

**NETWORKING AND FIRM PERFORMANCE AMONG SMALL AND  
MEDIUM ENTERPRISES IN KENYA**

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Doctor of Philosophy in Strategic Management in Dedan Kimathi University of  
Technology**

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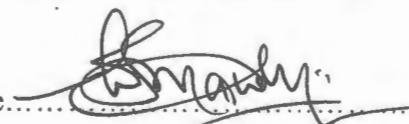
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I declare that this thesis is my original work and to the best of my knowledge has not been submitted and will not be presented at any other university for a similar or any other degree award. In addition, all the sources used have been appropriately accredited.

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## **DEDICATION**

I dedicate this work to my parents Mr and Mrs Maina Muchiri who without formal education made sure that all seven members of our family accessed quality education. Secondly, Boniface Amukanga who in the year 1999 predicted I would become a PhD holder. May the Lord be with you all.

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TECHNOLOGY**

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## ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of Variance
CBS	Central Bureau of statistics
CEG	Centre for economic growth
FDI	Foreign Direct Investment
GOK	Government of Kenya
KAM	Kenya Association of Manufacturers
KER	Kenya Economic Report
KIPPRA	Kenya Institute for public policy research and analysis
KNBS	Kenya National Bureau of Statistics
KREP	Kenya Rural Enterprises Programme
MTP	Medium Term Plan
OECD	Organization for Economic Cooperation
RBV	Resource based view
ROK	Republic of Kenya
UNIDO	United Nations Development Organization
SME	Small and Medium Enterprises
SPSS	Statistical package for social scientists

## ABSTRACT

SMEs are the backbone of global economies and they serve as medium of job creation and poverty eradication. They are unique compared to large organizations in terms of size, resources and flexibility. Since most of the SMEs are constrained resource wise, they are unable to compete and hence their survival and longevity is a major concern. In addition, they are known to operate in isolation which is considered as a major obstacle to their competitiveness and hence performance. It is assumed that networking among SMEs can enhance their performance. This study evaluates networking outcomes and how they influence performance of manufacturing SMEs in Kenya. A critical literature review identified three network outcomes that were likely to influence firm performance. These include: network relationships, dimensions and networking capability. These variables have been previously studied separately and hence there are inconsistent findings regarding their influence on performance. This study integrated these three dimensions together because firms are likely to use them in a combination as they compete with their rivals. The three network outcomes were the basis of three objectives that guided the study and eight hypotheses that were tested.

Extant literature reveals scanty details on networking and performance in the developing and least developed countries. It is unclear whether those studies can be replicated in both developing and least developing countries. In particular, there are no comprehensive studies related to networking and firm performance in Kenya. Consequently, there exists a gap regarding whether being in a business network influences SMEs performance in Kenya and how firms can leverage on their position in the network to enhance their competitiveness. The study targeted manufacturing sector which has huge potential yet it has stagnated in growth for years. The study targeted manufacturing SMEs registered under Kenya Association of Manufacturers (KAM) with a population of 660 and drew a sample of 132 firms using systematic random stratified sampling. A survey was conducted targeting CEOs of the firms using questionnaires. Data was analyzed by use of statistical package for social sciences (SPSS) version 20. Descriptive and inferential statistics were used to present data. Quantitative methods that were used in this study include multiple regression analysis, Factor analysis, ANOVA and Pearson correlation coefficient.

The study has proposed a networking performance model based on critical review of literature. Further results indicate that network content, governance, structure, intensity, range, partner's knowledge, relational skills and internal communications influence performance of SMEs. Results were presented using descriptive and inferential statistics. The results showed that network content, structure, governance, intensity, range, relational skills, partner's knowledge and internal communication affect firm performance. Further, the study revealed that the level of networking in Kenya is low at 26%. The study has made significant contribution to managers, policy makers and to theory. For managers the study should seek to identify and build ties with networks that in the long-term will assist them to acquire resources and capabilities that are owned by others. For the government, it is recommended that there is need to formalize and legitimize most of the networks. In addition network facilitators are expected to steer the networks to avoid conflicts. The study has added to the empirical literature of developing countries regarding networking and firm performance.

## CHAPTER ONE

### INTRODUCTION

#### 1.0 Background of the study

The Small and Medium Enterprises (SMEs) were enormously abandoned and disregarded in the period of 1950s and 60s due encouragement and upheld of large enterprises (Stokes, 2003). However, in 1970s and 80s, the situation changed and they became a vital part of the economy. Therefore, SMEs are some of the economic actors within the economies of nations (Wolff and Pett, 2006). They are a major source of job creation (Clark III and Moutray, 2004) and they represent the seeds of future large companies (Monk 2000). In addition, they enhance regional economic balance and promote effective resource utilization considered critical to engineering economic development and growth (Ogujiuba and Oluch, 2004).

SMEs by number dominate the world business stage. Though it may not be possible to obtain precise data, estimates suggest that more than 95% of enterprises across the world are SMEs, accounting for approximately 60% of private sector employment (Ayyagari, 2011). Japan has the highest number of SMEs among the industrialized countries accounting for more than 99% of total enterprises (EIU 2010). Ghatak (2010), argues that India had 13 million SMEs in 2008, equivalent to 80% of all the country's businesses. In Tanzania, it is estimated that approximately 50% of all industrial output originates from SMEs (United Republic of Tanzania, 2001). In South Africa, it is estimated that 91% of the formal business entities are SMEs (Abor and Quartey 2010).

The contribution of SMEs to the country's GDP varies in the same way their numbers. In Australia, SMEs contributed around 60% of Australia's industrial value added in 2009-10 (Australian government, 2011). In OECD economies, over 95% of firms are SMEs and account for 55% of the GDP. In South Africa, SMEs contribute 52-57% of the GDP. In Ghana, SMEs are

prominent in the local economy and represent about 92% of Ghanaian businesses contributing about 70% of the GDP (Abor and Quartey 2010).

The internationalization of economy, globalization of trade, growth of internet and information technology has created changes among the countries and competition has become rampant for gaining sustainable growth in the world (Prasad 2004, Johnson and Scholes 2005). Antonio and Gregorio (2005) notes these changes has majorly affected SMEs because of their economies of scale, inadequate access to capital finance, inadequate industrial infrastructure, lack of market base information, obsolete technology, lack of modern management skills and lack of labour training compared with large enterprises. Due to these factors, the annual closures of SMEs in developing countries are gradually increasing.

SMEs need support and resources from external parties such as other firms, supporting institutes, relative and friends (Bairrd, Lyles and Orris, 1993). If an organization can network with its suppliers, buyers and competitors, it will become a crucial ingredient to avoid competition and achieve advantage (Johnson and Scholes, 2005). Through such networks, organizations can identify opportunities, raise their resources, achieve competitive advantage and hence achieve overall improved performance.

Individual SMEs experience difficulties in achieving economies of scale in purchase of inputs and are often unable to take advantage of market opportunities that require large production quantities, homogenous standards and regular supply (UNIDO, 2005). It is generally acknowledged that isolation, rather than size, is the key obstacle, preventing SMEs boosting their competitiveness. Networking therefore offers an important route for individual SMEs to address their problems as well to improve their competitive position (Lorna, 2007).

Critical success factors for improving performance in SMEs as outlined by Soderquist (1996) include: development of networks and partnerships; promoting a corporate culture; developing flexibility and speed response to customers; creating an effective structure and analyzing competitors. Development of networks and partnerships is essential for firms experiencing the need to be efficient, flexible and adaptive.

### **1.1 SMEs in Kenya**

In the year 2012, parliament passed in to law the Micro and Small Enterprise Act in order to set up new rules and institutions to support micro and small businesses in Kenya. According to the MSE Act (2012), A micro enterprise is a business that has less than Ksh. 5 million invested in it, or has sales of less than Ksh.500,000 a year or has 1-9 people working in it. A Small Enterprise is a business that has sales of between Ksh. 500,000- Ksh. 1 million a year, or has 10-50 people working in it. A medium enterprise is an enterprise with 50-99 employees, an annual turnover of above Ksh. 50M and below Ksh. 1 Billion (ROK 1992, CBS/ KREP, 1999).

The enactment of MSE Act has two fold benefits to the SME sector. First, a registrar of Micro and Small enterprises will be established to register MSE Association or umbrella organizations. Secondly, the MSE Authority will be established whose main function is to coordinate, harmonize and facilitate activities and relate to the sector. These benefits will help address the challenges of informality among the SMEs. Such challenges hinder their growth as they have limited access to financial services, infrastructure, inter-firm linkages and the market (KER 2013).

The National Baseline Survey, Central Bureau of Statistics, Centre for Economic Growth, K-Rep Holdings (CBS/CEG/KREP, 1999) notes that the growth of enterprises from micro to small, small to medium and then medium to large, means, employment creation, increase in revenue and

capital base. The economic impact of SMEs can be measured by their contribution to output, employment, income, investment, exports and other economic indicators (Prasad, 2004).

According to Kenya's Economic Survey 2008 (ROK, 2008), out of the total new jobs created, Micro, Small and Medium enterprises (MSMES) created 426.9 (89.9 percent) thousand new jobs out of a total of 474.8 new jobs created in 2007 in Kenya. In 2008, MSMES created 433.5 (79.9 percent) new jobs out of 543.3 thousand new jobs created in Kenya (ROK, 2009). In the same year the sector contributed Kshs 806,170 million of GDP which is 59 percent of total GDP (ROK, 2009). The Kenya Economic Survey 2010 notes that this same sector generated 390.4 thousand new jobs which translate into 87.6 percent of the total jobs generated in 2009.

Kenya government has recognized the importance of the informal sector in social economic development and has in the past prepared Sessional papers and support strategies for SMEs. In spite of these policy papers and support strategies, the performance of the SMEs is still dismal. SMEs, have a high death rate, (60 percent) closing down within their first year of operation, 40 percent less than 2 years old and 66 percent less than 6 years; thus hardly gain from experience (ROK, 1999). According to Sessional paper of 2005 No.2 SMEs in Kenya have high collapse rate with most of the SMEs die with 3 years of operation. A mere 30 percent of SME survive past the first generation (Dyer &Whetten, 2006) and only 10 percent to 15percent survive to a third generation (Dyer &Whetten, 2006).

The weak performance and high failure rate of SMEs may impact on their objectives of poverty alleviation, employment creation and economic growth. Bowen, Morara and Mureithi (2009) note that given the importance of SMEs to economic development and given their high failure rate, it becomes essential for researchers to unearth factors that will enable SMEs to survive and grow.

From the ongoing, it is essential for the government, policy makers, researchers and entrepreneurs to address the threats faced by SMEs. Such a consideration should focus on adopting modern approaches that will make them competitive and enhance their longevity.

### **1.1.1 Manufacturing sector in Kenya**

The manufacturing sector in Kenya constitutes 70 percent of the industrial sector contribution to GDP, with building, construction, mining and quarrying contributing the remaining 30 percent (KER 2013). Kenya's manufacturing sector is among the key productive sectors of the economy identified under vision 2030 which can spur growth because of its immense potential for value creation, employment generation and poverty alleviation (KAM 2014). According to KNBS (2013), the manufacturing sector contributes directly to 10% of the Kenya's GDP. The sector comprises of 3,700 manufacturing units and employs 277,900 persons and nearly 500,000 indirectly which accounts for 13% of the labour force in the formal sector in Kenya.

The manufacturing sector has high, yet untapped potential to contribute to employment and GDP growth. Bigsten *et al.*, 2010, notes since the sector is not limited to land size, the sector has high growth prospects compared with Agriculture sector. It is noted that its contribution to GDP has continued to stagnate at about 10 percent with contribution to wage employment on a declining trend (KER, 2013).

Kenya's share of manufacturing exports to the global market is dismal and stands at 0.02 percent. This figure is low compared with South Africa at 0.3 percent; Singapore and Malaysia have 2.4 percent and 1.3 percent respectively (KER, 2013). Further, it is noted that low value addition and high costs of production impede competitiveness of Kenya's manufactured goods in the global market.



**Table 1: Comparative world share of manufacturing exports (%)**

Country	2007	2008	2009	2010	2011
Kenya	0.016	0.018	0.019	0.017	0.018
Singapore	2.391	2.271	2.370	2.542	2.429
China	11.964	12.766	13.458	14.763	15.393
Malaysia	1.314	1.245	1.309	1.332	1.223
Tanzania	0.005	0.007	0.006	0.008	0.007
Uganda	0.004	0.006	0.006	0.005	0.006
South Africa	0.342	0.365	0.302	0.328	0.321

**Source: World Trade Organization (2012)**

UNIDO (2008) notes that widespread informality; weak inter-firm linkages and lack of innovation and export competitiveness are major challenges impeding Sub-Saharan Africa's industrialization. In this regard, the government should develop policy incentives to promote inter-firm linkages and FDIs to enhance progression of SMEs to large-scale competitive firms.

### **1.1.2 Business environment**

Organizations today are faced with massive globalization, demanding customers with rapidly changing desires, shrinking response time, shrinking product lifecycles and demanding employees. This requires organizations to become fast, flexible, participative and focused on customers, competition, teams, time and process (Susan & Johnson 2003). These organizational challenges together with advancement of technology have a huge impact on both large and small enterprises. Obviously, SMEs compared to large organizations have inadequate access to capital and finance, obsolete technology, inadequate industrial infrastructure, lower economies of scale, lack of modern management skills and lack of labour training (Antonio and Gregorio 2005). Due to these factors, the annual closures rates of SMEs in developing countries are gradually increasing.

SMEs face new challenges in globalised economies and only sustainable strategies will save them from large enterprises. SMEs are not smaller versions of large companies, but mainly due to their size they tend to interact differently with their environment (Shuman & Seeger 1986). Coviello & McAuley (1999) notes that what differentiates SMEs from Large multinationals enterprises (MNEs) are their managerial style, ownership and independence.

### **1.1.3 Business networking**

Business network is defined as a mode of organizing economic activities through inter-firm coordination and cooperation in order to exchange or share information or resources. It is an integrated structure ongoing economic and non-economic relations embedded within, among and outside business firms (Yeung, 1998)

Business networking process is a means through which firms are able to form inter-organizational relationships where they can interact and share experiences in order to achieve collaborative advantage. There are several reasons why SMEs participate in strategic networks:

“Globalization creates imperatives for firms to consider participating in networks” (Van Laere and Heene 2003)

“On the present level of market competition, enterprises have to organize themselves into effective production system architectures in order to be able to fulfill the market demands.” (Mezegar, Kovacs and Paganelli, 2000)

“Ever increasing global competition hitting both large and small companies alike are provoking creative thinking. Small and medium sized companies (SMEs) need to change behavior to meet these challenges. One of the ways that SMEs can successfully fight the competition is by increasing inter-firm cooperation or networking.” (Seremetis, 1994)

From these citations, it is evident that inter firm cooperation or business networking can be a vital alternative in response to the turbulent business environment.

Jenkins *et al.* (2007) notes there are accrued benefits on SMEs regarding business networking: 1) There is increased employment and wealth creation by local firms 2) There is acceleration of knowledge transfer and technology upgrading 3) Enhanced skills, standards and capacity 4) Attraction of FDI in cluster effects 5) More diversified client and market structures 6) More stable relationships to buyer /producer organizations 7) Risk- sharing through joint funding operations 8) facilitation of access to finance 9) There are opportunities to innovate, upgrade and increase competitiveness. Further, OECD (2001a) points several other benefits including: 1) Increased scale and scope of activities 2) Shared costs and risks 3) Improved ability to deal with complexity 4) Enhanced learning 5) Flexibility and efficiency in knowledge management 6) speed and 7) Resilience

Despite the fact these benefits accrue to networking firms, irrespective of their size and activity empirical studies suggest that many SMEs face both internal and external obstacles to seizing networking opportunities (OECD, 2004). In addition, a major reason why SMEs do not take full advantage of networking opportunities is their lack of motivation to do so (OECD 2004)

The concept of network includes four components: actors; links; flows and mechanisms (Conway *et al.*, 2001; Conway and Jones 2006). The actors are the individuals and entities who make up the network. Links or ties are the arches that connect individuals and represent the relationship between actors. The flows indicate the exchanges that occur between the actors within network and largely involve flow of resources. Finally, the mechanisms of the network are the modes and rules of interaction employed by actors within the network

Business relationships and networks are perceived as sources of competitive advantage (Ford *et al.*, 2003; Gulati 2007). Performance of the firm remains the ultimate indicator for success as evidenced in both empirical and theoretical models (Man *et al.*, 2002). There are many factors that affect the

performance of a firm and these factors are attributed to the internal and external factors of the firm (Pearce and Robison, 2002). Understanding the factors that impact small business performance is important and enables advisors, policymakers and other relevant stakeholders to serve the SME sector better (Gaskill and van Auken, 1993)

Several authors acknowledge that Joining a strategic network is a valuable path for SMEs striving to gain a sustainable competitive advantage within their business environments: Lower transaction costs, social capital creation, entering foreign markets and achieving economies of scale (Cruickshank and Rolland 2006; Doz and Hamel 1998; Inkpen and Tsang 2005; Jarillo 1988; Nahapiet and Ghoshal 1998; Rosenfeld 1996) have been reported as positive outcomes establishing ties with other firms and the market.

Johannisson (1987, 2000) argues that the concept of network and networking applied to the strategic management of SMEs helps researchers to focus on entrepreneurship as collective rather than individualistic phenomenon and permits the addition of options regarding the ways small business may build competitive advantage in both domestic and international markets.

Several scholars have advance knowledge regarding networking: Networking competence (Ritter *et al.*, 2002); network dynamics and relationship dynamics (Ahuja *et al.*; Halinen *et al.*, 1999); network capability (Annad and Khana, 2002); relational capability (Lorenzoni and Lipparini, 1999) and alliance capability. Whereas these scholarly works are vital, Gulati *et al.*, (2000) posit there is an urgent need for academic research to systematically investigate the effects of networks on firm performance.

From the literature it is evident that the variables that are likely to influence resource acquisition hence influence firm performance can be categorized in three broad categories: Networking

relationships (Hoang & Antoncic, 2003) consider three areas of network relationships: network content, governance and structure. On the other hand Burt (1992) and Zhao and Aram (1995) break the network dimension into two aspects: network range and network intensity. Finally, network capability (Walter *et al.*, 2006) contains four of its dimension namely: relational skills; coordination; partner's knowledge and internal communication. This study used an integrated approach in relation to the three dimensions discussed because firms are likely to use them in combination and not in isolation as have been previously studied.

Okatch *et.al* (2011) notes there are deficiencies among SMEs and Large firms linkages. In addition, other countries have dealt with such deficiencies by adopting strategies which reduce the atomization of small firms through networking and clustering at industry and enterprises levels.

## **1.2 Statement of the problem**

Research on business networks to date has focused on the antecedents of network formation and relational content among firms rather than outcomes of such relationships and networks (Werner 2002; Kapasuwan 2006). Haves & Senneth (2001) notes that although the arguments in favour of networking appear compelling and most of the existing literature is premised on the belief that networking is beneficial, there is little empirical evidence to date of an association between firm performance and the owners use of networks particularly for established firms.

Gulati *et al.*, (2000) posit there is an urgent need for academic research to systematically investigate the effects of networks on firm performance. Further, Werner (2002), after reviewing international management research in top management journal found that impact of foreign partners on firm performance is a potential research area not frequently addressed. Lorna (2007) notes that isolation, rather than size, is the major obstacle hindering SMEs competitiveness. Notably, given the rapid proliferation of inter-firm relationships in recent years, neglecting the

strategic networks in which firms are embedded can lead to an incomplete understanding of firm behavior and performance (Gulati *et al.*, 2000).

Empirical literature on the impact of networking on the performance SMEs have produced mixed results. Thrikawala (2011) finds a significant positive relationship between an SME's engagement in various networks and the performance of the SME. Watson (2007) also found that SMEs that were involved in networking had higher performance and survive longer. On contrary, Rowley, Behrens and Krachhardt (2000) found a negative association between networking and performance. Further, some scholars have suggested that networking may be a pathway of losing strategic information and competence to partners and therefore some networking relationships may not be beneficial (Hitt *et al.*, 2007; Semrau & Werner, 2012). In this regard, there exists a gap and there is need for further studies to test the phenomenon so as to test the consistency of the results. In Kenya it is perceived there is inherent weakness in capacity of local SMEs that has hindered linkages between SMEs and large firms (Okatch *et al.*, 2011).

Most of the studies that have addressed the problem of networking and SMEs performance have largely focused on developed countries. It is not clear where such studies can be replicated in developing and least developed countries. Consequently, the findings of this study seek to fill the gap by exploring the Kenyan context.

This study therefore sought to assess the influence of networking on firm's performance. Specifically, this study seeks to investigate whether participating in networks boosts firm's performance.

### **1.3 Purpose of the study**

The purpose of the study was to examine the influence of networking on firm's performance.

## 1.4 General objective

The general objective of this study was to assess the influence of business networking on firm's performance among the small and medium enterprises in Kenya.

### 1.4.1 Specific objectives

The specific objectives of this study include;

- (i) To assess the influence of network relationships on firm performance in small and medium enterprises in Kenya.
- (ii) To determine whether network dimensions influences firm performance in SMEs in Kenya.
- (iii) To evaluate the influence of network capability on firm performance in small and medium enterprises in Kenya

## 1.5 Research hypotheses

The study was guided by the following research hypotheses derived from the research objectives.

### *Objective one*

1. **Ho:** There is no relationship between network content and firm performance in small and medium enterprises
2. **Ho:** There is no relationship between network governance and firm performance in small and medium enterprises
3. **Ho:** There is no relationship between network structure and firm performance in small and medium enterprises

### *Objective Two*

4. **Ho:** There is no relationship between network range and firm performance in small and medium enterprises
5. **Ho:** There is no relationship between network intensity and firm performance in small and medium enterprises

***Objective Three***

6. **Ho:** There is no relationship between relational skills and firm performance in small and medium enterprises
7. **Ho:** There is no relationship between partner's and firm performance in small and medium enterprises
8. **Ho:** There is no relationship between internal communication and firm performance in small and medium enterprises

**1.6 Significance of the study**

One of the biggest challenge facing SMEs is how to overcome the distortions that hamper their competitiveness and hence performance. It is generally acknowledged that isolation, rather than size, is the key obstacle preventing SMEs to boost their competitiveness. Networking offers an important route for individual SMEs to address their problem as well as to improve their competitive position (Lorna 2007). Therefore, it is significant to examine whether networking can improve performance of SMEs. This will enable them to contribute to the development challenges facing Kenya such as unemployment, poverty, weak economic growth and realization of Vision 2030 (The Kenya's long term development plan).

Given their significance in contribution to the economies worldwide, research on SMEs networking and performance is essential. The main motivation for SMEs networking is so that they can gain access and leverage on resources not under their control in cost effective business linkages so that through them their performance can be improved.



A study on networking and performance of SMEs in Kenya would be appropriated for several reasons. First, it will unearth how SMEs can leverage on resources owed by other firms in the markets to enhance their competitiveness. This will enable SMEs managers to lay strategies on how to establish strong ties with other firms. In addition, SMEs practitioners can leverage on positioning within the networks in order to achieve a higher collaborative advantage.

Secondly, to the best knowledge of this researcher there has been no previous study done to examine the influence of networking and performance in Kenya. In this regard, this study provides an empirical and theoretical framework for future studies on networking and firm performance especially in the SMEs sector.

Third, an understanding of networking strategy among firms' and its influence on performance is critical in designing policies and interventions that will help in successful implementation of networks and business linkages especially in the private sector. There have been recommendations in the economic reports that networking is an important route that SMEs need to embrace to enhance their growth, survival and performance. In this regard, this study adds to the empirical literature in Kenya on networking and firm performance which is very scanty.

Therefore, the extrinsic value of the results of this research has provided empirical evidence of the status of manufacturing SMEs in relation to networking and how firms can leverage on inter-firm networks to cope with competition and acquire resources owned by other firms. The findings of this study can also assist membership organizations to understand how provide services and package programs that can boost an individual firm's performance.

## **1.7 Scope of the study**

The study targeted SMEs registered under Kenya Association of Manufacturers (KAM). The respondents were CEOs or senior managers of the respective firms. The choice of SMEs in the KAM listing was based on the fact firms that were registered under a membership organization were likely to have a high tendency of inter-firm linkages. KAM provides capacity building for its members on regular basis. In addition, it also serves as a conduit for vital information required by the firms. Through such avenues, SMEs CEOs and owners are likely to interact and link up their business operations easily. A pilot study confirmed that CEOs, managers and owners of the firms that had experience in the association's affairs had a good understanding of the issues that were being addressed by the study.

The choice of the manufacturing sector for this study was motivated by the fact that manufacturing process has a long value chain. This long value chain may require firms to collaborate and cooperate with others. In this case, alliances with suppliers and firms' with complementary products that upgrade and enhance the user's experiences and value for the products is necessary for this sector. The study only considered firms that have been active members of KAM for a period of not less than one year but it must have been in existence for more than three years.

## **1.8 Definition of terms**

### **(a) Networking**

Networking is defined as the process of building long term contacts with the motive to have access towards information and resources (George *et al.*, 2001). It can be at individual or firm level.

### **(b) Network**

A network is a term used to indicate a social structure that includes a set of relationships between a group of individuals. It includes four main components: actors, links, flows and mechanisms (Conway *et al.*, 2001)

### **(c) Strategic network**

A strategic network is a long-term agreement between different but linked organizations which allows firms to gain competitive advantage over competitors outside the network (Jarillo, 1998). In this case the network members are not completely dependent on each other but the relationships established among firms are essential for their own final competitive position.

### **(d) Small and medium enterprises**

According to the MSE Act (2012), A micro enterprise is a business that has less than Ksh. 5 million invested in it, or has sales of less than Ksh.500,000 a year or has 1-9 people working in it. A Small Enterprise is a business that has sales of between Ksh. 500,000- Ksh. 1 million a year, or has 10-49 people working in it. A medium enterprise is an enterprise with 50-99 employees, an annual turnover of above Ksh. 50M and below Ksh. 1 Billion (ROK 1992, CBS/ KREP,1999).

### **(e) Network structure**

Refers to firm's network structure which could acquire access to external resources through their network relationships and integrate with internal resources to generate additional benefits. It is regarded as an indicator of the resource reservoir that control the quality and quantity of access to external resources through network ties (Hoang and Antoncic, 2003; Zaheer & Bell,2005).

### **(f) Network governance**

It is the effective and efficient use of inter-organizational network infrastructure and the resources and skills of its members (Hoang and Antoncic, 2003).

**(g) Network content**

Refers to the resources exchanged between actors. It focuses on both tangible (capital) and intangible resources (Amit and Zott, 2001).

**(h) Network intensity**

Network intensity is the combination of time, mutual trust and reciprocal services (Granovetter, 1973).

**(i) Network range**

Network range refers to the variety and number of connections. In this regard the broader external network is the easier it is to have access to resources (Burt, 1992).

**(j) Relational skills**

It refers to social competence which is crucial for the management relationships (Kale *et al.*, 2000).

**(k) Partner's Knowledge**

Partner's knowledge is the organized and structured information about firm's partners (Walter *et al.*, 2000).

**(l) Internal communication**

Internal communication encompasses assimilation and sharing of information among the firm employees (Kale *et al.*, 2000).

## **1.9 Organization of thesis**

The structure of this thesis is that it is organized in of five chapters. Chapter one introduces the background of the Study i.e. the background of SMEs globally, in Africa and specifically in Kenya. In addition the chapter introduces the concept of networking in the sphere of SMEs. The chapter addresses the statement of the research problem with regard to networking and firm performance, the chapter defines the research objectives and the research the hypotheses. The scope of this study ie the manufacturing sector is also discussed. Finally, the chapter concludes with the justification, significance and definition of terms.

Chapter Two reviews the literature on SMES, networking and performance in general. In this chapter various theoretical frameworks regarding networking are discussed at length. Empirical review is also contained in this chapter. A conceptual framework containing dependent and independent variables that guides hypothesis development is highlighted in this chapter.

Chapter three outlines the methodology that the study adopts. The chapter discusses the research designs, the population for the study, data collection methods and data analysis techniques. This chapter has presented the multiple regression model that was used in this thesis. The validity and reliability tests and how they were observed have also been discussed. The chapter has also discussed how the research variables have been operationalized.

Chapter Four focuses on the data analysis and discusses the study results. Both descriptive and inferential statistics have been used to present the study findings. Pearson correlations coefficient, multiple regression model and ANOVA have been used in to test the eight hypotheses that were proposed in the study. The findings have been supported by both the empirical and theoretical literature where possible.

Chapter five, draws the summary and conclusion of the study. Being the final chapter it has it has given the summary of the entire thesis, including the main findings, the discussions, conclusions and the contribution of the thesis. The chapter has also made suggestions for further studies.

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## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

First and foremost this chapter begins by reviewing literature on SMEs policies and manufacturing sector in Kenya. Further, this chapter reviews literature from various scholars on networking, resource acquisition and performance of SMEs. It reviews both theoretical and empirical literature on SMEs based on Transaction cost theory, resource dependency theory, social network theory and resource based view. In addition definitions of networking, performance as well as relevant literature has also been discussed. It also proposes the conceptual framework of the study. Further, the literature forms the basis of Networking- Performance Model for manufacturing SMEs.

#### 2.2 Overview and evolution of SMEs policies in Kenya

The SMEs sector's importance was first highlighted in Sessional Paper No.1 of 1986, Economic Management for Renewed Growth (ROK, 1986). The paper set out mechanisms for enhancing an enabling environment for SMEs. Further, the government's commitment in Sessional Paper 1 of 1986 was reinforced in the (ROK, 1989) report, "the strategy for small Enterprise". The aim of the report was to delineate the mechanisms for removing the constraints to growth and the development of the SME sector.

Sessional Paper No.2 of 1992, "Small and Medium Enterprises (MSMEs) and Jua Kali development in Kenya" was aimed to formulate a policy framework for SMEs in Kenya (ROK, 1992). This paper recommended all relevant ministries in consultation with the Attorney general's office address the legal and regulatory framework to support the creation of an enabling business environment for SMEs. Other recommendations included a comprehensive review of

Acts and licenses that pertain to SMEs and formation of association to provide easy access to information to various enterprises in the country.

The Kenya government's commitment to creation of an enabling legal and regulatory environment has been addressed in policy documents. First, the development plan for 1989-1993 indicated that the government would speed up the review of local authorities by laws and regulations that were restrictive to the development of SMEs. Secondly, the Small Enterprise Policy Implementation Programme mission report of 1994 identified issues such as legislative reform, land allocation and poor infrastructure as the main weakness inhibiting development of the SMEs. Finally, the development plan 1994-1996, highlighted the government's pledge to harmonize the licensing regime and simplify requirements so as to encourage commercial and industrial development.

Sessional Paper No.2 on "the development of SMEs for wealth and employment creation for poverty reduction" was formulated and published in 2005 (ROK, 2005). It addressed business registration, business licensing and tax regime. The private sector development strategy 2006-2010 (ROK, 2006) aimed to address the SMEs issues integrated in the private sector. It considered SMEs as a central link between private sector and poverty reduction. It outlined specific policies and strategies that need to be pursued in order to enhance private sector growth and competitiveness. The goals outlined were: 1) Improving Kenya's business environment 2) Accelerating institutional transformation within the public sector 3) Facilitating growth through greater expansion of trade 4) Improving the productivity of enterprises and 5) Supporting entrepreneurship and indigenous enterprises development.

The strategy identified some major constraints facing the SME sector and they include: lack of access to markets, limited capital and limited skills. In response to the constraints, the goal on



supporting entrepreneurship and indigenous enterprise development aimed at facilitating the SMEs competitiveness by supporting the development of new enterprises, improving access to capital, facilitating the graduation and evolution of enterprise, promoting firm to firm linkages and promoting broader MSMEs representation in business associations.

During the last quarter of 2012, Sessional Paper No.9 on “the National Industrialization Policy Framework for Kenya” was approved (ROK, 2012). The policy aims to create incentives for manufacturing sector value addition, sub –sector linkages and investments. This is quite important to help address the challenges facing the sector. The Micro and Small Enterprise (MSE) Act No. 55 of 2012 was also passed in parliament in the year 2012. Notably, it was the first comprehensive legislation that addresses the promotion, development and regulation of SMEs. Its objectives include: 1) Provision of an enabling environment 2) facilitation of business development services 3) formalization and upgrading of informal micro and small enterprises 4) promoting the entrepreneurial culture and 5) promoting representatives associations.

From the ongoing it is evident that the government has done substantial in formulating frameworks that can guide the growth of SMEs in Kenya. However, despite the reforms, the policies are still inadequate in providing guidance on establishment of various SMEs related institutions and regulations. Ong’olo and Awino (2013) posit there has been poor coordination in different ministries and other institutions handling SMEs issues. In addition, the poor coordination has been due to lack of support to the overall management of the SMEs in Kenya.

### **2.3 Overview of manufacturing sector performance**

Manufacturing sector is vital for Kenya’s economic growth. Its performance is measured in growth, employment creation and contribution to the country’s overall output and exports (KER, 2012). The share of manufacturing sector’s employment to overall formal employment stands at

an average of 13%. The sectors wage employment increased from 276,900 employees in 2011 to 277, 900 employees in 2012. This indicates a dismal 0.4 percent improvement. However, during the period 2010 and 2011, the improvement was at 3.4 percent. The sectors contribution to the wage employment declined from 13.9 percent in 2008 to 12.9 percent in 2012. This could be attributed to the possibility of firms becoming more capital intensive or the shifting to use of casual labour to minimize labour costs (KIPPRA, 2012). Notably, there were fewer employees in the manufacturing sub-sector between 2006 and 2010 (KER, 2012).

The contribution of the sector to the GDP has declined since 2011. In the year 2011 the contribution fell from 9.6 percent to 9.2 percent in 2012 while growth rate deteriorated from 3.4 percent in 2011 to 3.1 percent in 2012. These changes can be attributed to high costs of production, stiff competition from imported goods, high costs of credit, drought incidences in 2012 and uncertainties due to the 2013 general election (KNBS, 2013).

Vision 2030 identifies manufacturing sector and one of the key sectors that will spur economic growth (ROK 2007). Currently, the implementation of second Medium Term Plan (MTP) is underway. The first MTP came to an end in 2012 and the sectors goal was to increase the contribution to GDP by at least 10 percent per annum (ROK 2012). This growth rate was to be achieved through: 1) Strengthening production capacity and local content of domestically-manufactured goods, 2) increasing generation and utilization of research and development results, 3) increasing share of products in the regional market to 15 percent and 4) developing niche products for existing and new markets.

**Table 2.1: Status of 2008-2012 target and objectives**

MTP 2008-2012 objective / Target	Status
Development of at least two SEZs	The SEZ Bill has gone through the first reading and Sessional paper has been prepared for tabling in parliament.
	Land has been earmarked in Mombasa (2,000 sq. Km) and Lamu( 700 sq. Km). Surveying and profiling of Kisumu EPZ is ongoing.
Development of five SME parks	135 and 20 acres of land has been identified in Eldoret and Taita Taveta, respectively.
	Identification of land in other counties is on going
	Development of master plans in progress.

**Source: KER 2013****Table 2.2: Status of 2008-2012 Objective after the first MTP**

MTP 2008-2012 Objective/ Target	Status
Increase manufacturing sector contribution to GDP by at least 10% per annum	Five year (2008-2012) average growth rate was 3.16 %

**Source: KER 2013**

The sectors' growth during the first MTP was dismal and contributed on 3.6 percent to the GDP. It is important for the stakeholders to re-evaluate policies and strategies so that the contribution of this sector to Vision 2030 can be achieved (KER 2013).

From the above analysis, the performance of manufacturing sector in terms of contribution to GDP has fallen below the vision 2030 targets. In addition, the sectors contribution to GDP during the first MTP deteriorated from 10.8 percent in 2008 to 9.2 percent in 2012. The average growth rate is at 3.16 percent. Notably, the key challenges facing the sector include low value addition, limited diversification, high cost of production and influx of counterfeits. It is therefore important that the government develops policy incentive to promote inter-firm linkages (between large manufacturing and SMEs) and foreign direct investments (FDIs) that would enhance progression of SMEs to large-scale competitive firms (KER 2013).

This study sought to evaluate the propensity of manufacturing SMEs towards inter-firm linkages or networking. This will assist the policy makers and entrepreneurs pursuing the policy recommendations as outlined in the Kenya Economic Report 2013.

## 2.4 Networking

Business environment of enterprises is undergoing a rapid change as the traditional markets are being changed by network (Moller and Halinen, 1999). Network relationships has been a focus of a number of studies which can be classified over a wider continuum: firms' capabilities and performance (Smart Bessant & Gupta, 2007; Zaheer & Bell, 2005); knowledge and resource sharing (Inkpen & Tsang, 2005) Internationalization (Guercini & Runfola, 2010; Mustafa & Chen, 2010); entrepreneurial opportunities (Bojica & Fernandez Perez 2010); entrepreneurial traits and behavior (Wincent & Westerberg, 2005).

Network studies have also focused on investigating the organization type: Multi-nationals companies (William and Lee, 2009); high-tech firms (Anderson *et al.*, 2007) high – growth ventures (Slotte-Kock & Coviello, 2010) family business (Mustafa & Chen, 2010) and SMEs (Zain & Ng, 2006). Luo (2007) notes that for SMEs, networks are regarded as a means of providing diversity of knowledge, accessing resources and complimentary assets. In addition, firms that emphasizes on building business networks increase flexibility and efficiency (Lorenzi and Baden-Fuller, 1995), access network resources at minimal transaction cost (Casson and Cox, 1993) operate under reduced business risk, (Gulati *et al.*, 2000) and eventually their performance is high (Dyer and Nabeoka, 2000)

## 2.5 Adoption of networking on manufacturing sector

It is factual from economic development that until a certain stage of maturity is reached, the economic growth of a country is driven by industrialization. Further, in both developed and developing countries, the presence of a vibrant manufacturing sector a means of increasing the citizens' welfare (Migiro and Wallis, 2006). Strategic management research on network relationships usually occurs in the framework of a single industry (Schilling & Phelps, 2007), with an emphasis on manufacturing sector (Tsai, 2001).

## 2.6 Definitions of networking

Networking is considered an important activity for small and large firms (Oliver, 2001; Lorenzoni and Lippatini, 1999). Some definitions of networking are listed in the table below:-

**Table 2.3: Definitions of networking**

Zain & Ng (2006)	A network is the relationships between a firm's management team and employees with customers, suppliers, competitors, government, families, friends, distributors, bankers, families, friends or any other party that enables it to internalize its business activities.
Perez & Sanchez (2002)	Networking refers to relationships of an organization with other organization within a region or outside the region
George et.al (2001)	Networking is defined as the process of building long term contacts with the motive to have access towards information and resources.
Street & Cameron (2007)	A network is defined as a collection of relationship that binds a group of independent organizations together
Hoang and Antoncic (2003)	A set of actors (individuals or organizations) and a set of linkages between actors.
Human and Provan (1997)	SMe networks are intentionally formed group of small and medium sized profit-oriented companies in which the firms are geographically proximate, operate within the same industry, potentially sharing inputs and outputs and undertake direct interactions with each other for specific business outcomes.

This study adopts the definition by George *et al.*, (2001) "Networking is defined as the process of building long term contacts with the motive to have access towards information and resources". Further, this study is interested in horizontal inter-firm networks. Ghauriet *al.*,(2003) makes a major distinction between vertical and horizontal networks. Vertical networks is a cooperative relationship between suppliers, producers and buyers, aiming at a solution for marketing problems, improved efficiency or the exploitation of market opportunities. Horizontal networks

are cooperative networks relationships among manufacturers who want to solve a common market problem, improve production efficiency or exploit a market opportunity through resource mobilization and sharing.

The manufacturing sector in Kenya faces huge problems when it comes to market the products due to high competition in the global market. There has been an outcry related to high production costs and low exports. In this regard there is need for Kenyan firms to stem up resource mobilization strategies if are to become competitive.

## **2.7 Types of networks**

Based on literature review based on networks, O'Donnell, Gilmore, Cummins and Carson (2001), Hoang and Antoncic (2003) conclude that with regard to network content, networks may be classified either as inter-firm networks or personal networks. This study is solely based on inter-firm networks. Nonetheless, the following section elaborates the distinction between these two constructs.

### **2.7.1 Inter-firm networks**

Das and Teng (1996) notes that inter-firm networks are integrative forms of organizational cooperation. Further, these networks exist through formally contracted, collaborative arrangements such as specialization within the various elements in the value chain activities. The value chain activities may include but not limited to logistics, contract manufacturing or research and development activities (Belso-Martinez, 2006). Chetty & Wilson (2003) argue that inter-firm network provide firms access to a variety of important resources and complementary skills which leads to the building of specialized knowledge and achievement of economies of scale in operations and collaboration to acquire greater knowledge and capabilities.

### **2.7.2 Interpersonal networks**

Dubini & Aldrich (1991) posit that interpersonal networks consist of a group that includes people from whom they obtain services, advice and moral support. These networks are significant because managers place great importance on meeting and communicating with people (Peterson & Rondstadt, 1986). Different terms have been used to describe inter-personal networks. These include: personal connections (Andersen, 2006), informal networks (Coviello & Munro, 1997), social ties (Ellis, 2011) and social networks (Zhou *et al.*, 2007).

Premarantne (2002) classifies entrepreneurial networks into three categories: social networks, supporting networks and inter-firm networks. However, literature a wide literature review shows that business networks can also be classified under: general business networks, managerial and social networks.

### **2.7.3 General business networks**

A business network is a voluntary inter-business cooperation between at least three enterprises whose autonomy is partially limited to cooperation (Moeller, 2010). Further, a business network is any formal or informal linkage between business enterprises which provides exchanges of knowledge information and other resources among members (Huang *et al.*, 2003). Trust and commitment are central to formation of business networks (Moeller, 2009). Further, Premarantne (2002) suggests that the social context in which business relations are embedded cannot be separated from the business networks.

### **2.7.4 Managerial networks**

Managerial networks consist of suppliers, customers and similar enterprises (Ngoc and Nguyen 2009). Li and Zhou (2005) suggest that these networks involve links between managers of different firms. Further, they posit that managerial networking between a firm's manager and

other managers presents opportunities for information acquisition. Farinda *et al.*, (2009) notes that managerial networks enable a firm to gain more clients, business associates, suppliers and market knowledge. Thrikalawa (2011) argues that the mutual support from firms and managers in the same managerial networks may lead to better performance.

### **2.7.5 Social networks**

Social networks consist of actors such as family members, friends and acquaintances. Hoang (2006) suggests that social networks are linkages or social systems of individuals that facilitate access to resources or valued sources of information that are beneficial to business enterprises. Business behavior and performance is affected by factors such as social structure, social relations and social ties of business owners managers and employees (Barnir and Smith, 2002)

### **2.8 Typologies of network relationships**

Adler &Kwon (2002) argues that most of the scholarly works on business relationships focus on the distinctions between the bonding and bridging nature of network ties. Lee (2009) describes bonding as inward, intra- community network linkages that help to cement homogenous ties. Further, such bonding relationships are developed within the organization internally. Conversely, bridging relationships are open networks characterized by outward network linkages across diverse social cleavages which entail heterogeneous ties. Adler &Kwon (2002) notes a focus on external relations generates bridging forms of social capital whereas a focus on internal ties within collectiveness bonding forms of social capital.

King, Morris and Snell (2007) explored the network ties and actors based on relational archetypes of internal and external business relationships. Internal and external relationships are distinguished according to firm's boundary affiliation (Houghton, Smith &Hood, 2009). Basically internal networks include sets of activity-based relationships between individuals,



within work groups and among the various work groups that make-up an organization (Allee, 2008). On the other hand, external networks include those between the organization and its suppliers, investors, strategic business partners and customers (Allee, 2008). Further, Houghton, Smith and Hood (2009) specified that external networks function as efficient information channels between a formal actor (the firm) and the other actor network members beyond the firm, including national, regional and local trade associations.

## **2.9 Network models**

The most popular model for networking is the Larson and Starr's model (1993) of organization formation. It explains how the exchange relationship transforms from a set of relatively simple dyadic exchanges into a dense set of stable, multidimensional inter-organizational relationships. During the formation certain relationships are selected, added, dropped, or allowed to evolve while the entrepreneur grows the range of possible critical resource providers for a new venture (Larson and Starr, 1993). The model is guided by three stages of networking activity used to secure critical economic and non-economic resources and it involves: 1) focusing on essential dyadic ties, 2) converting dyadic ties to socioeconomic exchanges and 3) layering the exchange with multiple processes.

This study also draws insight provided by Hite (2003, 2005) on the evolutionary process of relationally embedded networks in emerging entrepreneurial firms. Specifically her proposition is that entrepreneurial firms evolve through three phases of relational ties: 1) personal, 2) dyadic economic interaction, and social.

### **2.9.1 Personal and essential dyadic exchanges**

The first step towards building an effective new venture network, aspiring entrepreneurs evaluate and map their current network ties (Macmillan, 1988). This forms a basis for the entrepreneurs to form narrow network of strong ties from previously established relationships (Steir and

Greenwood, 1999). In this case entrepreneurs may first explore the possibility of starting their own business with small contacts (Greve and Salaff, 2003). At this stage family and friends are the sources of the required resources (Larson, 1995). Family members provide strong ties which are instrumental in helping entrepreneurs recognize potential opportunities and provide continuing support (Jack, 2005). Hite (2003) notes that a history of engaging in social activities and interactions means that the parties involved are aware of each other's needs and interests.

Granovetter (1973) argues that the social support of these strong ties results mainly from high frequency of contact, strong emotional intensity, high intimacy and mutual confiding which are associated with frequent interactions. At this early stage of network development the entrepreneur is able to determine who will receive relative degree of trust based on a history of past dealings inside or outside of a business setting. Further, during this stage the network is able to take shape and consists of primarily of strong ties that the entrepreneur can trust. These relationships will be based on high trust levels and provide more emotional support than weaker ties (Levin and Cross, 2004).

Trust that exists at this stage is based on emotional aspect. During this stage the entrepreneur relies more heavily on relationships based emotional aspect rather than cognitive trust to secure resources (Smith and Lonrke, 2007).

At this early stage of network development the entrepreneur is able to determine who will receive relative degree of trust based on a history of past dealings inside or outside of a business setting. Further, during this stage the network is able to take shape and consists of primarily of strong ties that the entrepreneur can trust. These relationships will be based on high trust levels and provide more emotional support than weaker ties (Levin and Cross, 2004).

Trust that exists at this stage is based on emotional aspect. During this stage the entrepreneur relies more heavily on relationships based emotional aspect rather than cognitive trust to secure recourses (Smith and Lonrke 2007).

### **2.9.2 Dyadic socioeconomic exchanges**

Birley (1985) argues as entrepreneurs continue to grow their respective networks over time they shift from depending on ties based primarily on social support and begin to use their limited exchange relationships as means for new venture growth. Larson and Starr (1993) notes that relationship involves increasingly interweaving social and business exchanges as parties build, test and refine complex social and economic contract seeking mutual economic exchange. After the interaction has been established the dyadic interactions of the ties will increase over time and hence will result in increased interaction ease and quality (Hite, 2005).

A network structure that may provide critical resources to the new venture may result due to the changing interaction content and quality among existing ties. The network structure therefore will evolve to include increasing number of weak ties that are more arms-length or market-like than socially embedded (Larson and Starr, 1993; Hite, 2003, 2005).

The weak ties are more beneficial than strong tie because they are likely to provide non-redundant information, such as the most effective means for economic support and market outlets (Bruderl and Preisendorfer 1998). Gulati (1995) notes that increasing familiarity between network ties at this stage of network development will increasingly breed trust given the exchange partners refrain from activities that abuse trust. Hite (2005) posit that at this stage trust is more likely to be primarily cognitive in nature and it develops as partner competency becomes known and exchange relationships crystallize.

### 2.9.3 Organizational exchanges

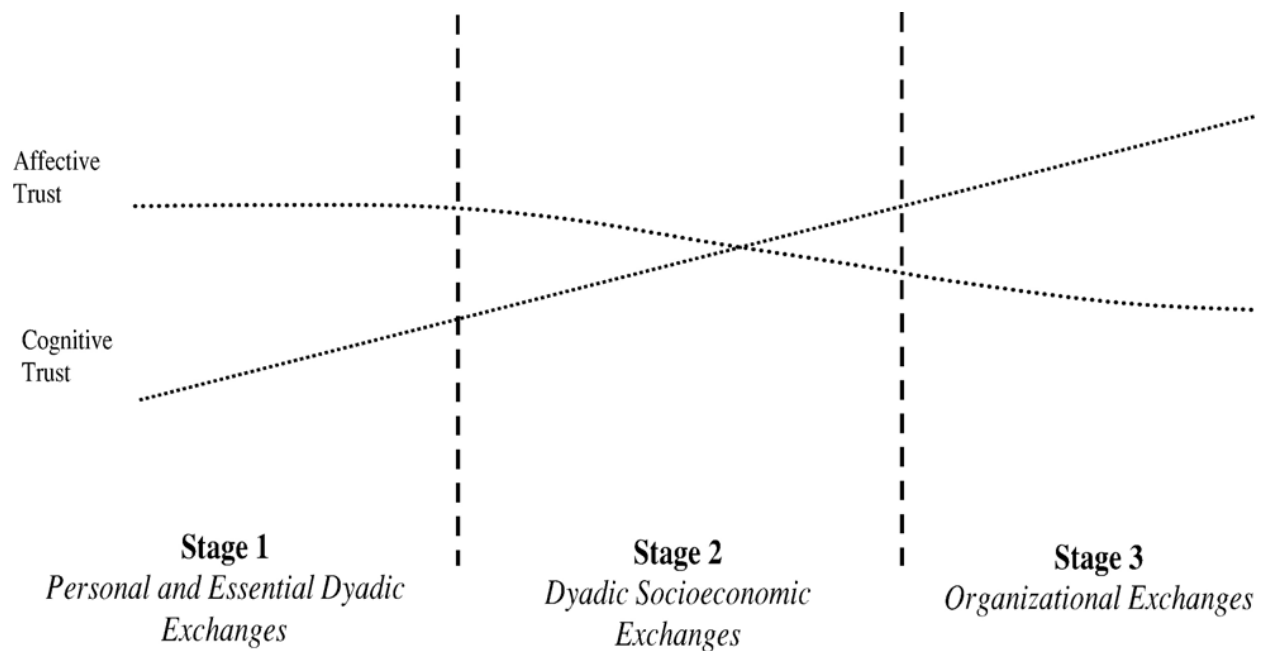
As the firm moves from emergence to early growth additional transformation in exchange relationships takes place. These ties between the entrepreneur and the set of essential firm relationships are less likely to solely interpersonal but based on repeated institutional level exchange cycles between organizations seeking economic gain (Katz and Ganter, 1988). Jack (2005) argues that such ties will support the new ventures activity by becoming resource suppliers, business generators, market expanders and reputation enhancers.

At this level the proportion of socially based ties within the network may decrease as the entrepreneur continue to seek social capital needed to increase the new venture likelihood of success (Hite, 2003,2005; Hite and Hesterly, 2001). This means that the network structure may consist of higher number of weak rather than strong ties. This is evidenced by empirical support provided by research examining the evolution of young firm networks which found that upstream contacts (eg. Suppliers) shifted from a social to economic basis over time (Schutjens and Stam, 2003).

The evolution at this stage leads an organization created from the new venture rather than individual entrepreneur and starts to specific and form the boundaries for trust relationships with critical resource providers (Baier, 1986). Cognitive trust further develops as the structure evolves to include more weak ties increasing the knowledge of the parties' competencies and provides evidence of trustworthiness.

Cumulatively, the entrepreneur will rely less on the relationships based on affective or social trust as the structure of the exchange dyads shifts in emphasis from personal, strong ties to more organizational weak ties. Lewis and Weigert (1985) argue that these organizational exchanges still

exist within a social context and therefore the affective element of trust is still a necessary condition.



**Fig. 2.1:** A stage model of cognitive and affective trust within entrepreneurial networks. Adopted from (Larson and Starr's 1993; Hite 2003, 2005).

## 2.10 Exogenous and endogenous forces

Networks operate within a dynamic environment and it is expected that both exogenous and endogenous forces are likely to influence how networks evolve over time. Prescott (1998) notes that exogenous forces may include environmental jolts and changes. For instance, the rise of Japanese competition followed by the threat of U.S and European trade protectionism shaped the pattern of strategic alliances observed in the global automobile industry in 1980s (Nohria and Garcia-Pont, 1991). Another example is the discovery of recombinant DNA and other biotechnologies that were exploited by new biotech firms triggered the extensive pattern of alliances that has shaped the modern biotechnology industry (Powel, Koput and Smith-Doerr, 1996). In this regard exogenous forces leads to convergence of firms that were previous autonomous across the industry boundaries hence shaping strategic networks.

Exogenous environmental forces can change the existing landscape of businesses by triggering disbandment of strategic alliances. For instance, the decline of UNIX as a standard operating system has led to the disbanding of several strategic networks that were purposefully designed to win the UNIX wars (Gomes-Casseres, 1994). Gulati *et al.*, (2000) notes that more liberal foreign direct investment policies have led to the dismantling of networks that linked first world multinational to third-world local strategic partners.

Endogenous environment can also present opportunities for networks to evolve. A dense network can be formed by actors forming alliances at individual level and then influencing their connections (Gulati *et al.*, 2000). Garcia-pont and Nohria (1999) posit that this is what happened in the global automotive industry during the 1980s. In addition, endogenous evolution include the pathways of information that each tie represent which may alter the opportunity structure of a focal actor as new ties are formed or disbanded ( Gulati and Gargiulo, 1999). Other mechanisms for endogenous evolution include the pathways of information that each tie represents, which alters the opportunity structure of a focal actor as any new tie is formed or disbanded (Gulati and Gargiulo, 1999). Thus, the exogenous and endogenous dynamic can have significant implications on the actors in the networks.

### **2.11 Networking theory**

The roots of networking theory can be traced from organizational behavior, management and sociology (Claro 2004). Networks, in the context of business studies, have in general received an increasing amount of attention in the literature (e.g. Moller &Halinen, 1999; Gilmore & Rocks, 2004; Hakansson&Snehota, 2006). In consistent with Premarantne (2002), this study will be guided by Resource Based Theory (RBT), Transaction Cost theory (TCT) and Social Capital Theory (SCT). Premarantne (2002) posits that though these theories view networking from different perspectives, they provide insight into the development and structure of SMEs networks.

### 2.11.1 Transaction cost theory

Transaction cost theory is the oldest theory that explains networking. The first proponent was Commons (1934), it was reinforced by Coase (1937) and Arrow (1969,1974). However, Williamson (1985; 1991) provides a comprehensive understanding of small business networking. In the context of small businesses and networking transaction cost has not direct link or meaning with transaction cost analysis (Premaratne 2002).

Transaction costs have been defined in several ways by researchers. Arrow (1969) defines transaction costs as the costs involved in running the economic system. Kenny (2009) defines transaction costs as the inefficiencies that arise at the interface of activities in production and distribution processes of business enterprises. Premaratne (2002) defines transaction cost as all costs involved in a transfer of goods and services from one unit to another.

Coase (1988) asserts that there are always transaction costs for carrying out market transactions. An enterprise would prefer transactions to be organized within the enterprise if the costs would be less than the cost of carrying the transaction in the market. On the other hand, as the additional costs of the transaction the cost of carrying out the transaction through the market or in another enterprise, an enterprise will prefer the transactions to be organized outside the enterprise (Coase 1988).

Transaction costs are characterized by high uncertainty, type and degree of asset specificity and the frequency of occurrence (Williamson 1979). The above characteristics make the market transactions more costly. Enterprises therefore attempt to reduce these costs by vertical integration. In this way the market is transformed into a hierarchy which is self-governing, ensuring a continuation of market relations and creating long-term bilateral dependency

relationships between parties (Williamson 1991). This argument is consistent with Coase (1988) that linkages or hierarchies effectively reduce transaction cost for enterprises because of bilateral nature of relationships between the enterprises.

Thorelli (1986) states that business enterprises exist due to their ability to minimize transaction costs and take advantage of economies of scale. Further, he suggests that the existence of transaction cost leads to the rational for the creation of linkages between small enterprises.

Transaction cost approach is best suited to explain networking in SMEs because they have limited resources. Gilmore *et al.*,(2006) views networking as an important business dimension given the resource constraints and limitations of SMEs.

#### **2.11.1.1 Criticism of transaction cost theory**

There have been several criticisms on this theory. Several writers particularly on evolutionary economics and strategic management embrace ‘capabilities’, ‘dynamic capabilities’, or ‘competence’ approaches (Langlois 1992; Kogut and Zander, 1992; Dosi and Marengo, 1994). These writers have been critical on transaction cost theory and the critique concerns the reliance on opportunism and the neglect of differential capabilities (firm heterogeneity) and dynamics in transaction cost economics. Knowledge based writers often argue that differential capabilities give rise to production cost which largely affect make or buy decision. Therefore firms may internalize activities because they can carry out these activities in a more production (not transaction) cost-efficient way than other firms are capable. Some writers argue that the existence of a firm can solely be explained in knowledge based terms and without making use of opportunism (Demsetz ,1998; Kogut and Zander, 1992; Hodgson, 2004).



### **2.11.2 Resource dependency theory**

The resource dependency theory in relation to enterprise networking was proposed by Pfeffer and Salancik (1978). It provides that there is interdependency of business enterprises. They argue that the effectiveness and performance of business enterprises is highly dependent on the enterprise's external environment. In this case, interdependency is necessary because no one actor (enterprise) entirely controls all the conditions necessary for the achievement of desired outcomes (performance). All business enterprise actions and outcomes are based on interdependent causes or agents in the external environment (Pfeffer and Salancik, 1978).

Interdependency of a business enterprise on the external environment leads to uncertainty. In order to overcome the problem of interdependence and uncertainty, enterprises attempt to increase the level of coordination between themselves and external environment. With the need to improve performance and increase coordination between the enterprise and its external environment, there is formation of linkages. These linkages may involve enterprises exchanges and transactions which may be momentary or physical resources as well as information exchanges with external groups or enterprises (Pfeffer and Salancik, 1978). They further observe that linkages will stabilize an enterprises exchange with its external environment and reduce uncertainty.

Sengenberger and Pyke (1992) analyzed resource dependency theory in relation to small business networking and found they lack the necessary resources and economies of scale to compete individually. In this regard SMEs need to link together in order to share information and resources for the purposes of improving their performance. As a consequence, linkages and network formation are paramount to small business success (Sengenberger and Pyke, 1992).

The contribution of both Pfeffer and Salancik (1978) and Sengenberger and Pyke (1992) revolve around the social context of relations between individuals. The social context of relations is essential in linkages and is the catalyst for the formation of all business networks (Sengenberger and Pyke, 1992)

### **2.11.3 Social network theory**

Premaratne (2002) argues that the logic of the social network theory is the premise that individuals in the society are involved in a number of social relationships with each other. The Social networking was introduced and formalized by Moreno in 1937. However, this theory has developed and changed over time. Cartwright and Harary (1956) “graph theory” introduced mathematical formula in Moreno’s (1937) theory. Milgram, 1967; Watts and Strogatz (1998) developed the “Six degrees of separation” theory. This theory suggests that people are interconnected and the number of contacts required to reach any other person is as little as six (Kleinfield, 2002).

Granovetter (1973, 1985), Burt (1992) and Coleman (1988) provide theories relevant to small business networks though anchored on social network approach.

#### **2.11.3.1 Network closure theory**

Coleman’s (1988) network closure theory proposes that the greatest value in a network is gained where individuals are bound by a level of trust. Trust becomes an enabler for establishment of linkages and networks where individuals become resourceful to each other. The extent to which actor’s contacts connected among them promotes an environment that facilitates access to trustworthy information, resources, role expectations and interpersonal solidarity (Rhee 2007).

The central theme of Coleman's (1988) theory is trust among members who know each other. He further distinguishes between open network and closed network. Open network in a group is marked by a high degree of social disintegration and trustworthiness among members will be low and the value derived from such connections cannot be great. Conversely, in closed network, there are mutual bonds among members thus creating trustworthiness which leads to beneficial information and resource exchanges.

Coleman (1988) posits that small business networking stems from the fact that SME owners/managers will seek information and resources from individual who are trustworthy to them. In this regard SME owners/managers will form linkages and networks with those individuals so that their businesses can gain competitive advantage from these networks which are bound by high level of trust. However, non-members will be excluded from the network because it is assumed that they do not provide any value addition to information and resource acquisition.

### **2.11.3.2 Strength of weak ties theory**

Granovetter (1973) introduced the strength of weak ties theory to networking which was built on Milgram's (1967) "Small world's" theory. He argues that individuals whose weak ties comprise of close connections (strong ties) will have access to limited and less valuable information than individuals whose ties encompass weak ties. Weak ties create more value than stronger ties (Granovetter 1973). Iris (2007) argues that weak ties serve as bridges between strong dyadic relations that would otherwise have been unconnected. This means that an enterprise with individuals who have numerous weak ties will gain access to superior, non-redundant, information and services.

This theory provides a strong basis for small business networking. Small enterprises, in attempting to reduce the effects of their size, will therefore access valuable information and

resources from both their strong ties (family, friends) and also take advantage of their weak ties (customers, suppliers and acquaintances).

### **2.11.3.3 Structural holes theory**

This theory was advocated by Burt (1992) and is concerned with redundancy. It refers to the gap or hole spanned between non-redundant contacts “whether a relationship is strong or weak it generates information benefits when it is a bridge over a structural hole”. Network contacts are redundant if they lead to the same people and hence provide the same information benefits (Burt 1992). This theory proposes that an individual is in an advantageous position to acquire information if the person is connected to each other (non-redundant contacts). This theory suggests that contacts which are not connected in any way provide overlapping information benefits.

This theory is consistent with Granovetter’s (1973) strength of weak ties theory. Regardless of whether a relationship is strong or weak, it will always generate information benefits if it is a bridge over a structural hole (Burt 1992).

Past research on networks has shown that strong ties between the actors in a network has an influence on the firm’s performance (Granovetter’s 1973, 1974; Krackhardt, 1992). On the same note (Gulati, 1998) argues that strong ties have some distinctive advantages in networks namely: information about partners’ capabilities; timely information about opportunities and threats and referral to and from partners.

This theory largely supports the aspect of small business networking. Enterprises owners or managers seeking to acquire information will form linkages with those who are not directly connected with them. Such information will be valuable for creating competitive advantage. This

theory therefore creates advantages for enterprises whose manager's relationships are not limited to their primary contacts alone (Burt, 2001).

### **2.12 Oliver's six networking motives**

Oliver (1990) proposed six factors that motivate organizations to involve themselves in the inter-organizational relationships. In this regard, motives are the reasons that encourage networking whereas inter-organizational relationships refer to the linkages between the organizations. The motives explained in this theory have been derived from the organizational view in the context of large organizations though applicable in SMEs (Oliver, 1990). The six factors include: necessity; asymmetry; reciprocity; efficiency; stability and legitimacy.

The motive of necessity underscores the need of meeting the legal requirements as outlined by regulatory bodies. The government and regulatory bodies can formulate laws that require SMEs to belong to certain associations. Oliver (1990) argues that such enforcements are meant to maintain mandatory relationships between organizations. Compliance to such requirements may be an initiation into networking process. For instance, in Malaysia, SMEs are required to join Bar Council of Malaysia in order to perform their activities (Farinda, 2009)

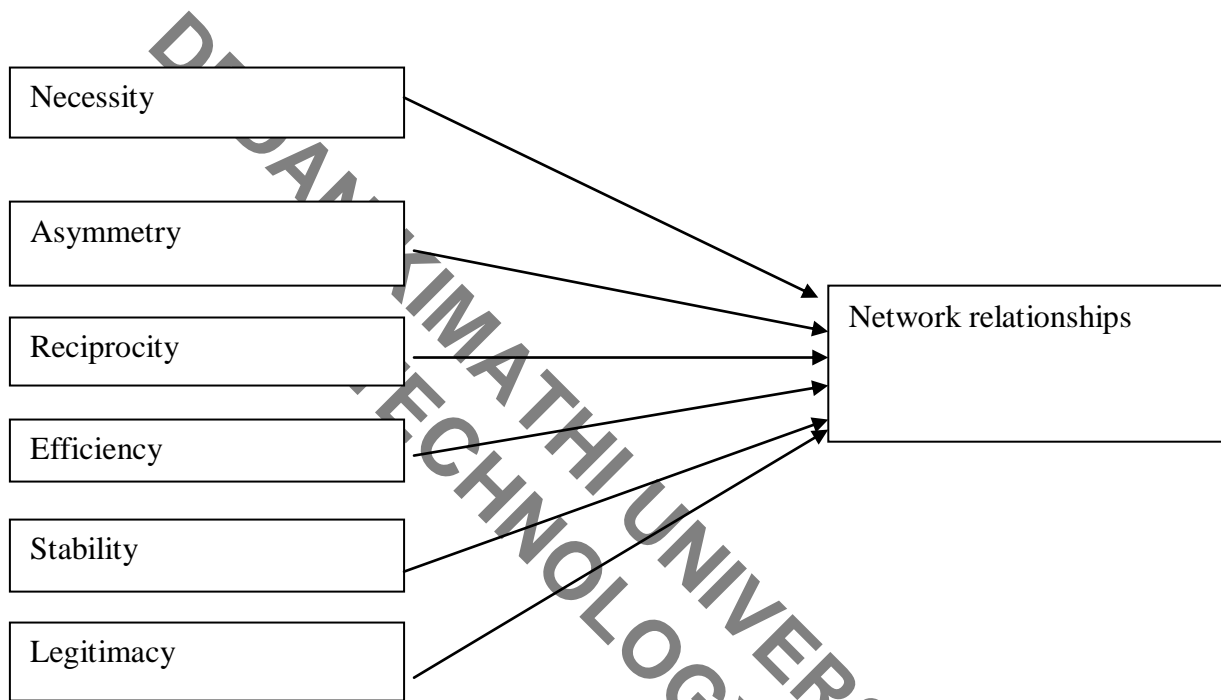
The asymmetry and reciprocity motives aim to influence resources in organizations. The motive of asymmetry from a network to a firm is meant to exert power and control over the firms resources. For instance, a manufacturing firm may want to form a business linkage with a distributor because then it may control its upstream activities and increase its power over the distribution channel. Hakansson and Ford (2002) notes that this type of business relationship provides opportunity for businesses to influence each other.

The reciprocity motive seeks to expect mutual benefits from a network. It relates to the need of having collaborative business networks. This motive seeks collaborative, cooperation and coordination from the inter-organizational relationships rather than controlling or gaining power over each other (Oliver, 1990). The firm's competitive advantage greatly rests on collaborative business networks (Gulati *et al.*, 2000). Lin and Zhang (2005) suggest that building business network through reciprocity could increase the growth of existing resources and the ease of obtaining external resources.

Efficiency motive is meant to improve firm's internal efficiency through business networking (Oliver, 1990). Since efficiency is a predictor of firm's performance, this motive is core to any firm seeking networking. Through inter-organizational networks SMEs can reduce costs of production, distribution so as to maximize their output. Notably, through networking, firms can achieve efficiency through increasing return on assets, reduction of waste and unit costs by leveraging on economies of scale (Contractor and Orange, 1988). Lin and Zhang (2005) posit that forming business networks is an avenue of minimizing business risks, reducing production cost, increasing flexibility and increasing firm's knowledge.

Stability motive refers to a motive that a firm is able to minimize uncertainty or forecast the outcome of their activities (Oliver, 1990). Business environment is usually unpredictable and uncertain. Such uncertainties can be minimized by SMEs fostering inter-organizational relationships. Mackinnon *et al.*, (2004), posit that the involvement of a firm in a wider network not only provides a platform for learning and resource sharing but also assists in operating in an uncertain economic environment. Saleh and Ndubisi (2006) suggest that access to new markets could be jointly achieved by firms that participate in business networks. Ebers (1997) notes that firms can enhance their stability by sharing the risks or gaining market power.

The motive of legitimacy aims to assist an organization build its reputation or image in the market through inter-organizational relationships (Oliver, 1990). SMEs compared to large organizations have lesser reputation and branding in the market place. Their market presence and awareness can be improved through networking with firms with a high market reputation. Anderson *et al.*,(1994) argues that relationships fostered with firms that are unique, well known and prestigious resulted in an advantage for the lesser partner to gain competitive advantage in business.



**Source: Oliver (1990)**

Fig. 2.2 Motives of networking

### 2.13 Social capital

Nahapiet and Ghoshal (1998) defines social capital as “the sum of the actual resources embedded within, available through and derived from the network of relationships possessed by an individual or a social unit”. Alder & Kwon (2002) posit that like any other resources, sources of social capital lie in business structures within which network actor is located. An inter-firm network places social capital at the firm’s disposal, promoting and supporting the production of

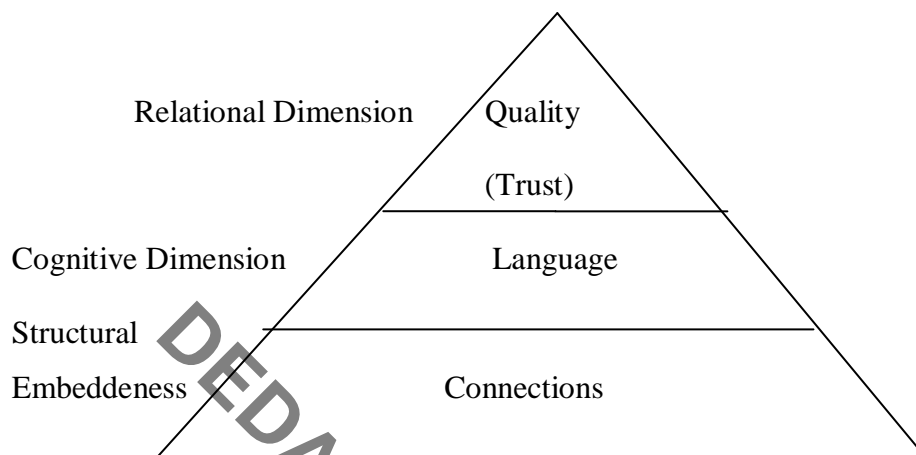
intellectual capital which ultimately fosters the competitive advantage of firms (Antoldiet *al.*, (2011).

Bruderl and Presisendorfer (1998) posit that besides providing access to economic resources, social capital derived from the network is important because it can provide the entrepreneur access to useful information that can lead to ventures success. Further, Anderson and Jack (2002) notes that social capital serves as both a product of the entrepreneurial network and an enabler of continued network development facilitating coordination and cooperation of network ties by bonding the parties involved.

Korgut and Zander (1993) argue that the presence of social capital can enhance knowledge capture, codification and transfer because it can lead to innovation through facilitating the combination and exchange of resources. Alder & Kwon (2002) posit that like other resources, sources of social capital lie in business structures within which a network actor is located. In this regard, social capital can be differentiated from other types of resources and is largely a function of a firm's position in the network structure. This proposition is consistent with Inkpen and Tsang (2005) who views social capital as the aggregate of resources embedded within, available through and derived from the network relationships possessed by an individual or organization.

Social capital phenomenon was originally used to describe relational resources embedded in personal ties that are beneficial for the development of individuals in social organization (Tsai & Goshal, 1998). However, recent research has applied this concept to a broad range of issues including relationships within and beyond a firm (Huggins, 2010; Inkpen & Tsang, 2005), relationship inside and outside a family (Arregle *et al.*, 2007; Pearson *et al.*, 2008), organization-industry relations (Cooke, 2007), and social networks of engagement and reciprocity (Fukuyama, 2002).





**Source: Nahapiet and Ghosal (1998)**

Fig 2.3 Social Capital Dimensions

Lee (2009) classified social capital in three broad dimensions: structural; relational and cognitive. Antoldi *et al.*, (2011) makes clear distinction between structural, relational and cognitive social capital. Structural dimension of social capital refers to the patterns of connection between actors: the number and kinds of actors involved; presence or absence of direct ties between specific individual actors network density, connectivity and hierarchy and the stability of ties between nodes.

Tsai and Ghosal (1998) posit that structural embeddedness of social capital focuses on the micro aspects of the network configuration. Further, it includes the social interaction. Structural embeddedness can be viewed from three perspectives: network ties, configuration and stability (Inkpen and Tsang, 2005). Since social network are diversified, the location of contacts in the social structure of interactions can provide certain advantages for the actors (Adler & Kwon, 2002; Lee, 2009). In this regard, positioning in the network is important because lead to access of vital information (Carolis& Saporito, 2006). Lee (2009) notes that the structure of social

networks influence social interaction and hence the ability to make contacts and access to specific business resources (Lee, 2009).

On relational dimension they argue that it focuses on the behavioural assets of the network such as trust and trustworthiness, obligations and expectations. Granovetter (1992) notes that relational view focuses more on information and resources leveraged from personal and direct relationship the entrepreneur develops with others through history of interactions. This view includes many aspects of social context such as social interactions and the degree of trust in the relationships (Naphiet and Ghosal, 1998).

Lee (2009) notes that relational social capital refers to the normative conditions and best practices that guide individual actor's relations. In addition, Lin & Si (2010), finds the normative conditions of trust, obligation, and expectations are the main components of relational dimensions. Relational embeddedness is significant since network engagement, norms and trustworthiness have the potential to lead to organizational advantage (Lee, 2009).

Tsai and Ghosal (1998) propose that relational embeddedness is characterized by trust and trustworthiness. Trust is an attribute of a relationship, but trustworthiness is an attribute of an individual actor involved in the relationship. In addition, as trusting relationships develop in a network actors form a reputation of trustworthiness that can become important information for other actors in the network (Tsai & Ghosal 1998). Hence, being embedded in a network gives rise to a form of trust known as relational trust. Relational trust therefore grows over time yielding to feelings of reliability, positive expectations of interdependence and thus based on continuing reciprocity (Andler & Kwon, 2002).

Finally, the cognitive dimension of social capital refers to the meaningful contexts of communication among and between actors (Nahapiet & Ghoshal, 1988). These dimensions facilitate the exchange of information, knowledge and resources (Kang *et al.*, 2007).

The cognitive perspective of social capital focuses on attributes like a shared code that facilitate a common understanding of collective goals and proper ways of acting in a social system (Nahapiet & Ghosal, 1998). De Carolis and Saporito (2006) notes that shared systems of meaning and language facilitate the exchange of information, learning and knowledge creation making it possible for the individual to share each other's thinking process.

Cognitive embeddedness focuses on a shared vision of which network members have similar perceptions, collective goals and aspirations to promote mutual understanding (Inkpen and Tsang 2005). Liao and Welsch (2005) notes those individual social actors who share values for implementing codes of conduct and having attitudinal similarities can freely interact

The presence of strong social capital in a network increases the efficiency of actors and actions within the networks. It compounds a necessary requirement for producing significant benefits for firms when they are united on the market, both domestic and international (Antoldiet *al.*, 2011).

The table below summarizes empirical studies on the social capital dimension and the key findings:

**Table 2.1: Empirical studies on the social capital dimension**

Author/s (year)	Social Capital Dimension	Key Findings
Liao and Welsh (2005)	Structural, relational and cognitive	High technology and non-technology entrepreneurs do not differ significantly on structural social capital.
Tsai and Ghosal (1998)	Structural, relational and cognitive	The three social capital dimensions are related significantly to resource exchange.
Wu (2008)	Structural, relational and cognitive	Information role mediates in the relationship between the three social capital dimensions and firm competitiveness.
Inkpen and Tsang (2005)	Structural, relational and cognitive	The nature of the network type in which the organization is embedded is affected by the process of inter-organizational knowledge transfer
Yli-Renko, Autio and Sapienza (2001)	Structural and Relational	Social interaction and higher trustworthiness are related to knowledge acquisition
Tsai (2000)	Structural and relational	Structural and relational social capital affect the quality and formation of inter-organizational linkages.
Lawson, Tyler and Cousins (2008)	Structural and relational	The broader range and intensity of supplier integration, the greater the accumulation of relational capital.
Mu. Peng and Love (2008)	Structural and relational	Weak ties help the firms to build initial relationships while strong ties help firms to acquire higher-quality resources and knowledge.

Tutti (2010) summarizes the various elements of social capital from literature as indicated below

**Table 2.2: Elements of social capital**

Elements of Social Capital	Authors
<p><b>Structural</b>            Presence or absence of network ties            Network Configuration              Density              Connectivity              Hierachy            Closure            Tie strength            Structural holes</p>	<p>Nahapiet&amp; Ghosal, 1998            Nahapiet &amp; Ghosal, 1998              Coleman, 1998            Granovetter, 1973            Burt, 1992</p>
<p><b>Relations</b>            Norms            A collective group of norms            Reciprocity            Identification and Identity            Social solidarity            Obligations            Expectations            Sanctions            Trust and trustworthiness            Friendship            Respect</p>	<p>Coleman, 1998; Portes 1996            Sandefur &amp; Laumann, 2000            Coleman, 1988; van den Hooff et al., 2004            Lesser, 2000; Putnam, 1995; Adler &amp; Kwon, 2002            Nahapiet &amp; Ghoshal, 1998            Sandefur &amp; Laumann, 2000            Nahapiet &amp; Ghoshal, 1998; Coleman, 1988            Nahapiet&amp; Ghosal 1998; Coleman, 1988            Coleman, 1988            Lesser, 2000; Coleman, 1988            Nahapiet&amp; Ghosal 1998</p>

### 2.14 Firm resources and resource acquisition

The resource based view (RBV) of the firm suggests that their unique bindles of resources and capabilities serve an advantage for enterprises (Barney, 2000; Cabrera-suárez *et al.*, 2001). Further, Wang, He and Mahoney (2009) posit that the RBV emphasizes the role of firm-specific knowledge resources helping organizations to achieve a sustainable competitive advantage.

Barney (1991; 1995) argues that according to the Resource Based View (RBV) of strategy, firms with valuable, rare, non-inimitable and non-substitutable resources have the potential of achieving

superior performance. In addition, resources are inputs into a firm's production process (Barney 1991) and are either knowledge-based or property based (Miller and Shamsie 1996). Galunic and Rodan (1998) distinguish between property-based and knowledge-based resources.

Property based resources refer to tangible input resources while knowledge-based resources are ways in which firms combine and transform the tangible inputs. McEvily and Chakravarthy (2002) posit that because knowledge based resources are difficult to imitate, they provide sustainable competitive advantage and hence facilitate sustainable differentiation.

In RBV theory, resource acquisition is critical since resources with value, rareness, inimitableness and non-substitutability can create competitive advantages and have a great impact on performance (Foss 1996). Zhang, Wong and Soh (2005) consider resource acquisition as a composite of resource capability and resource acquisition outcome. Resource acquisition capability is the ability to acquire both tangible and intangible useful resources through firms or individuals. On the other hand, acquisition outcome focuses on the usability of the resources acquired and on whether these resources can bring current or long-term competitive advantages.

Traditionally, scholars of business strategy adopted only two views: Industry based view and resource based view to explain the sources of business competitiveness. The proponents of industry based views argue that high returns can be achieved by firms which understand the structural conditions of their industry and place themselves at the most advantageous position with the given environment (Porter 1980, 1985). This view looks at the industry as the fundamental unit of analysis for designing competitive strategy of the firm.

The resource based view argues that high returns are due to heterogeneity of the firms than to the structure of the industry. This is because only firms which succeed in accumulating rare,

valuable, inimitable and difficult to replicate will achieve competitive advantage (Barney, 1991). This view considers the firm as the primary unit of analysis for strategy making.

The “third view” is propelled by the fact that there is diffusion of alliances among firms. Aldoni *et al.*, (2011) posit that though inter-firm alliances make substantial contribution to the understanding of the supernormal profits of the firm, neither industry based view nor resource based view consider the benefits obtained from exchanges with partners. To highlight the relevance of alliance in building sustainable competitive advantage, scholars have used terms such as: ‘Collaborative advantage’ (Kanter 1994), ‘organizational advantage’ (Nahapiet and Ghoshal 1998), and ‘inter-organizational competitive advantage’ (Dyer and Singh 1998).

Curado & Bontis (2006) notes an extension to the RBV framework; the knowledge based view of the firm (KBV) regards knowledge as a specific organizational resource. This perspective originates from the strategic management literature and builds upon and extends RBV (Alavi & Leidner, 2001). Although the RBV recognizes the important role of knowledge in the firms that seek to achieve competitive advantage, the advocates of knowledge based view of the firm argue that the RBV treats knowledge as a generic resource without having any special characteristics (Mentzas, 2004).

Knag, Morris and Snell (2007) argued that recent theories of strategic management have shifted towards resource and knowledge based views of the firm. Knowledge embodied within people is the foundation of firms core capabilities and is fundamental to the development of its value proposition.

Cabrera Suarez *et al.*, (2001) combined these two perspectives into the resource and knowledge based views of the firm as a way of determining distinctive aspects of tacit knowledge and resource in achieving business continuity in family firms. Lee, Lee and Pennings (2001) utilized

both the RBV and social capital theory to explain firm performance and suggested that both these frameworks integrated account for wealth creation. Further, in order to create value and economic wealth, it is important for entrepreneurs to accumulate firm internal capabilities and develop external networks simultaneously (Lee *et al.*, 2001).

The knowledge based view has been employed with social capital theory to explain how network relationships contribute to efficiency in knowledge exploitation (Grant & Baden-Fuller, 2004). In addition, Grant and Baden-Fuller (2004) proposed the usage of knowledge based theory of a firm to identify advantages of knowledge –accessing provided through network collaboration and strategic alliances.

The table below summarizes key findings of a number of studies utilizing RBV and KBV to address knowledge resource issues in network relationships.



**Table 2.3: Selected empirical studies using resource-based view, knowledge –based view and a combination of the two**

Author (s)/ year	RBV/KBV/ Combination	Key Findings
Grant and Baden-Fuller (2004)	KBV of the firm	Inter-firm alliances are motivated by firms' desire to gain knowledge from other firms'.
Yli-Renko, Autio and Sapienza (2001)	KBV of the firm	Knowledge acquisition mediates relationship between social interaction and new product development, social interaction and technological distinctiveness. Further, it partially mediates between network ties and technological distinctiveness.
Lee, Lee and Pennings (2001)	RBV of the firm	Sponsorship-based linkages do not have individual affects on performance but linkage with financial institutions has a multiplicative effect with technological capabilities and financial resources invested on a start-up's performance.
Cabrera-Suarez and Garcia-Almeida (2001)	Resource based, knowledge based view of the firm	Tacit knowledge embedded in a founder can become a source of competitive advantage upon transmission. Further, knowledge transfer can help solve succession issues thus guaranteeing continuity of the family business.

### 2.15 Firm performance

Performance of the firm remains the ultimate indicator for success as evidenced in both empirical and theoretical models (Man *et al.*, 2002). There are many factors that affect the performance of a firm and these factors are attributed to the internal and external factors of the firm (Pearce and Robison, 2002). Understanding the factors that impact small business performance is important and enables advisors, policymakers and other relevant stakeholders to serve the SME sector better (Gaskill and van Auken, 1993). Chaharbaghi and Lynch (1999) posit that a firm with better performance has superior long-term intangible abilities relative to its competitors.

Several authors have proposed several measures that can be used to measure firms performance.

Westhead and Wright (1998) argue that small business performance can be measured in terms of

sales growth, employment growth, changes in profitability, and changes in profitability in comparison with the competitors. Blatt 1993; Orser *et al*, 1998; LeBrasseur 2003, posit that firms performance can be measured by considering increased earnings, employment growth and sales revenues.

Lack of financial reporting requirements for majority of SMEs makes it difficult to obtain sufficient financial information to measure their performance in an economic sense (Everret and Watson 1998). Massurel and van Montfort (2006) argue that there is interference between business profits and entrepreneurial income by entrepreneurs.

### **2.15.1 Measures of performance**

Schayek (2011) notes that SMEs performance can be measured using financial measures (objective) and non-financial measures (subjective). Notably, most research in strategic management usually adopts objective measures as the indicator of firm performance. However, Cameron and Whetten (1983) argue that no one measure is superior to another. In addition, the adoption of either is dependent and guided by the research question.

#### **2.15.1.1 Financial Measures**

Financial measures of performance are derived from the accounts of the firm. This means they can be found in the balance sheet or income statement of a firm (Kellen, 2003). The objectivity of the financial measures is based on the fact that they can be measured and are verifiable. Some common financial measures include:

**Return on Assets (ROA):** It provides information about how much profits are generated on average by each unit of the assets of the firm (Peterson and Shoeman, 2008). Further, ROA is an indicator of how efficiently a firm is being operated with the assets available.

$$\text{ROA} = \frac{\text{Net profit after tax}}{\text{Total equity}}$$

**Return on Equity (ROE):** Watson (2007) notes that ROE gives a starting point for good systematic analysis of firm performance. It relates the earning left over for equity investors after debt service costs have been factored into the equity invested in the firm (Damoradan, 2007)

$$\text{ROE} = \frac{\text{Net profit after interest before tax}}{\text{Total equity}}$$

**Sales growth:** It refers to an increase in sales over a period of time. It is a good measure for SME performance (Delmar *et al.*, 2003)

**Profitability:** It refers to the growth of profits over time. Profitability can be expressed using the following accounting based metric

- (a) Gross profit = Total revenues - Total cost
- (b) Gross profit margin = Gross profit / sales
- (c) Net profit = Gross profit - Interest and Tax
- (d) Net profit margin = Net profit / sales.

#### 2.15.1.2 Non-financial performance measures

Non-financial measures are known as the subjective performance measures of performance. Ittner and Larcker (2003) posit that non-financial measures can provide indirect quantitative indicators of a firm's intangible assets such as intellectual capital and customer satisfaction and customer loyalty which are key drivers of business success. Some non-financial measures include employee growth, customer satisfaction, satisfaction compared with competitors and overall satisfaction on organizational performance.

Measurement of performance in SMEs is critical so that owners/ managers are able develop a routine of evaluating their businesses from time to time. Business performance reflects firm's growth and capability over time which is an indicator through which outcomes are measured. The study sought to

measure performance based on financial objectives. Therefore growth in sales and profitability were used to measure performance in this study.

### **2.16 Networking and firm performance**

The manner in which a firm is embedded in its alliance network is an important factor influencing its behavior and performance (Gulati & Gargiulo, 1999). Inkpen (1998); Lubatkin *et al.*, (2001) argues that participation in alliances has implications for corporate competitiveness, provided that firms are favourably embedded in the web of strategic alliances in their industries. The networks provide a vast of opportunities for firms to learn from each other by gathering information and acquiring new skills and therefore it has been argued that the performance of firms is influenced by both the external linkages and internal linkages (Adler & Kwon, 2002). Business relationships and networks are perceived as sources of competitive advantage (Ford *et al.*, 2003; Gulati 2007).

A critical literature review indicates that networking concept can viewed from the following perspectives 1) networking relationships (Hoang & Antoncic, 2003) considers three areas of network relationships: network content; governance and structure. 2) networking dimensions, Burt (1992) and Zhao and Aram (1995) break the network dimension into two aspects: network range and network intensity. 3) network capability (Walter *et al.*, 2006) contains four dimensions namely: Relational skills; coordination; partner's knowledge and internal communication.

### **2.17 Network relationships and firm performance**

Networking relationships can be viewed in three perspectives: structure, governance and content (Amitt and Zott 2001; Hoang and Antoncic 2003). Allee (2008) suggest that network relationships in business are distinguished as purposeful networks consisting of specific role and value interactions oriented towards the achievement of a particular outcome.

The active agents of a network participate by playing particular roles in which they convert both tangible and intangible assets into negotiable offerings and fulfill different functions. Notably the

definition of network relationships vary but essentially depend on whether the focus is on the configuration of ties or on the quality of relationships between actors within linkages (Adler & Kwon, 2002; Moran, 2005).

### **2.17.1 Network structure and firm performance**

Networking is considered an important activity for small and large firms (Oliver, 2001; Lorenzoni and Lippatini, 1999). Network structure is defined as “the pattern of ties between different actors” (Hoang and Antoncic 2003). Zaheer & Bell (2005) defines an enterprise network structure as a firm's network which could acquire access to external resources through their network relationship and integrate with internal resources to generate additional benefits.

Network literature has considered embeddedness of firms in networks of external relationships with other organizations crucial (Gulati *et al.*, 2000) and has emphasized the importance of external resources and capabilities to the firm through its networks (Zaheer & Bell, 2005; McEvily and Marcus, 2005). Hoang and Antoncic (2003) posit that within a network structure, network size and centrality determine the amount of resources an actor can access. In addition, network structures centre on differential network positioning that exerts an influence on resource flow (Hoang & Antoncic, 2003; Moran, 2005).

The amount of resources available is measured by two main variables. The network size (Aldrich & Reese, 1993) and ventures centrality in the network (Taheri & Van Geenhuizen, 2011). The later refers to the ventures position in the network and its ability to access and control resources (Hoang & Antoncic, 2003).

Diversity of resources is largely affected by structural position and strength of ties in the network structure (Hoang & Antoncic, 2003). Nahapiet & Ghoshal (1998) posit that the structural position

could either be dense or loose. Coleman (1990) suggests that closure of network structure generates trustworthiness and facilitates the emergence of norms. In contrast, Granovetter (1973) suggests that loose networks provide benefits from diversity of knowledge and brokerage opportunities.

Network density is defined as the proportion of existing dyadic ties to all potential ties in the network (Kenis & Koke, 2002). Further, Cromie and Birney (1992) define network density in terms of connectedness or the extent to which network members are linked with each other. Koka & Prescott (2002) notes that it is directly related to the contacts that a social unit possesses and to the number of ties it has with each other. It is measured by determining the number of other contacts with the network to which the SME owner-manager is connected.

At inter-firm level, network centrality enables the central firm to acquire power, access and control alternative information sources and participate in coordinated collective actions (Kenis & Knoke 2002). The social units in a central network position have greater access to, and potential control over, relevant sources such as information and knowledge (Pfeffer & Salancik, 1978).

Previous research has acknowledged three distinct components of centrality (Brass & Burkhardt, 1993; Rowley, 1997). (1) Degree of centrality- which means that units are well connected and have access to many alternative sources of information and resources. (2) Closeness centrality- This influences the units independent access to different points in the network. (3) Betweenness centrality- this determines potential control over others, or the possibility of increasing the dependence of others on the unit.

Empirical studies by Powell *et al.*, (1996) demonstrate that the central position in inter-firm learning networks in Biotechnology start-ups is related to their faster growth. Further, Zaheer and

Zaheer (1997) found that the degree of centrality of banks in their information networks is potentially related to their market influence

Taheri & Van Geenhuizen (2011) argues that the concept of strength of ties refers to the intensity of the relationships. Strong relationships with other actors in a network built over a period of time can be a valuable source of market information and new knowledge. There emerges a contradicting view where the “strength of weak ties” (Granovetter, 1973) state that resources are obtained through casual meetings, where information flow is non-redundant (Hite & Hesterly, 2001).

Jack (2005) notes that actors connected through strong ties are likely to interact frequently but the information is likely to be the same restricting diversity. Diversity of knowledge are more likely in loose networks (Granovetter, 1973). This argument is supported by Burt (1992) suggesting that a loose network with few redundant contacts provides more benefits.

### **2.17.2 Network governance and firm performance**

Network governance is the element of coordination of the network exchange (Hoang & Antoncic, 2003). It is the mechanism that governs the relationship among actors, the legal forms of actors, and the incentives for participations within networks. These mechanisms are based on power, influence, relationship reciprocity, and trust support the network sustainability more than legal enforcement (Amit and Zott, 2001). Larson (1992) posits that reciprocity refers to mutual connection between two actors within a directed network.

Trust between actors is a critical element of network exchange (Lorenzoni and Lipparini, 1999) and is associated with the willingness of others to engage in cooperative interactions (Ring and Van de Ven, 1992). The dense of the network facilitates sanctions that make it less likely for

network participants to trust each other (Coleman 1989). Uzzi (1997) argues that a relationship governed by mutual trust reduce transaction costs given that participants can assume that the other party takes actions that are predictable and mutually acceptable.

When actors within the network trust each other, they are more willing to engage in cooperative activity through which further trust may be generated (Fukuyama, 1995). Trust refers to the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trust or irrespective of the ability to monitor or control that other party (Mayer *et al.*, 1995).

When trust exists individuals are willing to give useful knowledge, when possible, or forego complete knowledge (Tsai and Ghosal, 1998). Further, Aldrich and Fiol (1994) notes that “trust is a critical first-level determinant of the success of founding entrepreneurs because, by definition, there is an absence of information and evidence regarding their new activity”. Das and Teng (1998) posit that because it is impossible to monitor every detail in most exchanges entrepreneurs must always have a minimum trust level that often evolves as partners interact. This means that without some level of trust in these circumstances the economic exchanges would fail.

Larson (1992) found that trust centered around two dimensions: one consisting of a social relations aspect and the other encompassing the economic aspect. Scholars refer to the social relations or emotional side of trust as the “affective” (McAllister, 1995), “benevolence” (Mayer *et al.*, 1995), “identification based” (Lewicki and Bunker, 1996), or “personal goodwill” trust (Hite, 2005).

Affective trust develops when individual emotionally invest in relationships resulting in genuine concern for a partners welfare and a belief in the relationship’s intrinsic virtue (McAllister, 1995).



This means that affective trust reside at an interpersonal level (Lewis and Weigert, 1985). On the other hand, researchers label the economic dimension of trust as “cognitive” (Lewis and Weigert, 1985), “competence” (Mayer et al., 1995), “Knowledge –based” (Lewicki and Bunker, 1996), or “social” trust (Hite, 2005). Cognitive trust occurs when a person makes a conscious decision to trust based upon the best knowledge they have (McAllister, 1995).

Cognitive trust tends to be high when repeated interactions allow parties to come to know, understand and predict the routine and process of interaction (Hite, 2005). Both affective and relational trust are not necessarily independent, each may be more or less salient in particular stages of a relationship (Lewicki and Bunker, 1996).

### **2.17.3 Network content and firm performance**

Content within a network refers to exchanging resources (Amit and Zott, 2001). Research on networks often adopts resource based view of the firm and views firm as dependent upon the external environment to prove resources and capabilities as opposed to normal market transactions. These resources vary and include: advice (Watson, 2007), encouragement and financial resources (Starr and MacMillan, 1990), contacts (Bruderl and Preisendorfer, 1998) and legitimacy (Elfring and Hulsink, 2003). Further, resources may also include ideas, information and advice (Smeltzer *et al.*, 1991).

Gimeno *et al.*, (1997) argues that content may include the arcane knowledge and emotional support for individual willing to take risks increasing their persistence to remain in business. Networks can support new ventures by providing access to meaningful and valuable information, giving access to customers and suppliers and opening up possibilities for broadening the financial basis of a new venture (Bruderl and Preisendorfer, 1998).

Das and Teng (1998) on contrary argue that participants need to consider how to protect internal know-how and the quality of knowledge that should be shared with networking partners. In this regards, firms need to understand the resources by offered by other actors, their value and appropriateness to the firm's strategy.

## **2.18 Networking dimensions and firm performance**

Burt (1992) and Zhao and Aram (1995), break the network concept in two dimensions: the range and the intensity. Range refers to the differences among the contacts within a focal actor's network. It may also be viewed as the degree of diversity contained in a network. The intensity refers to the extent of the interacting organizations' resources committed to the relationship in terms of the frequency of contact and amount of resources exchanged.

### **2.18.1 Network intensity**

Network intensity is the combination of time, mutual trust and reciprocal services (Granovetter 1973). Ahuja (2000) argues that the closer the relationship among members, the faster the speed of sharing resources. The more familiar contacts are, the more trustworthy the members become, and this reduces unethical behavior and encourages exchange amongst group members (Gulati 1995; Uzzi 1996). Through use of networks firms are capable of locating resources and hence the acquisition can be enhanced through mutual trust.

In addition, if the relationship among members is close it blends a common vision for group members which facilitate the exchange and combination of resources. In this regard firms not only receive rare resources but also use the resources acquired from other groups to enhance the acquisition and outcomes (Tsai and Ghosal, 1988)

### **2.18.2 Network range**

Network range refers to the variety and number of connections. In this regard the broader external network is the easier it is to have access to resources (Burt, 1992). The core strategy of the firm is to get resources needed at the lowest cost (Elfring and Hulsink, 2003) and that a social network plays an important role in capturing these resources. Dess and Starr (1992) notes that the network has the benefit of reducing the uncertainty of innovation. In addition, through the networks there is enhanced communication and exchange of resources (Larson, 1991) hence speeding up the transfer of knowledge and technology.

### **2.19 Networking capability and firm performance**

The development of the network capability construct is based on the contributions to “alliance capability” (Prashant & Kale, 2002), “relational capability” (Lorenzoni and Lipparini, 1999) and “network capability” (Anand and Khanna, 2000). Walter *et al.*, (2006) notes that “Networking capability comprises a firm’s ability to develop and utilize inter-organizational relationships to gain access to various resources held by other actors”. From the resource based perspectives, Foss (1999) posits that the networking firm can reap competitive advantages from acquiring resource and capabilities from networking with others.

Networking capability was defined by Walter *et al.*, (2006) and refers to firm’s ability to initiate, maintain and utilize inter-organizational relationships with various external partners for the firm’s advantage. Dickson & weaver (2011) posit that such a relationship assists the firms to access and compliment resource requirement which enhances competitive advantage. Kale *et al.*, (2000) notes a firm should have the ability to coordinate resources internally and externally for effective utilization of resources acquired through networking. Further, it should have the ability to identify the potential partners with relevant resources to fill its resource gaps.

SMEs must be able to use inter-organizational relationships to improve business relationships to improve business performance and acquire sustainable competitive advantage in fast changing business environments (Walter *et al.*, 2006). Kate *et al.*, (2000) notes that there are four dimensions that form networking capability. These include: relational skills; coordination; partner knowledge and internal communication. These dimensions are likely to build capabilities of firms to create and sustain beneficial relationships hence enhancing competitive advantage of the firm (Teece, 2007).

### **2.19.1 Relational skills**

Kate *et al.*, (2000) refer to relational skills as a social competence which is crucial for the management relationships because relationships are often inter-personal exchange situations. Marshall, Goebel and Moncrief (2003) argue that relational skills is a wide range of skills which include aspects such as communication skills, problem solving skills, interpersonal skills, conflict management skills, empathy, emotional stability, self-reflection, sense of justice and cooperativeness. Teece (2007) notes a firm with good relational skills is likely to develop effective and sustainable relationship that is mutually beneficial among networking partners which in turn enhances competitive advantage that leads to firm performance.

### **2.19.2 Coordination**

Barney & Arika (2005) points that knowledge and other resources required to build firms competitive advantage are in isolation and fragmented. They therefore require proper coordination and combination in order to realize their potential. Walter *et al.*, (2006) notes that coordination of resources and activities extend beyond the firms boundaries, connecting individual firms together with other firms of different individuals into a network of mutually supportive interaction.

### **2.19.3 Partner's knowledge**

Partner's knowledge is the organized and structured information about firm's partners (Walter *et al.*, 2006). SME owners or managers with knowledge about their partners can structure appropriate exchange mechanism and governance structures in order to avoid instabilities in their partnerships to sustain their relationships (Kale *et al.*, 2000). In addition, partner's knowledge serves to solve or avoid unnecessary dispute that may arise as a result of networking with incompatible partners (Hitt *et al.*, 2009).

### **2.19.4 Internal communication**

Internal communication encompasses assimilation and sharing of information among the firm employees. Sharing of such information is a means through which knowledge and information from partners permeates into the firm. Internal communication is a vital part of collaborative competence (Kale *et al.*, 2000). Song, Wary and parry (2010) argue that regardless of market conditions, the competitive advantage associated with information depends on the formal process of information acquisition and utilization.

A networking firm needs to have internal communication skills in order to integrate and coordinate knowledge throughout the firm and thereby generate feedback from prior as well ongoing collaboration experiences (Kale *et al.*, 2002). Internal communication is therefore not only essential for gathering and utilizing strategic information but a necessity for achieving competitive advantage hence improving firms' performance.

## **2.20 Empirical review**

### **2.20.1 Network relationships and firm performance**

A study by Chu and Lee (2007) on strategic resources, network competence and sustainable competitive advantage on Taiwan Led firms. The study was based on Resource based view and

social network theory to examine the most important factor to affect the sustainable competitive advantage. A total of 135 manufacturing firms were targeted for the study. In this study only 38 questionnaires were returned. The industry structure was divided into: 1) Up middle stream 2) down-stream and 3) others. The study was guided by two research questions: 1) How do we measure strategic resources and sustainable competitive advantage? 2) How do strategic resources and network competences affect the sustainable competitive advantage in the LED industry? The study used trust, centrality and information sharing which are indicators of network relationships. The study found trust, capability and information sharing are the most important factors affecting sustainable competitive advantage.

The study considered hi-tech manufacturing firms and most of the responses came from “down-stream” (though was highly targeted at 74.1%). According to the authors downstream utilizes a low level technology compared to the technology required by the firms in the upper-middles industry. The study focused on a hi-tech industry where the level of innovation is very high and patents are critical part that forms competitiveness. The study suffers from generalization since most of the responses came from low technology class. The current study targeted and got responses across the board hence enhancing the generalizability of the results.

### **2.20.2 Network dimensions and firm performance**

Seck and Mazzarol (2006) conducted a study on “strategic networking and growth of Technology oriented SMEs: Evidence from Singapore. The study targeted 112 technology-oriented SMEs in Singapore in relation to the role played by strategic networks and alliances in their development and growth. The study adopted a survey method targeting 140 companies and got a response of 80 percent. The findings suggested that firms growth is independent of network range but predicted by intensity. Though the study was conducted in Singapore authors acknowledge results were influence by Chinese culture. Further, building relationships in Chinese cultural

context requires more time and effort than it usually take in other cultures. The factor of culture therefore required to be controlled in the study.

A study conducted by Ge, Hisrich and Dong on “Networking, resource acquisition, and the performance of Small and Medium-Sized Enterprises: An empirical study of three major cities in China” examined 227 firms in three economic zones in China. The independent variables for the study were network intensity and range. The study found there was positive association between network intensity, network range and firm performance.

### **2.20.3 Network capabilities and firm performance**

A South African based study by Human and Naude (2010) “Exploring the relationship between network competence, network capability and firm performance: A resource based perspective in an emerging company” targeted 100 firms and 288 respondents yielding 76 percent of questionnaire analysis. The sample was drawn from multiple business setting and utilized non-probability sampling method. The study found that all the four latent dimensions of network capability had significant influence on firm performance.

In the study of “The influence of dimensions of networking capability in SMEs performance” targeting Tanzanian SMEs, Bengesi and Roux (2014) found a positive association between three dimensions of network capabilities (relational skills, partner’s knowledge and internal communication) and firm performance. However, there was negative association between coordination and firm performance

### **2.21 Network studies in Kenya**

There are few studies done in the area of networking in Kenya. Korir and Schulz (2012) studied “Network dynamics dimension factors in event management in Kenya”. The study targeted 271

entrepreneurs of special event management enterprises. It concluded that respect, support, trust and cooperation are important factors in measuring network dynamic. Korir *et al.*, (2012) studied “the effects of network structure on performance of minor event management venture in Kenya”. In this study an exploratory research design was used targeting 271 entrepreneurs in minor event management venture in Kenya. The study found that network structure had no significance on performance. The same authors conducted a survey on “Network capability dimension in minor events management ventures in Kenya”. The target was still 271 respondents drawn from Kisumu, Uasin Gishu and Nairobi Counties. There was modification of network capability indicators as proposed by Walter *et al.*,(2006) except for the partner’s knowledge dimension. The study concluded that open communication, partner’s knowledge, initiating relationships and developing relationships are crucial in measuring network capability.

The three studies mentioned above are (to the researcher’s knowledge) the only studies explaining the concept of networking in Kenya. In this regard, there is very little literature that can explain the concept of networking in the Kenyan context. The current study draws literature from the global perspective to evaluate the context of networking in the Kenyan manufacturing sector.

## **2.22 Research gap**

After the review of literature with a specific focus on networking and firm performance the following research gaps have been identified. First, most of the studies do not consider a comprehensive inclusion of all the determinants of networking variables as identified in the literature and subject them to performance. They have used only a single determinant against the performance of the firm. For instance, a study using only network dimensions to find out its influence on firm performance may not be comprehensive. The current study considers the three major determinants of networking and their influence on firm performance hence addressing the limitations of most of the other studies.

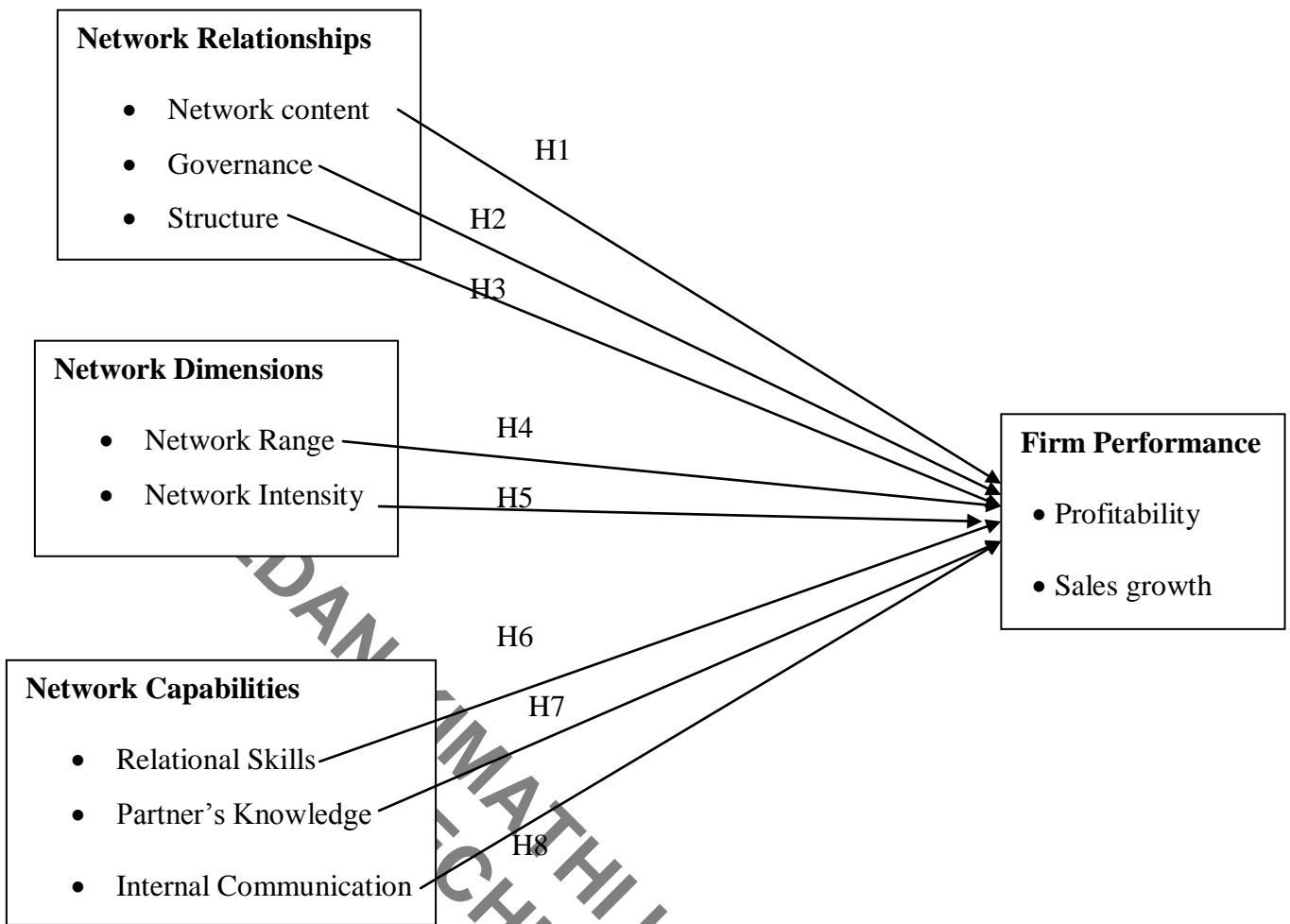


Secondly, majority of the studies randomly selected the sample from the populations of intent. The major gap in such a sample is the heterogeneity of the firms. This study selected a sample from a membership organization where credibility of the firm can be ascertained by a third party. Further, belonging to an association signifies that firms can easily network together because the association may act as a network facilitator.

Finally, most of the studies have been conducted in developed countries and it is not clear whether they can be replicated in the developing and least developed countries and ascertain whether the same factors hold true. From the literature review it is evident that there is scanty literature on networking in Kenya. It is evident that manufacturing sector plays a major role in the global economy. Hence, a study on networking in this vital sector will be valuable to the sector and the Kenyan economy.

### **2.23 Conceptual framework and hypothesis development**

The conceptualization of this study was based on the assumption that through business networking performance of manufacturing SMEs can be enhanced. The dependent variable is performance which is indicated by sales and profitability of the SMEs. The independent variables are the variables that are likely to influence resource acquisition hence influence firm performance and are categorized in three broad categories: Networking relationships (Hoang & Antoncic, 2003) considers three areas of network relationships: network content, governance and structure. On the other hand Burt (1992) and Zhao and Aram (1995) break the network dimension into two aspects: Network range and network intensity. Finally, network capability (Walter *et al.*, 2006) contains four of its dimension namely: Relational skills; coordination; partner's knowledge and internal communication.



Independent Variables

Dependent variable

Source: Author (2014)

Fig. 2.2 Conceptual framework

The hypotheses of the study were developed by considering the three broad related to the independent variables

### Network structure

Network structure is defined as “the pattern of ties between different actors” (Hoang and Antoncic 2003). Zaheer& Bell (2005) defines an enterprise network structure as a firms network which could acquire access to external resources through their network relationship and integrate with internal resources to generate additional benefits.

Network literature has considered embeddedness of firms in networks of external relationships with other organizations crucial (Gulati *et al.*, 2000) and has emphasized the importance of external resources and capabilities to the firm through its networks (Zaheer & Bell, 2005; McEvily and Marcus, 2005). Hoang and Antoncic (2003) posit that within a network structure, network size and centrality determine the amount of resources an actor can access. In addition, network structures centre on differential network positioning that exerts an influence on resource flow (Hoang & Antoncic, 2003; Moran 2005). Since structure influences resources flow, a clearly defined structure is likely to influence performance. From the on-going it is hypothesized that:

*H<sub>1</sub>: There exists a relationship between network structure and firm performance in small and medium enterprises*

### **Network governance**

Network governance is the element of coordination of the network exchange (Hoang & Antoncic, 2003). It is the mechanism that governs the relationship among actors, the legal forms of actors, and the incentives for participations within networks. These mechanisms are based on power, influence, relationship reciprocity, and trust support the network sustainability more than legal enforcement (Amit and Zott, 2001). Larson (1992) posits that reciprocity refers to mutual connection between two actors within a directed network. Proper coordination of the network exchange is vital for enhanced firm performance. It can therefore be hypothesized that:

*H<sub>2</sub>: There exists a relationship between network governance and firm performance in small and medium enterprises*

### **Network content**

Content within a network refers to exchanging resources (Amit and Zott, 2001). Research on networks often adopts resource based view of the firm and views firm as dependent upon the external environment to prove resources and capabilities as opposed to normal market

transactions. These resources vary and include: advice (Watson, 2007), encouragement and financial resources (Starr and MacMillan, 1990), contacts (Bruderl and Preisendorfer, 1998) and legitimacy (Elfring and Hulsink, 2003). Further, resources may also include ideas, information and advice (Smeltzer *et al.*, 1991). Resources are major constraint hindering SMEs performance, when they are acquired sustainably the implications is enhanced firm performance. In this regard it is hypothesized that:

*H<sub>3</sub>: There exists a relationship between network content and firm performance in small and medium enterprises*

### **Network intensity**

Network intensity is the combination of time, mutual trust and reciprocal services (Granovetter 1973). Ahuja (2000) argues that the closer the relationship among members, the faster the speed of sharing resources. The more familiar contacts are, the more trustworthy the members become, and this reduces unethical behavior and encourages exchange amongst group members (Gulati 1995; Uzzi 1996). Through use of networks firms are capable of locating resources and hence the acquisition can be enhanced through mutual trust. Mutual trust therefore can gel members together hence contributing to firms performance. It can therefore be hypothesized that:

*H<sub>4</sub>: There exists a relationship between network intensity and firm performance in small and medium enterprises*

### **Network range**

Network range refers to the variety and number of connections. In this regard the broader external network is the easier it is to have access to resources (Burt 1992). The core strategy of the firm is to get resources needed at the lowest cost (Elfring and Hulsink 2003) and that a social network plays an important role in capturing these resources. Dess and Starr (1992) notes that the network has the benefit of reducing the uncertainty of innovation. In addition, through the

networks there is enhanced communication and exchange of resources (Larson, 1991) hence speeding up the transfer of knowledge and technology. When this is achieved there is likelihood that performance is enhanced. It is therefore hypothesized that:

*H<sub>5</sub>: There exists a relationship between network range and firm performance in small and medium enterprises*

### **Relational skills**

Kate *et al.*, (2000) refer to relational skills as a social competence which is crucial for the management relationships because relationships are often inter-personal exchange situations. Marshall, Goebel and Moncrief (2003) argue that relational skills is a wide range of skills which include aspects such as communication skills, problem solving skills, interpersonal skills, conflict management skills, empathy, emotional stability, self-reflection, sense of justice and cooperativeness. In this regard, relational skills between network members is likely to impact on individual firm performance. It is therefore hypothesized

*H<sub>6</sub>: There exists a relationship between relational skills and firm performance in small and medium enterprises*

### **Partner's knowledge**

Partner's knowledge is the organized and structured information about firm's partners (Walter *et al.*, 2006). SME owners or managers with knowledge about their partners can structure appropriate exchange mechanism and governance structures in order to avoid instabilities in their partnerships to sustain their relationships (Kale *et al.*, 2000). In addition, partner's knowledge serves to solve or avoid unnecessary dispute that may arise as a result of networking with incompatible partners (Hitt *et al.*, 2009). A healthy network relationship is likely to influence the performance of the firm. Therefore it can be hypothesized that:

*H<sub>7</sub>: There is no relationship between partner's knowledge and firm performance in small and medium enterprises*

### **Internal communications**

Internal communication encompasses assimilation and sharing of information among the firm employees. Sharing of such information is a means through which knowledge and information from partners permeates into the firm. Internal communication is a vital part of collaborative competence (Kale *et al.*, 2000). Song, Wary and parry (2010) argue that regardless of market conditions, the competitive advantage associated with information depends on the formal process of information acquisition and utilization. Information acquisition and proper utilization is likely to influence firm performance. From the on-going it is hypothesized that:

*H<sub>8</sub>: There is no relationship between internal communications and firm performance in small and medium enterprises*

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 Introduction

In this chapter, the research design and methodology that was applied in the study is presented. The chapter aims to identify the research design, population, sampling techniques, research instruments, data collection procedures and analysis methodologies.

##### 3.1.1 Construct measurement

In order to accomplish the objectives of the study, four major constructs were chosen and linked together after the literature review. These include: network relationships; network dimensions; networking capabilities and firm performance. These items were chosen after critical literature review and it was evident that they have been previously used, tested and hence were reliable to be tested for this study. All these items were measured on a five -point likert scale.

#### 3.2 Research design

Cooper and Schindler (2008) define research design as the overall plan of obtaining the answers to the questions being studied and also handling the difficulties encountered during the research process. The study used descriptive survey of all Manufacturing SMEs in Kenya. Mugenda and Mugenda (2003) posit that descriptive statistics enable meaningful description of distribution of scores or measurements using a few indices or statistics. Further, descriptive statistics help to simply large volumes of data in a clearer way. Measures of central tendency give the expected scores or group of in the study while measures of variability such as standard deviations inform about the distribution of scores around the mean of distribution.

Gay (1981) defines survey as “an attempt to collect data from members of a population in order to determine the current status of a population with respect to one or more variables”. He asserts

that a descriptive study determines and reports the way things are and commonly involves assessing attitudes and opinions towards individuals, organizations and procedures.

The choice of survey was motivated by the fact that it is more focused on data rather than theory. In this regard it was possible to administer the data collection tools to the respondents to the firms and clarifying issues that were not so clear to them. The outcome of such was a high response rate.

### **3.3 Target population**

The target population for this study was manufacturing SMEs registered by the Kenya Association of Manufacturers. The choice of this population was because SMEs registered under KAM are likely to interact more hence network as opposed to those that are doing business without any formal association. Secondly, the choice of KAM was due to the fact that it is the membership organization for all the manufacturing firms in Kenya. A sample was drawn from the firms registered under small and medium enterprises in the KAM database.

The manufacturing sector was an appropriate choice for testing networking because manufacturing process involves a value chain. The study focus of the horizontal activities (supplier's side) of the value chain. The study sought to target the CEOs, managers/ owners because the choice of the network largely depends on their decisions. In addition, they are best placed to know the value obtained from specific networks.

### **3.4 Sampling frame**

Saunders & Lewis, (2012) posit that a sampling frame is a complete list of all the case in the population from which the researchers sample will be drawn. In this study, the sampling frame consisted of all registered manufacturing enterprises under the category of SMEs in operation in



Kenya and was listed under KAM database as at 31<sup>st</sup> December 2013. The KAM database contains all the firms and categorizes them either as small, medium or large enterprises. Further, the details of firms address, location, telephone numbers, website and e-mails were provided.

### **3.4.1 Sample and sampling techniques**

Sampling is drawing a portion of the target population for observation (Worthern and Sanders, 1987). Systematic random sampling was used to select participants from 660 firms registered under KAM in the small and medium enterprises category. The sample was then classified in small and medium enterprises employing 11-49 employees and 50-100 for the medium enterprises. Further, the firm must have been registered in the association for a period of not less than one year. However, the firm must be in existence for a period not less three years.

The researcher selected 132 firms using systematic random sampling from the sampling frame of firms that meet the criteria described. Systematic random sampling involves selecting the sample at regular intervals from the sampling frame. The  $n$ th item is calculated by dividing the population with the sample size. In this case  $k^{\text{th}}$  item arrived at by dividing 660 by 132 ( $660/132 = 5$ ). From the population of 660 firms, one firm in every five was selected, the  $k^{\text{th}}$  number being the  $5^{\text{th}}$  firm from the sample. As a result a total of 132 firms were selected.

### **3.5 Data collection instruments and procedures**

Data collection tool that was used in collecting the primary data was the questionnaire. A five likert scale questionnaires was used as a data collection instrument for the primary data in this study. Cooper and Schindler (2008) notes that a questionnaire is a document that consists of printed questions in a definite order on a form or set of forms. The questions in the questionnaire can be structured (close ended) or unstructured (open ended). The study questionnaire was more

dominated with structured questions. Open-ended questionnaires are used in qualitative research while close-ended questionnaires are used to carry out statistics in quantitative research.

The researcher collected primary data by hand delivering the questionnaires to the selected manufacturing firms. This questionnaire was addressed to the owners/ managers or the CEOs of the SMEs. The questionnaire was designed on the basis of the objectives of the research and study's literature review. A research assistant was trained on how to administer the questionnaire while the researcher monitored the process. Appointments were made prior to the administration of the questionnaire. Respondents were requested to confirm their availability beforehand.

Self-administrated questionnaires could offer some advantages to the respondents. They include:

1) They are familiar to most people and generally do not make people apprehensive; 2) They are cost effective when studies involving large sample size and large geographical areas; 3) Any loss of validity is compensated by a large study size and greater statistical power Barriera *et al.*, (2006).

### 3.6 Pilot test

Prior to data collection, a pilot study comprising of 20 managers of manufacturing firms was conducted. The aim of the pilot test was to test the validity and reliability of the research instrument. In addition, it was a means which ensured that all intended dimensions of research were covered and also that all questions were clear and unambiguous. The results of the pilot test were used to guide making the necessary modifications in the questionnaire. After this modification, the questionnaire was deemed appropriate in examining relationships between networking and firm performance among Kenyan SMEs. The choice of 20 firm managers is in consistent with Mugenda and Mugenda (2003) who asserts that the pretest sample should be between 1% to 5% depending on the sample size. The pilot study also carried out multi-collinearity test to check whether there was casual link between the variables. However, the pilot

study results did not detect the existence of the phenomenon. The results of the pilot test were not included in the final tally.

### **3.6.1 Reliability of the constructs**

Reliability is the extent to which an experiment, test, or any measuring procedure yields the same result on repeated trials (Cooper & Schindler, 2008). It is a measure of the consistency of variable measurements. This study used the Cronbach's Alpha coefficient as a reliability test measure. Cronbach's alpha tests the survey's internal consistency and is a measure of how well each item on a scale correlates with the remaining items. Cronbach's alpha reliability coefficient normally ranges between 0 and 1. George and Mallery (2003) points that the decision to accept Likert scales of measurement in the instrument may follow the criteria of scores as follows:  $C > 0.9$  – Excellent;  $C > 0.8$  – Good;  $C > 0.7$  – Acceptable;  $C > 0.6$  – Questionable;  $C > 0.5$  – Poor, and  $C < 0.5$  – Unacceptable Where C is the value of Chronbach's Alpha Coefficient. This means the closer the Cronbach's alpha coefficient is to 1, the greater the internal consistency of the items in the scale. According to Saunders & Lewis (2012), a coefficient of 0.7 is acceptable though others scholars have indicated a coefficient of 0.6 is also acceptable (Nunnaly 1978). This study used 0.6 as the minimum coefficient.

### **3.6.2 Validity of the constructs**

Validity refers to the degree to which a study accurately reflects or assesses the specific concept that the researcher is attempting to measure. It is the degree to which results obtained from the analysis of data actually represent the phenomenon under study. It is the accuracy and meaningfulness of inferences, which are based on the research results (Mugenda and Mugenda 2003). Karami (2009) suggest that in order to screen the appropriateness of questionnaires and test the validity and relevance of questions it should be pretest or a short pilot study should be

conducted. Further, by carrying out the pilot study the researcher ensures that questions are in appropriate order and user friendly (Saunders *et al.*, 2007).

Construct validity seeks agreement between a theoretical concept and a specific measuring device or procedure. Content Validity is based on the extent to which a measurement reflects the specific intended domain of content. Criterion related validity, also referred to as instrumental validity, is used to demonstrate the accuracy of a measure or procedure by comparing it with another measure or procedure which has been demonstrated to be valid.

As concerns to validity, the items in the questionnaires of this research were all from literature that has been published. Some little modifications were done to improve the expression according to some experts and pre-test to the scholars and entrepreneurs in the manufacturing sector.

### **3.6.3 KMO and Bartlett's test**

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's test of Sphericity were carried out before factor analysis. Preacher & MacCallum (2002) contends that the minimum sample sizes are not always useful and valid. In this regard, it may be difficult to state whether absolute sample size is important in factor analysis. The communality measures, the percentage of variance in a given variable explained by all the factors jointly. These may therefore be interpreted as the reliability of the indicator (Gason, 2008).

Notably, if communalities are high, recovery of population factors in sample data is normally very good. MacCallum *et. al.*, (1999) suggested communalities should all be greater than 0.6 or the mean level of communality to be at least 0.7.

### **3.7 Data analysis and presentation**

The first step was to code the data in order to process it using the computer. Both descriptive and inferential statistics were used. The analysis was done by the use of statistical package for social sciences (SPSS) software version 20. This software allows processing of data with ease and is able to give several outputs which are vital for such a study. The study adopted likert scale since it can be evaluated through factor analyses, principal component and correlation analysis.

Pearson Correlation analysis was used to test the strength of the relationship between independent and dependent variables. Correlation analysis is aimed at determining whether there is variance between two measurement variables and to compute the strength of the relationships (Kothari 2004). A study on “Network relationships for business performance: A social capital perspective” by Hamrila (2012) on Malaysian SMEs used correlation analysis to test the strength of the relationship between the independent and the dependent variables.

To measure the influence of networking and firm performance, the study used a likert scale of 1 to 5. The scale of 1 (strongly disagree) implied the worst case scenario while a scale of 5 (strongly agree) was an indication of best case scenario. The mean score and standard deviation for each was then calculated.

### **3.8 Measurements and operationalization of variables**

The constructs were operationalized by selecting measurement scale items and scale types. Hair *et al.*, (2006) notes that in a survey research, operationalising a construct involves a series of scale items in a common format such as a likert scale or a semantic differential scale. The study is guided by the dependent variable (performance) and independent variables (network range, content, structure, intensity, range, partner’s knowledge, relational skills and internal communication).

The table below summarizes how each of the items has been operationalized

Variable Type	Construct	Indicator	Measurement	Relevant Literature
Dependent	Performance	Profitability, sales growth	likert scale	Roberston & Chetty (2002), Sousa (2004), Loxton & Weerawardena (2006)
Independent	Network content	Density, centrality and ties	likert scale	Hoang and Antoncic (2001)
	Network Governance	Reputation, reciprocity and trust	likert scale	Hoang and Antoncic (2001)
	Network structure	Information quality, Information diversity	likert scale	Hoang and Antoncic (2001), Human and Provan (1997)
	Network range	Relationship with suppliers, government, universities	likert scale	Hoang and Antoncic (2001), Human and Provan (1997)
	Network Intensity	Intimacy level, meeting frequency	likert scale	Walter <i>et al.</i> ,(2006), Dyer and Singh (1998)
	Relational Skills	Good relationships, ability to maintain relationships	likert scale	Walter <i>et al.</i> ,(2006), Dyer and Singh (1998)
	Partner's Knowledge	Partner's products, strategies and markets	likert scale	Walter <i>et al.</i> ,(2006) Dyer and Singh (1998), Gulati, 1999
	Internal Communication	Information flow, regular meeting	likert scale	Walter <i>et al.</i> ,(2006) Dyer and Singh (1998), Kale <i>et.al</i> (2002)

### 3.9 Statistical model

Multiple regression equation was used to determine the relationship between independent and dependent variables. It evident from literature that a number of scholars have used multivariate analyses such as structural equation modeling and multiple regression to test hypotheses when investigating relationship between network elements (Kaasa, 2009; Stam & Elfring, 2008). However, the study uses multiple regression analysis to determine the relationship between independent and dependent variables.

The multiple regression equation that was used in discussed below.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \varepsilon$$

Y = FP = Firm performance

X<sub>1</sub> = NC = network content

X<sub>2</sub> = NG = Governance

X<sub>3</sub> = NS = Structure

X<sub>4</sub> = NI = Intensity

X<sub>5</sub> = NR = Range

X<sub>6</sub> = RS = Relational skills

X<sub>7</sub> = PK = Partner's knowledge

X<sub>8</sub> = IC = Internal communications

Where

Y = Dependent variable

X<sub>1</sub>, X<sub>2</sub>, X<sub>3</sub>, X<sub>4</sub>, X<sub>5</sub>, X<sub>6</sub>, X<sub>7</sub>, X<sub>8</sub> are independent variables

ε = Error term

β<sub>0</sub> is a constant

The model was tested at 5% level of significance using the F-test.

## CHAPTER FOUR

### DATA PRESENTATION, ANALYSIS AND INTERPRETATION

#### 4.1 Introduction

This chapter presents the results of the findings of the research study. This study seeks to evaluate networking and performance among manufacturing SMEs in Kenya. The specific objectives of this study include, assessing the influence of network characteristics on firm performance in small and medium enterprises in Kenya, to determine whether network dimensions influences on firm performance in SMEs in Kenya, to evaluate the influence of networking capabilities on firm performance in small and medium enterprises in Kenya. The aim of this chapter is to present the data that was collected in the study

#### 4.2 Response rate

It refers to the percentage of subjects who respond to questionnaires. Many authors believe that a response rate of 50% is adequate for analysis and reporting. Specifically Mugenda & Mugenda (2003) asserts that 50 % is adequate, 60% is good and above 70% is very good. The number of questionnaires that were administered totaled to 132 while that that were returned were 100. This represents 76% response rate which can be considered very good.



### 4.3 Reliability analysis

#### 4.3.1 Cronbach's Coefficient Alpha

Reliability is the extent to which an experiment, test, or any measuring procedure yields the same result on repeated trials (Cooper & Schindler, 2008). It is a measure of the consistency of variable measurements. This study used the Cronbach's Alpha coefficient as a reliability test measure. Cronbach's alpha tests the survey's internal consistency and is a measure of how well each item on a scale correlates with the remaining items. Cronbach's alpha reliability coefficient normally ranges between 0 and 1. The value of at least 0.7 is recommended for instruments to be acceptable and a coefficient of 0.8 for instruments used in practical applications, (George and Mallery, 2003). The results are presented in tables as shown below

**Table 4.1 Case summary**

	N	%
Cases Valid	18	90
Excluded	2	10
Total	20	100.0

**Table 4.2 Reliability results**

Cronbach's Alpha	N of Items
.964	100

The value of Cronbach's Alpha was 0.964 which was quite high compared with 0.7. This indicates that the test instrument was reliable.

#### 4.4 Demographics

**Table 4.3 General Demographics of Respondents**

Category		Frequency	Percentage
Gender	Male	61	61
	Female	39	39
Total		100	100
Number of Years	Less than 25	0	0
	25-35	45	45
	35-45	34	34
	45-55	13	13
	Over 55	8	8
	Total	100	100
	Less than 5	19	19
Working Experience	5-10	46	46
	10-15	21	21
	Over 15	14	14
Total		100	100
Position	Owner/ Manager	21	21
	CEO	70	70
	Others	9 (Operational managers)	9

The respondents constituted Chief Executive Officers, managers/owners of SMEs. Most of the respondents were male with 61(61%) while their female counter- parts constituted 39 (39%) of the respondents. This shows a huge disparity between male and female in the top management of SMEs. Brush *et al.*, (2004) found that gender has an effect on networking of SMEs. As pertaining the age, most of the respondents were aged between 25to 35 years constituting (45%), 35-45

years accounted to 34%, those between 45-55 years accounted for (13%) and over 55 years accounted for 8%.

In terms of the working experience of the respondents, more than a third (46%) of the sample had worked in the firm for 5-10 years, 21% had worked 10-15 years, 19% had experience of less than 5 years while 14% had an experience of over 15 Years. Greve and Salaf (2003) found that age had had a positive impact on networking. They posit that as SMEs grow the level of networking increases due to sustained relationships and contact building that has been developed over time. However, with digital evolution, young CEOs and managers may network more.

Majority of respondents 70% indicated that they were chief executive officers (CEOs) of the SMEs while 21% of the participants were the owners, while 9% were operational managers. In this regard, the researcher had the confidence to conclude that the participants of this study had enough experience, knowledge and expertise about their firms in relation to networking and firm performance and therefore could be trusted with the information towards the success of the this study.

#### **4.5 Descriptive statistics on company profile**

Descriptive statistics in terms of frequencies and percentages were used to describe the characteristics of the firms that responded for the study.

**Table 4.4: Profile for the companies sampled for the study**

<b>Firm Characteristics</b>	<b>Categories</b>	<b>Responses</b>	<b>Percentages</b>
Age of Company in Years	1-3 Years	4	4
	4-6 Years	6	6
	7-10 Years	3	3
	Over 10 Years	87	87
<b>Total</b>		100	100
Number of Employees	10-30	30	30
	30-50	25	25
	50-70	17	17
	70-90	6	6
	90-100	22	22
	<b>Total</b>		100
Legal Status of Company	Limited Company	89	89
	Partnership	6	6
	Sole Proprietorship	5	5

The results indicate that majority of the firms has been in existence for more than 10 years. This accounted for 87%. Firms that has been in existence for 1-3 years yielded 4 %, 4-6 years 6 % and 7-10 years 3% respectively. There is positive association between a firm's age and networking (Hoang *et al.*, 2003; Dowling and Helm 2006).

One of the criteria used in categorization of SMEs is based on the number of employees. The study results showed that 30% of the firms surveyed employed 10-30 employees, 25% employed 30-50 employees, 17% employed 50-70 employees, 6% employed 70-90 employees and finally 22% employed 90-100 employees. All the employees in consideration were on full time basis.

Legal status increases the legitimacy of the firm in the market place. The study established that 89% of the firms surveyed were registered as private limited companies, 6% were under partnerships and 5% were under sole proprietorship. Human and Provan (2000) found that legal status of the SMEs affect their propensity to network. They found that sole proprietors due to their size and legal status only utilize social networks primarily of friends and family.

**Table 4.5: Subsector or Industry**

	<b>Frequency</b>	<b>Percent</b>
Food and Beverage	13	13
Chemical and Pharmaceuticals	19	19
Machinery and Equipment	8	8
Paper Publishing and Printing	21	21
Rubber, polythene and Plastics	8	8
Wood and Furniture's	4	3
Textile and Apparels	16	16
Parts and Fabricated Metals	2	2
Wires, electrical and Electronic Goods	5	5
Leather Goods	2	2
Others	2	2
<b>Total</b>	<b>100</b>	<b>100.0</b>

Questionnaires were distributed among diverse SMEs registered with KAM and have been consistent members for more than three years. The firms were organized in several sub-sectors for easier categorization. The sub-sector analysis indicated that distribution was as follows:-13% food and beverage, 19% chemicals and pharmaceuticals, 21% paper publishing and printing, 16% textile and apparels, 16% textile and apparels, 8% rubber, polythene and plastics, 6% machinery

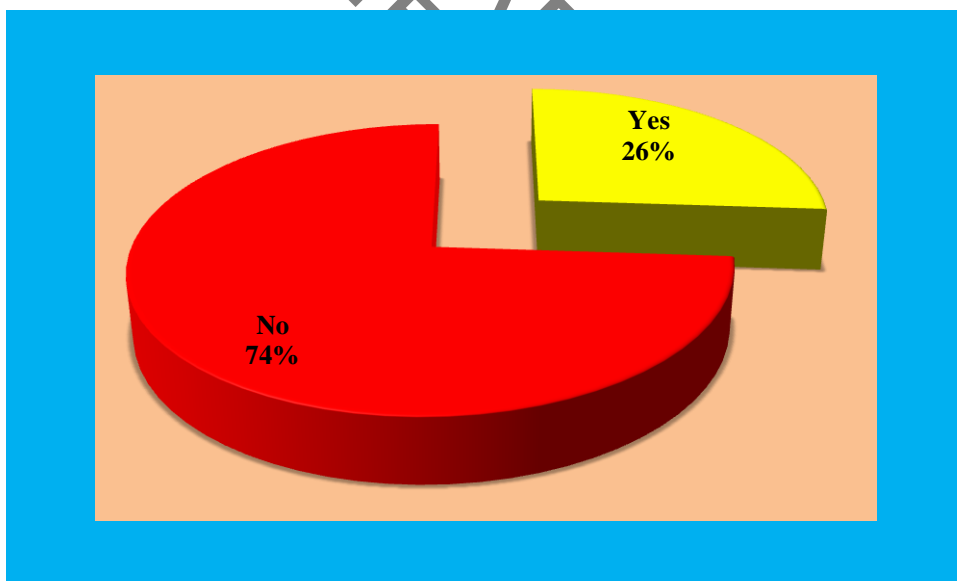
and equipment, 3% wood and furniture's, 3% wires, electrical and electronic, 2% parts and fabricated metals, 2% leather goods and others which were not in the categorization given by the researcher yielded 2%.

#### 4.6 Firms degree of networking

This section presents the respondents opinion on the various aspects of the firms degree of networking and various firms and industry factors that influences firms degree of networking. In this study, networking activities included joint ventures, long term supplier-buyer agreements, trade associations, franchising and business contracting.

##### 4.6.1 Whether firms cooperate or collaborate with other firms in business activities

Fig 4.1 Response on firms degree of networking



In terms of whether the firms cooperate or collaborate with other firms in business activities more than half (74%) of the firms which participated in the study were found to have a very low degrees of networking, while only 26% of the firms cooperate or collaborate with other firms. This means that networking level of Kenyan SMEs is still very low. This compares with evidence from Croatian republic where networking was found to be as low as 29.2% (Kolakovic 2008).

#### 4.6.2 Firm/ Industry factors that influence your decision to engage in networking

**Table 4.6** Firm/ Industry factors that influence your decision to engage in Networking

Firm/industry Factors	Mean	Std deviation
Economies of Scale	3.750	.688
Resource Acquisition	4.250	.618
Access to market Information	3.150	.793
Research and Development Intensity	2.400	.488
Competition	4.673	.558

On the respondents rating the factors that influence the decision of SMEs to engage in networking, the study found that competition is the key factor as shown by the mean of 4.673, resource acquisition by a mean of 4.250, next is economy of scale with a mean of 3.750, access to market information with 3.150 and finally the research and development with a mean of 2.4.

The study demonstrates that competition is key driver which cause firms to network. The market dynamisms and how businesses compete has changed due to globalization. Globalization creates imperatives for firms to consider participating in networks (Van Laere and Heene 2003). Mezeger, Kovacs and Paganelli (2000) assert that due to the present level of market competition, enterprises have to organize themselves into effective system architectures in order to be able to fulfill the market demands.

The ever increasing global competition hitting both large and small companies alike are provoking creative thinking. Small and medium sized companies (SMEs) need to change behavior

to meet these challenges. One of the ways that SMEs can successfully fight the competition is by increasing inter-firm cooperation or networking (Seremetis, 1994).

**Table 4.7 below presents the results on the respondents rating of perceived benefits of networking**

Perceived benefits of networking	Mean	Std deviation
Increased employment and growth	3.450	.688
Acceleration of Knowledge Transfer	3.250	.618
Enhanced Skills	3.150	.793
Attraction of foreign direct investment in clusters	3.400	.488
Market Diversification	4.373	.558
Stable Business Relationships	4.450	.688
Risk-Sharing	3.250	.618
Facilitation to access to finance	1.150	.793
Opportunities to innovate, upgrade and Increase Competition	4.200	.488

The respondents rating on the importance of respondents rating of perceived benefits of networking, the study found that stable business relationships as the key perceived benefit of networking as shown by mean of 4.450, market diversification as shown by mean of 4.373, opportunities to innovate, upgrade and increase competition as shown by mean of 4.200, increased employment and growth as shown by mean of 3.450 and risk sharing as shown by mean of 3.250, the study further revealed that enhanced skills as shown by mean of 3.150, acceleration of knowledge transfer 3.250, attraction of foreign direct investment in clusters 3.400.



The study sought to test the nine perceived benefits as was proposed by Jenkins *et al.* (2007). It was found that eight of them except facilitation to access to finance yielded high values of mean. Therefore this study is in consistent with the findings of Jenkins *et al.* (2007).

#### 4.7 Networking relationships

This section presents the respondents opinion on the various aspects of the networking relationships which constitutes the structure, governance and content. Structure has got three was measured in relation to density, centrality and ties. Governance on the other hand was measured in relation to reputation, reciprocity and trust. Finally, content was measured by considering the various aspects of information quality and information diversity.

##### 4.7.1 Validity of various statements as regards to the network structure

The study sought from the firms involved in the study the extent to which they agree with statements on network structure.

**Table 4.8** Presents the research findings on respondent rating validity of various statements in regards to density of the networking

Density	Mean	Std deviation
We know each other by name	2.800	.737
We regularly talk to each other about business	1.700	.703
We see each other regularly in business situations	2.450	.584

The study found that majority of the firms neither agree and disagree that they know each firms by name, they disagreed that they regularly see each other in business situation and they also disagreed that they regularly talk to each other about business. It can be concluded from the findings that density in not significant in the determination of structure, network relationships and

hence performance. Surin and Wahab (2013) investigated “the effect of social network on business performance in established manufacturing SMEs in Malaysia”. They found that density had positive but not significant effect on firm performance.

#### 4.7.2 Validity of various statements in regard to the Centrality of the Networking

**Table 4.9: Shows the results on validity of each statement as regard to Centrality of the Networking**

<b>Centrality of Networking</b>	<b>Mean</b>	<b>Std deviation</b>
We talk directly about business issues	4.860	.483
We receive directly helpful information	3.992	.738
We call for advice about running business information	3.051	.706
We call for advice about running business	3.639	.584
We were the first to receive new things in the group	3.051	.706

From the findings on the respondents rating various statements in regard to centrality of networking, the study found that the majority of respondents agreed that they talk directly about business issues as shown by the mean of 4.860, they agreed that they receive directly helpful information with a mean of 3.992, they as well neither agreed nor disagreed with statement that they call for advice about running business information as well as we were the first to receive new things in the group. However, they agreed that they call for advice about running business.

Powell *et al.*, (1999) in the study “Network position and firm performance: Organizational returns to collaborations in the Biotech industry” found that centrality plays a substantial role in determining firm performance. Further, they posit that centrality enables firms to select and complete research projects that prove worth of patent protection. Surin & Wahab (2013) investigated “the effect of social network on business performance in established manufacturing SMEs in Malaysia”. They found that centrality had positive and significant effect on firm

performance. The findings of this study reveal that centrality plays a key role in enhancing firm performance.

#### 4.7.3 Validity of various statements in regard to the ties of the networking

**Table 4.10 Strong and Weak Ties in relation to structure.**

<b>Ties</b>	<b>Mean</b>	<b>Std deviation</b>
We share personal matters with	3.920	.545
We might discuss family matters with them	4.351	.547
We might ask them for advice about private partner	4.311	.619

The study found that respondents agreed with the statement that “we share personal matters”, they also agreed that they might discuss family matters with them and that we might ask them for advice about private matters. The findings show that strong and weak ties are strong influencers of structure and hence network relationships.

This findings support earlier results by Rosit (2011) who argued that both weak and strong ties are important for SMEs success and strong ties are valuable fro knowledge creation purposes. Further, Koka and Prescott (2008) posit that a dense network increases the possibilities of developing strong ties and in doing so facilitates the transfer of tacit knowledge which in turn has a positive impact on innovative performance. A study by Bruderl and Preisendorfer (1998) involving over 1600 German founders, established that strong ties were more critical than weak ties in explaining the firm’s success.

#### 4.7.4 Validity of various statements regarding network governance

Table 4.11 presents the study findings on respondents rating validity of various statements as regards to the network governance

Network Reputation	Mean	Std deviation
We generate a lot of enthusiasm among partners	4.320	.545
We always have a forgiving nature	3.551	.547
We like persuading others until the task is completed	3.511	.619

On the respondent rating validity of each statement as regards to network reputation, the study found that respondents agreed that they generate a lot of enthusiasm among partners as shown by a mean of 4.320, the respondents agreed that they always have a forgiving nature as well as that we like persuading others until the task is completed as shown by mean of 3.551 and 3.511 respectively.

#### 4.7.5 Validity of various statements regarding network governance as regard reciprocity

Table 4.12 Network reciprocity

Network Reciprocity	Mean	Std deviation
Our partners are generally fair in dealing with us	3.120	.545
Our partners are willing to do us favour if asked	3.451	.547
We do favours to each other from time to time	3.211	.619
We were the first to receive new things in the group	3.307	.619

Regarding reciprocity the study established that respondents could neither agree nor disagree with the following statements, that our partners are generally fair dealing with us (Mean=3.120), our partners are willing to do us favour if asked (Mean=3.451), we do favours to each other time to time (Mean= 3.211), we were the first to receive new things in the group (Mean=3.307).

#### 4.7.6 Validity of various statements regarding network governance as regarding trust

Table 4.13 presents the study findings on respondents rating validity of various statements as regards to the network trust

Network Trust	Mean	Std deviation
We are dependable to our partners	3.720	.545
We are sincere to others	3.551	.547
They consider we are trustworthy	3.511	.619

Regarding trust in the network governance the study established that most respondents agreed regarding the statements of dependability among the partners as shown by the (Mean=3.720), also they agreed concerning the statement that , we are sincere to others (Mean=3.551) as well as that they consider we are trustworthy (Mean=3.511)

#### 4.8 Indicate to what extent you agree with the following statements on networking content

##### 4.8.1 Networking content: information quality

Table 4.14 Information quality

Information Quality	Mean	Std deviation
Their information is accurate	3.720	.545
Their information is relevant	3.551	.547
Their information is specific	3.511	.619
We receive information on time	3.290	.670

The respondents agreed with the statements regarding information quality, to begin with they agreed that their information is accurate (Mean=3.720), their information is relevant (3.551), their information is specific (Mean=3.551) as well as that we receive information on time (Mean=3.290).

#### 4.8.2 Indicate to what extent you agree with the following statements on networking

Table 4.15 Information diversity

Information Diversity	Mean	Std deviation
Market Data	4.720	.545
Process Design	4.551	.547
Packaging Design	4.511	.619
Marketing Know How	4.612	.210

Regarding networking information diversity the most important information diversity is market data (Mean= 4.720), market know how (Mean=4.612), process design (Mean=4.551) as well as packaging design (Mean=4.511)

#### 4.9 Networking dimensions: intensity and range

In order to comprehend network dimensions in terms of intensity and range the research sought to understand duration of engagement among the firms.

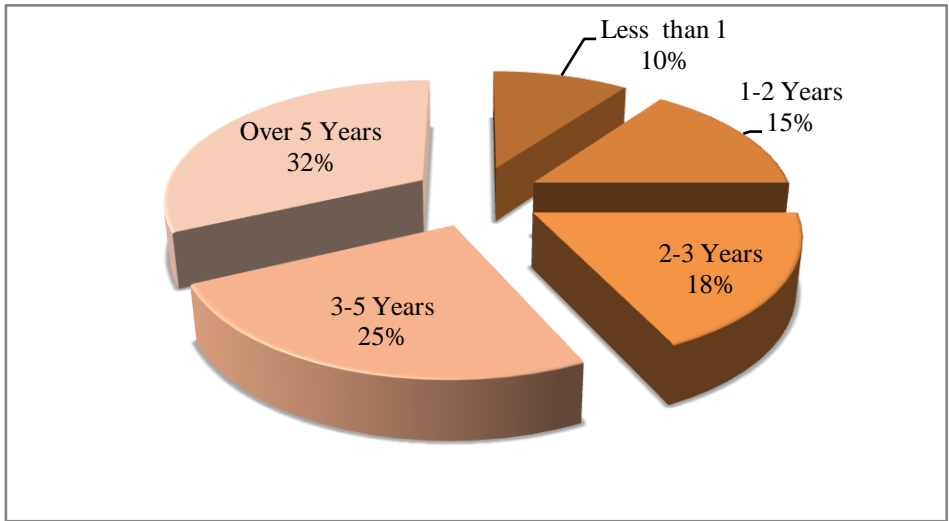


Fig 4.3 How many years have you known each other

Most of respondents accounting to 32% have known each other firms for more than 5 years, followed by 25% who mentioned they have known each other firms for 3-5 years, 18% have known each other firms for 2-3 years, 15% have known each other firms for 1-2 years and 10% have known each firms for 1 year.

**4.9.1 Intimacy level and meeting frequency**

**Table 4.16 Intimacy and meeting frequency**

	Mean	Std deviation
<b>Intimacy Level</b>		
We keep a close relationship with each other	4.251	.540
<b>Meeting Frequency</b>		
We meet each other frequently	3.912	.624

The study has established that most of the respondents indicated that they agreed they maintain a close relationship with each other and they meet frequently. This is indicated by the means of 4.251 and 3.912 respectively.

**4.9.2 Indicate to what extent you agree with the following statements regarding network range**

**Table 4.17: Shows results of network range.**

	Mean	Std deviation
We closely work with our suppliers	4.472	.545
We enjoy Government support	4.121	.634
We closely work with University	1.713	.869
We have a good relationship with Agencies	3.808	0.541
We have a good relationships with our competitors	3.656	.618
We receive feedback from our customers	4.890	.390

Regarding network range the following finding were established, most respondents agreed that they closely work with suppliers (Mean=4.472), they agreed that they enjoy government support (Mean=4.121), they also agreed that they have a good relationship with agencies (mean=3.308), they neither agreed with statement that they have a good relationships with competitors (Mean= 3.656), however they strongly agreed that they receive feedback from customers (Mean=4.890). However, they disagreed that they closely work with universities.

**4.10 Networking capabilities**

On the level of agreement on various aspect on the four networking capability indicators which include networking coordination, relational skills, partners knowledge and internal communication.



#### 4.10.1 Networking Capabilities

**Table 4.18: shows the responses regarding coordination and relational skills**

<b>Coordination</b>	<b>Mean</b>	<b>Std deviation</b>
We appoint coordinators to manage relationships between firms	2.176	1.138
We discuss regularly with our partners how support each other	2.786	.612
We develop a joint problem solving mechanism.	2.514	.613
<b>Relational</b>		
We build good relationship with our partners	4.120	.655
We deal flexibility with our partners are	3.869	.631
We seek new relationships with new partners	4.120	.560
We have the ability to initiate and maintain relationships with new partners	4.121	.445

Regarding coordination the research established that the respondents disagree with assertion that they appoint coordinators to manage relationships between firms as shown by (mean=2.176), They disagreed with the statement with assertion that they discuss regularly with our partners how support each other (Mean= 2.786), they could neither agree nor disagree with the statement that they develop a joint problem solving mechanism (Mean= 2.514), however concerning network relation skills the research established the following the respondents agreed that they build good relationship with partners (Mean=4.120), they agreed that they deal flexibly with partners (Mean=3.869), We seek new relationships with new partners (Mean=4.120), We have the ability to initiate and maintain relationships with new partners (Mean=4.121)

#### 4.10.2 Partners Knowledge

**Table 4.19: shows the responses between Partners Knowledge and internal communication**

<b>Partner's Knowledge</b>	<b>Mean</b>	<b>Std deviation</b>
We know our partners products	4.176	1.138
We know our partners potentials and strategies	3.286	.612
We knows our partners markets	4.514	.613
Partners are willing to benefits others by providing information's	4.390	.234
<b>Internal Communication</b>		
We share responsibility and do not pass blame to others	4.194	.655
There is flow of information between managers and subordinates	3.769	.631
We have regular meetings amongst partners	4.542	.456

From the analysis regarding partner's knowledge the study established the following: most firms acknowledged that they know partners products (Mean=4.176), they could neither agree nor disagree that they know partners potentials and strategies (Mean=3.286), they agreed that they knows their partners markets (Mean=4.514), they also agreed that partners are willing to benefits others by providing information's (Mean=4.390).

The study also sought to establish respondents' responses on the issue of internal communication. The study established that respondents agreed with the assertion that they share responsibility and do not pass blame to others (mean= 4.194), they also agreed that there is a flow of information between managers and they have regular meetings amongst the partners with a mean of 3.769 and 4.542 respectively.

#### 4.11 Resources acquisition

**Table 4.20 Resource acquisition**

	<b>Mean</b>	<b>Std deviation</b>
We get tangible resources from the network	3.805	.811
We get intangible resources from the network	4.382	.614
The resources we have gotten have brought competitive advantage to the firm	4.702	.673
Due to our position in the network, we obtained superior resources	4.698	.685
We have good relationships with our competitions	3.654	.545
The resources we have gotten are also available to other firms	4.321	.567

The study established several observations concerning network resources acquisition. The study established most firms that participated agreed with statements that they get tangible resources from the network (Mean=3.805), they also agreed that they get intangible resources from the network (Mean=4.382), they also strongly agreed that the resources they have gotten have brought competitive advantage to the firm (Mean=4.702). Further, the study also established that the respondents agreed that due to their position in the network, firms have obtained superior resources (Mean=4.698), they strongly agreed that they have good relationship with competitions (Mean=4.684). Finally, they also agreed with assertion that the resources they have are also available to other firms (Mean=4.321).

#### 4.12 Firm performance

The study sought to find out the extent to which firms agree or disagree with statements regarding firm performance.

**Table 4.20 Firm Performance**

	<b>Mean</b>	<b>Std deviation</b>
Network relationships foster business performance	4.492	.510
The cost of network is insignificant compared with the gains	4.547	.701
The sales and profits have grown due to networking	4.051	.756

Most firms as indicated by respondents believes that network relations foster business performance as shown by the mean of 4.492 as well as agreeing that cost of network is insignificant compared with the gains as indicated by Mean of 4.547. In addition, the respondents agreed that network have helped to improve sales and profits due to the networking as shown by the mean of 4.051.

**Table 4.21 what is the average increase/ decrease in revenue per annum between 2010-2013**

	Frequency	%
1-10%	30	34.5%
10-20%	40	28.7%
20-30%	20	20.0%
Over 30%	10	16.8%

The study established that 34.5% of the firms witnessed an average increase in revenue per annum between 1-10 %, 28.7% of the firms witnessed an increase in revenue of 10-20%, 20% of the firms witnessed 20-30% and finally 16.8% of the firms witnessed an increase over 30%.

**Table 4.22As regarding the average increase/ decrease in revenues per annum between 2010-2013**

What is the approximate margin that your business operates in 2010-2013?

Margin	Frequency	%
Less than 5%	30	30%
5-10 %	40	40%
10-20 %	20	20%
Over 30%	10	10%

The study established that over 40% of the SME that participated with this study acknowledged that approximate margin that your business operates in 2010-2013 of 5-10%, followed by 30% of the firms that had a margin of less than 5%, next were the 20% firms that have operated with a margin 10-20% and finally 10% with a margin of over 30%. Margins indicate the gross profit against the total sales of a company.

**Table 4.23 what is the average increase in sales per annum between 2010-2013**

Sales	Frequency	%
Less than 5%	45	45%
5-10 %	30	30%
10-20 %	20	20%
Over 30%	5	5%

The study established that over 30% of the respondents acknowledged that approximate margin that your business operates in 2010-2013 of 5-10%, it was also noted that 30% of the firms that had a margin of less than 5%. In addition, it was noted that 20% firms that have operated with a margin 10-20% and finally 5% with a margin of over 30%.

## 4.13 Factor analysis

### 4.13.1 KMO and Bartlett's test

Churchill (1979) notes that the assessments of Cronbach Alpha and exploratory factor analysis (EFA) are the first tools for the assessment of the measurement instrument quality. In this regard, the study adopted Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) as the test statistic to measure the sample adequacy and Bartlett's test of Sphericity as the test statistic to test the null hypothesis that correlation matrix upon which the principal component analysis is based is an identity matrix.

The KMO measure of Sampling Adequacy measure varies between 0 and 1, and values closer to 1 are better. To measure the KMO test statistics was used against the minimum acceptable level of 0.6 (Tabachnick and Fidell, 2001). The KMO value for this study was approximately 0.8 which is above the suggested minimum of 0.6. This study sample was therefore good for factor analysis procedure as recommended by Tabachnick and Fidell (2001). The results are shown in the table 4.24.

**Table 4.24: KMO and Bartlett's statistics for the measurement scales used in the study test statistics: KMO and Bartlett's coefficients.**

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.788
Bartlett's Test of Sphericity	Approx. Chi-Square	902.012
	Df	98
	Sig.	.000

Bartlett's test of Sphericity coefficient was used to test the null hypothesis that the correlation matrix upon which factor analysis is based is an identity matrix. An identity matrix simply refers to a matrix which all diagonal elements are one while all other elements are zero. From the

table 4.24 the approximate chi value is 902.012 Sig=0.000. This leads to the rejection of the Null hypothesis that the correlation matrix is an identity matrix.

#### **4.13.2 Communalities**

Gason (2008) posit that the communality measures the percent of variance in a given variable explained by all the factors jointly and may be interpreted as the reliability of the indicator. The study followed the suggestion of Gerbing and Anderson (1998) that principal component analysis be generated separately for each individual study construct to ascertain that all items loaded onto one factor only. If communalities are high, recovery of population factors in sample data is normally very good. The implication is that the variations of factors with higher extraction values can be explained by all other factors combined. The table of Communalities which shows the variance in each of the original variables is described in the table 4.25.

**Table 4.25 Communalities**

	Initial	Extraction
Network Structure	1.000	.720
Network Content	1.000	.745
Network Governance	1.000	.779
Network Range	1.000	.777
Intensity	1.000	.751
Relationships	1.000	.813
Partners Knowledge	1.000	.833
Internal Communication	1.000	.686
Economies of Scale	1.000	.467
Risk sharing	1.000	.405
Market know how	1.000	.369
Relationship with competitors	1.000	.328
Feedback from customer	1.000	.252
Market competition	1.000	.275
coordination	1.000	.274
Resource Acquisition	1.000	.216
Position in the network	1.000	.234
Flexibility with partners	1.000	.381
Information Diversity	1.000	.263

Extraction Method: Principal Component Analysis.

Table 4.25 shows the variation in a single variable with respect to all the other variables put together in the factor analysis. The factors with higher extraction values mean that their variation is explained to a greater extent by all other factors combined together. As shown in table 4.25 above all the variables had their variability explained to a greater degree by all the others combined. Communalities should be greater than 0.6 or the mean level should be at least 0.7 (MacCallum *et al.*, 1999)



**Table: 4.26: Total variance**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.536	18.900	18.900	4.536	18.900	18.900
2	2.149	8.956	27.856	2.149	8.956	27.856
3	1.933	8.054	35.910	1.933	8.054	35.910
4	1.723	7.179	43.089	1.723	7.179	43.089
5	1.494	6.225	49.314	1.494	6.225	49.314
6	1.273	5.303	54.617	1.273	5.303	54.617
7	1.260	5.248	59.865	1.260	5.248	59.865
8	1.112	4.633	64.498	1.112	4.633	64.498
9	.996	4.151	68.648			
10	.926	3.858	72.506			
11	.878	3.659	76.165			
12	.779	3.244	79.409			
13	.673	2.803	82.212			
14	.618	2.575	84.787			
15	.556	2.318	87.106			
16	.489	2.036	89.142			
17	.479	1.996	91.138			
18	.440	1.834	92.973			
19	.389	1.621	100.000			

Extraction Method: Principal Component Analysis

From the analysis, only eight factors in the initial solution have Eigen values greater than 1. Together, they account for almost 64.498% of the variability in the original variables. If a factor has a low Eigen value, then it is contributing little to the model.

#### 4.13.3 Scree plot

The leftmost section of scree plot shows the variance explained by the initial solution; only eight factors in the initial solution have Eigen values greater than 1. Together, they account for almost 64.498% of the variability in the original variables. If a factor has a low Eigen value, then it is contributing little to the model.

### Scree Plot

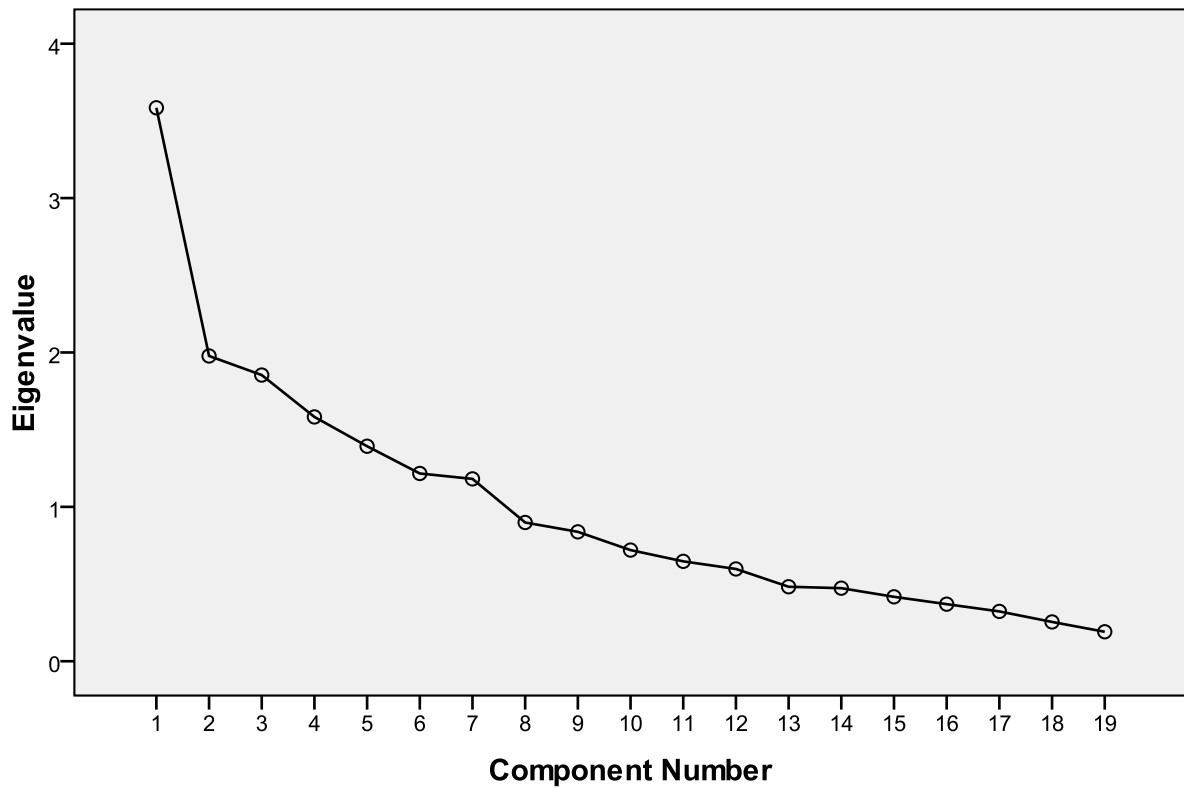


Fig 4.1 Scree plot

Factor analysis helped in formulating the hypotheses for the study. The scree plot forms the basis for decision criteria that informed hypothesis formulation. Factor numbers (independent variables) with the Eigen values greater than one indicate their high extent in affecting the total variance in the model. From the scree plot, all the other factors except the eight on the left hand side were not contributing significantly to the overall variance in the model. This means they were excluded in the multiple regression model and hence not subjected to testing of the hypothesis. From nineteen factors, only eight were selected and tested in multiple regression analysis and the rest were therefore dropped.

#### 4.14 Multiple regression statistics

**Table 4.27: Regression table**

<i>Regression Statistics</i>	
Multiple R	0.934
R Square	0.872
Adjusted R Square	0.776
Standard Error	.84
Observations	100.00

The table 4.27 illustrates the model fitness the regression equation. It shows the relationship between the Dependent variable (Firm Performance) and the independent variables (Networking content, governance, structure, network range, intensity, relational skills, partner's knowledge and internal communication). The study used 100 observations to estimate the model. From the table, it is shown that the overall model fitness was found to be 0.872 ( $R^2$ ). This means that 87.2% of the total variation can be explained by the model. The independent variables of the study are: network relationships ( $X_1$ ), governance ( $X_2$ ), structure ( $X_3$ ), network range ( $X_4$ ) network Intensity ( $X_5$ ), relational skills ( $X_6$ ) partner's knowledge ( $X_7$ ) internal communication ( $X_8$ ) while the dependent variable is firm performance. From the analysis, it can be concluded that jointly,  $X_1$ - $X_8$  are good predictors of SMEs performance.

**Table 4.28: Test of Joint regressor's significance-Analysis of variance**

	Df	SS	MS	F	Significance F
Regression	3	9880.90	99.39	45.99	0.01
Residual	97	4940.45	70.2		
Total	100	5090.32			

The general linear multiple regression model the study examined is given by;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \varepsilon$$

The column labeled F in the table above gives the overall F-test of the hypothesis that;

**H<sub>0</sub>:**  $\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = \beta_8 = 0$  versus;

**H<sub>a</sub>:** at least one of  $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8$  does not equal to zero where  $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$  and  $\beta_8$  are coefficients of  $X_1, X_2, X_3, X_4, X_5, X_6, X_7$  and  $X_8$  respectively.

The F statistic (45.99) has the associated P-value of 0.01. Since 0.01 is  $< 0.05$ , we reject H<sub>0</sub> at significance level 0.05 which is to say that at least none of the regressor coefficients are equal to zero and indeed all the independent variables (Networking content, governance, structure, network range, intensity, relational skills, partner's knowledge and internal communication) jointly have a statistically significant influence on changes in the dependent variable i.e. performance of SMEs.

**Table 4.29: Test hypothesis of zero slope coefficients in the model**

	<b>Coefficients</b>	<b>Standard Error</b>	<b>t- Stat</b>	<b>P-value</b>	<b>Lower 95%</b>	<b>Upper 95%</b>
Intercept	26.653	6.56	3.33	0.00	-25.90	-10.10
X <sub>1</sub> :	13.99	0.45	7.90	0.04	6.20	13.20
X <sub>2</sub> :	18.07	0.89	2.90	0.02	-1.90	1.90
X <sub>3</sub> :	14.86	0.40	2.90	0.03	0.20	2.80
X <sub>4</sub>	11.20	0.30	2.97	0.03	9.54	14.30
X <sub>5</sub>	13.80	0.41	2.90	0.02	10.11	15.30
X <sub>6</sub>	7.97	0.30	1.90	0.04	5.00	8.20
X <sub>7</sub>	7.62	0.29	1.34	0.01	5.20	7.99
X <sub>8</sub>	6.52	0.20	2.69	0.03	4.11	7.80

From the table, it can be deduced that the fitted line for regression is

$$Y=36.90+13.99 X_1+ 18.07 X_2+ 14.08 X_3+11.20 X_4+ 13.8 X_5+ 7.97 X_6+7.62 X_7+ 6.52 X_8+ \varepsilon$$

The coefficient of network content was found to be 13.99. It has an estimated standard error of 0.45, t-statistic of 7.90 and an associated p-value of 0.04. This implies that the impact of network content that network members are able to establish among other firms and its influences the firms performance statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . In this regard, the null hypothesis ( $H_0$ ) is therefore rejected while the alternative hypothesis ( $H_a$ ) is accepted that there is a statistically significant relationship between network content firm's performance.

The coefficient of governance was found to be 18.07. It has an estimated standard error of 0.89, t-statistic of 2.90 and an associated p-value of 0.02. This implies that the impact of governance influences firm's performance is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . In this regard, the null hypothesis ( $H_0$ ) is therefore rejected while the alternative hypothesis ( $H_a$ ) is accepted that there is a statistically significant relationship between governance and firm's performance.

The coefficient of structure was found to be 14.86. It has an estimated standard error of 0.40, t-statistic of 2.90 and an associated p-value of 0.03. This implies that the impact of structure influences firm's performance and it is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . In this regard, the null hypothesis ( $H_0$ ) is therefore rejected while the alternative hypothesis ( $H_a$ ) is accepted that there is a statistically significant relationship between structure and firm's performance.

The coefficient of network range was found to be 11.20. It has an estimated standard error of 0.30, t-statistic of 2.97 and an associated p-value of 0.03. This implies that the impact of network range influences firm's performance and is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . In this regard, the null hypothesis ( $H_0$ ) is therefore rejected while the alternative hypothesis ( $H_a$ ) is accepted that there is a statistically significant relationship between network range and firm's performance.

The coefficient of network intensity was found to be 13.80. It has an estimated standard error of 0.41, t-statistic of 2.89 and an associated p-value of 0.03. This implies that the impact of structure influences firm's performance and is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . In this regard, the null hypothesis ( $H_0$ ) is therefore rejected while the alternative hypothesis ( $H_a$ ) is accepted that there is a statistically significant relationship between network intensity and firm's performance.

The coefficient of relational skills was found to be 7.97. It has an estimated standard error of 0.30, t-statistic of 1.90 and an associated p-value of 0.04. This implies that the impact of structure influences firm's and its performance is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . In this regard, the null hypothesis ( $H_0$ ) is therefore rejected while the alternative

hypothesis ( $H_a$ ) is accepted that there is a statistically significant relationship between relational skills and firm's performance.

The coefficient of partner's knowledge was found to be 7.62. It has an estimated standard error of 0.29, t-statistic of 1.34 and an associated p-value of 0.01. This implies that the impact of structure influences firm's and its performance is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . In this regard, the null hypothesis ( $H_0$ ) is therefore rejected while the alternative hypothesis ( $H_a$ ) is accepted that there is a statistically significant relationship between partner's knowledge and firm's performance.

The coefficient of internal communications was found to be 6.52. It has an estimated standard error of 0.20, t-statistic of 2.69 and an associated p-value of 0.03. This implies that the impact of structure influences firm's and its performance is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . In this regard, the null hypothesis ( $H_0$ ) is therefore rejected while the alternative hypothesis ( $H_a$ ) is accepted that there is a statistically significant relationship between internal communications and firm's performance.

#### 4.15 Pearson correlation coefficient

##### 4.15.1 Network content and firm performance

		Firm performance	Networking content
Firm Performance	Pearson Correlation	1	.700**
	Sig. (2-tailed)		.000
	N	100	100
Networking Content	Pearson Correlation	.700**	1
	Sig. (2-tailed)	.000	
	N	100	100
**. Correlation is significant at the 0.05 level (2-tailed).			

Correlation between network content and firm performance was found to be significant at 0.05 level since the p-value of 0.000 is less than 0.05. The correlation magnitude between firm performance and network capability was found to be 70 %.

#### 4.15.2 Governance and firm performance

		Firm performance	Governance
Firm Performance	Pearson Correlation	1	.631**
	Sig. (2-tailed)		.000
	N	100	100
Governance	Pearson Correlation	.631**	1
	Sig. (2-tailed)	.000	
	N	100	100
**. Correlation is significant at the 0.05 level (2-tailed).			

Correlation between governance and firm performance was found to be significant at 0.05 level since the p-value of 0.000 is less than 0.05. The correlation magnitude between firm performance and governance was found to be 63.1 %.

#### 4.15.3 Structure and firm performance

		Firm performance	Networking Structure
Firm Performance	Pearson Correlation	1	.585*
	Sig. (2-tailed)		.000
	N	100	100
Networking Structure	Pearson Correlation	.585*	1
	Sig. (2-tailed)	.000	
	N	100	100
**. Correlation is significant at the 0.05 level (2-tailed).			



Correlation between firm network content and performance was found to be significant at 0.05 level since the p-value of 0.000 is less than 0.05. The correlation magnitude between firm performance and network capability was found to be 58.5 %.

#### 4.15.4 Network range and firm performance

		Firm performance	Networking range
Firm Performance	Pearson Correlation	1	.384*
	Sig. (2-tailed)		.000
	N	100	100
Networking Range	Pearson Correlation	.384*	1
	Sig. (2-tailed)	.000	
	N	100	100
**. Correlation is significant at the 0.05 level (2-tailed).			

Correlation between network range and firm performance was found to be significant at 0.05 level since the p-value of 0.000 is less than 0.05. The correlation magnitude between firm performance and network range was found to be 38.4 %.

#### 4.15.5 Network intensity and firm performance

		Firm performance	Network Intensity
Firm Performance	Pearson Correlation	1	.801*
	Sig. (2-tailed)		.000
	N	100	100
Network Intensity	Pearson Correlation	.801*	1
	Sig. (2-tailed)	.000	
	N	100	100
**. Correlation is significant at the 0.05 level (2-tailed).			

Correlation between network intensity and firm performance was found to be significant at 0.05 level since the p-value of 0.000 is less than 0.05. The correlation magnitude between firm performance and network range was found to be 80.1 %.

#### 4.15.6 Relational skills and firm performance

		Firm performance	Relational skills
Firm Performance	Pearson Correlation	1	.700**
	Sig. (2-tailed)		.000
	N	100	100
Relational skills	Pearson Correlation	.700**	1
	Sig. (2-tailed)	.000	
	N	100	100
**. Correlation is significant at the 0.05 level (2-tailed).			

Correlation between relational skills and firm performance was found to be significant at 0.05 level since the p-value of 0.000 is less than 0.05. The correlation magnitude between firm performance and network range was found to be 70 %.

#### 4.15.7 Partner's knowledge and firm performance

		Firm performance	Relational skills
Firm Performance	Pearson Correlation	1	.666**
	Sig. (2-tailed)		.000
	N	100	100
Relational skills	Pearson Correlation	.666**	1
	Sig. (2-tailed)	.000	
	N	100	100
**. Correlation is significant at the 0.05 level (2-tailed).			

Correlation between Partner's Knowledge and firm performance was found to be significant at 0.05 level since the p-value of 0.000 is less than 0.05. The correlation magnitude between firm performance and network range was found to be 66.6 %.

#### 4.15.8 Internal communication and firm performance

		Firm performance	Internal Communication
Firm Performance	Pearson Correlation	1	.710**
	Sig. (2-tailed)		.000
	N	100	100
Internal communication	Pearson Correlation	.710**	1
	Sig. (2-tailed)	.000	
	N	100	100
**. Correlation is significant at the 0.05 level (2-tailed).			

Correlation between internal communication and firm performance was found to be significant at 0.05 level since the p-value of 0.000 is less than 0.05. The correlation magnitude between firm performance and network range was found to be 71.0 %.

### 4.30 Correlation summary matrix

Correlation Table

DE

		Firm performance	X1=Content	X2=Governance	X3=Structure	X4=Range	X5=Intensity	X6=Relational Skills	X7=Partners Knowledge	X8=Internal communication
Firm performance	Pearson Correlation	1	.700**	.631**	.585*	.384	.801**	.700**	.666**	.710**
	Sig. (2-tailed)		.000	.021	.030	.050	.000	.000	.010	.000
	N	100	100	100	100	100	100	100	100	100
X1=Content	Pearson Correlation	.700**	1	.123	.106	.106	.101	.099	.101	.239
	Sig. (2-tailed)	.000		.300	.220	.180	.199	.309	.278	.288
	N	100	100	100	100	100	100	100	100	100
X2=Governance	Pearson Correlation	.631**	.123	1	.285*	.162	.299	.028	.299	.028
	Sig. (2-tailed)	.021	.300		.099	.215	.090	.400	.099	.080
	N	100	100	100	100	100	100	100	100	100
X3=Structure	Pearson Correlation	.585*	.100	.283	1	.171*	.040	.400	.099	.080
	Sig. (2-tailed)	.050	.400	.099		.120	.300	.400	.099	.080
	N	100	100	100	100	100	100	100	100	100

X4=Range	Pearson Correlation	.384	.206	.264	.172	1	.028	.299	.390	.079
	Sig. (2-tailed)	.050	.000	.090	.098		.400	.099	.080	.380
	N	100	100	100	100	100	100	100	100	100
X5=Intensity	Pearson Correlation	.882**	.201	.099	.243	.128	1	.239	.299	.308
	Sig. (2-tailed)	.000	.104	.400	.100	.200		.099	.087	.067
	N	100	100	100	100	100	100	100	100	100
X6=Relational Skills	Pearson Correlation	.700**	.123	.106	.106	.101	.123	1	.099	.231
	Sig. (2-tailed)	.000	.300	.220	.180	.199	.300	.100	.239	.090
	N	100	100	100	100	100	100	100	100	100
X7=Partners Knowledge	Pearson Correlation	.666**	.120	.230	.199	.450	.506*	.230	1	.239
	Sig. (2-tailed)	.010	.305	.101	.130	.070	.050	.101	.100	.099
	N	100	100	100	100	100	100	100	100	100
Internal Communication	Pearson Correlation	.710**	.172	1	.028	.299	.390	.079	.264	1
	Sig. (2-tailed)	.000	.198		.400	.099	.080	.380	.090	
	N	100	100	100	100	100	100	100	100	100

#### 4.16 Hypothesis testing

The study was guided by eight hypotheses which were tested as indicated below:

##### Hypothesis 1

**H<sub>0</sub>:** There is no relationship between network content and firm performance in small and medium enterprises

**H<sub>1</sub>:** There exists a relationship between network content and firm performance in small and medium enterprises

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.935 <sup>a</sup>	.874	.871	.41938

a. Predictors: (Constant), X<sub>1</sub> Network Content

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.307	5	1.661	14.447	.020 <sup>a</sup>
	Residual	16.533	94	.176		
	Total	24.840	99			

a. Predictors: (Constant),

b. Dependent Variable: Firm performance

The coefficient of network content (**X<sub>1</sub>**) has an estimated standard error of 0.41938, F-statistic of 14.447 and an associated p-value of 0.020. This therefore indicates network content and its influence on firm performance is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . This shows that the influence of network content on SMEs performance is significant at

this level. The null hypothesis ( $H_0$ ) is therefore rejected while the alternative ( $H_a$ ) is accepted that there is a statistically significant relationship between network content and SMEs performance.

## Hypothesis 2

**H<sub>0</sub>:** There is no relationship between network governance and firm performance in small and medium enterprises

**H<sub>1</sub>:** There exists a relationship between network governance and firm performance in small and medium enterprises

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.583 <sup>a</sup>	.340	.305	.41760

a. Predictors: (Constant), X<sub>1</sub> Network Governance

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.447	5	1.689	9.688	.030 <sup>a</sup>
	Residual	16.393	94	.174		
	Total	24.840	99			

a. Predictors: (Constant),

b. Dependent Variable: b. Dependent: Firm performance

The coefficient of network governance ( $X_2$ ) has an estimated standard error of 0.41760, F-statistic of 9.688 and an associated p-value of 0.030. This therefore indicates network governance and its influence on firm performance is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . This shows that the influence of network governance on SMEs performance is significant at this level. The null hypothesis ( $H_0$ ) is therefore rejected while the

alternative ( $H_a$ ) is accepted that there is a statistically significant relationship between network governance and SMEs performance.

### Hypothesis 3

**H<sub>0</sub>:** There is no relationship between network structure and firm performance in small and medium enterprises

**H<sub>1</sub>:** There exists a relationship between network structure and firm performance in small and medium enterprises

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.767 <sup>a</sup>	.588	.566	.33001

a. Predictors: (Constant), X<sub>1</sub> Network structure

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.603	5	2.921	26.817	.000 <sup>a</sup>
	Residual	10.237	94	.109		
	Total	24.840	99			

a. Predictors: (Constant),

b. Dependent Variable: firm performance

The coefficient of network structure ( $X_3$ ) has an estimated standard error of 0.33001, F-statistic of 26.817 and an associated p-value of 0.000. This therefore indicates network content and its influence on firm performance is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . This shows that the influence of network structure on SMEs performance is significant



at this level. The null hypothesis ( $H_0$ ) is therefore rejected while the alternative ( $H_a$ ) is accepted that there is a statistically significant relationship between network structure and SMEs performance.

#### Hypothesis 4

**H<sub>0</sub>:** There is no relationship between network range and firm performance in small and medium enterprises

**H<sub>1</sub>:** There exists a relationship between network range and firm performance in small and medium enterprises

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.846 <sup>a</sup>	.716	.700	.27416

a. Predictors: (Constant), X<sub>1</sub> Network range

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.775	5	3.555	47.297	.000 <sup>a</sup>
	Residual	7.065	94	.075		
	Total	24.840	99			

a. Predictors: (Constant),

b. Dependent Variable: firm performance

The coefficient of network range ( $X_4$ ) has an estimated standard error of 0.27416, F-statistic of 47.297 and an associated p-value of 0.000. This therefore indicates network range and its influence on firm performance is statistically significant at significance level  $\alpha=0.05$  since

$p < 0.05$ . This shows that the influence of network range on SMEs performance is significant at this level. The null hypothesis ( $H_0$ ) is therefore rejected while the alternative ( $H_a$ ) is accepted that there is a statistically significant relationship between network range and SMEs performance.

### Hypothesis 5

**H<sub>0</sub>:** There is no relationship between network intensity and firm performance in small and medium enterprises

**H<sub>1</sub>:** There exists a relationship between network intensity and firm performance in small and medium enterprises

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.853 <sup>a</sup>	.727	.712	.26864

a. Predictors: (Constant), Network intensity

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18.056	5	3.611	50.041	.000 <sup>a</sup>
	Residual	6.784	94	.072		
	Total	24.840	99			

a. Predictors: (Constant),

b. Dependent Variable: firm performance

The coefficient of network intensity ( $X_5$ ) has an estimated standard error of 0.26864, F-statistic of 50.041 and an associated p-value of 0.000. This therefore indicates network intensity and its influence on firm performance is statistically significant at significance level  $\alpha = 0.05$  since

$p < 0.05$ . This shows that the influence of network intensity on SMEs performance is significant at this level. The null hypothesis ( $H_0$ ) is therefore rejected while the alternative ( $H_a$ ) is accepted that there is a statistically significant relationship between network intensity and SMEs performance.

### Hypothesis 6

**H<sub>0</sub>:** There is no relationship between relational skills and firm performance in small and medium enterprises

**H<sub>1</sub>:** There exists a relationship between relational skills and firm performance in small and medium enterprises

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.811 <sup>a</sup>	.658	.643	.29919

a. Predictors: (Constant), relational skills

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.336	4	4.084	45.623	.000 <sup>a</sup>
	Residual	8.504	95	.090		
	Total	24.840	99			

a. Predictors: (Constant),

b. Dependent Variable: firm performance

The coefficient of network content ( $X_6$ ) has an estimated standard error of 0.29919, F-statistic of 45.653 and an associated p-value of 0.000. This therefore indicates relational skills and its

influence on firm performance is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . This shows that the influence of relational skills on SMEs performance is significant at this level. The null hypothesis ( $H_0$ ) is therefore rejected while the alternative ( $H_a$ ) is accepted that there is a statistically significant relationship between relational skills and SMEs performance.

### Hypothesis 7

**H<sub>0</sub>:** There is no relationship between partner's knowledge and firm performance in small and medium enterprises

**H<sub>1</sub>:** There exists a relationship between partner's knowledge and firm performance in small and medium enterprises

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.813 <sup>a</sup>	.661	.646	.29792

a. Predictors: (Constant X<sub>1</sub>) Network Relationship

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.408	4	4.102	46.215	.000 <sup>a</sup>
	Residual	8.432	95	.089		
	Total	24.840	99			

a. Predictors: (Constant),

b. Dependent Variable: firm performance

The coefficient of partner's knowledge ( $X_7$ ) has an estimated standard error of 0.29792, F-statistic of 46.215 and an associated p-value of 0.000. This therefore indicates partner's knowledge and its influence on firm performance is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . This shows that the influence of partner's knowledge on SMEs performance is significant at this level. The null hypothesis ( $H_0$ ) is therefore rejected while the alternative ( $H_a$ ) is accepted that there is a statistically significant relationship between partner's and SMEs performance.

### Hypothesis 8

**H<sub>0</sub>:** There is no relationship between internal communication and firm performance in small and medium enterprises

**H<sub>1</sub>:** There exists a relationship between internal communication and firm performance in small and medium enterprises

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.831 <sup>a</sup>	.690	.674	.28608

a. Predictors: (Constant),  $X_1$  Internal Communication

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.147	5	3.429	41.903	.000 <sup>a</sup>
	Residual	7.693	94	.082		
	Total	24.840	99			

a. Predictors: (Constant),

b. Dependent Variable: firm performance

The coefficient of internal communication ( $X_8$ ) has an estimated standard error of 0.28608, F-statistic of 41.903 and an associated p-value of 0.000. This therefore indicates internal communication and its influence on firm performance is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . This shows that the influence of internal communication on SMEs performance is significant at this level. The null hypothesis ( $H_0$ ) is therefore rejected while the alternative ( $H_a$ ) is accepted that there is a statistically significant relationship between internal communication and SMEs performance.

**Table 4.31: Results of the Hypothesis tested**

Hypothesis	Description	Results
H1	Network content influences firm performance of manufacturing SMEs in Kenya	Supported
H2	Network governance influences the firm performance of manufacturing SMEs in Kenya	Supported
H3	Network structure influences the firm performance of manufacturing SMEs in Kenya	Supported
H4	Network range influences the firm performance of manufacturing SMEs in Kenya	Supported
H5	Network intensity influences the firm performance of manufacturing SMEs in Kenya	Supported
H6	Relational skills influences the firm performance of manufacturing SMEs in Kenya	Supported
H7	Partners knowledge influences the firm performance of manufacturing SMEs in Kenya	Supported
H8	Internal communication influences the firm performance of manufacturing SMEs in Kenya	Supported

#### 4.17 Chapter summary

This chapter has illustrated the empirical results of the study. Descriptive statistics were used to analyze the background information. Measures of central tendencies were used to present the expected scores from the group of scores in the study. Standard deviation was used to inform the distribution of scores around the mean of the distribution. Factor analysis was conducted to identify the dimensionality of each research construct. Further, to select from the questionnaire the items with higher loadings and to compare the selected items with similar items in theory. Multiple regression analysis was used to determine the relationship between networking and firm performance among the manufacturing SMEs in Kenya.

The study tested eight hypotheses. The findings show that all the eight hypotheses of the study were supported: H1: network content influences the performance of SMEs among the manufacturing firms in Kenya; H2 Network governance influences the performance of SMEs among the manufacturing firms in Kenya; H3 Networking structure influences the performance of manufacturing SMEs in Kenya; H4: Network range influences the performance of SMEs among the manufacturing firms in Kenya; H5 Network intensity influences the performance of SMEs among the manufacturing firms in Kenya; H6 Relational skills influences the performance of manufacturing SMEs in Kenya; H7: Partner's knowledge influences the performance of SMEs among the manufacturing firms in Kenya; H8 internal communication influences the performance of SMEs among the manufacturing firms in Kenya.

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

The purpose of the study was to establish whether networking influences firm performance among the manufacturing SMEs in Kenya. Networking was conceptualized to have three major determinants: network relationships, network dimensions and networking capabilities. These three determinants were used to form the independent variables while firm performance was the dependent variable.

This chapter presents the discussions, contribution, implications, limitations, conclusion and suggestions for further studies. The outcomes of this study have been compared with previous study where possible.

#### 5.2 Discussions

This section focuses on the three objectives that have guided the study. These three objectives aim to assess the influence of networking on firm performance in manufacturing SMEs in Kenya. The discussions therefore revolve around each objective and the findings are put into the context of existing literature.

##### 5.2.1 Objective One

*To assess the influence of network relationships on firm performance in small and medium enterprises in Kenya.*



The study sought to establish whether there exists a relationship between Network relationships and firm performance. Network relationship has got three indicators which are structure, governance and content. The study found there was strong association between network relationships and firm performance.

This is consistent with Ehsan & Ismail (2013) who studied the effect of social network on business performance in established manufacturing SMEs in Malaysia. They found that centrality was positively and significantly related to business performance. The findings therefore lends support to the social network theory indicating that the more central the entrepreneur in the network the more it will affect his/her business performance (Cantner and Joel 2011).

The study results on network governance are consistent with Mika (2009) who studied “The role network governance in business performance in business model performance” targeting Finnish software industry. The study drew upon the RBV and network governance theories to investigate what is network governance from management point of view and how it affects a firm’s business model performance. The results showed a positive association between network governance and firm performance.

The findings in this study contrast those of Korir *et al.*, (2012) on their study “effects of network structure on performance of minor event management ventures in Kenya”. They found that network structure had no significant influence performance of event management ventures. However, evidence from empirical studies indicates that a superior network structure has

significant implications for enhancement of firms performance. This is attributed to the context in which firms could acquire external resources through network relationships and integrate them with internal resources to generate additional benefits (Zaheer & Bell 2005). Under this objective three hypotheses were tested as indicated below:

### **Hypothesis 1**

**H<sub>0</sub>:** There is no relationship between network content and firm performance in small and medium enterprises

**H<sub>1</sub>:** There exists a relationship between network content and firm performance in small and medium enterprises

The coefficient of network content ( $X_1$ ) has an estimated standard error of 0.41938, F-statistic of 14.447 and an associated p-value of 0.020. This therefore indicates network content and its influence on firm performance is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . This shows that the influence of network content on SMEs performance is significant at this level. The null hypothesis ( $H_0$ ) is therefore rejected while the alternative ( $H_a$ ) is accepted that there is a statistically significant relationship between network content and SMEs performance.

### **Hypothesis 2**

**H<sub>0</sub>:** There is no relationship between network governance and firm performance in small and medium enterprises

**H<sub>1</sub>:** There exists a relationship between network governance and firm performance in small and medium enterprises

The coefficient of network governance ( $X_2$ ) has an estimated standard error of 0.41760, F-statistic of 9.688 and an associated p-value of 0.030. This therefore indicates network governance and its influence on firm performance is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . This shows that the influence of network governance on SMEs performance is significant at this level. The null hypothesis ( $H_0$ ) is therefore rejected while the alternative ( $H_a$ ) is accepted that there is a statistically significant relationship between network governance and SMEs performance.

The findings in this study are consistent with those of Chou (2013) in the study “The impact of network governance on the performance of Information Technology Outsourcing (ITO)”. The study targeted 191 Companies from Taiwanese industries and found that relational governance has a positive effect on performance.

### **Hypothesis 3**

**H<sub>0</sub>:** There is no relationship between network structure and firm performance in small and medium enterprises

**H<sub>1</sub>:** There exists a relationship between network structure and firm performance in small and medium enterprises

The coefficient of network structure ( $X_3$ ) has an estimated standard error of 0.33001, F-statistic of 26.817 and an associated p-value of 0.000. This therefore indicates network content and its influence on firm performance is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . This shows that the influence of network structure on SMEs performance is significant

at this level. The null hypothesis ( $H_0$ ) is therefore rejected while the alternative ( $H_a$ ) is accepted that there is a statistically significant relationship between network structure and SMEs performance.

The findings of this study are in contrast with the findings of Korir *et al.*, (2012) who did not find positive association between network structure and firm performance in the Event Management Ventures in Kenya. However, the findings of this study are consistent with the study by Goce Andreyski (2009) on “Competitive strategy, alliance networks and firm performance”. The study targeted 125 firms from computer and electronic industries and found that dense network structure is more beneficial for firms that have superior either advantage creating or advantage-enhancing capabilities whereas firms with inferior capabilities can benefit more from a sparse network structure. Further, the study findings are consistent with the findings by Yang and Liu (2012) in their study on “Boosting firm performance via enterprise agility and network structure”. Their study targeted 250 companies in Taiwan glass industry and they found that network structure is a critical competitive strategy source of firm performance.

### **5.2.2 Objective Two**

***To determine whether network dimensions influences firm performance in SMEs in Kenya.***

This study sought to evaluate networking and performance among manufacturing SMEs in Kenya. The independent variable network dimensions have got two indicators: intensity and range which were found to be positive and significant to firm performance. In this regard two hypotheses were tested and their results are discussed below:

#### **Hypothesis 4**

**H<sub>0</sub>:** There is no relationship between network range and firm performance in small and medium enterprises

**H<sub>1</sub>:** There exists a relationship between network range and firm performance in small and medium enterprises

The coefficient of network range ( $X_4$ ) has an estimated standard error of 0.27416, F-statistic of 47.297 and an associated p-value of 0.000. This therefore indicates network range and its influence on firm performance is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . This shows that the influence of network range on SMEs performance is significant at this level. The null hypothesis ( $H_0$ ) is therefore rejected while the alternative ( $H_a$ ) is accepted that there is a statistically significant relationship between network range and SMEs performance.

Network range refers to the variety and number of connections. In this regard the broader external network is the easier it is to have access to resources (Burt 1992). The results of this study are in consistent with the findings of Ge, Hisrich and Dong (2004) "Networking, resource acquisition and the performance of SMEs: An empirical study of three major Cities in China". In the study of a sample of 177 SMEs they found a positive association between network range and resource acquisition outcome. Further, there was positive relationship between resource acquisition outcome and firm performance.

## Hypothesis 5

**H<sub>0</sub>:** There is no relationship between network intensity and firm performance in small and medium enterprises

**H<sub>1</sub>:** There exists a relationship between network intensity and firm performance in small and medium enterprises

The coefficient of network intensity ( $X_5$ ) has an estimated standard error of 0.26864, F-statistic of 50.041 and an associated p-value of 0.000. This therefore indicates network intensity and its influence on firm performance is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . This shows that the influence of network intensity on SMEs performance is significant at this level. The null hypothesis ( $H_0$ ) is therefore rejected while the alternative ( $H_a$ ) is accepted that there is a statistically significant relationship between network intensity and SMEs performance.

Network intensity is the combination of time, mutual trust and reciprocal services (Granovetter 1973). Ahuja (2000) argues that the closer the relationship among members, the faster the speed of sharing resources. The results of this study are in consistent with the findings of Ge, Hisrcich and Dong (2004) "Networking, resource acquisition and the performance of SMEs: An empirical study of three major Cities in China". In the study of a sample of 177 SMEs they found the broader the network is, the more resources the firm comes into contact with and more easily the firm can acquire resources. The outcome of resource acquisition hence performance to an extent is contingent on the networking range. After integrating the acquired resources, the firm will

have sustainable competitive advantages and as a result there will be higher profitability (Brush, Greene and Hart, 2001).

### **5.2.3 Objective Three**

*To evaluate the influence of network capabilities on firm performance in small and medium enterprises in Kenya*

The study adopted four measures of networking capability developed by Walter *et al.*, (2006) namely relational skills, coordination, partners knowledge and internal communication. Notably, the dimension of coordination was dropped during the extraction of factor analysis because it had a low Eigen value. The three measures tested under networking capability were found to be positive and significant to firm performance.

In the study of “The influence of dimensions of networking capability in SMEs performance” targeting Tanzanian SMEs, Bengesi and Roux (2014) found a positive association between three dimensions of network capabilities (relational skills, partner’s knowledge and internal communication) and firm performance. However, there was negative association between coordination. This study was able to establish a positive significant association between the three the dimensions of networking capabilities (except) and firm performance.

These results are consistent with results of a study by Human and Naude (2010) “Exploring the relationship between network competence, network capability and firm performance: A resource based perspective in an emerging company”. The study found that all the four latent dimensions of network capability had significant influence on firm performance. However, the current study

found three dimensions of network capability to have a significant influence on firm performance.

Generally there is an agreement that networks are critical for SMEs performance. Stam *et.al.*, (2013) pointed out clearly the importance of networks that were also confirmed by this study. The importance of networks include enabling entrepreneurs identify opportunities; obtain resources at low prices and to secure legitimacy from stake holders. Networks therefore remain an important component of social capital acquisition (Kwon and Arenius 2010). Under this objective three hypotheses were tested whose results are discussed below:

#### **Hypothesis 6**

**H<sub>0</sub>:** There is no relationship between relational skills and firm performance in small and medium enterprises

**H<sub>1</sub>:** There exists a relationship between relational skills and firm performance in small and medium enterprises

The coefficient of network content ( $X_6$ ) has an estimated standard error of 0.2999, F-statistic of 45.653 and an associated p-value of 0.000. This therefore indicates relational skills and its influence on firm performance is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . This shows that the influence of relational skills on SMEs performance is significant at this level. The null hypothesis ( $H_0$ ) is therefore rejected while the alternative ( $H_a$ ) is accepted that there is a statistically significant relationship between relational skills and SMEs performance.



These results are consistent with results of a study by Human and Naude (2010) “Exploring the relationship between network competence, network capability and firm performance: A resource based perspective in an emerging company”. The study found that all the four latent dimensions of network capability had significant influence on firm performance. Therefore the current study and the study by Human and Naude (2010) are consistent that relational skills dimension of network capability influences firm performance.

### **Hypothesis 7**

**H<sub>0</sub>:** There is no relationship between partner’s knowledge and firm performance in small and medium enterprises

**H<sub>1</sub>:** There exists a relationship between partner’s knowledge and firm performance in small and medium enterprises

The coefficient of partner’s knowledge ( $X_7$ ) has an estimated standard error of 0.29792, F-statistic of 46.215 and an associated p-value of 0.000. This therefore indicates partner’s knowledge and its influence on firm performance is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . This shows that the influence of partner’s knowledge on SMEs performance is significant at this level. The null hypothesis ( $H_0$ ) is therefore rejected while the alternative ( $H_a$ ) is accepted that there is a statistically significant relationship between partner’s and SMEs performance.

These results are consistent with results of a study by Human and Naude (2010) “Exploring the relationship between network competence, network capability and firm performance: A resource based perspective in an emerging company”. The study found that all the four latent dimensions

of network capability had significant influence on firm performance. Therefore the current study and the study by Human and Naude (2010) are consistent that partner's knowledge dimension of network capability influences firm performance.

### **Hypothesis 8**

**H<sub>0</sub>:** There is no relationship between internal communication and firm performance in small and medium enterprises

**H<sub>1</sub>:** There exists a relationship between internal communication and firm performance in small and medium enterprises

The coefficient of internal communication ( $X_8$ ) has an estimated standard error of 0.28608, F-statistic of 4.9059 and an associated p-value of 0.000. This therefore indicates internal communication and its influence on firm performance is statistically significant at significance level  $\alpha=0.05$  since  $p<0.05$ . This shows that the influence of internal communication on SMEs performance is significant at this level. The null hypothesis ( $H_0$ ) is therefore rejected while the alternative ( $H_a$ ) is accepted that there is a statistically significant relationship between internal communication and SMEs performance.

These results are consistent with results of a study by Human and Naude (2010) "Exploring the relationship between network competence, network capability and firm performance: A resource based perspective in an emerging company". The study found that all the four latent dimensions of network capability had significant influence on firm performance. Therefore the current study and the study by Human and Naude (2010) are consistent that internal communication dimension of network capability influences firm performance.

The findings of this study will benefit several stakeholders namely:

- (i) Future researchers: The study would guide future researchers on the studies related networking, firm performance and other related areas.
- (ii) Manufacturers/ Business owners: The study hopes to benefit the manufacturers/ business owners on the accrued benefits of networking, leveraging on resources owned by others and hence improvement in business performance.
- (iii) Government and policy makers: The government of Kenya would benefit on the findings of the study and provide a conducive environment (including formulating policies that guide SMEs networking practices) that accelerate growth in the manufacturing sector for the realization of Vision 2030

### **5.3 Contribution to theory**

Traditional strategy research has viewed firms as autonomous entities seeking to build resources and seek market positions that lead to sustainable competitive advantage. An understanding of the proliferation of growth of business networks underscores that firms are more properly viewed as connected entities to each other in multiple networks of resource. These linkages bind them in complex relationships that are simultaneously competitive and cooperative. These build the social capital within a firm. RBV proponents view the firms from individual perspectives while networks proponents see the firms as organizations taking opportunities of the rents that accrue to firms as partly the result of their own unique resource endowments, but partly derived from the structure of the network to which they belong.

This study also offers some theoretical implications. Although there have been numerous studies in business networking and firm performance, literature about networking from the outcome

perspective on firm performance is very scanty. Most studies on networks concentrate on nature of networks and how they are formed. Therefore this study contributes to literature on network outcomes and firm performance. The study examined exhaustively the network determinants and links them to firm performance. Finally, the study contributes to the empirical literature on networking and firm performance for a developing country like Kenya. In addition, the proposed framework can serve as a basis for future research in relevant issues

#### **5.4 Contribution to manager/ business owners**

SME managers and business owners in the manufacturing sector has an opportunity to grow their businesses through networking. From extant literature it is clear that firm can leverage on resources owned by others and build on social capital. In addition, literature has confirmed that isolation of firms is a major obstacle hindering their competitiveness. In this regard managers need to identify profitable networks that can influence their business performance. Further, managers occupy a strategic decision making position in the organizations. It is expected that successful managers will lead their organizations by seizing opportunities from the environment. For Kenyan SMEs to be successful and overcome the current death rates, networking for resource acquisition is a prerequisite. The synergetic relationship that firms enjoy by being in strategic networks has major accrued benefits. In this regard managers must make a deliberate attempt and build ties with other players in the market.

#### **5.5 Contribution to policy**

There have been several papers guiding policy development for SMEs in Kenya. From the reviewed literature, it is evident that implementation of these policies has been a challenge. Further, it was noted that coordination of SMEs activities has been done from a decentralized

environment. There is very little that guides inter-firm linkages or networking in the policy papers though it has been proposed in Economic reports. Clear policies that encourage the formation and coordination of networks is therefore vital. Policy makers should also encourage trade associations to guide firms on networking practices. Further, such association should act as network facilitators fostering creation of inter-firm networks, enhancing cooperation and competitiveness within the networks and mitigating conflicts as they arise.

### **5.6 Conclusions and implications**

Based on the findings of this study, it is clear that networking has strong influence on firm performance. The study has tested empirically the network outcomes and their influence on manufacturing SMEs in Kenya. The research was motivated by the Question: Does SMEs participation in inter-firm networks enhance their performance? The results indicate that all the eight hypotheses that were tested and supported. There has been mixed results regarding networking and firm performance. For instance, Thrikawala (2011) finds a significant positive relationship between an SME's engagement in various networks and the performance of the SME. Watson (2007) also found that SMEs that were involved in networking had higher performance and survive longer. On contrary, Rowley, Behrens and Krachhardt (2000) found a negative association between networking and performance. This study bridges this gap by providing new evidence from the Kenyan context.

The study found that most SMEs network because of competition and resource acquisition. This is true given that globalization has changed the landscape of competition globally. Further, SMEs are faced by resource constraints which are major hindrances to their competitiveness.

Firms must therefore find means of building a strong resource base by leveraging on social capital for them to remain competitiveness in the market place.

Understanding how networking influences firm performance has major implications for practitioners in both developing and developed countries. The effect of globalization and liberalization has affected the way businesses have been operating in the recent past. The results of this study have shown that networking largely influences business performance.

### **5.7 Limitations of the study**

Though the study has made valuable contributions it was not without limitations. The study focused only on Manufacturing SMEs registered under KAM. The manufacturing sector has huge dynamics at the industry level and therefore those factors may contribute to their differential performance. For instance, agro-based manufacturers are usually affected by weather patterns. However, this can be managed in further research by stratifying the sample at the industry level. The study used the questionnaire method to collected data from single respondent from the target population. This may be subject to bias from the respondent. Future research may target several respondents from the same organization.

### **5.8 Suggestions for further research**

The study targeted manufacturing sector to test the influence of networking on firm performance. Future research should consider extending the study to the service sector and find out whether the same dynamics are consistent in the two sectors. Further, it would be interesting to extend the research to large enterprises since literature has shown that SMEs are not small scale of large

enterprises. It would also be interesting to find results targeting a dynamic sector like the ICT sector where technology rapidly changes coupled with major consumer adoption. Future studies should investigate whether female and male entrepreneurs have the same propensity when it comes to networking. Finally, a study that considers networking at various stages of industry life cycles would be of value to managers and other practitioners.

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## APPENDIX 1:

### INTRODUCTION LETTER TO THE RESPONDENTS

Josiah NjeruMaina

P.oBox 27661-00506

Nairobi

Tel 0721 475 370

Email [njerujm2002@gmail.com](mailto:njerujm2002@gmail.com)

Dear sir/madam,

**Re: REQUEST TO OBTAIN INFORMATION ABOUT YOUR MANUFACTURING ENTERPRISES.**

As part of the program leading to a Doctoral degree in Business Administration (Strategic management), I am undertaking a study entitled “**Networking and performance among Small and Medium Enterprises in Kenya**”. The aim of the attached questionnaire is to assist me develop an understanding of the nature of networks and how they influence performance of manufacturing SMEs in Kenya. Your ideas will be helpful towards my PhD qualification in DedanKimathi University of Technology. It is hoped that this thesis will be of benefit to the manufacturing SMEs in Kenya.

Please note that data obtained using this questionnaire is purely for academic purpose and your identity will remain anonymous.

Yours faithfully,

Josiah NjeruMaina

REG. No.B311-003-0005/2012

**APPENDIX II:**  
**QUESTIONNAIRE**

This questionnaire is designed purposefully for academic research only. It is meant to assist the researcher draw valuable conclusions regarding networking and performance of Manufacturing SMEs in Kenya. Your participation therefore is considered of great value towards the completion of this dissertation. In addition, the information obtained from your firm remains confidential and strict adherence to research ethics is going to be upheld. Finally, the researcher remains grateful for your participation.

**Identification Number**..... **Date**.....

This questionnaire contains several sections, kindly fill all the sections by ticking or writing in the space provided. Where multiple businesses are involved another set of questionnaire will be provided. It is estimated that the time spent in filling this questionnaire will not exceed **20 minutes**. Please **do not** tick one question **twice**.

**Section A: Company profile**

1. What is the age of your firm/ company in years?

Age in years	Tick
(a) 1-3	
(b) 4-6	
(c) 7-10	
(d) Over 10 years	

2. How many full time employees does your company have

Number of employees	Tick
(a) 10-30	
(b) 30-50	
(c) 50-70	
(d) 70-90	
(e) 90-100	

3. What is the legal status of your company

Legal status	Tick
Limited company	
Partnership	
Sole proprietorship	
Other (Specify) _____	

4. Which subsector or industry do you operate in?

Number of employees	Tick

(a) Food and Beverage	
(b) Chemical and Pharmaceuticals	
(c) Machinery and Equipment	
(d) Paper Publishing and Printing	
(e) Rubber, polythene and Plastics	
(f) Wood and Furniture	
(g) Textiles and apparels	
(h) Parts and Fabricated metals	
(i) Leather goods	
(j) Wires, electrical and electronic goods	
(k) Others (Specify)_____	

**Section B: Firms degree of networking**

- Networking activities include the following: Strategic alliances, joint ventures, long term supplier-buyer agreements, trade associations, franchising, business contracting

5. Does your firm cooperate or collaborate with more than three firms in business activities  
 (a) Yes  (b) No

6. Firm and Industry factors may influence the decision to engage in networking or not. Kindly **rank** the firm/ industry factors listed below in order through which they may have influenced your decision to engage in Networking.

Industry factors	Tick appropriately				
	1	2	3	4	5
(a) Economies of scale					
(b) Resource acquisition					
(c) Access to market information					
(d) Research and Development Intensity					
(e) Competition					

7. Indicate to what extent you agree with the following perceived benefits of networking  
 5=**Strongly Agree**; 4=**Agree**; 3=**Neutral**; 2=**Disagree**; 1= **Strongly Disagree**

Perceived Benefits	Tick appropriately				
	1	2	3	4	5
(a) Increased employment and growth					
(b) Acceleration of knowledge transfer					
(c) Enhanced skills					
(d) Attraction of foreign direct investments in clusters					
(e) Market Diversification					
(f) Stable business relationships					
(g) Risk –sharing					
(h) Facilitation to access to finance					



(i) Opportunities to innovate, upgrade and increase competition					
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**Section C: Networking Relationships**

- Networking relationship has got three indicators: **Structure; Governance and Content**
- **Structure has three indicators: Density; Centrality and Ties**
- **Governance has three indicators: Reputation; Reciprocity and Trust**
- **Content has two indicators: Information Quality and Information Diversity**

8. Indicate to what extent you agree with the following statements on network structure  
 5=Strongly Agree; 4=Agree; 3=Neutral; 2=Disagree; 1= Strongly Disagree

	Tick appropriately				
<b>Density</b>	1	2	3	4	5
(a) We know each other by name					
(b) We regularly talk to each other about business					
(c) We see each other regularly in business situations					
<b>Centrality</b>					
(d) We talk directly about business issues					
(e) We receive directly helpful business information					
(f) We call for advice about running business					
(g) We were the first to receive new things in the group					
<b>Ties</b>					
(h) We share personal matters with					
(i) We might discuss family matters with them					
(j) We might ask them for advice about private partner					

9. Indicate to what extent you agree with the following statements on network governance  
 5=Strongly Agree; 4=Agree; 3=Neutral; 2=Disagree; 1= Strongly Disagree

	Tick appropriately				
<b>Reputation</b>	1	2	3	4	5
(a) We generate a lot of enthusiasm among partners					
(b) We always have a forgiving nature					
(c) We like persuading others until the task is completed					
<b>Reciprocity</b>					
(d) Our partners are generally fair in dealing with us					
(e) Our partners are willing to do us favour if asked					
(f) We do favours to each other from time to time					
(g) We were the first to receive new things in the group					
<b>Trust</b>					
(h) We are dependable to our partners					
(i) We are sincere to others					
(j) They consider we are trustworthy					

10. Indicate to what extent you agree with the following statements on networking content  
 5=Strongly Agree; 4=Agree; 3=Neutral; 2=Disagree; 1= Strongly Disagree

	Tick appropriately				
<b>Information Quality</b>	1	2	3	4	5
(a) Their information is accurate					
(b) Their information is relevant					
(c) Their information is specific					
(d) We receive information on time					
<b>Information Diversity</b> ( Information used to be exchanged)					
(e) Market Data					
(f) Product design					
(g) Process design					
(h) Packaging design					
(i) Marketing know-how					

**Section D: Networking Dimensions**

- Networking dimensions has got two indicators: **Intensity and Range**

11. Indicate to what extent you agree with the following statements on **network Intensity**

- (a) How many years have you known each other

Years	Tick
(a) Less than 1	
(b) 1-2	
(c) 2-3	
(d) 3-5	
(e) Over 5 years	

- (b) Indicate to what extent you agree with the following statements regarding intimacy level and meeting frequency.

5=Strongly Agree; 4=Agree; 3=Neutral; 2=Disagree; 1= Strongly Disagree

	Tick appropriately				
<b>Intimacy level</b>	1	2	3	4	5
(a) We keep a close relationship with each other					
<b>Meeting frequency</b>					
(a) We meet each other frequently					

12. Indicate to what extent you agree with the following statements regarding **network range**.

5=Strongly Agree; 4=Agree; 3=Neutral; 2=Disagree; 1= Strongly Disagree

	Tick appropriately				
	1	2	3	4	5
(a) We closely work with our suppliers					
(b) We enjoy Government support					
(c) We closely work with universities					
(d) We have a good relationship with Agencies					
(e) We have good relationships with our competitors					
(f) We receive feedback from our customers					

**Section E: Networking Capability**

- Networking relationship has got Four indicators: **Coordination; Relational skills; Partners knowledge and Internal communication**

13. Indicate to what extent you agree with the following statements regarding **networking capability**

5=Strongly Agree; 4=Agree; 3=Neutral; 2=Disagree; 1= Strongly Disagree

	Tick appropriately				
	1	2	3	4	5
<b>Coordination</b>					
(a) We appoint coordinators to manage relationships between firms					
(b) We discuss regularly with our partners how to support each other					
(c) We develop a joint problem solving mechanism					
<b>Relational skills</b>					
(a) We build good relationship with our partners					
(b) We deal flexibly with our partners are					
(c) We seek new relationships with new partners					
(d) We have the ability to initiate and maintain relationships with new partners					
<b>Partners knowledge</b>					
(a) We know our partners products					
(b) We know our partners potentials and strategies					
(c) We know our partners market					
(d) Partners are willing to benefit others by providing information.					
<b>Internal communication</b>					
(a) We share responsibility and donot pass blame to others					
(b) There is flow of information between managers and subordinates					
(c) We have regular meetings amongst partners.					

**Section F: Resource Acquisition**

14. Indicate to what extent you agree with the following statements regarding firm resource acquisition from the network

5=Strongly Agree; 4=Agree; 3=Neutral; 2=Disagree; 1= Strongly Disagree

	Tick appropriately				
	1	2	3	4	5
(a) We get tangible resources from the network					
(b) We get intangible resources from the network					
(c) The resources we have gotten have brought competitive advantage to the firm					
(d) Due to our position in the network, we obtained superior resources					
(f) The resources we have gotten are also available to other firms					

**Section G: Firm Performance**

15. (a) Indicate to what extent you agree with the following statements regarding firm Performance  
5=Strongly Agree; 4=Agree; 3=Neutral; 2=Disagree; 1= Strongly Disagree

	Tick appropriately				
	1	2	3	4	5
(a) Network relationships foster business performance					
(b) The cost of network is insignificant compared with the gains					
(c) The sales and profit have grown due to networking					

(b) What was the average increase/ decrease in revenue per annum between 2010-2013?

Growth	Tick
(a) 1-10%	
(b) 10-20%	
(c) 20-30%	
(d) Over 30%	
Decline	Tick
(a) 1-10%	
(b) 10-20%	
(c) 20-30%	
(d) Over 30%	

(c) What is the approximate margin that your business operated in for the last three years?

Growth	Tick

(a) Less than 5%	
(b) 5-10%	
(c) 10-20%	
(d) Over 30%	

(d)What is the approximate sales level that your business operated in for the last three years?

Growth	Tick
(a) Less than 5%	
(b) 5-10%	
(c) 10-20%	
(d) Over 30%	

**Section G: Demographics**

16. (a) Please tick your Gender Male  male

(b) What is your age bracket?

Number of years	Tick
(a) Less than 25	
(b) 25-35	
(c) 35-45	
(d) 45-55	

(c) How long have you worked in this company?

Working Experience ( in years)	Tick
(a) Less than 5	
(b) 5-10	
(c) 10-15	
(d) Over 15	

(d) Position: Owner/Manager  CEO  Others (specify)\_\_\_\_\_

**Thank You for your Cooperation**