002) that concludes that education is one of the factors that impact positively on growth of entrepreneurs with large stocks of capital that includes education and or vocational training are better placed to adapt the constantly changing business environment. SMEs needed training on financial management skills given that financial education positively impacted on their business growth, this would encourage SMEs from borrowing more from lenders and thereby encouraging business growth.

4.4.2 Impacts of Financial Skill Training on SMEs Growth

Financial skill training impacts on SMEs growth. The responses were rated on a five point likert scale where 1= not at all, 2= less extent, 3 = moderate extent 4 = large extent, 5= very large extent. The mean and standard deviations were generated from SPSS and are as illustrated in Table 4.4.

Table 4.4 Impacts of Financial Skill Training on SMEs Growth

Impacts of Financial Skill Training on SMEs Growth	Mean	Std. Deviation
Financial skills training impact positively on growth of enterprises	4.412	0.045
Training makes entrepreneurs adapt to constantly changing business environment	4.681	0.041
Financial training programs can improve the incomes of SMEs	3.342	0.082
Financial skills can improve productivity and incomes of entrepreneurs	2.404	0.161

According to the findings, respondents indicated that to very large extent training makes entrepreneurs adapt to constantly changing business environment as shown by mean of 5.0, largely financial skills training impact positively on growth of enterprises this is shown by mean of 4.0, respondents indicated that moderately financial training programs can improve the incomes of SMEs as shown by mean of 3.0, and to a less extent financial skills can improve productivity and incomes of entrepreneurs as shown by mean of 2.0. This meant that financial training is a very important catalyst in business growth and therefore lending to the SMEs banks and

other financial institution needed to consider financial training to make loans have positive impact in growth of businesses.

4.4.3 Operation Management Issues on the Growth of SMEs

Operation Management Issues on the Growth of SMEs. The responses were rated on a five point likert scale where 1= not at all, 2= less extent, 3 = moderate extent 4 = large extent, 5= very large extent. The mean and standard deviations were generated from SPSS and are as illustrated in Table 4.5.

Table 4.5 Operation Management Issues on the Growth of SMEs

Operation Management Issues on the Growth of SMEs	Mean	Std. Deviation
Loaning	4.006	1.210
Cost	4.282	1.035
Production design	3.480	1.034
Competition	3.470	1.450
Efficiency	4.460	0.102
Flexibility	2.098	0.602
Technology	4.800	0.022
Inventory control	2.056	0.645

According to the findings respondents indicated that technology and efficiency are operations management issues that have very large impact on the growth of SMEs as shown by mean of 4.8 and 4.5 respectively, loaning and cost had large impact as

indicated by the respondents shown by mean of 4.006 and 4.282 respectively, respondents indicated that production design and competition aspects had a moderate impact on the growth of SMEs this is shown by mean of 3.48 and 3.47 respectively, flexibility and inventory control had less effect on growth of SMEs as shown by mean of 2.098 and 2.056 respectively. Finding depicts that technology and efficiency impacted more positively to SMEs growth. This finding showed that SMEs needed to adopt technology and be effective in their daily running of their business in order to realize growth of their businesses.

4.4.4 Training on SMEs management

Respondents were required to indicate whether they had any training on SMEs management and whether the training had impacted positively on SMEs growth. The findings are illustrated on figure 4.8.

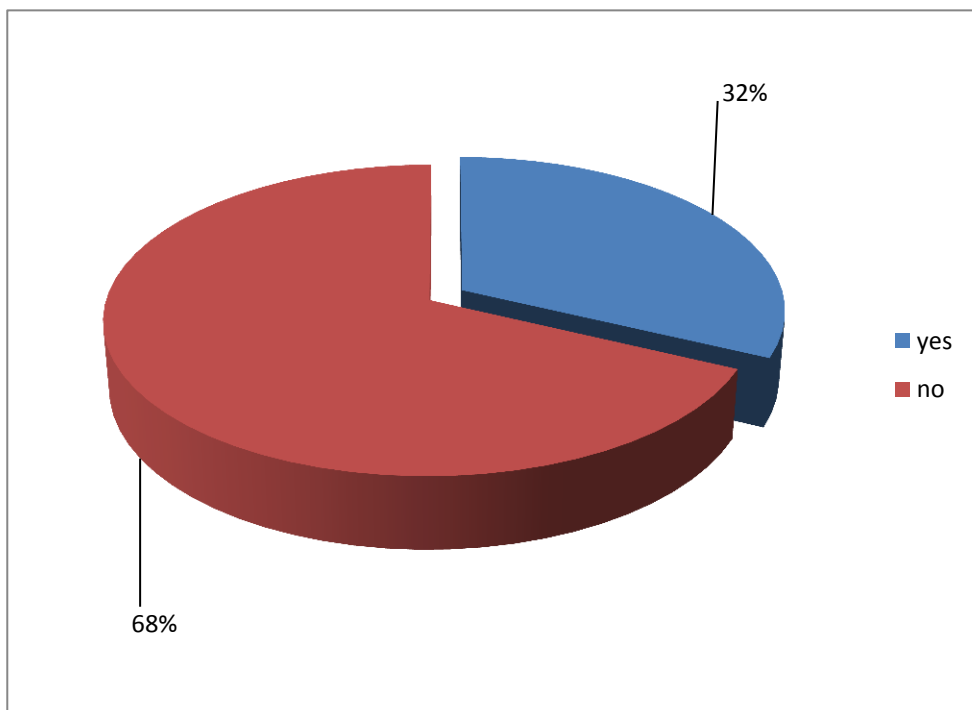


Figure 4.8 Training on SMEs management

Study findings show many respondents 68% indicated that they had no training on the SMEs management while only 32% said that they had SMEs management skills. These finding showed that respondents had no training on SMEs management which could be the cause of business failures in the region of the study. Respondents with skill on SMEs management indicated that workers including managers had better understanding on business performance in knowledge-based economies.

4.5 Innovation in Operations

4.5.1 Impact of Innovation in Operations on Business Growth

The respondents were asked to state the impact of innovation on their business growth, the finding are illustrated on the figure 4.9.

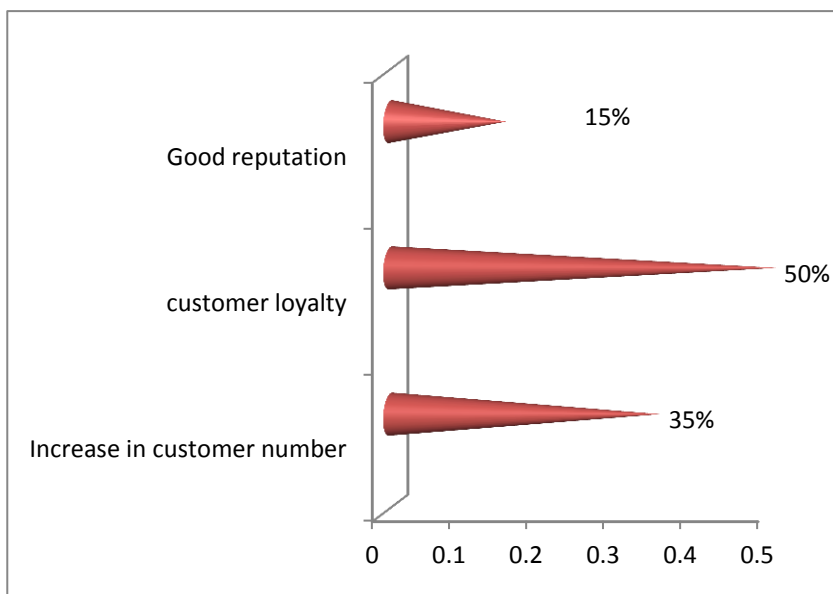


Figure 4.9 Impact of Innovation in Operations on Business Growth

According to the findings half of the respondents indicated that innovation in operations had impacted on the business growth by increasing customer loyalty, 35 percent indicated that innovation in operations created increase in customers numbers while only 15 percent said that innovation in operations created good reputation and

hence business growth. Innovation in operations needed to be implemented in the path of ordinary operational activities in day to day running of business, the cumulative result of innovations in operations would be sufficient to sustain a competitive position should the changes in markets follow predictable sequence and hence realize SMEs growth.

4.5.2 Effect of Innovation in Operations on Business Growth

On effect of innovation on business growth, the responses were rated on a five point likert scale where 1= not at all, 2= less extent, 3 = moderate extent 4 = large extent, 5= very large extent. The mean and standard deviations were generated from SPSS and are as illustrated in Table 4.6.

Table 4.6 Effect of Innovation in Operations on Business Growth

Effect of Innovation on Business Growth	Mean	Std. Deviation
Inventory control	3.056	1.072
Production design	3.234	1.070
Competition	4.164	1.064
Efficiency	3.002	1.083
Cost	2.402	1.095
Flexibility	2.402	1.095
Technology	4.620	1.005

From the study findings showed that technology had aided on the growth of business to the very large extent this is shown by mean of 4.620, respondents indicated that competition to large extent was lower as result of innovation and hence business growth this is shown by mean of 4.164, further response indicated that production

design, inventory control as well as efficiency had a moderate effect on the growth of businesses as result of innovation, this is illustrated by mean of 3.234,3.056 and 3.002 respectively, and lastly respondents said that cost and flexibility had less effect on business growth as shown by mean of 2.402 concurrently. From the study findings the SMEs needed to be encouraged to understand the significance of technology as an innovation in operations which is a principal means of winning to a competitive advantage as well as more profitability to their businesses.

4.5.3 SMEs Agent Banking

On SMEs agent banking, the responses were rated on a five point likert scale where 1= Strongly Agree, 2= agree, 3 = neutral 4 = disagree, 5= strongly disagree .The mean and standard deviations were generated from SPSS and are as illustrated in Table 4.7.

Table 4.7 SMEs Agent Banking

SMEs Agent Banking	Mean	Std. Deviation
Access to appropriate financial products and services, has a negative impact on SMEs firms' performance	2.380	1.288
Agency banking has eliminated capital constrains to SMEs	4.140	0.1313
Agency banking has contributed to financial inclusion in Kenya	1.438	3.023
The right banking environment is a key pillar of SMEs growth	3.100	1.010

According to the findings respondents strongly agreed that agency banking has contributed to financial inclusion in Kenya as shown by mean of 1.438, respondents agreed that Access to appropriate financial products and services, has a negative impact on SMEs firms' performance, as shown by, mean of 2.380, further responses were neutral on whether the right banking environment was a key pillar of SMEs growth as illustrated by mean of 3.100 and finally responses disagreed on the fact that agency banking has eliminated capital constrains to SMEs as shown by the mean of 4.140.

The finding depicts that agency banking resulted in financial incursion in the region of the study, eliminating challenges in financing which limit growth of small and medium enterprises, this concurred with Djankov et al., (2003) who found that the main factors affecting SMEs performance of firms is inadequate access to right financial services and products.

4.6 Correlation Analysis

The data presented earlier on innovation in operations, operation management /SMEs and operation management issues were computed by use of single factor variables prepared by obtaining each factors' mean. Pearson correlations analysis was done at 95% confidence level as well 2-tailed 5% confidence level. The Table 4.8 illustrates the correlation matrix for the factors of innovation in operations, operation management /SMEs and operation management issues and Growth of small and medium enterprises. As from the Table 4.8 there was a positive relationship amongst .medium and large size enterprises growth and innovation in operations, operation management /SMEs and operation management issues of 0.894, 0.493, and 0.661

magnitudes respectively. This positive relationship shows a correlation between the factors that is favourable as well as the Growth of medium and small enterprises, with innovation in operations having the highest value and operation management issues resulting to lowest value of correlation.

All the examined factors had a p-value of ($p < 0.05$) - 95% level of confident thus significant. Relationship values of Growth of small and medium enterprises and innovation in operations, operation management /SMEs and operation management issues were 0.018, 0.024 and 0.031 respectively. This showed that innovation in operations was highly significant while operation management /SMEs followed while operation management issues were the least.

Table 4.8 Correlation Matrix

	Growth of small and medium enterprises	Innovation in operations	Operation management /SMEs	Operation management issues
Growth of small and medium enterprises (r) (p) Sig. (2 tailed)	1.000			
Innovation in operations (r) (p) (2 tailed)	0.894 0.018	1.000		
Operation management /SMEs (r) (p) Sig. (2 tailed)	0.493 0.0321	0.316 0.047	1.000	
Operation management issues (r) (p) Sig. (2 tailed)	0.661 0.024	0.163 0.019	0.216 0.047	1.000

4.6.1 Regression Analysis

The study further applied a multiple regression analysis in determining variables relationships on the small and medium enterprises growth in Nanyuki region. (SPSS V 20.0) applied in coding well as to computation of the multiple regression measurements. Coefficient of determination were used to show that dependent variable changes can cause fluctuations in the independent variables of Growth of small and medium enterprises which explained all the 3 independent variables (Innovation in operations, Operation management /SMEs and Operation management issues).

4.6.2 Model Summary

The independent variables studied show that 84.5% Growth of small and medium enterprises are shown by the R^2 . This indicates that the other factors not studied contributed 15.5% of the Growth of small and medium enterprises. Therefore further research needs to be done to determine those other factors amounting to (15.5%) that affect Growth of medium and small sized enterprises in Nanyuki region.

Table 4.9 Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	0.919	0.845	0.789		0.6273

4.6.3 ANOVA Results

The rate of significance was 0.0179 and is smaller than 0.05 hence thus the model was significant statistically in predicting how Innovation in operations, Operation management /SMEs and Operation management issues medium and small sized

enterprises in Nanyuki region . The F value was critical at 5% significance level as shown in 3.23. Since the F critical was smaller than F calculated, (value = 9.475), this illustrates the general significance of the model.

Table 4.10 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.534	2	1.267	9.475	.0179 ^a
	Residual	9.307	40	2.327		
	Total	3.465	42			

4.6.4 Coefficient of Determination

Multiple regression analysis was undertaken so as to establish Growth of medium and small sizes enterprises' relationship in Nanyuki region and SPSS generated Table below shows the three variables.

($Y = \beta_0 + \beta_1. X_1 + \beta_2. X_2 + \beta_3. X_3 + \epsilon$) becomes

$$Y = 1.147 + 0.752X_1 + 0.487X_2 + 0.545X_3$$

From the calculation of regression found out that considering all factors, (Innovation in operations, Operation management /SMEs and Operation management issues) constant at zero, Growth of medium and small enterprises in Nanyuki region was 1.147. The data findings examined similarly shows that taking all extra zero independent variables, an increase in Innovation in operations leads to a 0.752 Growth increase of small and medium enterprises in Nanyuki region; a unit increase in Operation management /SMEs lead to a 0.487 increase in Growth of small and

medium enterprises in Nanyuki region, a unit increase in Operation management issues lead to a 0.545 increase in Growth of medium and small enterprises in Nanyuki region. This concludes that Innovation in operations contribute most to the Growth of medium and small enterprises in Nanyuki region, followed by Operation management /SMEs. At 5% significance level and 95% confidence level, Innovation in operations had a 0.0192 level of significance, Operation management /SMEs showed a 0.0269 level of significance, Operation management issues showed a 0.0251 level of significance, therefore the most significant factor in the Growth of medium and small sized enterprises in Nanyuki region was Innovation in operations.

Table 4.11 Coefficient of determination

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.147	1.2235		1.615	0.367
	vulnerability assessment	0.752	0.1032	0.152	4.223	.0192
	experience of staff in years	0.487	0.3425	0.054	3.724	.0269
	numbers of staff trained	0.545	0.2178	0.116	3.936	.0251

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter presents findings, discussion, conclusion summary derived from findings and recommendations suggested. The conclusions and recommendations arrived at based on the study.

5.2 Summary of Findings

5.2.1 Operation Management Issues

Study findings show that half of the respondents had borrowed from banks, 45 percent had accessed loan for business growth from microfinance, while only 5 percent had accessed loan from friends and relatives. The study findings established that 60 percent of the respondent indicates that great difficulties in accessing loans for business growth these were the majority, 35 percent indicated that there were difficulties in accessing loans, while only 5 percent of the respondents had no difficulties in accessing loans for business growth.

According to the study findings majority of the respondents 75% indicated that it was very important to access the startup loan for the business growth while 25 percent were for the opinion that startup loan was not important in the business growth. Respondents were to rate the above business achievement as result of loan accessibility, the findings indicate that Sales revenues had the largest achievement as result of loan accessibility, shown by mean of 4.5, Physical assets and Market

coverage had large achievement due to loan accessibility as shown by point 4 on the scale, financial assets had moderate achievement as result of loan accessibility shown by mean of 3 while profitability has less achievement due to financing as shown by mean of 2.

5.2.2 Operation Management /SMEs

From the findings majority of the respondents 55% had no any training on the financial management skills, while only 45% of the respondents had training on the financial management skills. Respondents indicated that to very large extent training makes entrepreneurs adapt to constantly changing business environment as shown by mean of 5.0, largely financial skills training impact positively on growth of enterprises this is shown by mean of 4.0, respondents indicated that moderately financial training programs can improve the incomes of SMEs as shown by mean of 3.0, and to a less extent financial skills can improve productivity and incomes of entrepreneurs as shown by mean of 2.0.

According to the findings respondents indicated that technology and efficiency are operations management issues that have very large impact on the growth of SMEs as shown by mean of 4.8 and 4.5 respectively, loaning and cost had large impact as indicated by the respondents shown by mean of 4.006 and 4.282 respectively, respondents indicated that production design and competition aspects had a moderate impact on the growth of SMEs this is shown by mean of 3.48 and 3.47 respectively, flexibility and inventory control had less effect on growth of SMEs as shown by mean of 2.098 and 2.056 respectively. From the study findings majority of the respondents 68% indicated that they had no training on the SMEs management while only 32% said that they had SMEs management skills.

5.2.3 Innovation in Operations

Study findings show that half of the respondents stated that innovation in operations had impacted on the business growth by increasing customer loyalty, 35 percent indicated that innovation in operations created increase in customers numbers while only 15 percent said that innovation in operations created good reputation and hence business growth. From the study findings showed that technology has aided on the growth of business to the very large extent this is shown by mean of 4.620, respondents indicated that competition to large extent was lower as result of innovation and hence business growth this is shown by mean of 4.164, further response indicated that production design, inventory control as well as efficiency had a moderate effect on the growth of businesses as result of innovation, this is illustrated by mean of 3.234, 3.056 and 3.002 respectively, and lastly respondents said that cost and flexibility had less effect on business growth as shown by mean of 2.402 concurrently.

From the findings respondents agreed strongly that agency banking has contributed to financial inclusion in Kenya as shown by 1.438 mean, respondents agreed that Access to appropriate financial products and services, has a negative impact on SMEs firms' performance, as shown by, mean of 2.380, further responses were neutral on whether an appropriate banking environment was a key pillar of SMEs growth as illustrated by mean of 3.100 and finally responses disagreed on the fact that agency banking has eliminated capital constrains to SMEs as shown by the mean of 4.140.

From the regression calculation established, taking all issues into account (Innovation in operations, Operation management /SMEs and Operation management issues) constant at zero, Growth of small and medium enterprises in Nanyuki region was 1.147. The data findings examined similarly showed that taking all extra independent variables at zero, a unit increase in Innovation in operations lead to a 0.752 increase in Growth of small and medium enterprises in Nanyuki region; a unit increase in Operation management /SMEs lead to a 0.487 Growth increase of small and medium enterprises in Nanyuki region, a unit increase in Operation management issues lead to a 0.545 increase in Growth of medium and small enterprises in Nanyuki region.

5.3 Conclusions

5.3.1 Operation Management Issues

The study concludes that businesses in the Nanyuki region that participated in the study had opted for microfinance and banks for financing. This data shows that a majority of the enterprises are boosted by funds from financial institution and banks with Microfinance and banks helping a very large group of entrepreneur's access loans for growth. Difficulties in accessing loans for business growth was reason for slow and retardation of business growth. This finding concured with Agency banking model is intended to enhance access to financial facilities by allowing small businesses to work as satellite branches.

Startup loan had positive impact on the growth of the business, therefore banks and other financial institution need to make available startup loans to SMESs to facilitate their growth. These findings illustrated that sales revenues had largest achievement as result of loans accessibility due to availability of enough stocks, profitability had minimal achievement, and this could also meant that the cost of accessing loan could

have been higher meaning less profits. Therefore the banks and other lending financial institutions needed to consider lowering the rate of lending to SMEs so as to increase the profitability margins for entrepreneurs.

5.3.2 Operation Management /SMEs

Education is among the factors which impacts positively entrepreneurs growth with large capital stocks that includes vocational training and education were well structured to constantly adapt to dynamic business environment. SMEs needs training on financial management skills given that financial education can have positive impact on their business growth, this will encourage SMEs from borrowing more form lenders and thereby encouraging business growth. Financial training is a very important catalyst in business growth and therefore lending to the SMEs banks and other financial institution needs to consider financial training to make loans have positive impact in growth of businesses, technology and efficiency impacts more positively to SMEs growth. This finding shows that SMEs needs to adopt technology and be effective in their daily running of their business in order to realize growth of their businesses.

Study concludes that respondents had no training on SMEs management which could be the cause of business failures in the region of the study. Respondents with skill on SMEs management indicated that workers including managers had better understanding on business performance in economies that are knowledge based.

5.3.3 Innovation in Operations

Innovation in operations needs to be implemented in the path of ordinary operational activities in day to day running of business, the cumulative result of innovations in

operations will be sufficient to sustain a competitive position should the changes in markets follow predictable sequence and hence realize SMEs growth. SMEs need to be encouraged to understand the significance of technology as an innovation in operations which is a principal means of winning to a competitive advantage as well as more profitability to their businesses.

Study concludes that agency banking as resulted in financial incursion in the region of the study, eliminating financing challenge that has been found to limit medium and small enterprises growth. Finally Innovation in operations contributes most to the Growth medium and small size enterprises in Nanyuki region, followed by Operation management /SMEs. At 5% significance level and 95% level of confidence, Innovation in operations had a 0.0192 significance level , Operation management /SMEs showed a 0.0269 level of significance, Operation management issues showed a 0.0251 level of significance, therefore the factor that was most significant in the Growth of medium and small enterprises in Nanyuki region was Innovation in operations.

5.4 Recommendations

5.4.1 Government Interventions

Study recommends that Government, relevant ministries in trade and industrialization should come up with policies on SMEs training on areas of financial management since the study found out that, SMEs operators has no training on the financial management.

And given that training impact positively on growth of entrepreneurs with large stocks of capital that includes education and or vocational training are better placed to adopt the constantly changing business environment. From the finding agency banking as resulted in financial incursion in the region of the study, eliminating financing challenge that has been found to limit growth of small and medium enterprises, the study recommends that the model can be replicated by government in financing SMEs in rural areas of Kenya.

5.4.2 Financial institutions

From the study findings accessing loans for business growth was reason for slow and retardation of business growth and that startup loan could have positive impact on the growth of the business. The study recommends that financial institution should make available financial resources to SMEs to enhance business growth.

5.5 Limitations of the study

The limitations of the study were: Sample respondents were picked from selected SMEs within Nanyuki thus effects found only reflect situations of that particular business. Thus this finding may not have been representative of all SMEs in Nanyuki region let alone the whole Laikipia County. The study also limited itself to the operations management issues since there were many other factors that could influence the growth of Medium and Small Sized Enterprises (SMEs) in Kenya.

5.6 Suggestions for Further Studies

Since this study was on the operations management issues in growth of medium and small enterprises. The study used Nanyuki region as a case. The study suggests that same study to be conducted in other counties outside Laikipia County for comparison purposes and to allow for generalization of findings on the operations management issues in growth of medium and small enterprises.

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APPENDICES

Appendix I: Research Questionnaire

This questionnaire is designed to collect data from SMEs in Nanyuki region in Kenya on the operations management and growth of small and medium enterprises in Kenya. The data shall be used for academic purposes only and will be treated with confidence. Your participation in facilitating the study is highly appreciated.

(Tick in the Boxes Provided)

Section A: General Information

1. Age below 45 years above 45 years

2. Highest Level of Education?

Certificate Diploma Bachelors Master PhD

3. Number of years in Operation?

0-5 6-10 11-15 Over 15

4. What is the form of ownership of your enterprise if any (Please tick appropriate answer)

(a) Sole owner

(b) Partnership

(c) Limited Company

Section B: Operation Management Issues

5. Where did you access loan for your business growth?

Microfinance []

Bank []

Friends and Family []

6. Rate the difficulty in accessing loan for your business growth?

Very Easy []

Hard []

Very Hard []

7. Rate the importance of access to seed capital in growing your business?

Not Important []

Very Important []

8. Please indicate the level of your firm’s achievement adopted since started being financed by commercial banks in terms of the following aspects by putting a tickin the box that corresponds to your situation.

Key:

1-Not at all; 2-Less extent; 3-Moderate extent; 4-Large extent; 5-Very large extent

Factors	5	4.	3	2	1
Sales revenues					
Profitability					
Physical assets					
Financial assets					
Markets coverage					

Section C: Operation Management /SMEs

9. Have you ever been trained on Financial Management?

Yes []

No []

10. Have you gone for any training in SMEs Management?

Microfinance []

Bank []

Friends and Family []

11. Use the key provided to appropriately Tick the extent of Operation management issues on the growth of SMEs.

Key:

1-Not at all; 2-Less extent; 3-Moderate extent; 4-Large extent; 5-Very large extent

Operation management /SMEs	5	4	3	2	1
Loaning					
Cost					
Production design					
Competition					
Efficiency					
Flexibility					
Technology					
Inventory control					

12. Have you been trained on SMEs Management?

Yes []

No []

13. If yes how did the training help in growing your business?

.....

14. Use the key provided to appropriately **Tick** the extent to which financial Skills Training impacts on SMEs growth.

Key:

1-Not at all; 2-Less extent; 3-Moderate extent; 4-Large extent; 5-Very large extent

Statements	5	4.	3	2	1
Financial skills training impact positively on growth of enterprises					
Training makes entrepreneurs adapt to constantly changing business environment					
Financial training programs can improve the incomes of SMEs					
Financial skills can improve productivity and incomes of entrepreneurs					

Section D: Innovation

15. In your opinion what has been the impact of operating innovation on your business growth.

- a) Increase in customer numbers []
- b) Customer loyalty []
- c) Good reputation []

d) Others (specify)

.....

16. Use the key provided to appropriately Tick the effect of innovation on the growth of SMEs.

Key:

1-Not at all; 2-Less extent; 3-Moderate extent; 4-Large extent; 5-Very large extent

Innovation	5.	4.	3.	2.	1.
Inventory control					
Production design					
Competition					
Efficiency					
Flexibility					
Technology					
Cost					

17. What challenges do SMEs encounter as a result of innovation e.g. agent banking?

KEY Likert scale of (1 –4) 1= not important. 2= important, 3 = important 4 = very important.

Challenges	4.	3.	2.	1.
Untrained staff				
Inadequate cash in the agents till				
System failures				
Data loss				

18. The following are some of the statement in to SMEs agent banking. Please indicate the extent to which you agree or disagree with each statement.

Key:

1-Strongly agree; 2-Agree; 3-Undecided; 4-Disagree; 5-Strongly disagree

Statement	5.	4.	3.	2.	1.
Access to appropriate financial products and services, has a negative impact on SMEs firms' performance					
Agency banking has eliminated capital constrains to SMEs					
Agency banking has contributed to financial inclusion in Kenya					
An appropriate banking environment is a key pillar of SMEs growth					

Thank you for your participation.