

**INTERNATIONAL NETWORKS IN INNOVATION PROCESS AS A  
SOURCE OF COMPETITIVENESS IN SMALL AND MEDIUM  
SIZED ENTERPRISES IN NAIROBI CITY COUNTY CENTRAL  
BUSINESS DISTRICT**

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## **DECLARATION**

This research report is my original work and has not been presented to any other institution of learning for the award of a degree or any other academic certificate.

**Sign** .....

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

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## **DEDICATION**

I dedicate this project to my family for their moral support and prayers throughout my study period.

## **ACKNOWLEDGEMENT**

I thank the Almighty God for His guidance and providence, which enabled me to undertake this project that was too involving in terms of time and resources.

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## **ABSTRACT**

The study objective was to establish the role of international networks in innovation process as a source of competitiveness among the SMEs in Nairobi City County Central Business District. The specific objectives of the study were; to establish the factors influencing SMEs to undertake International Networking, to establish the extent to which international networks contributed to innovation in the SMEs and to establish the extent to which international networks has contributed to competitiveness of the SMEs. This study used descriptive research design. The population of the study was all the Small and Medium Sized Enterprises operating in Nairobi Central Business district. According to the County Government of Nairobi records (2016) there are 726 SMEs operating in Nairobi Central Business District. The researcher used simple random sampling technique. The technique accorded all the members of the population equal chance of being selected for the study. The researcher picked the SME that fell in a number after every ten in the County Government of Nairobi records (2016). This enabled the researcher to arrive at 73 SMEs as the sample size. The study used primary data which was collected using semi structured questionnaire. Data was analysed using statistical package for social sciences based on the questionnaires. In particular, mean scores, percentages and frequency distributions were used to summarize the responses and to show the magnitude of similarities and differences. Results were presented in frequency tables and charts. The study concluded that; absence of skilled employees in region influenced SMEs to undertake international networking to a great extent. The study also found out that; internal characteristics and capabilities of SMEs contributed to innovativeness of SMEs in the NCBD to a great extent. From the findings it was also noted that international accumulation of tacit knowledge; change and elimination of boundaries inside and between organizations in the international innovation system; integration of tacit knowledge with research and development based codified knowledge contributed to innovation in the SMEs to a great extent. The study found out that; SMEs can use international networks as a tool to collude against common rivals or reduce competition by binding competitors as allies, enjoy first mover advantage by exploiting speed to market, and international inter-firm networks and common know-how cause the emergence of embedded tacit knowledge to a great extent.

## TABLE OF CONTENTS

<b>DECLARATION</b> .....	i
<b>DEDICATION</b> .....	ii
<b>ACKNOWLEDGEMENT</b> .....	iii
<b>ABSTRACT</b> .....	iv
<b>LIST OF ACRONYMS AND ABBREVIATIONS</b> .....	vii
<b>LIST OF FIGURES</b> .....	viii
<b>LIST OF TABLES</b> .....	ix
<b>CHAPTER ONE: INTRODUCTION</b> .....	<b>1</b>
1.1 Background of the Study.....	1
1.1.1 Concept of International Business.....	2
1.1.2 Concept of Competitiveness.....	4
1.1.3 Small and Medium Sized Enterprises.....	5
1.1.4 Nairobi City County Central Business District.....	6
1.2 Research Problem.....	6
1.3 Research Objective.....	8
1.4 Value of the Study.....	8
<b>CHAPTER TWO: LITERATURE REVIEW</b> .....	<b>10</b>
2.1 Introduction.....	10
2.2 Theoretical Foundation of the Study.....	10
2.2.1 Interactive Innovation Theory.....	10
2.2.2 Traditional Trade Theory.....	11
2.3 Specific Characteristics of Innovative SMEs.....	12
2.4 International Networks and Innovation Process.....	13
2.5 International Networks and Competitiveness.....	16
<b>CHAPTER THREE: RESEARCH METHODOLOGY</b> .....	<b>19</b>
3.1 Introduction.....	19
3.2 Research Design.....	19
3.3 Population of the study.....	19
3.4 Sampling and Sample Size.....	19
3.5 Data Collection.....	20
3.6 Data Analysis.....	20

<b>CHAPTER FOUR: DATA ANALYSIS, INTERPRETATION AND PRESENTATION...</b>	<b>21</b>
4.1 Introduction .....	21
4.2 Response Rate .....	21
4.3 Demographic information of the Respondents.....	22
4.3 International Network and Innovation .....	26
4.4 Factors influencing SMEs to undertake International Networking.....	27
4.5 Extent to which international networks contributed to innovation in the SMEs .....	28
4.6 International Networks and Competitiveness .....	29
4.7 Discussion of Findings .....	30
4.7.1 Factors influencing SMEs to undertake International Networking .....	30
4.7.2 Extent to which International Networks contributed to Innovation in the SMEs .....	30
4.7.3 Role of International Networks on Competitiveness.....	31
<b>CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS.....</b>	<b>33</b>
5.1 Introduction .....	33
5.2 Summary of findings.....	33
5.3 Conclusions .....	34
5.4 Recommendations .....	35
5.5 Areas for Further Studies .....	35
<b>REFERENCES.....</b>	<b>36</b>
<b>APPENDICES .....</b>	<b>i</b>
Appendix I: Letter of Introduction .....	i
Appendix II: Questionnaire.....	ii
Appendix III: List Of SMEs In Central Business District .....	v
Appendix IV: Permit Letter.....	vii

## **LIST OF ACRONYMS AND ABBREVIATIONS**

**CBD:** Central Business District

**NCBDA:** Nairobi Central Business District Association

**SME:** Small and Medium Enterprises

**SPSS:** Statistical Package for Social Sciences



## LIST OF FIGURES

Figure 4.1: Respondents' Highest Level of Education .....	22
Figure 4.2: Duration SME has operated in Kenya.....	24
Figure 4.3: Number of employees in the SMEs.....	25
Figure 4.4: Whether SMEs had established International Networks .....	25

## LIST OF TABLES

Table 4.1: Respondents' Highest Level of Education Qualification .....	22
Table 4.2: Respondents Length of Continuous Service with the SME.....	23
Table 4.3: Duration the SME has been in operation in Kenya .....	23
Table 4.4: Number of employees the SME.....	24
Table 4.5: Whether the SME had established any International Networks .....	25
Table 4.6: Extent characteristics contributed to innovativeness of SME in the NCBD ...	26
Table 4.7: Extent listed factors influence SMEs to undertake international networking .	27
Table 4.8: Extent to which international networks contributed to innovation in the SMEs	28
Table 4.9: Extent international networks has contributed to competitiveness of the SMEs	29

## **CHAPTER ONE: INTRODUCTION**

### **1.1 Background of the Study**

The worldwide alarm on the unrelenting gradualness as well as the drop in economic growth enhanced by continuing joblessness, hardship together with its consequential complications has prompted the increase in strategies search that could encourage economic activity in many economies. Small business developments have been at the centre stage of these attempts founded on the notion that small-scale enterprises are the ones that form the context in which entrepreneurial activity takes place. The small-scale organisations are recognised as an essential element of economic growth as well as a vital component in the effort to boost nations out of poverty (Wolfenson, 2011). In the recent past decades, product innovation is greatly guide by cooperation between networks. This is because triumph in innovation has been noted to be dependent on flexibility of an organisation, as well as management capability in cooperating with third actors and outside organisations (Daskalakis and Kauffeld-Mons 2005). They point out that by a firm participating in synergetic course with partners belonging to the network; the organisation will be in a position to conquer in-house constraints. Further, since the global economy is based on an internationalisation inclination, these networks progressively happen on an international scale. Currently organisations are enclosed in contrasting national surroundings, in addition to the worldwide business environs. Consequently, networks can be found on these different geographical scales.

Establishment of networks are possessions which would offer innovation capabilities as well as knowledge (Gulati 2009). By acquiring the knowledge through networking, a path would be noted through which an organisation's networking undertakings begin on a regional scale and then head to the international scale. Presently, each internationalisation strategy is created from experiences of the past as well as future prospects of each organisation and as such it can be characterised as a "highly contextualized and socially constructed activity" (Fletcher 2004). He further opines that the congregation of linked economic undertakings in a region enables the flow of resources, capabilities and knowledge, leading to a competitive advantage for the firm. An international networking process also taps into the localized capabilities that are mainly founded

on the region's infrastructure, natural resources, as well as built environment, and in particular the knowledge base (Asheim and Coenen 2005). It therefore follows that as a firm borrows from the capabilities of international partners, the expectation is innovation development of these firms will be improved.

Small and medium enterprises (SMEs) are now recognized in the world economy to play an essential role in international economic progression and sustainability. Given the increasing competitiveness of the global market, regarding innovation and business sophistication, the advantages of international networks lie in their ability of the small and medium sized enterprises to be flexible and to respond quickly to changing market conditions through highly personalized and differentiated products within a "collective entrepreneurship" context. This is no exception to the SMEs in the Nairobi CBD. The numbers of SMEs operating the CBD are diverse in nature ranging from those firms that deal with electronics, furniture, home appliances, and consultancy as well as clothing products. However, with the expansion of East Africa Community, The SMEs have expanded to the international markets with the value of Kenya exports increasing from Ksh 34.5 billion in 2010 to Ksh 85 billion in 2015, a move that can be attributed to the opening up of the international markets. As a result of international trading, the local SMEs have had to expand their collaboration with other partners to innovation of new products that are tailored to the new markets.

The study was based on interactive innovation models in which small and medium enterprises are put in the center encircled by other actors or organisations that may influence their capability to innovate. Bianchi and Labory (2011) noted that interactive model is whereby communication happens both ways instead of it being one way. A participant cannot be secluded then analysed alone; instead, the participant requires to be evaluated according to how it is operating compared to organizations in its network.

### **1.1.1 Concept of International Business**

International business consists of any commercial transaction that crosses the borders of any two nations and encompasses a huge as well as increasing share of the global total trade activities (Bennett, 2009). International business entails conducting business activities across national borders. International business is not only limited to exchange of goods and services, it also

includes foreign investment. The growing rate of multinational enterprises has helped make international business gained wide popularity. McDonald et al. (2002) noted that the movements of technologies, people goods, resources, services, as well as ideas amongst markets does have huge impacts on nations as well as their companies, individuals and governments. At the country level, involvements in international business undertakings help nations optimise country's proficiency in trade in delivering of services and goods to the international market. It's been noted that this as well increases the diversities of services and goods available in country marketplaces as well as expose consumers to ideas and new lifestyles. Eventually these exposures have effects on their country cultures encompassing the economic and political establishments, and influence a society's behaviours, lifestyles, and attitudes.

In companies, international business has been noted to help open up new opportunities abroad but also increase competition in domestic markets. International competitiveness makes organisations become highly efficient and innovative the way they use their resources which are limited. To the customers, international business does increase variety of services and goods into the global market and enhance living standards. More importantly, borders that are open enhance increased technologies exposure, new ways of doing things and ideas (Devinney, 2010). Grosse (2005) noted that state-governments do have huge impacts on international business undertakings by deciding how closed or open countrywide economies are to outside influences for instance investment and trade.

International business rule comprises of multilateral and bilateral arrangements amongst nations which commands the terms of trade amongst them. These trade policies and relations differ in content and scope but depend generally on the economy structure of a specific nation (Hill, 2005). At the international level, the process of globalisation plays a significant role in promoting and determining consequent trade policies. At the domestic level, policy making is very well allied with the autonomy of state agencies as well as and their institutional capacity and strength. Given that no countries or state produces everything it requires single-handedly, international business has not only turn out to be an avenue whereby countries get the services and goods that is not available to them or lack adequate amounts but also a subject of international politics either for realising, encouraging or sustaining peace among global trading partners or nations and a source of countrywide insecurity resulting from external advancements

in nations with which it depends or inter-depend on for crucial merchandises and occasionally battles are fought to preserve that security of the nation (Torre, 2008).

### **1.1.2 Concept of Competitiveness**

Competitiveness is the capability of supranational regions, organisations, regions, and industries to produce, as well as the same time remain exposed to international competition, moderately high factor income, and factor employment levels on a maintainable foundation (Gulati, 1999). Porter *et al.*, (2006) acknowledges that competitiveness is the foundation of success, based on productive prospective of a countries economy, which in turn is eventually set by the efficiency of its organisations driven by complexity of organisation strategy and actions as well as excellence of microeconomic business environment. An organisation's maintainable competitiveness originates from its capability to bring together and exploit a suitable blend of resources. This is attained by constantly developing prevailing and generating new resources and competences in response to vibrant market situations (Barney, 2007).

Traill and Pitts (2007) posit that competitive trade is one that enjoys the continual capability to gainfully achieve and sustain market share in both foreign and domestic markets. Therefore, explained, sectorial competitiveness has its particular part to play between national and business competitiveness. Whereas commercial competitiveness largely hangs on the organisational design of the individual organisation, countrywide competitiveness, largely hangs on the political economy and of the nation. International competitiveness, as cited by the authors above indicate, is a little harder to comprehend, but it can be as distinct from the countrywide average as the organisational framework of regions may deviate within a country. In the setting of economic globalization in the international market, each nation attempts to gain competitive advantage in numerous sectors in order for it to enhance the international competitiveness of their product as well as enlarge their market portion. Industrial competitiveness is a nation's specific industry's capability providing the need to meet product demand to the international marketplace and increase earnings constantly, through its highly enhanced capability and production effectiveness in comparison to other nations in the free trade international marketplace (Zhao & Wen, 2004).

The ambience of great worldwide competition calls for a great level of capability to uphold or progressively improve the business performance. Vos (2009) noted that managers or owners of

management skills are very limited and that it needs to be must be advanced for organisations to be capable to of effectively execute corporate strategies which will enhance the organisation's competitiveness. Nonetheless, there have been a number of contentions on the competitiveness measurement, owing to the indexes used and interpretations have generated contention. Ezeala-Harrison (2010), accepts that competitiveness can be measured through seven indexes: nature of competitive advantage, capacity for innovation, the brand extension, restriction of the regulations of the environment, quality in the education of mathematics and science, quality in the education system, and ease of access to credit.

Lichtenthaler (2010) defines international competitiveness as the governing techno-economic profound absolute competitiveness. This competitiveness is built on international resources and a region's socio-institutional ability to refurbish the resource base in a collaborative and collective learning process growing international innovativeness and productivity as well as generating wellbeing for the nationals of a region.

### **1.1.3 Small and Medium Sized Enterprises**

Small enterprises can be defined as those businesses which employ not more than 10 workers. In the Kenyan scenario, a study conducted by Kimuyu and Omiti (2000) defined a small enterprise as one that employed between five and about fifty people. Mostly, the enterprise would be managed by the owner or directly controlled by the community of the owner. They are commonly family owned. The enterprises prospectively operated from industrial or business premises meet other formal registration requirements and are tax-registered. Nevertheless, they observed that categorization in terms of turnover and assets was challenging, because of the varied variances in several business sectors like manufacturing, professional services, construction, and retailing. Medium enterprises entails a kind challenging to define compared to the "small" and "big" business groups. They are still regarded as fundamentally owner-controlled, though the shareholding or community control base. They are characterised by employment of more than two hundred (200) employees and capital assets of a considerable amount of about Ksh. 2 million not including property (Kimuyu & Omiti, 2000).

An SME's size of entire personnel differs extensively across commercial organisations and undertakings. Nevertheless, there are two crucial constituents of the workforce who are apprentices and entrepreneurs. It has been noted that informal sectors engage noticeably more

workers and apprentices compared to the formal service sector which is domineered by owners. Growth of employment in Kenya's small enterprise sector has in the recent past far-off overtaken growth in the larger modern sector (Aboagye, 2011). Nonetheless, a lot of SMEs still need personnel who have expertise which school dropouts mostly lack, hence the small enterprise sector will not possibly unravel Kenya's unrelenting joblessness problem on its own (Ongile & McCormick, 2006).

#### **1.1.4 Nairobi City County Central Business District**

The Nairobi City County Central Business District is defined by the Nairobi Central Business District Association (NCBDA) which is a registered society under the Societies Act (Cap 108) and was formed in May 1997 as a rectangular shape, around the Uhuru Highway, Haille Selassie Avenue, Moi Avenue and University Way. It includes many of Nairobi's important buildings, including the City Hall and Parliament Building. The city square is also located within the perimeter.

NCBDA's mission is to make Nairobi the choice of Africa-Clean, secure, and vibrant-Home for all. This is reinforced by their clarion call, "Improvement through Action". NCBDA is basically investing in the future through focusing on city refurbishing. NCBDA expects realise noteworthy, evident improvement of downtown Nairobi. In return it will avail gradually additional striking openings for investment. In order to release this goal, NCBDA's objectives are: to abolish hindrances to commercial progression by troubleshooting and strategic planning of key concerns facing the business community, such as traffic management, security, infrastructure development, street people informal traders among others; to analyse trends and key economic indicators important to the Central Business District and its environs as a way to sustaining a comparative and competitive business surroundings which fosters a positive image for Nairobi and to be enabler and support, along with other community partners, in enhancing investment and development and making Nairobi the international hub.

#### **1.2 Research Problem**

The increasing globalization of markets and increased competition associated with increasing technological complexity make innovation an important factor for firms, increasingly highlighting the importance of establishing international networks (Lichtenthaler, 2010).



International networks drive an important contribution to increasing the competitiveness of economies and regions. This networking may involve the development of innovative projects, new technology, cost synergies or access to limited resources. This also results in benefits for international competitiveness through the geographic proximity between firms and other international / local actors (Bigliardi and Galati, 2012). International business has transformed gradually with a number of environmental factors forcing the changes in ways of conducting business. Many of the factors are as a result of the effects of globalization. Globalization has seen several business enterprises rethink the strategies that can be pursued in order to trade internationally international. This has seen the implementation of international integration which is already a significant contributor to the economic activities of several enterprises.

The small and medium enterprises sector in Nairobi CBD is very visible and is the largest provider of essential services and goods to the general public. The sector is an important component in the country and is often used as the benchmark in terms of its development and the general growth of the National economy. By being a major employer, the sector has thus contributed in constructive ways and positively to the people and economy of Kenya. However, purely domestic SMEs are confronted by international competition if their sales and products are enormously segmented or localised.

International studies that have been undertaken on the role international networks in the innovation process as a source of competitiveness includes Gordon and McCann (2009) study on innovation, agglomeration, and international development. The study established that there is no inherent reason why any particular configuration of geography and industrial organization (clusters of firms) should be in general terms superior to others. Beugelsdijk (2011) studied international surroundings and an organisation's innovative performance. The findings were that organisation specific motivations for innovation are more significant than the international environment of the firm.

Other studies include Nguku (2013) study on external environmental factors influencing China-Kenya trade and established that external environmental factors like; political environment, legal environment, economic factors, social cultural factors and technological environment influenced the growth of Sino-Kenya trade. Policies developed by two nations have seen the growth in the

movement of foreign direct investments although the balance between the two trading partners has not been achieved. Nyagaka (2014) researched on the role of international trade in achieving food security in sub Saharan Africa. He found out that the capacity to import food has plummeted, occasioning the country into more food insecure issues. The balance of trade between Kenya and the rest of the world has deteriorated against Kenya. The study consequently sought to answer the question; what is the role of international networks in the innovation process as a source of competitiveness among the SMEs in Nairobi City County Central Business District?

### **1.3 Research Objective**

The objective of the research study was to establish the role of international networks in innovation process as a source of competitiveness among the SMEs in Nairobi City County Central Business District.

### **1.4 Value of the Study**

Appreciating the role of international integration in fostering international trade in a country will help policy makers scheme earmarked procedures and platforms that will keenly encourage progression and sustainability of such businesses due to the role they play, along with assisting the policy makers back, inspire, and encourage formation of suitable guidelines to guide the organisations. Current SMEs practitioners once they realize the major factors that affect the performances of their SMEs, they will be able to rectify their mistakes accordingly. Prospective SMEs practitioners will be able to avoid the past mistakes that have led to the failure of the SMEs.

Findings from the study will be of value to management and staff of small and medium sized enterprises as they will get understanding on how their organisations would efficiently run their business internationally and get better offer from their trading partners. The study will also give insights on the significance of embracing an efficient international network for both the SMEs and its partners thus offer competitive advantage to the firms.

The study will be of importance to the government more particularly the Ministry of Trade and Industry in making policy decisions with an overall objective of reducing bottlenecks in the

operations of SMEs while at the same time fast-track the growth rate in the sector as well as take advantage of the improved economy and reductions in bottlenecks.

The study will also build an article that can be adopted by other players in the industry. Predominantly, the study is expected to the literature on the international trade amongst firms especially in developing countries like Kenya. It's anticipated that the results will be of value to academicians, who may use this study to establish research gaps that may be of interest for further study/research. Recommendations were provided on potential areas of future studies.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter was structured based on the research objectives. It reviewed appropriate literature available that focused on the theoretical framework, specific characteristics of innovative SMEs, international networks and innovation process and international networks and competitiveness.

### **2.2 Theoretical Foundation of the Study**

There are different theories on innovation and networking, each identifying own paradigm and concept about the innovativeness and networking. Highlighted below are some of such theories which include;

#### **2.2.1 Interactive Innovation Theory**

Interactive innovation theory states that small and medium enterprises are positioned in the centre surrounded by other institutions or actors or which could influence their capability to innovate. Bianchi and Labory (2011) noted that interactive model is that communication occurs in both ways instead of it being one way. The theory of Interactive Innovation is promoted by the evolutionary and institutionalist theory. The indigenisation of international institutions is considered as a core issue and this institutional endowment increases success and competitiveness of region (Maskell & Malmberg, 2012). Therefore, in this approach, international economic success is encouraged by institutions and network relations, which are also necessary for innovation and knowledge creation (Hudson, 1999). The theory of Interactive Innovation focuses on the institutional basis of learning and innovation. In this approach innovation is a creative, social and economic process, depending on international networks, rather than a result of only research activities.

Networks of international agents constitute the institutional base of international innovation systems. Relations with different type of research and development organisations, and collaboration with clients, suppliers and partners through informal and formal international networks are considered as the main sources of learning process and innovative activities (Maskell & Malmberg, 2012). It could be concluded that both industrial districts and international innovation systems bring overemphasis on international agents and international

networks. Within these contemporary development approaches, international embeddedness, tacit knowledge, international institutional environment and production culture have been strongly emphasized.

### **2.2.2 Traditional Trade Theory**

Traditional trade theory stresses the achievements from specialisation occasioned by dissimilarities amongst nations (Marshall *et al.*, 2011). The aspect that supports this notion mutually advantageous business opportunities exists because of specialisation on the basis of relative effectiveness – “a country does not have to be better at producing something than its trading partners to benefit from trade (absolute advantage). It is sufficient that it is relatively more efficient than its trading partners (comparative advantage).” This understanding clarifies the reason why numerous opportunities exist to gain from trade than the case would be should absolute advantage be only considered. Other current theories indicate additional origins of advantages from trade that are not connected to variances in countries, for instance heightened competition, economies of scale in production, access to a wide selection of goods, enhanced output and possibly highly steady prices and markets (Pike, 2008). Commerce has enabled countries to gain from economies and specialisation to produce more proficiently. This in return increased output, reinforced by enhancement of new technologies as well as knowledge, in addition improved variety accessible to customers. The achievements got from trade-transaction may probably not be disseminated equally, inside or amongst countries, consequently demonstrating why some parties oppose free trade policies

The theory recommended some reasonable advantage as aiding a nation benefit from international business (Raj *et al.*, 2012). This will also be true for the organisation. If an organisation is to achieve a maintainable greater performance (that is equivalent to maintainable competitive advantage) then it needs to make itself differentiated. Alderson (2009) suggested at an elementary principle of maintainable competitive advantage, that a vital characteristic of competitive advantage is the specialisation of suppliers to achieve the differences in buyer demand. Kijewskiet *al.*, (2007) acknowledged that organisations should strive for unique characteristics in order for them to differentiate competitors from themselves in the eyes of the consumer. Additionally, he mentioned that distinct advantage could be attained by reducing prices, product enhancement, selective advertising appeals as well as innovation. Whereas these

notions place the principal foundation for organisations in working towards maintainable competitive advantage, it is noted that the fierce type of competition nowadays needs organisations to be highly entrepreneurial and innovative in their strategy planning instead of only enhancing existing products and reducing prices.

### **2.3 Specific Characteristics of Innovative SMEs**

Internal characteristics and capabilities of SMEs, which are essential to absorb and use external linkages and external knowledge, are significantly important in the innovation and growth processes. External linkages as external sources are necessary but not sufficient condition for SMEs in the innovation process. At that point, internal sources of innovation should be analysed. In innovation networking literature, the innovative SMEs are analysed and the main characteristics of them are defined implicitly or explicitly. Size could have positive effect on innovativeness if the number of skilled worker increases with the firm size. A large percentage of skilled personnel may also refer to more advanced absorptive capacity to extent networking potential of firm in the innovation process. Freel (2013) finds an affirmative association between the percentage of technicians in the personnel of SMEs and the innovativeness and the existence of extended spatial linkages in Northern British. Arndt and Sternberg (2010) also conclude similar results from their original database on 10 European Union regions. Larsson and Malmberg (2010) noted that organisations with an international innovation networks tend to have more of scientific workers compared to do companies' mainly local or national technology relations.

The region and age of the firm create differences as regards to innovativeness. For example, Koschatzky (2009) indicates that the importance of international effects in the innovation process of SMEs has changed according to type of region: rural, central urban and intermediate regions. Among them, firms in central regions reveal greater innovative capacity than that of firms in other regions. Keeble, Malecki and Poehling (2011) advocate that learning and innovation increase over time as a firm matures. The innovative firms have the tendency toward path-dependence and over-specialization. Another important effect on innovative capacity is the exports of SMEs. Koschatzky and Bross (2011) also reveal that larger, more exported and more cooperated firms are more innovative. Raj *et al.*,(2012) shows that high-technology, innovative

SMEs have higher export rate, more collaboration and partnership with other agents, higher employment and turnover growth but lower number of employees than non-innovative SMEs.

Access to knowledge sources is the basic external sources of innovation, which depends on international and inter-international linkages. Although international and inter-international linkages have been handled specifically in the next part, here these linkages discussed briefly as a source of innovative capacity. In Grotz and Braun study (2007) innovative firms have a good knowledge of possible information sources. They are relatively independent from international innovation consultants and contact over large distances. The proximity of high-profile research institutions does not necessarily lead to a higher of innovativeness of SMEs. The networks of successful and innovative firms are probably non-local more than they are local (Malecki & Poehling, 2009).

#### **2.4 International Networks and Innovation Process**

Presently, innovation development is viewed as a technical as much as a social process. Non-linear practices strongly bounded in social and economic activities have seen innovations happen. Innovation is also achieved through interactive learning among organisations and their surroundings (Lundvall, 2012). Non-linear and interactive innovation model emphasizes “the plurality of types of production system and innovation (science and engineering is only relevant to some sectors), ‘small’ processes of economic coordination, informal practices as well as formal institutions, and incremental as well as large-scale innovation and adjustment” (Storper and Scott, 2009). International innovation networks are an important part of an international innovation system. Given that innovation processes are viewed to be greatly collaborative; the participants of the innovation network “need to develop a common language and modes of interpretation and, above all, trust in order to overcome some of the uncertainties characterizing the innovation process” (Raj *et al.*, 2012).

Arndt and Sternberg (2010) suggest that SMEs should cooperate during the innovation process for the reduction of uncertainties and costs, for the increasing flexibility towards changing market conditions. High level of networks creates a synergy to induce innovative activities and also affects innovativeness positively. Because the significance of networking to the innovation process does make clear, that networking is an important way of exchanging knowledge. To a

certain degree, networking is able to reward for missing in-house resources and knowledge, but without the capability for absorbing external knowledge and assimilating it into their own production, firms not benefit from learning effects of networks. Therefore, access to networks becomes the basis of development and knowledge capacity. Successful innovation depends on the knowledge creation capacity of firms and as well as entering into external relations with other firms in international, national or international levels (Koschatzky, 2010).

Organisations that are network-based have demonstrated to being elastic and flexible compared to organisations with hierarchies. Consequently, the continually pressure increase in the information age to improve adaptation, flexibleness, as well as the capability to respond to the adjustments, while at the same time remain efficient, has led to network-based organisations. The network-based organisation development has been independent of the sector of life. Important points in these happenings are swiftness, competition and continuous change (Olluset *et al.*, 2008). Changing networks as well as eliminating existing boundaries inside and amongst organizations in the international innovation system. For organisations to encourage more flexibility as well as improve the utilisation of project efforts, hierarchies are removed (Olluset *al.*, 2008).

Recent development models emphasize that in the recent era of globalization, the role of international networks and international learning become more important (Maskell & Malmberg, 2009) and generate new knowledge, new technology. In addition, this international creation of knowledge contributes to innovativeness of firms. In the related literature there are the common view about significance of innovation as the most important engine of long-term success, competitiveness and growth of firms and regions (Simmie, et al., 2012). According to the evolutionary approach with the changes in the perception of knowledge and learning, innovation process has transformed significantly during the last years. With the criticism of linear innovation models, broader viewpoint with respect to innovation process, which also includes social and relational perspective, comes into agenda.

Foundation of research and development units and creation of codified knowledge has been important for the international innovativeness and development. The research and development expenditure is concentrated in large firms and they are expected to drive the technological



progress. While large firms have advantages in the production of codified knowledge, SMEs could benefit from the international accumulation of tacit knowledge through the international networks (Patrucco, 2013). The outcome of international knowledge creation could be exploited by everybody in international learning processes, against the will of the first creator. For small firms one way of solving the problem of improving the innovative capacity relies on international collective learning. In this sense, international collective knowledge could be exploited by small and medium sized organisations effectively in the region (Capello, 2009).

Capability of small firms to cooperate and organizational, institutional and cultural proximity ensures the development of dynamic and creative synergy. Trust amongst SMEs is yet another component in which dynamic synergy rest, given that it helps decrease the uncertainty and in the innovation process. In international networks of small firms, dynamic synergy causes the exchange of cumulated local-know-how and knowledge in the region (Keeble and Wilkinson, 2009). Moreover, it is also necessary that small and medium sized entrepreneurs need to supplement international tacit knowledge with codified research and development results. The cooperation with other small firms, large firms, universities and research institutes become meaningful in order to integrate tacit knowledge with research and development based codified knowledge.

The role of internationally embedded networks and international tacit knowledge changes according to the stages of development, especially in regions, specialized in low-tech sectors. International networks are important in the initial phases of development, but in the later stages internationally embedded networks may lost their importance due to the increasing competition (Amin, 1999, Eraydın, 2012). Schmitz and Nadvi (2009) noted that in this process collaborative environment of region encourages knowledge dissemination among entrepreneurs and cause to invest and to innovate. After a period, if regions do not find new knowledge sources, new ideas and motivations, they may lose their innovative capacity and earlier success level. Although international networks provide the new knowledge to SMEs at a certain degree, collective learning, locked into international tacit knowledge, has some limitations for international development. Only using international tacit knowledge and only taking place in the international collective learning could protect the firm from adapting global shifts.

## **2.5 International Networks and Competitiveness**

Innovation is in the recent years viewed at a macro/firm-level perspective and not at micro/product/level by scholars (Siguaw et al., 2006). Trott (1998) noted that the key basis for the new trend is that the describing element for lasting existence through innovation look as if is not founded on explicit, distinct innovations; but quite on a predominant, whole-organisation innovation ability structure, named “innovativeness”. The rationality supporting the perspective is that a young enterprise long-lasting existence could highly depend on the enterprise’s overall of innovativeness which yields strategic competencies which sequentially boosts the improvement of innovations, as well as not as much on the real innovations (Trott, 1998). It is this distinctive characteristics that sum up the difference between innovativeness and innovation. Innovation can be explained as a result focused measure, for instance “new product success” (Ayers et al., 1997). Menguc and Auch (2006) on the other hand noted that innovativeness is acknowledged as a relative variable which represents an organisation level alignment towards innovation.

An organisation which has the capability to be agile, quick to change, and be vigilant on the alterations in the environment (Innovativeness attribute), and is able to use its strategic abilities quicker and more advantageously than competitor, is well placed in adjusting faster as well as without difficulty to the varying market situations, hence form a greater competitive advantage (Eisenhardt and Martin, 2010). Certainly a firm which has capability to build and establish distinctive resources quicker than competitors is considered to be more innovation capable or more innovative (Winter, 2013). Basically this implies that an innovative firm is one which is proactive and continually explores new market opportunities instead of taking advantage of the one that already exist (Menguc and Auch, 2006). Innovativeness that’s characterized by high level of organisational flexibility, efficient and active implementation of new organizational practices and strategies does enhance yield and aids organisations match their asset base to the changing business environment needs.

The main source of success for the economic actors is sustainable competitiveness. Economic participants’ competitiveness is highly associated to their adaptableness to the emerging techno-economic environment (Hodgson & Knusden, 2013). Camagni (2012) noted that due to their inherent openness to the movement of both factors and goods, nations work within a system of absolute competitiveness and not within a system of comparative competitiveness. Their absolute

competitiveness being at an insufficient level with respect of the other nations may result in mass employment, and, if public transfers of income are insufficient, abandonment and emigration.

Boschma (2013) noted that an actor's competitiveness is dependent on their ability to learn and innovate. The competitiveness sources have also been considered to be vital in an international context. Economic development is viewed as a process that is path dependent, cumulative and communicative which inclines to be local in nature. According to Storper (2011), it is in non-market environment that the sources of competitiveness are determined than in market environment including for example the untraded interdependencies. Untraded interdependencies include the institutional, social, cognitive and cultural conventions that are formed during history between nations. The importance of international institutional settings and routines in fostering the localised, cumulative and geographically bounded collective and interactive development processes is emphasized in Evolutionary economics and institutional economics frameworks. These institutional settings must include elements enabling the processes learning, networking, leadership and leadership in the international development network. These processes should lead to increasing international productivity, since "productivity is not everything, but in the long run it is nearly everything" (Asheim & Coenen 2005).

Asheim and Cooke (2011) noted that territorial agglomerations could develop competitive advantage through the internationally embedded network relations and learning process. International inter-firm networks and common know-how cause the emergence of embedded tacit knowledge, which is crucial for international competitiveness and development. The economic success stories of Silicon Valley, the Third Italy and international clusters in Southern Germany cause this conclusion about importance of international networks (Cook and Morgan, 1998,). It might be possible to replicate the economic success of these experiences in other regions from developed and developing countries through replicating strong international networks and collaboration with competitors, suppliers, customers, universities etc. In this idea spatial proximity is considered as the engine steering these networks by facilitating face to face contacts and fostering the sense of community (Romijn & Albu, 2012). Important functions of networks are to open the doors to resources and knowledge necessary for the development, production and consumption of goods. In this perspective international and inter-international

networks play a crucial role in accessing complementary resources which a single firm or region does not possess.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter contained a description of the methods and procedures that was used to carry out the study. The chapter gave summary information regarding the methodologies that was adopted and used in this study. The chapter described the research design, target population, data collection procedures and methods used for analyzing and presenting the data.

### **3.2 Research Design**

The study used descriptive research design. A descriptive research design objective is to establish the; who, what, where, when and how much (Cooper and Schindler 2000). Additionally, a descriptive research design is structured, has investigative questions and part of formal studies. The design was suitable since the key interest was to explore the viable relationship and describe how the factors supported matters under investigation. Descriptive design method provides quantitative data from a cross section of the chosen population. This design provided further insight into research problem by describing the variables of interest.

### **3.3 Population of the study**

Population is a well-defined or set of people, services, elements, events, group of things or households that are being investigated (Ngechu, 2004). This definition will ensure that the population of interest is homogeneous. A research study's target population should be clearly defined and the unit of analysis should be identified, which is not easy sometimes. The target population consist of all the units being studied.

The population of the study was all the Small and Medium Sized Enterprises operating in Nairobi Central Business district. According to the County Government of Nairobi records (2016) there are 726 SMEs operating in Nairobi Central Business District.

### **3.4 Sampling and Sample Size**

Cooper and Schindler (2000) defined a sampling design as the target population that is being studied using sampling methods. The study used all the SMEs from different sectors operating in

Central Business District. In the study, the researcher used simple random sampling technique. The technique accorded all the members of the population equal chance of being selected for the study. The researcher picked the SME which falls in a number after every ten in the County Government of Nairobi records (2016). This enabled the researcher to arrive at 73 SMEs as the sample size.

### **3.5 Data Collection**

The study used primary data which was collected using semi structured questionnaire. Self-administered questionnaires allowed the participants to respond to the questions by themselves and at their own pace. The questionnaire consisted of both open and closed-ended questions. The close ended questions provided more structured responses to facilitate tangible recommendations. The open-ended questions provided additional information that may not have been captured in the close-ended questions. Walliman (2001) notes that use of questionnaire ensured that confidentiality was upheld, saves on time and was very easy to administer. The respondents rated their responses using a five point Likert scale.

### **3.6 Data Analysis**

Once the data was collected, the questionnaires were edited for accuracy, consistency and completeness. However, before final analysis is performed, data will be cleaned to eliminate discrepancies and thereafter, classified on the basis of similarity and then tabulated. The data collected was analyzed using descriptive statistics (measures of central tendency).

Data was analyzed using statistical package for social sciences based on the questionnaires. In particular mean scores, percentages and frequency distribution were used to summarize the responses and to show the magnitude of similarities and differences. Results were presented in frequency tables and charts.

## CHAPTER FOUR: DATA ANALYSIS, INTERPRETATION AND PRESENTATION

### 4.1 Introduction

This chapter presents the data analysis, interpretation and presentation of findings on role of international networks in the innovation process as a source of competitiveness among the SMEs in Nairobi City County Central Business District. The specific objectives of the study were; to establish the factors influencing SMEs to undertake International Networking, to establish the extent to which international networks contributed to innovation in the SMEs and to establish the extent to which international networks has contributed to competitiveness of the SMEs. The SPSS programme was used to compute the frequencies and percentages which were then presented in form of frequency tables and graphs and pie charts. The analysis has been presented in the order of the specific areas the researcher was interested in.

### 4.2 Response Rate

	<b>Frequency</b>	<b>Percentage (%)</b>
Responded	56	77
Not responded	17	23
Total	73	100

**Source: Author, 2016**

A list of 73 SMEs targeted by the study was reached as shown in the appendix 111. A total of 73 respondents were supplied and requested to fill the questionnaires. Out of this, 56 respondents filled and returned the questionnaires whereas 17 of them were either returned faulty or were never returned at all. This therefore gave the study a response rate of 77% which was adequate for analysis. Mugenda and Mugenda (2010) assert that a response rate of 75% or above is adequate for academic research.

### 4.3 Demographic information of the Respondents

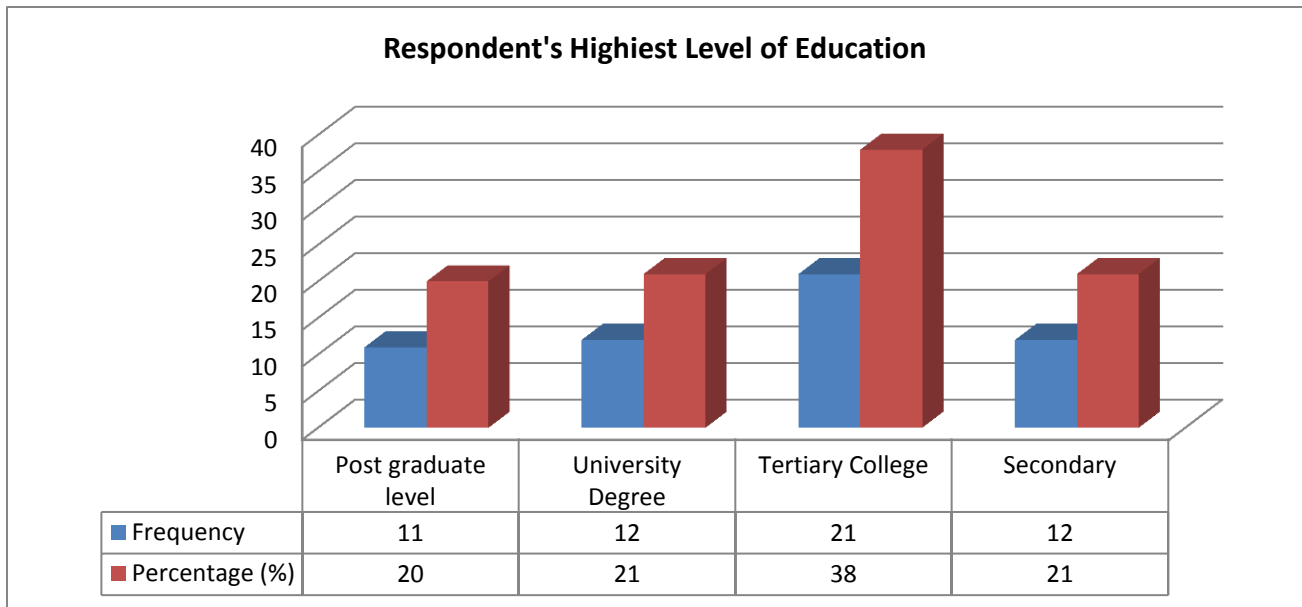
**Table 4.1: Respondents' Highest Level of Education Qualification**

	Frequency	Percentage (%)
Post graduate level	11	20
University Degree	12	21
Tertiary College	21	38
Secondary	12	21
Total	56	100

**Source: Author, 2016**

The researcher wanted to establish the respondents' highest level of education qualification. According to the findings, 38% of the respondents had tertiary college certificates, 21% had university degree education and 21% had secondary certificates whereas only 20% had post graduate level certificates respectively. This is an implication that most of the respondents had adequate level of education to understand international networking and the relationship between international networking, innovativeness and competitiveness. The results on respondents' highest level of education are as shown in the figure below;

**Figure 4.1: Respondents' Highest Level of Education**



**Source: Author 2016**



**Table 4.2: Respondents Length of Continuous Service with the SME**

	<b>Frequency</b>	<b>Percentage (%)</b>
Less than five years	21	38
5-10 years	25	45
Over 10 years	10	18
<b>Total</b>	<b>56</b>	<b>100</b>

**Source: Author, 2016**

The study wanted to establish the respondents' length of continuous service with their SME. According to the results displayed in the table above, 45% of the respondents had a length of continuous service with their SME of between 5-10 years, 38% said less than 5 years while 18% said over 10 years respectively. This implied that majority of the respondents had served for an adequate number of years which hence enabled them answer questions related to role of international networks in the innovation process as a source of competitiveness among the SMEs in Nairobi City County Central Business District.

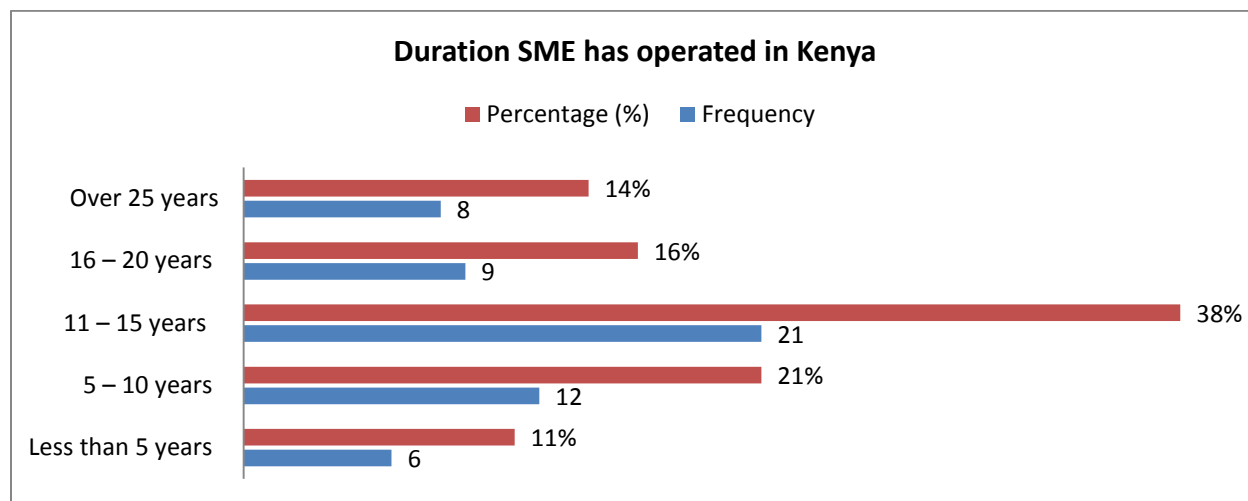
**Table 4.3: Duration the SME has been in operation in Kenya**

	<b>Frequency</b>	<b>Percentage (%)</b>
Less than 5 years	6	11
5 – 10 years	12	21
11 – 15 years	21	38
16 – 20 years	9	16
Over 25 years	8	14
<b>Total</b>	<b>56</b>	<b>100</b>

**Source: Author, 2016**

The study wanted to find out the duration the SME has been in operation in Kenya. According to the results displayed in the table above, 38% of the SMEs had operated in Kenya for a duration of 11-15 years, 21% said 6-10 years, 16% said 16-20 years, 14% said over 25 years whereas 11% said their SME had operated in Kenya for a duration of under 5 years respectively. The results on duration the SME has been in operation in Kenya are also shown in the figure below;

**Figure 4.2: Duration SME has operated in Kenya**



**Source: Author, 2016**

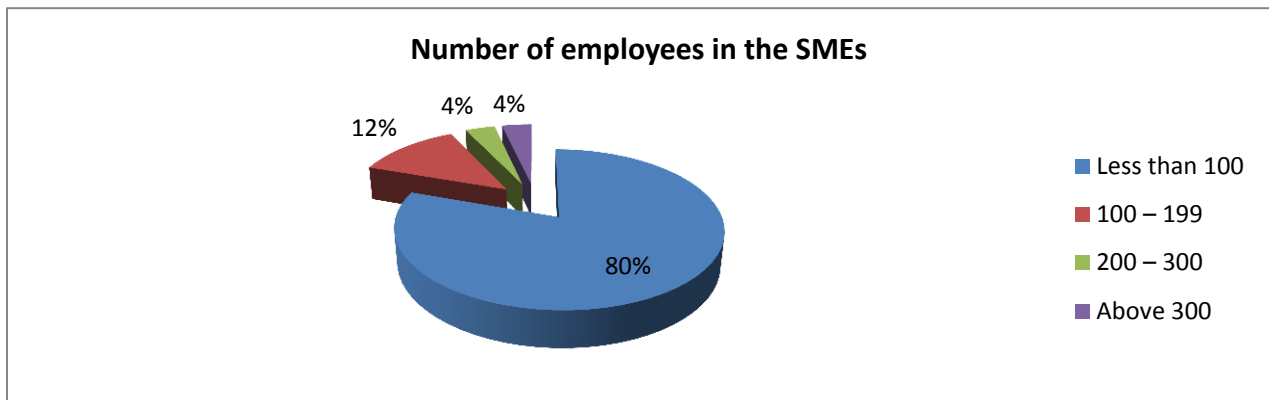
**Table 4.4: Number of employees in the SME**

	Frequency	Percentage (%)
Less than 100	45	80
100 – 199	7	12
200 – 300	2	4
Above 300	2	4
Total	56	100

**Source: Author, 2016**

The table above depicts findings on number of employees in the SMEs. On this question, 80% of the SMEs had less than 100 employees, 12% had 100-199 employees, 4% had 200-300 employees whereas 4% had above 300 employees. This was an implication that most of the SMEs were not as diverse thereby having low number of employees whereas others had branches in the NCBD and outside the city thereby having high number of employees. The results on number of employees in the SMEs are as shown in the figure below;

**Figure 4.3: Number of employees in the SMEs**



**Source: Author, 2016**

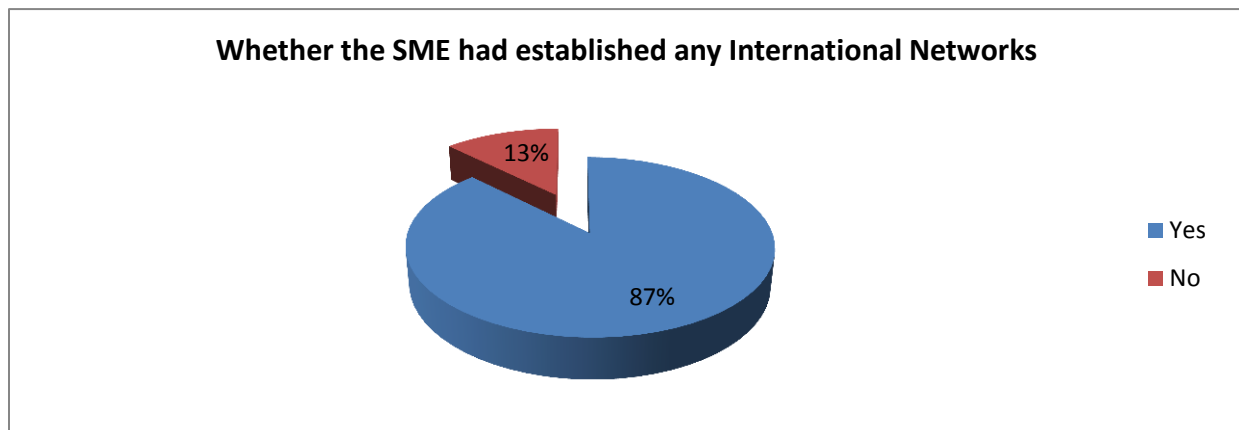
**Table 4.5: Whether the SME had established any International Networks**

	Frequency	Percentage (%)
Yes	49	87
No	7	13
Total	56	100

**Source: Author, 2016**

The researcher wanted to find out SME had established any International Networks. According to the findings in this study, majority of the respondents (88%) said that their SME had established some international networks whereas a few as shown by 13% said that their SMEs had not established any international networks. The results on whether SMEs had established international networks are as shown in the figure below;

**Figure 4.4: Whether SMEs had established International Networks**



**Source: Author, 2016**

### 4.3 International Network and Innovation

**Table 4.6: Extent to which some characteristics contributed to innovativeness of SME in the NCBD**

Innovativeness of SMEs	Mean
Internal characteristics and capabilities of SMEs	4.20
The size of SME	3.80
Number of skilled worker increases with the firm size	3.94
Age of the firm	3.60
International and inter-international linkages of SME	3.92
Openness to new ideas	3.90
Financial structure of SME	3.78

**Source: Author, 2016**

The table above depicts findings of respondents' ratings on extent to which some characteristics contributed to innovativeness of SME in the NCBD. According to the findings, majority of the respondents were in agreement that; internal characteristics and capabilities of SMEs contributed to innovativeness of SMEs in the NCBD to a great extent as shown by the mean of 4.20; the size of SME, the number of skilled worker increases with the firm size, the age of the firm, international and inter-international linkages of SME, openness to new ideas and financial structure of SME contributed to innovativeness of SME in the NCBD to a moderate extent as shown by the mean of 3.80, 3.94, 3.60, 3.92 and 3.78 respectively. From the findings it was also noted the characteristics that contributed to innovativeness of SME in the NCBD to a moderate extent had means that were very close to great extent mean.

#### 4.4 Factors influencing SMEs to undertake International Networking

**Table 4.7: Extent to which listed factors influence SMEs to undertake international networking**

<b>Reasons for international networking</b>	<b>Mean</b>
Insufficient quality systems of international firms	3.74
Insufficient technological levels of international firms	3.66
Production and organization structures of international firms do not fit to you	3.83
Absence of skilled employees in region	4.02
External relations provide new external knowledge	3.34
Difficulty at finding firms from your region	3.68

**Source: Author, 2016**

The table above depicts findings on respondents rating on the extent to which listed factors influence SMEs to undertake international networking. According to the results, majority of the respondents were in agreement that; absence of skilled employees in region influenced SMEs to undertake international networking to a great extent as shown by the mean of 4.02. Insufficient quality systems of international firms, insufficient technological levels of international firms, production and organization structures of international firms do not fit to some SMEs, external relations provide new external knowledge, difficulty at finding firms from your region influenced SMEs to undertake international networking to a moderate extent as shown by the mean of 3.74, 3.66, 3.83, 3.34 and 3.68 respectively.

#### 4.5 Extent to which international networks contributed to innovation in the SMEs

**Table 4.8: Extent to which international networks contributed to innovation in the SMEs**

<b>International network contribution</b>	<b>Mean</b>
International accumulation of tacit knowledge	4.01
Increased elasticity and enhanced utilization of project work	3.78
Increased development and knowledge capacity	3.78
Change and eliminate the boundaries inside and between organizations in the international innovation system	4.08
Integration of tacit knowledge with research and development based codified knowledge	3.76
Increased flexibility towards changing market conditions	3.60
Reduction of uncertainties and costs	3.94
Development of dynamic and creative synergy	3.54

**Source: Author, 2016**

The study wanted to establish the extent to which international networks contributed to innovation in the SMEs. According to the findings depicted in the table above, majority of the respondents were in agreement that international networking lead to; international accumulation of tacit knowledge and change and eliminate the boundaries inside and between organizations in the international innovation system, integration of tacit knowledge with research and development based codified knowledge contributed to innovation in the SMEs to a great extent as showed by the mean of 4.01 and 4.08 respectively. Increased elasticity and enhanced utilization of project work, increased development and knowledge capacity, , increased flexibility towards changing market conditions, reduction of uncertainties and costs and development of dynamic and creative synergy all of which contributed to innovation to a moderate extent as shown by the mean of 3.78, 3.78, 3.76, 3.60, 3.94 and 3.54 respectively.

#### 4.6 International Networks and Competitiveness

**Table 4.9: Extent to which international networks has contributed to competitiveness of the SMEs**

<b>International Network and Competitiveness</b>	<b>Mean</b>
International inter-firm networks and common know-how cause the emergence of embedded tacit knowledge	4.01
It enhances productivity and enables firms to match their asset base to the requirements of a changing business environment	3.73
To enjoy first mover advantage by exploiting speed to market	4.08
The SMEs can use it as a tool to collude against common rivals or reduce competition by binding competitors as allies.	4.26
It enables the SME to access complementary resources which a single firm or region does not possess.	3.89
It enables the SME to apply strategic capabilities sooner and more strategically than competitors	3.74
It enables SMEs to developing unique offerings that enhance their revenues	3.87
To achieve economies of scale and of learning	3.30

**Source: Author, 2016**

The table above depicts findings on the extent to which international networks has contributed to competitiveness of the SMEs. According to the results, it is clear that majority of the respondents were in agreement that; SMEs can use international networks as a tool to collude against common rivals or reduce competition by binding competitors as allies, enjoy first mover advantage by exploiting speed to market, and international inter-firm networks and common know-how cause the emergence of embedded tacit knowledge to a great extent as shown by the mean of 4.26, 4.01 and 4.01 respectively. The findings also established that majority of the respondent were in agreement that International network; enables the SME to access complementary resources which a single firm or region does not possess, enables SMEs to developing unique offerings that enhance their revenues, enables the SME to apply strategic capabilities sooner and more strategically than competitors, enhances productivity and enables firms to match their asset base to the requirements of a changing business environment, and that;

international networks help them to achieve economies of scale and of learning to a moderate extent as shown by mean of 3.89, 3.87, 3.74, 3.73 and 3.30 in that descending order respectively.

## **4.7 Discussion of Findings**

### **4.7.1 Factors influencing SMEs to undertake International Networking**

The study found out that majority of the respondents were in agreement that: absence of skilled employees in region influenced SMEs to undertake international networking to a great extent as shown by the mean of 4.02. Insufficient quality systems of international firms, insufficient technological levels of international firms, production and organization structures of international firms do not fit to some SMEs, external relations provide new external knowledge, difficulty at finding firms from your region influenced SMEs to undertake international networking to a moderate extent as shown by the mean of 3.74, 3.66, 3.83, 3.34 and 3.68 respectively. The results agree with Freel (2013) findings who assert that in there are main characteristics that determine whether an SME can undertake international networking or not.

### **4.7.2 Extent to which International Networks contributed to Innovation in the SMEs**

The study found out that majority of the respondents were in agreement that; internal characteristics and capabilities of SMEs contributed to innovativeness of SMEs in the NCBD to a great extent as shown by the mean of 4.20; the size of SME, the number of skilled worker increases with the firm size, the age of the firm, international and inter-international linkages of SME, openness to new ideas and financial structure of SME contributed to innovativeness of SME in the NCBD to a moderate extent as shown by the mean of 3.80, 3.94, 3.60, 3.92 and 3.78 respectively. From the findings it was also noted the characteristics that contributed to innovativeness of SME in the NCBD to a moderate extent had means that were very close to great extent mean. The study also established that majority of the respondents were in agreement that international networking lead to; international accumulation of tacit knowledge and change and eliminate the boundaries inside and between organizations in the international innovation system, integration of tacit knowledge with research and development based codified knowledge contributed to innovation in the SMEs to a great extent as showed by the mean of 4.01 and 4.08



respectively. Increased elasticity and enhanced utilization of project work, increased development and knowledge capacity, , increased flexibility towards changing market conditions, reduction of uncertainties and costs and development of dynamic and creative synergy all of which contributed to innovation to a moderate extent as shown by the mean of 3.78, 3.78, 3.76, 3.60, 3.94 and 3.54 respectively. Freel (2013) findings had found out that size had a positive effect on innovativeness if the number of skilled worker increases with the firm size. A high proportion of qualified staff may also refer to more developed absorptive capacity to extent networking potential of firm in the innovation process. The region and age of the firm create differences as regards to innovativeness. For example, Koschatzky (2009) indicates that the importance of international effects in the innovation process of SMEs has changed according to type of region: rural, central urban and intermediate regions. Among them, firms in central regions reveal greater innovative capacity than that of firms in other regions. The results also agree with Keeble, Malecki and Poehling (2011) who advocated in the literature that learning and innovation increase over time as a firm matures. The innovative firms have the tendency toward path-dependence and over-specialization. Another important effect on innovative capacity is the exports of SMEs. Koschatzky and Bross (2011) also revealed in the literature that larger, more exported and more cooperated firms are more innovative. Raj *et al.*,(2012) shows that high-technology, innovative SMEs have higher export rate, more collaboration and partnership with other agents, higher employment and turnover growth but lower number of employees than non-innovative SMEs. Access to knowledge sources is the basic external sources of innovation, which depends on international and inter-international linkages.

#### **4.7.3 Role of International Networks on Competitiveness**

The study found out that majority of the respondents were in agreement that; SMEs can use international networks as a tool to collude against common rivals or reduce competition by binding competitors as allies, enjoy first mover advantage by exploiting speed to market, and international inter-firm networks and common know-how cause the emergence of embedded tacit knowledge to a great extent as shown by the mean of 4.26, 4.01 and 4.01 respectively. The findings also established that majority of the respondent were in agreement that International network; enables the SME to access complementary resources which a single firm or region does not possess, enables SMEs to developing unique offerings that enhance their revenues, enables

the SME to apply strategic capabilities sooner and more strategically than competitors, enhances productivity and enables firms to match their asset base to the requirements of a changing business environment, and that; international networks help them to achieve economies of scale and of learning to a moderate extent as shown by mean of 3.89, 3.87, 3.74, 3.73 and 3.30 in that descending order respectively. The main source of success for the economic actors is sustainable competitiveness. Economic actors' competitiveness is strongly associated to their adaptability to the emerging techno-economic environment (Hodgson & Knusden, 2013). The results agree with the literature findings by Eisenhardt and Martin (2010) who argued that an organisation which has the capability to be agile, quick to change, and be vigilant on the alterations in the environment (Innovativeness attribute), and is able to apply its strategic abilities quicker and more strategically than competitor, is better placed to adjust more fast and without difficulty to changing market conditions, and thus form a superior competitive advantage. Certainly a firm which has capability to build and establish distinctive resources quicker than competitors is considered to be more innovation capable or more innovative (Winter, 2013).

## **CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Introduction**

This chapter presents the summary of findings, conclusions, recommendations and also suggests area for further studies on role of international networks in the innovation process as a source of competitiveness among the SMEs in Nairobi City County Central Business District. The specific objectives of the study were; to establish the factors influencing SMEs to undertake International Networking, to establish the extent to which international networks contributed to innovation in the SMEs and to establish the extent to which international networks has contributed to competitiveness of the SMEs.

### **5.2 Summary of findings**

This study obtained a response rate of 77% which was adequate for analysis according to Mugenda and Mugenda (2010). According to the findings, 38% of the respondents had tertiary college certificates, 45% of the respondents had a length of continuous service with their SME of between 5-10 year and this implied that majority of the respondents had served for an adequate number of years which hence enabled them answer questions related to role of international networks in the innovation process as a source of competitiveness among the SMEs in Nairobi City County Central Business District. According to the results, 38% of the SMEs had operated in Kenya for duration of 11-15 years and that 80% of the SMEs had less than 100 employees. According to the findings in this study, majority of the respondents (88%) said that their SME had established some international networks whereas a few as shown by 13% said that their SMEs had not established any international networks. The results showed that many SMEs had established international networking. The study established that there are characteristics that determine international networking such as the size, no of employees, exporting/importing levels and so on. It can also be summarized from the study that international networking of SMEs contributes both moderately and greatly to innovation and competitiveness of the firms. A firm that performs well internationally may compete effectively well internationally if it adopts the right technologies as well as effectively utilizing the resources.

### 5.3 Conclusions

It can be concluded that; absence of skilled employees in region influenced SMEs to undertake international networking to a great extent while insufficient quality systems of international firms, insufficient technological levels of international firms, production and organization structures of international firms do not fit to some SMEs, external relations provide new external knowledge, and, difficulty at finding firms from your region influenced SMEs from undertaking international networking to a moderate extent.

The study found out that; internal characteristics and capabilities of SMEs contributed to innovativeness of SMEs in the NCBD to a great extent while the size of SME, the number of skilled worker increases with the firm size, the age of the firm, international and inter-international linkages of SME, openness to new ideas and financial structure of SME contributed to innovativeness of SME in the NCBD to a moderate extent. From the findings it was also noted that international accumulation of tacit knowledge as well as change and elimination of boundaries inside and between organizations in the international innovation system, integration of tacit knowledge with research and development based codified knowledge contributed to innovation in the SMEs to a great extent while increased elasticity and enhanced utilization of project work, increased development and knowledge capacity, increased flexibility towards changing market conditions, reduction of uncertainties and costs and development of dynamic and creative synergy all of which contributed to innovation to a moderate extent.

The study found out that; SMEs can use international networks as a tool to collude against common rivals or reduce competition by binding competitors as allies, enjoy first mover advantage by exploiting speed to market, and international inter-firm networks and common know-how cause the emergence of embedded tacit knowledge to a great. The findings also established that majority of the respondent were in agreement that International network; enables the SME to access complementary resources which a single firm or region does not possess, enables SMEs to developing unique offerings that enhance their revenues, enables the SME to utilise strategic know-hows quicker as well as more advantageously compared to its competitors, improves efficiency as well as allows organisations to equal their asset base to the necessities of

a fluctuating business environment, and that; international networks help them to achieve economies of scale and of learning to a moderate extent.

#### **5.4 Recommendations**

The researcher recommends that the managements in the SMEs continue with the motive of engaging in international networks for these have been found to have a positive effect on their competitiveness and innovativeness. In this case, SMEs have to consider characteristics that make them more viable to international networks while at the same time applying strategies that will see them competitive in the markets they are categorized in.

The researcher recommends that SMEs also seek various integration measures while at the same time counteracting challenges that may limit them from forming international networks. In this case, the management in the said SMEs must take a lead towards the mobilization and utilization of the available resources so as to enhance higher performance levels compared to their counterparts in the same line of business.

The researcher recommends that the SMEs adopt the current technologies according to their line of business, be it in manufacturing, services, sales, distribution and so on. In this case, this study advises that the adoption of such technologies will see the innovativeness levels increase day by day thereby limiting challenges emanating from international integrations and networking.

#### **5.5 Areas for Further Studies**

This study recommends that further study be done to establish more on role of international networks in the innovation process as a source of competitiveness among the SMEs. In this case, this study recommends that more SMEs be involved especially those also in the rural areas to find out if the same results will be found. The study recommends the use of inferential statistics like regression, correlation and t-test to establish in figures the extent to which the independent variable (international networking) of this study affect the dependent variables (innovativeness and competitiveness).

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## APPENDICES

### Appendix I: Letter of Introduction

Dear Participant,

I am **Soittara Claudiah Simaiya**, a Master's degree student Business Administration at the University of Nairobi. I am carrying out a study on International Networks In Innovation Process As A Source Of Competitiveness In Small And Medium Sized Enterprises In Nairobi City County Central Business District. This study is part of the requirements for the conferment of the abovementioned degree. Your voluntary participation in this study is greatly appreciated. As a participant, you are kindly requested to participate by completing the study tools under the guidance of the researcher/ research assistant. Your identity will be concealed, privacy will be respected and any information you provide will be confidential and for purposes of research only. You shall not be exposed to any harm by participating in the study. Your participation is purely voluntary and you are free to withdraw at any point without any penalty. No extra cost will be incurred. Kindly read and understand the written consent form before signing. You are welcomed to ask any questions or to seek any necessary clarifications before you sign the document using the contacts below.

Sincerely,

I voluntarily agree to participate in the research.

Signature .....

Date .....

Principal researcher: **Soittara Claudiah Simaiya**

Tel: **0724477101**

Email: **csoittara@gmail.com**



**Appendix II: Questionnaire**

**Section A: Demographic Characteristics of Respondents**

1. Name of the SME (Optional).....
2. What is your highest level of education qualification?
  - a) Post graduate level ( )
  - b) University Degree ( )
  - c) Tertiary College ( )
  - d) Secondary ( )
3. Length of continuous service with the SME?
  - a) Less than five years ( )
  - b) 5-10 years ( )
  - c) Over 10 years ( )
4. How long has your SME been in operation in Kenya?
  - a) Under 5 years ( )      b) 5 – 10 years ( )
  - c) 11 – 15 years ( )      d) 16 – 20 years ( )
  - e) Over 25 years ( )
5. How many employees are there in your SME?
  - a) Less than 100 ( )
  - b) 100 – 199 ( )
  - c) 200 - 300 ( )
  - d) Above 300 ( )
6. Has your SME established any international network?
 

Yes ( )                      No ( )

**Section B: International Network and Innovation**

7. To what extent has the following characteristics contributed to innovativeness of your SME?  
Use 1-Not at all, 2-Small extent, 3-Moderate extent, 4-Great extent and 5-Very great extent.

<b>Innovativeness of SMEs</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Internal characteristics and capabilities of SMEs					
The size of SME					
Number of skilled worker increases with the firm size					
Age of the firm					

International and inter-international linkages of SME					
Openness to new ideas					
Financial structure of SME					

8. To what extent do the following factors influence your SME to undertake international networking? Use 1-Not at all, 2-Small extent, 3-Moderate extent, 4-Great extent and 5-Very great extent.

<b>Reasons for international networking</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Insufficient quality systems of international firms					
Insufficient technological levels of international firms					
Production and organization structures of international firms do not fit to you					
Absence of skilled employees in region					
External relations provide new external knowledge					
Difficulty at finding firms from your region					

9. To what extent has international networks contributed to innovation in your SME? Use 1-Not at all, 2-Small extent, 3-Moderate extent, 4-Great extent and 5-Very great extent.

<b>International network contribution</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Reduction of uncertainties and costs					
Increased flexibility towards changing market conditions					
Increased development and knowledge capacity					
Change and eliminate the boundaries inside and between organizations in the international innovation system					
Increased elasticity and enhanced utilization of project work					
International accumulation of tacit knowledge					
Development of dynamic and creative synergy					
Integration of tacit knowledge with research and development based codified knowledge					

**Section C: International Networks and Competitiveness**

10. To what extent has international networks contributed to competitiveness of your SME? Use  
 1-Not at all, 2-Small extent, 3-Moderate extent, 4-Great extent and 5-Very great extent.

<b>International Network and Competitiveness</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
It enables the SME to apply strategic capabilities sooner and more strategically than competitors					
It enhances productivity and enables firms to match their asset base to the requirements of a changing business environment					
International inter-firm networks and common know-how cause the emergence of embedded tacit knowledge					
It enables the SME to access complementary resources which a single firm or region does not possess.					
It enables SMEs to developing unique offerings that enhance their revenues					
To achieve economies of scale and of learning					
To enjoy first mover advantage by exploiting speed to market					
The SMEs can use it as a tool to collude against common rivals or reduce competition by binding competitors as allies.					

### Appendix III: List Of SMEs In Central Business District

1. NEKY ASSOCIATES LTD
2. RETAIL OF READY MADE GARMENTS
3. ISLAMIC BOOKS
4. EAGLE BEAUTY BOUTIQUE
5. BITIKA FASHIONS
6. NAIROBI VELOCITY ENTERPRISE
7. JONAM ENTERPRISES
8. MISS AFRICA LTD
9. JOSNAC ENTERPRISES
10. SUN ACE ELECTRONKS TRADING
11. KEIZI SMALL WORLD
12. WANJA & BROTHERS
13. SALAMA SHOE TRADERS LTD
14. SEDA CLOTHING
15. SPECIAL TOUCH SALON
16. TARIZI DESIGNS
17. MWAKIBOSA INVESTMENTS
18. GETRUDE MBONE TAILORING
19. SAE ENTERPRISES
20. JIM'S TECHNICAL SERVICES
21. SUPERSTYLE DRESSMAKING
22. SUNGURA MATTRESSES ENTERPRISES
23. CATRUS ENTERPRISES
24. KYAWANGO PROVISION STORE
25. VENUS METAL (AFRICA) LTD
26. RAVS FASHION LTD
27. GOLDEN GATE BAR
28. MUKURE TRADING CO. LTD
29. LOTUS CAFÉ
30. CAR DEALERS (1969) LTD
31. ZAHRA LODGE RESTAURANT
32. UNIVERSAL INSURANCE LTD
33. RUZAMIN GRAPHICS
34. OVERSEA COURIER SERVICES (K) LTD
35. WEAVERBIRD CREDIT LIMITED
36. POLE POLE ENTERPRISES LTD

37. SALUTE HOLDINGS LTD
38. CHANCERY WRIGHT INSURANCE
39. RAYDOLL TOUR TREVEL
40. BUNNY SNACKS
41. BETTY STORES
42. PROTEA MARKETING SERVICES LTD
43. BRIDGE INSURANCE BRKERS LTD
44. VESTORS LOSS ASSESSORS
45. PERMAR COMPANY
46. ORCHARD FRUIT JUICE
47. MONSU SUPPLIES
48. NO LIMIT ENTERPISES
49. NJEKAGI HAWKERS BAZAAR
50. KERI FASHION
51. NAIVANDI FASHIONS
52. DANIS MINI SHOP
53. VIRAJ ENTERPRISES
54. CLASSIC BOUTIQUE HANDBAGS
55. DICKSTAR INVESTMENT
56. DYSAN STATIONERS
57. MIRROR FASHIONS
58. MICHAEL ARISTIDI RIMOY
59. WONDERLAND GIFT SHOP
60. MUGO BOUTIQUE
61. KENCY BEATUU SHOP
62. AGRIMODE LIMITED
63. ASTER LTD
64. CENTRIFUGAL TECHNOLOGIES
65. CYAN OFFICE SUPPLIES
66. KEZA ENTERPRISES
67. MECK AGENCIES
68. MILLENIA VEVE STORES
69. SIGNAL HERBAL MEDICINE
70. MEDIA SUPPORT SERVICES
71. DAGORETTI PLUMBERS & GENERAL CONTRACTORS
72. FEYISSA IN FASHION
73. LAST MINUTE SERVICES

## **Appendix IV: Permit Letter**