

**CAPABILITY DYNAMISM AND COMPETITIVE ADVANTAGE OF
MANUFACTURING SMALL AND MEDIUM ENTERPRISES IN
NAIROBI COUNTY**

**BY
PETER SIRO MAOBE ROBINSON**

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT
OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE
OF MASTER OF BUSINESS ADMINISTRATION, SCHOOL OF
BUSINESS, UNIVERSITY OF NAIROBI**

2017

DECLARATION

I declare that this research project is my original work and has not been presented for a degree in any other university.

Signature

Date

Peter Siro Maobe Robinson

D61/74848/2014

This research project has been submitted for approval with my approval as the university supervisor

Signature

Date

Dr. Jackson Maalu

Department of Business Administration

University of Nairobi

DEDICATION

This work is dedicated to my family and especially Dolphine Nyambeki and close friends, for all their immeasurable support and love during this period of study. Thank you all.

ACKNOWLEDGEMENT

Special thanks to Almighty God for pulling me through the entire thick and thin of another stage of education in my life. I would like to profoundly thank my supervisor Dr. Jackson Maalu for his steadfast guidance and keen interest in my work. I remain indebted for his valuable contribution, encouragements and devotion during this research. I owe a lot to my classmates, they deserve special recognition from their encouragement, stimulating ideas and discussions.

ABSTRACT

In today's highly competitive business operating environment, firms have increasingly used sustainable strategic management practices to survive the intensive competition. SMEs operate in an environment that may impact both positively and negatively on their pursuit of strategies. Small and Medium Enterprises (SMEs) may develop competitive advantage through combination of resources that support their competitive position in the marketplace. Capability dynamism may lead to strategic investment processes by the SMEs which can lead to increased costs. The main objective of the study will be to establish the relationship between capability dynamism and competitive advantage of manufacturing SMEs in Nairobi. This study adopted a descriptive research design to achieve its objectives. Both primary and secondary data were used. Questionnaire was used as the main research instrument. Data collected was analysed quantitatively. The findings indicated that many of the SMEs spent between Ksh 1.1 million to Ksh 5million on research and development but majority of them spend less than Ksh 1 million on training. The respondents also indicated that to a large extent that their organization uses managers to combine their varied skills to create revenue producing products and services and use resource allocation routines to distribute scarce resources such as manufacturing assets from central points within the hierarchy. The respondents agreed to a large extent that managers use knowledge creation routines to build new thinking within the firm. It was also established that scanning the environment for opportunities & threats is also always implemented while access to external science & technology is occasionally implemented. The study concludes that organizations that developed capability dynamism have competitive advantage over their rivals. It is recommended that in order to reduce the failure rate of newly established firms, awareness needs to be created regarding the benefits related to extensive use of advanced technologies. Costs could be reduced by government intervention in reducing customs and excise taxes on ICT, while vendors could increase awareness campaign to SMEs. Kenyan SMEs need to move from the level of acquiring VRIN resources to developing dynamic capabilities. SMEs are therefore encouraged to develop sensing, seizing and reconfiguration capabilities to remain competitive.

TABLE OF CONTENTS

DECLARATION.....	ii
DEDICATION.....	iii
ACKNOWLEDGEMENT.....	iv
ABSTRACT.....	v
LIST OF TABLES.....	ix
ABBREVIATIONS AND ACRONYMS.....	x
CHAPTER ONE.....	1
INTRODUCTION.....	1
1.1 Background of the Study.....	1
1.1.1 Concept of Capability Dynamism.....	2
1.1.2 Competitive Advantage.....	3
1.1.3 Small and Medium Enterprises in Nairobi.....	4
1.2 Research Problem.....	6
1.3 Research Objectives.....	8
1.4 Value of the study.....	9
CHAPTER TWO.....	10
LITERATURE REVIEW.....	10
2.1 Introduction.....	10
2.2 Theoretical Foundation.....	10
2.2.1 Resource-based view theory.....	10
2.2.2 Dynamic capabilities theory.....	11
2.2.3 Porter’s Framework for Competitive Forces.....	12
2.3 Capability Dynamism.....	13
2.4 Capability Dynamism and Competitive Advantage.....	16

2.5 Empirical Review	18
2.6 Summary of Literature and Research Gaps.....	21
CHAPTER THREE	24
RESEARCH METHODOLOGY	24
3.1 Introduction	24
3.2 Research Design.....	24
3.3 Population of the study.....	24
3.4 Sampling Design	25
3.5 Data Collection.....	26
3.6 Data Analysis	27
CHAPTER FOUR.....	28
ANALYSIS AND RESULTS	28
4.1 Introduction	28
4.2 Response Rate	28
4.3 Profile of Respondent Firms	29
4.3.1 Years in Operation.....	30
4.3.2 Size of Firms.....	30
4.3.3 Sectoral Distribution.....	32
4.4 Capability Dynamism.....	32
4.4.1 Expenditure on Research and Development.....	33
4.4.2 Expenditure on Training.....	33
4.4.3 New Product Introduced in the Market	34
4.4.5 Dynamic Capabilities in Organizations	35
4.4.6 Implementation of Dynamic Capabilities Activities	36
4.4.6 Competitive Advantage.....	38

4.5 Relationship between Capability Dynamism and Competitive Advantage	39
4.6 Discussion of Results	42
CHAPTER FIVE	45
SUMMARY, CONCLUSION AND RECOMMENDATIONS	45
5.1 Introduction	45
5.2 Summary of the Study	45
5.3 Conclusion of the Study	47
5.4 Recommendations of the study	48
5.5 Limitations of the Study	48
5.6 Suggestions for Further Research	49
REFERENCES.....	50
APPENDIX ONE: QUESTIONNAIRE.....	55

LIST OF TABLES

Table 2.1: Summary and Knowledge Gaps.....	23
Table 3.1 Sample distribution	25
Table 4.1: Response Rate	29
Table 4.2: Years in Operation	30
Table 4.3: Size Classification of the Firm.....	31
Table 4.4: Number of Employees	31
Table 4.5: Sectoral distribution	32
Table 4.6: Expenditure on Research and Development	33
Table 4.7: Expenditure on Training	34
Table 4.8: New Product Introduced in the Market.....	34
Table 4.9: Dynamic Capabilities in Organizations	35
Table 4.10: Implementation of dynamic capabilities	37
Table 4.11: Competitive Advantage.....	38
Table 4.12: Regression Model Summary	39
Table 4.13: Summary of ANOVA ^a	40
Table 4.14: Summary of Coefficients of Regression Model.....	41

ABBREVIATIONS AND ACRONYMS

DCs	-Dynamic Capabilities
DCV	-Dynamic Capabilities View
GDP	- Gross Domestic Product
KAM	- Kenya Association of Manufacturers
MSME	- Medium Small and Micro Enterprises
R & D	- Research and Development
RBV	-Resource-Based View
SMEs	- Small and Medium Enterprises
VRIN	-Valuable, Rare Inimitable, Non-substitutable

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In today's highly competitive business operating environment, firms have increasingly used sustainable strategic management practices to survive the intensive competition. SMEs operate in an environment that may impact both positively and negatively on their pursuit of strategies. Capability dynamism create product development routines in which the management utilize their functional backgrounds and varied skills to create products and services that generate revenue (Helfat & Raubitschek, 2009). Additionally, strategic decisions forms part of the capability dynamism where management put together their various personal expertise and business functions to make decisions that gives a firm a strategic direction. Dynamic capability also entails recombination and reallocation of resources within the firm.

The concept of capability dynamism is premised on a wide range of occurrences associated with a change in economic conditions emanating from a change in factor supply conditions or demand or change of innovation in a firm. The various changes in the economic conditions include firm response to market conditions, competition created by innovations and economic growth. Capability dynamism is also supported by contingency theory (Lawrence and Lorsch, 1967). Contingency theory postulates that the best way for an organization to plan is affected by environment factors in which it operates. Contingency theory suggests that market dynamism and time have an important effect on Dynamic Capabilities (DCs) and hence on sustainable competitive advantage.

Small and Medium Enterprises (SMEs) may develop competitive advantage through combination of resources that support their competitive position in the marketplace. Capability dynamism may lead to strategic investment processes by the SMEs which can lead to increased costs. SMEs therefore may therefore benefit and at the same time face challenges in a bid to develop dynamic capabilities of that nature. The growth ambition of SMEs and industry characteristics affect capabilities such as use of superior organizational resources (Brush *et al.*, 2001). Differentiation in SMEs is mainly achieved through innovation because of limitation of resources that can create economies of scale (Burger, 2007). Hence SMEs are important channels of promoting product and technological innovations.

1.1.1 Concept of Capability Dynamism

The emerging capability dynamism model has been widely used by strategic management scholars because resource based view did not sufficiently explain the reason why some organizations enjoyed competitive advantage over others in a volatile business environment (Eisenhardt & Martin, 2000). According to resource based theory, firms are different in terms of the resources they possess, endowments and capabilities (Teece *et al.*, 1997).

Several studies have attempted to differentiate between ordinary capabilities and dynamic capabilities. Different outcomes and purposes can be drawn from ordinary and dynamic capabilities (Helfat & Winter, 2011). Ordinary capabilities ensure that an organization is able to undertake its routine activities continuously without changing the techniques. The

products and services and customer population also remain the same in dynamic capabilities hence the status quo is maintained. The concept of capability dynamism is defined by Helfat & Winter, (2011) as the ability of a firm to effectively create new resource base and subsequently reconfigure and modify them. Dynamic capabilities comprise of firm processes that can alter present situation leading to competitive advantage and improved performance.

Zahra and George (2002) indicated that capability dynamism are basically change capabilities that are bound to change and helps organization reallocate and reconfigure their resources to cater for ever changing customer requirements and changing strategies by the competitors. On the same vein, Zollo and Winter (2002) argued that capability dynamism are stable and learned patterns of joint activities through which a firm can systematically develop and modify its routine activities while pursuing efficiency and effectiveness.

1.1.2 Competitive Advantage

Porter (1985) indicated that competitive advantage refers to firms ability to accrue investment returns constantly which is beyond industry's average. This implies that sustainable competitive advantage can be obtained if an organization adopts a strategy for creating value that cannot be easily copied and implemented by any rival in the industry. It can be concluded that in order to attain sustainable competitive advantage, a firm must exploit strategic resources such as assets and capital which are available internally within the organization and allows the firm to come up with strategies and execute them so as to be more efficient and effective as compared to the competitors (Barney, 1991).

Competitive advantage does not rely on as a general assumption, such thing as technology, natural resources and economies of scale because they are very easy to copy. On the contrary, competitive advantage depends on resources that are rare, valuable and difficult to imitate that are embedded within the organization. This is supported by the resource based view (Stiles & Kulvisaechana, 2014). These categories of resource are intellectual capital assets which are referred to as invisible assets by Stewart (2012).

According to Porter (1991), a firm that looks for a position that is competitive in a given industry applies a competitive strategy. Such a firm gains profit and builds a constant market by harnessing various resources that makes it to be competitive in the business environment. In general there two important points that should be put into consideration by strategic leaders in a market economy and this includes; competitive strategies and industry type. Competitive strategy as postulated by Porter there squarely depends on pursuing advantages which are dictated by an organization's external factors that need analysis of rivals and market opportunities.

1.1.3 Small and Medium Enterprises in Nairobi

Definition of small and medium enterprises varies from one country to another because of the difference of economic and industrial structures. The key indicators that are used to make a distinction between micro, small, medium and large enterprises include; payrolls number of employees, revenues, and total assets (European Commission, 2014). In Kenya the (MSME bill, 2009) defines SMEs by looking at employees, equipment investment, annual turnover, investment in plant and machinery and registered capital.

Kenya, a small business is defined as having less than 50 employees or revenue not exceeding Ksh50 million. A company that has more than 50 employees but fewer than 500 is termed as a medium enterprise (MSME bill, 2009). The small and medium enterprises contribute immensely to industrial as well as economic growth.

Many of the developing countries depend on SMEs as the main drivers of economic development and innovative solutions as the key pillar for innovation among firms (Crossan & Apaydin, 2009). Due to limited resources, the small and medium firms need to mix information and communication technology and capability dynamism. In spite of having a number of studies on capability dynamism, a few studies have dealt with the effect of capability dynamism on competitive advantage. Several academicians and scholars have advanced the argument that capability dynamism on its own do not have significant effect on competitive advantage (Zahra, Sapienza & Davidsson, 2006), while others have a contrary view. Due to this disjoint of arguments, empirical studies have been impeded in the advancement of studies of capability dynamism.

Small and medium enterprises play a vital role in all economies of the world particularly in developing countries that are faced with serious unemployment and inequality in income distribution. Developing countries depend on SMEs as vehicle for developing efficient markets, competitive advantage and poverty reduction (Fan, 2003). In the Kenyan context, small and medium enterprises are the drivers of economic growth. SMEs in Kenya majorly comprise of trade (wholesale and retail), manufacturing with a bias in agribusiness and agro-based businesses which impacts on the broader society. The SME industry in Kenya comprises both formal and informal businesses which forms 74% of

the working population and contributes 18.4% of Kenya's GDP. Nairobi County is a host to various SME with numerous players that fall within the following broad sub sectors as stipulated by the MSME Act such as manufacturing, agri-business, trade and service. It also includes other existing and emerging economic activities such as mining. Nairobi City County Government estimates that there are 101,450 SMEs within the County (Nairobi City County, 2016). There is a high concentration of SMEs in Nairobi offering similar goods and services hence creating very stiff competition among the players in the subsector. Nyagah (2013) state that SMEs in Nairobi are faced with the threat of failure; three out five fail within the first six months. This study will however focus on the manufacturing Small and Medium Enterprises in Kenya.

1.2 Research Problem

One of the most fundamental questions in strategic management is how organizations attain and sustain higher financial performance. Achieving this performance is essential in a world which is characterized by intense global competition and strong rivalry in terms of price and performance of competing products, a world where all firms are attempting to continuously innovate and develop new business models. Since the business environments are continuously changing, skills and capabilities contributing to better performance presently may not be requisite for future growth (Schreyogg & Kliesch-Eberl, 2007). Dynamic capabilities can help increasing the company's potential to survive and further provide the organization with opportunities to grow in its markets.

Kenya SMEs sector is faced with numerous challenges which are also compounded by dwindling economic conditions and intense competition. Hence, management of SMEs are applying various strategies to improve firm performance achieve sustainable competitive advantage. Other challenges faced by SMEs in Nairobi include changing customer needs and delivering quality and new products in an efficient way among others. Some SMEs may also lack capability dynamism that yield a competitive advantage. Evidence is showing the slow decline of the small and medium retail enterprises in areas filtrated by the large firms in Nairobi (Mckinsey's Africa consumer insight center, 2012).

There are over 150,000 SMEs in Nairobi and having such a large number offering similar goods and services hence create very stiff competition among the players in the subsector. Challenges of competition are forcing small and medium-retail enterprises to re-think new ways of leveraging capabilities for competitiveness and survival. How an enterprise is able to anticipate these changes in their environment and adapt to them is crucial for long-term survival. This is especially true for the SMEs that need to strategically deploy their capabilities to maintain their competitive position in the face of new and emerging competitive and market challenges (O'Reilly & Tushman, 2008).

There are studies that have focused on concepts of organizational capabilities and competitive advantage (Tuan and Yoshi, 2010), dynamic capabilities, environmental dynamism and performance (Schilke, 2014) and core competences, core capabilities, strategy implementation and corporate performance. Ngeera (2013) studied the

application of dynamic capabilities approaches in commercial banks in Kenya and recommended a further research on other institutions that experienced bad results in their dynamic capability approaches. Ethiraj et al. (2005) conducted a case study of a software company in India in order to find out the source of capabilities. The findings revealed that capabilities that are specific to a client emanate from frequent exchanges with certain customers. This study fills the contextual gap of Kenyan and international empirical studies that have not conducted research on the topic. Empirical studies in Kenya that have considered large manufacturing companies (Magutu, 2013; Murgor, 2014) have the basis of selection on the number of employees instead of turnover. Methodologically some studies have either been conceptual (Helfat and Peteraf, 2014) or used selected measures for the variables (Protogerou et al., 2011). While these studies (Tuan and Yoshi, 2010; Machuki, 2011; Ongeti, 2014) had performance as the dependent variable their independent, moderating and intervening variables were different. More empirical studies are required to understand the types of capability dynamism to achieve and maintain competitive advantage within SMEs, and the impact of capability dynamism on competitive advantage. What is the relationship between capability dynamism and competitive advantage of manufacturing SMEs in Nairobi?

1.3 Research Objectives

This study was specifically guided by the following objectives;

- i. To establish the capability dynamism of manufacturing SMEs in Nairobi County
- ii. To determine the relationship between capability dynamism and competitive advantage of manufacturing SMEs in Nairobi County

1.4 Value of the study

This study adds value in the areas of theory, practice and policy development. From the theoretical perspective, the key benefits of this study are two pronged. To begin with this study will make a theoretical contribution by bringing a new dimension to study on the relationship between capability dynamism and competitive advantage. The second benefit of the study will be empirical in nature by testing the linear regression to show the linear interaction between and the variables hence feeling the gap on studies on capability dynamism (Helfat & Peteraf, 2009).

Policy development may involve enhancing resources and capabilities in relation to the environmental turbulences that organizations face. For example, manufacturing SME can recruit talent based on opportunities and threats that exist and reconfigure available resources in line with these environmental changes. The organization can also shed resources that inhibit the strategic stretches that might be required in these rapidly changing environments.

This study may contribute immensely to management practice in line with the main motivation in the field of strategic management, which is to enhance the understanding of how firms and managers can generate and sustain competitive advantage using capability dynamism in influencing organizational resources.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter looks at the issues related capability dynamism and competitive advantage. The chapter develops a theoretical framework in which the study is anchored as well as the empirical review. The chapter also presents the summary of the literature.

2.2 Theoretical Foundation

The study was guided by the following theories: Resource Based View, Dynamic capabilities theory, and Porter's framework for competitive forces.

2.2.1 Resource-based view theory

The Resource-Based View (RBV) was proposed by Barney in (1991). RBV of organizations holds that competitive advantage can be derived from firm's resources that have the following characteristics; rare, valuable, non-substitutable and imperfectly imitable (Miles & Covin, 2010). The resources comprise of organizational processes, assets, capabilities and information. According to Dickinson *et al.*, (2010), the resources are categorized into intangible and tangible resources. The theoretical underpinning is that organizational resources should be exploited in a manner that creates industrial wide competitive advantage for a focal organization.

Julianti *et al* (2010) clarify that assets are considered to be valuable when they can be used to exploit opportunities or to neutralise threats. They are considered rare when they are unique to an organisation and not available to rivals. Assets are considered inimitable when they cannot be copied or replicated by other players, and are considered non-substitutable when they cannot be replaced with other assets (Julianti *et al*, 2010). Tangible resources also referred to as capital have physical properties and therefore not rare because they can be found easily in the market to anyone with purchasing ability. Capital includes property, equipments and plant. Some technologies are protected by copyrights, patents and trademarks and therefore the value lies in the idea and not on the product. Some other resources that are intangible such as social relationships, organizational culture and employee knowledge allow organizations to utilize physical technologies in a unique way and therefore would be inimitable hence creating the strategic value. Resource Based View holds the view that organizational resources are distributed disproportionately thus creating a competitive advantage or disadvantage created by the resources.

2.2.2 Dynamic capabilities theory

The tenets of dynamic capability theory will guide this study. The theory endeavors to explain how organizations attain competitive advantage and how it is able to make it sustainable over time given the volatility of the business environment. It is argued that capability dynamism is an expansion of resource based theory of the firm for example short product life-cycles, increased global competition and rapid technological advancements.

Theory is anchored on the principles of absorptive capability, core competence, organizational routine, rigidity and core capability. The importance of dynamic capability is that it plays a role as a safeguard between organizational resources and the changes in the business environment by allowing a firm to change its resource base to achieve sustainable competitive advantage. The dynamic capability theory refers to organizations ability to attain renewed competitive advantage by revamping organizational resources and competences to achieve analogy with the shift in business environment. The capability is dynamic due to the reason that firms must frequently build, reconfigure and adapt to changes in the external and internal environment (Teece *et al.*, 1997).

2.2.3 Porter's Framework for Competitive Forces

Porter's forces paradigm was most prevalent in 1980s after it was proposed by Porters. This structure indicates that a firm's relative position contributes to its success. Porter postulated that competitive advantage by a firm can be achieved by adopting generic strategies which include focus strategy, differentiation and cost leadership. Application of these strategies by a firm helps in checking competition for instance creating barriers to entry by using economies of scale by an existing firm.

According to Porter (2008), understanding of the five forces enables a company to be aware of its structure and exploit a strategic position that is advantageous and discourages new entrants. The knowledge of five forces according to Porter helps firms to focus beyond express competitors. Porter (2008) highlighted four competitive forces which can lower firm profitability including; high prices charged by powerful suppliers,

knowledgeable customers who may shift to rival company, threat of substitutes and new entrants with new capabilities and competence scrambling for market share.

Definition of industry by firms is prerequisite to gaining benefits from the five forces model proposed by Porter. Porter (2000) argues that the benefits of defining are; strategy development, industry analysis and specifying unit boundaries. Based on this argument, the firms need to specify the product or service, geographical coverage, marketing segment and industry players. The weaknesses and strengths of competitors should also be established. Also important to assess is the industry profitability and other recent changes in the business environment which can be either positive or negative.

Porter (2008) further indicated that focusing on mitigating competition is a superior way of attaining greater performance than trend extrapolation or financial projections which is predominant in current investment analysis. It is important to note however that there is no universally accredited formula for dealing with competition. The methods to be used vary from one industry to another and different times. Common strategies used in dealing with competition are; value creation strategies, generic strategies and customer intimacy.

2.3 Capability Dynamism

According to Teece, Pisano and Shuen (1997), dynamic capability view was introduced to simplify the complexity of sustainable competitive advantage problem in the current changing business environment. This is based on the assumption that organizations that can spot and seize opportunities and adjust their resources and capabilities in tandem with

the realized opportunities and changes in the environment can build sustainable competitive advantage.

Sustainable competitive advantage has been a very interested topic to both practitioners and scholars because the period in which the firms take to attain sustainable competitive advantage has been decreasing over time. Li and Liu's (2014) conducted a research whose findings showed that capability dynamism influence competitive advantage positively and a dynamic environment was found to be an important antecedent. Successful case studies of organizations that have been able to survive in the current competitive environment and sustained a competitive advantage over time can provide vital lessons on how to sustain competition in a dynamic environment (Ambrosini & Bowman, 2009).

A critical analysis of dynamic capabilities indicated that it can be divided into seizing, sensing and reconfiguration capability (Teece, 2012). Sensing capability implies that for a firm to spot a prospect there is need for environmental scan and search for prospects that are continuously coming up within and without the firm. The common activity in sensing is scouting for new innovators or discovering market gaps, practices in research and development procedures that develop new ideas. Seizing capability: when opportunities are sensed, they then need to be seized and their value and potential have to be recognized. Seizing capability refers to choosing the correct technology or realizing the intended clients. Reconfiguration capability is when prospects seized after being sensed then they are required to be recombined which is also referred to as reconfiguration.

2.4 Competitive Advantage in Organizations

Wang (2014) argued that competitive advantage is attained when a firm obtains a set of characteristics that enable it to perform better than its competitors. In essence a competitive advantage provides an answer to the question why clients prefer from one firm and not from a rival firm (Ehmke, 2008). Porter (1985) argued that competitive advantage is at the centre of organizational performance in dynamic and competitive business environment. He indicated that a company's ability to perform better than rivals is in its capability to transform competitive strategy into a competitive advantage (Beal, 2001).

According to Barney (2001), competitive advantage can be defined differently provided the unit of analysis the firm or the industry. For him a firm is said to have a competitive advantage when the activities in engages in increase its efficiency or effectiveness in ways that competing firms are not, withstanding the fact that those other firms are in a particular firm's industry. The second definition refers to firms that produce higher returns than were expected by stockholders. Barney (2001) averred that his definition of competitive advantage is often called an economic rent.

The term competitive advantage is the ability gained through attributes and resources to perform at a higher level than others in the same industry or market (Christensen and Fahey 1984). The study of such advantage has attracted profound research interest due to contemporary issues regarding superior performance levels of firms in the present competitive market conditions. A firm is said to have a competitive advantage when it is

implementing a value creating strategy not simultaneously being implemented by any current or potential player (Barney, 1991).

According to Ehmke (2008) competitive advantage seeks to address some of the criticisms of comparative advantage. Michael Porter proposed the theory in 1985. Competitive advantage theory suggests that states and businesses should pursue policies that create high-quality goods to sell at high prices in the market. Porter emphasizes productivity growth as the focus of national strategies. Competitive advantage rests on the notion that cheap labor is ubiquitous and natural resources are not necessary for a good economy.

2.4 Capability Dynamism and Competitive Advantage

A direct link between capability dynamism, competitive advantage and firm's value creation is vague. According to Eisenhardt and Martin (2000), capability dynamism creates value because of the quality difference among competitors. Capability dynamism is difficult to replicate because of complexity of the underlying activities (Nelson & Winter, 1982). It can be argued if there is inexistence of a direct correlation between competitive advantage and dynamic capability, then dynamic capabilities should not be specific to one firm. According to Eisenhardt and Martin (2000), duplication of dynamic capability functions is possible across industries because their value lies in configuration of resources and not the capability dynamism itself. The conclusion is that dynamic capabilities are substitutable, equifinal and fungible hence similar dynamic capabilities can be replicated across many firms.

Organizations function in an ever changing market where the different industry players act and react against each other so as to gain competitive advantage and improve their performance (Smith, Ferrier & Ndofor, 2001). Empirical evidence suggests that rivalry among the competitors may lead to the market leader being dethroned due to emerging dynamics. From a customer perspective, the rivalry in the industry depicts the distinct offerings in the market from the various industry players embedded in their capabilities (Priem, 2007). Therefore a firm's relative performance is affected by the differences in their capability weaknesses and strengths expected.

Following the argument by Teece (2007), ability to reconfigure or recombine assets and firm structures is the key to sustainable profitability. The source of capabilities and firm foundation lies in organizational resources and are a basis for sustainable competitive advantage if they follow VRIN characteristics. This is however not true in ever changing market places where VRIN resources are not in existence therefore cannot act as a basis for competitive advantage. Eisenhardt and Martin (2000) argued that capability dynamism value that generates competitive advantage is found in resource recombination. They posit that capability dynamism is prerequisite but not enough settings for competitive advantage. They further posit that capability dynamism could be of use enhancement of firm resources that are obtainable in quest for long-standing competitive advantage and to build fresh resource combinations in the quest of momentary return.

The existing body of literature on Resource based view indicates that a firms capability results to increased performance when it is rare and valuable (Hitt *et al.*, 2011). This association can even be stronger when taking into account the firms strengths in totality because it may involve a number of capabilities. Therefore improving organizations strengths will make a firm unique from the competitors leading to a higher competitive advantage and better performance compared to the rivals. Complementarities may also be found in capability weaknesses just like they exist in strengths where an increase in capability weakness results to a decrease in marginal value of a weakness. Therefore a number of weaknesses put together may lead to a high negative performance results (Grimm & Smith, 2010).

Similarly, organizations can make use of their own resources to alter their sets of weaknesses and strengths. For example they can distribute flows of specific resources of the firm to augment their set of capabilities. In addition resources that are specific to a firm are not easily available to competitors. For instance, financial resources earned from previous performance record are accessible to a firm for private use. The disparity in the nature of the resources enables the organization to possibly distinguish its capabilities from the competitors because the management may decide to redistribute their personal financial resources for particular research and development projects (Ndofor, Sirmon, and He, 2011), internal instruction sessions among others.

2.5 Empirical Review

Teece (2009) using an analytical perspective indicated that capability dynamism can be categorized into three (1) seizing capability, 2) sensing capability and 3) reconfiguring

capability. Sensing capabilities implies that firms must constantly do environmental scans in order to spot new opportunities internally and externally. Routine practices in sensing capability involves scanning for potential innovators or assessing customer needs, R&D processes that create new understanding and knowledge on technological improvements. Seizing comes after opportunities are sensed to recognize their potential and value. Seizing capability implies picking the right technology or appreciating potential customers. Reconfiguration comes after opportunities are sensed and seized. Reconfiguring capability implies that the capacity to reconfigure and recombine resources in order to cater for dynamism in the organizations environment. According to Wang and Ahmed (2007) capability dynamism is made up of three components generically-innovative, adaptive and absorptive capability. The reasons they gave was: first, such capabilities are continuously stated in conceptual and empirical studies on capability dynamism. Secondly, empirical studies in all the three capabilities have a history but have in the recent past been associated to resource based theory of the firm to develop new ideas on capability dynamism.

Rindova (2001) carried a case study of Yahoo! and Excite seeking to establish co-evaluation of organizational form, task and competitive advantage. The findings indicated that these organizations use uninterrupted morphing to reach a strategic fit in a dynamic way in a very competitive business environment. The morphing process is based on capability dynamism of an organization and implies to constant change so as to generate a competitive advantage. Managers may dynamically coordinate the process of morphing and as a result it can have an effect on the advancement of capability dynamism of their

firms. Griffith (2012) notes that capability dynamism as the existence of a combination of resources that cannot be easily imitated. This argument was corroborated by Verona (2011) who averred that capability dynamism are not express processes like development of a new product or making strategic decisions (Eisenhardt, 2000). On the contrary they envisage dynamic capability as composed of firm's resources. Due to the fact that the composition of dynamic capabilities can be different across firms, the researchers indicated that capability dynamism of an organization as distinctive and therefore hard to transfer.

Newbert (2007) undertook an empirical study on RBV and the results showed that resource based view and capability dynamism view is not extensively empirically studied, he argued that empirical studies on capability dynamism is still in its formative years. He further noted that the published findings previously lack consistency and that only 60% of the studies found a nexus between capability dynamism and organizational performance and competitive advantage due to the difference in how the measurement of capability dynamism was measured. Mutugi (2006) in her studies found that forces in the ecosystem influence product types, market segmentation, positioning strategies, choice of business to invest in and services to be offered by the firm. The findings further indicated that changes affect clients, staff and firms portfolio which can create abundant strain on firms in pursuit of sustainable operational and financial self-sufficiency. If the changes are not implemented, the business ecosystem can subsequently affect firms operations, long-term viability and profitability. Wu (2010) carried out a study looking at the function of dynamic environment, application of dynamic and resource based views in

dynamic markets. The research sampled 253 firms in Taiwan and the study hypothesis stated that there is a positive relationship between dynamic capabilities and competitive advantage in dynamic markets. The results of the research indicated that capability dynamism in extremely dynamic markets augments organizations competitive advantage. Gathungu and Mwangi (2012) carried out a study on Dynamic Capabilities, Talent Development and Firm Performance in which they investigated the nature of sensing, seizing and transforming managerial dynamic capabilities and their interconnection influence firm performance. The study indicates that the dynamic capabilities influence firm performance positively towards ensuring their survival in the dynamic market place. Akwei, Peppard and Hughes (2012) examined how dynamic capabilities are created. The constant comparison method was used to analyze the data collected. The findings from the study reveal that dynamic capabilities are developed and renewed through continuous internal activities and external activities. Winter (2003) argues that the strategic value of capability dynamism consists of a series of actions and high expenses are incurred in order to develop and sustain such activities. The conclusion of the study was that companies can attain growth without necessarily relying on capability dynamism.

2.6 Summary of Literature and Research Gaps

Previous scholars refer to capability dynamism as reconfiguration of processes, resources and capabilities. This has resulted to contradictions in literature especially in elucidation of terminologies (Thomas & Pollock 1999). Additionally, documented studies to date have principally focused on industry of firm specific processes relating to capability dynamism majority of which were case studies. Therefore studies on capability dynamism has been carried out on a bit by bit basis hence the disjoint in the findings of

the various studies already undertaken. Extant literature shows that few studies have linked capability dynamism and competitive advantage. In view of the above, this study seeks to establish the relationship capability dynamism and its relationship to competitive advantage.

Table 2.1: Summary and Knowledge Gaps

Author(s)	Focus of the Study	Methodology	Major findings	Knowledge gaps
Wang and Ahmed (2007)	Dynamic capabilities: A review and research agenda	Empirical review of existing literature was used	Capability dynamism is made up of three components generically-innovative, adaptive and absorptive capability.	The study did not look at the link between capability dynamism and competitive advantage as is the case of the present study.
Rindova (2001)	Constructing competitive advantage: The role of firm-constituent interactions	Case study approach was used	These organizations use uninterrupted morphing to reach a strategic fit in a dynamic way in a very competitive business environment.	The firm looks at the internal factors only while the current study will look at both internal and external capabilities.
Newbert (2007)	Empirical study on RBV	Empirical study	Only 60% of the studies found a nexus between capability dynamism and organizational performance and competitive advantage	The study was a desk research reviewing existing studies while the current study will be qualitative in nature involving actual data collection.
Gathungu and Mwangi (2012)	Dynamic Capabilities Talent Development and firm performance	The study employed a descriptive research design	The study indicates that the dynamic capabilities influence firm performance positively towards ensuring their survival in the dynamic market place	The study did not look at the relationship between competitive advantage and dynamic capabilities. The study was also not in the manufacturing SMEs.
Akwei, Peppard and Hughes (2012)	The process of creating dynamic capabilities	Constant comparison method was used to analyze the data	The findings from the study reveal that dynamic capabilities are developed and renewed through continuous internal activities and external activities.	The study used Constant comparison method while the current study will adopt regression analysis
Wu (2010)	Function of dynamic environment, application of dynamic and resource based views in dynamic markets.	Data collection was done using an online survey. factor analysis and logistic regression analysis were carried out	The results of the research indicated that capability dynamism in extremely dynamic markets augments organizations competitive advantage.	The study was conducted in Taiwan which may be a different setting from Kenya

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research methodology that was used in conducting the study. The chapter covers the research design, population of the study, data collection methods and data analysis as well as findings presentation method.

3.2 Research Design

According to Gerhard (2004), research design is an exhaustive strategy of a study stipulating the approaches and processes for gathering and examining information on a given topic and presenting the findings. This study adopted a descriptive research design to achieve its objectives. A descriptive design is aimed at describing systematically the relationship between capability dynamism and competitive advantage.

According to Singh (2006), a descriptive research design is concerned with determining the position of the phenomenon under study. Design involves organizing, planning, data collection and analysis. A descriptive research design provides answers of where, who, how, what and when and how they relate with a specific research question.

3.3 Population of the study

According to the Kenya Manufacturers Association (KMA) manufacturing firms in Kenya operating in different sectors and are classified into 12 sub categories which are

based on the raw materials that the companies import or the products that they manufacture. The total number of manufacturing entities within Nairobi reportedly is 594 out of a total membership of 700 in Kenya (KAM, 2016). Thus Nairobi presented a suitable study area as 65% of the manufacturing organizations are located in it.

3.4 Sampling Design

A sample of 70 manufacturing firms in Nairobi County was selected which is 12.75% of the target population. According to Patton (2002), a sample of at least 10% of the target population is adequate for a descriptive study. This study ensured that the selected sample is a representative of the small and medium manufacturing firms Nairobi. This was crucial as it allowed for the making of valid inferences such that the conclusions that were drawn reflected the entire population. Stratified random sampling technique was used where the 12 different subcategories formed the strata as shown in table 3.1.

The ideal number of companies to take part in this study were statistically determined using the formula

$$n \geq \frac{z^2 S^2}{E^2}, \text{ where,}$$

n- Is the required sample size

Z - Is the critical value from the normal tables for 95% confidence.

E-Is the desired precision (5%).

Table 3.1 Sample distribution

	Manufacturing Category	Firms	Number of Firms	Number of sampled Firms
1	Chemical & Allied		68	8
2	Energy, Electricals		37	4
3	Food and Beverages		149	18

4	Leather	7	1
5	Metal	59	7
6	Motor vehicle	27	3
7	Mining	19	2
8	Paper and Board	68	8
9	Pharmaceuticals	23	3
10	Plastic	67	8
11	Textiles	53	6
12	Timber	17	2
Total	12 Categories	594	70

Source: KAM (2017)

According to KAM members' electronic database of 2016, companies have been categorized in terms of turnover. Small-scale manufacturing companies have a turnover of Kshs. 50 to 150 million per annum, while medium scale manufacturing companies have a turnover of Kshs. 151 to 250 million per annum. The unit of analysis was therefore the small and medium manufacturing enterprises.

3.5 Data Collection

Both primary and secondary data were used. Questionnaire was used as the main research instrument. Data collection instruments refer to the tools used for collecting data and how those tools are developed. Each questionnaire was divided into three sections covering issues under study. Section A covered demographic characteristics of the respondent, Section B covered capability dynamism while Section C covered competitive advantage of SMEs.

The respondents were SME owners and managers or their equivalent. This research found it advantageous to triangulate methods whenever feasible that is, the study used more than one form of data collection and hence used both email and self administered

questionnaire so as to get a high response rate. “Drop and pick later” method was used in administering the questionnaire.

3.6 Data Analysis

Data collected was analysed quantitatively. To begin with the questionnaires used in the survey were evaluated for reliability using Cronbach’s α measure for each construct in the questionnaire. The capability dynamism of SMEs was analysed using descriptive statistics to identify the data patterns as well as consistency of the responses in each of the results from the survey. Inferential statistics was used to test the hypotheses where the dependencies among the components were analyzed using regression analysis.

The relationship between capability dynamism and competitive advantage was measured by the following multivariate regression analysis. Where:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e \text{ where;}$$

Y = Competitive advantage

α = Autonomous factors

X_1 = Sensing capability

X_2 = Seizing capability

X_3 = Reconfiguring capability

β s represents the beta coefficients of the independent variables

e = Error term

CHAPTER FOUR

ANALYSIS AND RESULTS

4.1 Introduction

This chapter presents the analysis and interpretations of the data collected after administering questionnaires to the respondents. It presents analysis and findings of the study as set out in the research methodology to determine the relationship between dynamic capabilities and competitive advantage of manufacturing small and medium enterprises in Nairobi County. Specifically the study sought to find out the capability dynamism of manufacturing SMEs in Nairobi County and to establish the relationship between capability dynamism and competitive advantage of manufacturing SMEs in Nairobi County.

4.2 Response Rate

A sample of 70 manufacturing SMEs was drawn and served with questionnaires using drop and pick later method where 51 respondents filled questionnaires and returned. This formed a response rate of 72.86%. This study's response rate was acceptable as it compares well with similar studies of external environment on performance (Machuki, 2011).

Machuki (2011) obtained 43.3%. Similar studies on large scale manufacturing firms in Kenya obtained relatively above average response rates. Kidombo (2007) achieved 64.0% while Magutu (2013) had a response rate of 75%. In this study all subsectors of

the manufacturing SMEs in Kenya were well represented, thus avoiding any chance of bias. All efforts were made to administer the questionnaires to the targeted firms but some were not willing to participate due to company policy. Others were not committed to return the questionnaires citing lack of time to fill them. Table 4.4 shows the response rate in each of the sub sectors.

Table 4.1: Response Rate

Manufacturing Firms Category	Frequency	Percent	Cumulative Percent
Chemical & Allied	5	9.8	9.8
Energy, Electricals	3	5.9	15.7
Food and Beverages	14	27.5	43.2
Leather	1	2.0	45.2
Metal	4	7.8	53.0
Motor vehicle	3	5.9	58.9
Mining	2	3.9	62.8
Paper and Board	5	9.8	72.6
Pharmaceuticals	3	5.9	78.5
Plastic	5	9.8	88.3
Textiles	4	7.8	96.1
Timber	2	3.9	100
Total	51	72.86	

Source: Research Data, (2017)

4.3 Profile of Respondent Firms

The study sought to determine the general information of the respondents as well as that of manufacturing SMEs. The profile included: years of operation in Kenya, size classification of the firm, number of employees, and sector in which the organization operates.

4.3.1 Years in Operation

The study sought to find out how long the manufacturing SMEs had been operating in Kenya. The analysis was done using frequency, percent and cumulative percent.

Table 4.2: Years in Operation

Period	Frequency	Percent (%)	Cumulative Percent
1-5 years	7	14	14
6-10 years	14	27	41
11-15 years	19	38	79
Over 15years	11	21	100
Total	51	100	

Source: Research Data, (2017)

The findings indicated that 19 (38%) of the firms had been operating for a period of between 11 and 15 years while 14 (27) had been in operation for a period of between 6 and 10 years. Further findings indicated that 11 (21%) had operated in Kenya for over 15 years while only 7 (14%) had operated in Kenya for a period of between 1 and 5 years as shown in table 4.1. The findings implies that some of the manufacturing SMEs are multinational companies and majority had operated in Kenya for over five years and therefore conversant with competition in Kenya's manufacturing industry.

4.3.2 Size of Firms

The respondents were also asked to indicate whether their firms were small or medium scale enterprise. The criteria used in determining the size is based on MSME bill 2009 which defines small business as having less than 50 employees or revenue not exceeding Ksh50 million while a company that has more than 50 employees but fewer than 500 is termed as a medium enterprise.

Table 4.3: Size Classification of the Firm

Size classification	Frequency	Percent (%)	Cumulative Percent
Small	34	67	67
Medium	17	33	100
Total	51	100	

Source: Research Data, (2017)

Based on the findings, majority 34 (67%) of the SMEs were small enterprises while 17 (33%) SMEs were medium enterprises. It can therefore be deduced that majority of the manufacturing SMEs fall in the category of small enterprises. The study also sought to find out the number of employees in the firm. The size of workforce is a major indicator of the size and capacity of a firm. A firm has to make a decision on the size of workforce required. The increase in workforce also has costs and benefits related to levels of production and economies of scale.

Table 4.4: Number of Employees

Number of employees	Frequency	Percent (%)	Cumulative Percent
Less than 10	0	0	0
10-50	34	67	67
50-500	17	33	100
Total	51	100	

Source: Research Data, (2017)

The findings indicated that 34 (67%) of the firms had between 10 and 50 employees while 17 (33%) of the firms had between 50 and 500 employees. This means that majority of the firms were small enterprises based on the number of employees.

4.3.3 Sectoral Distribution

In this study all subsectors of the large scale manufacturing firms in Kenya were well represented, thus avoiding any chance of bias. Twelve categories were represented in the study.

Table 4.5: Sectoral distribution

Category	Frequency	Percent (%)	Cumulative Percent
Chemical & Allied	5	9.8	9.80
Energy, Electricals	3	5.9	15.7
Food and Beverages	14	27.5	43.2
Leather	1	2.0	45.2
Metal	4	7.8	53.0
Motor vehicle	3	5.9	58.9
Mining	2	3.9	62.8
Paper and Board	5	9.8	72.6
Pharmaceuticals	3	5.9	78.5
Plastic	5	9.8	88.3
Textiles	4	7.8	96.1
Timber	2	3.9	100
Total	51	100	

Source: Research Data, (2017)

The findings indicated that 14 (27.5%) of the firms were drawn from food and beverage subsector. Other subsectors included: Chemical & Allied, Paper and Board and Plastic which respectively represented 5% each respectively. Metal and textiles represented 4% each respectively as shown in table 4.5.

4.4 Capability Dynamism

All the SMEs involved in the study indicated that they posit dynamic capabilities to adjust environmental uncertainties.

4.4.1 Expenditure on Research and Development

The respondents were asked to indicate how much their company had spent on research and development in a bid to uncover new trends. Given that majority of the firms were small scale enterprises, 20 (39%) of the firms spent between Ksh1.1 million to Ksh 5million. It was further established that 17 (33%) spent over Ksh 5 million on research and development. Only 14 (28%) of the firms had spent less than Ksh 1 million on research and development. This implies that the firms take research and development seriously based on their expenditure.

Table 4.6: Expenditure on Research and Development

Amount (Ksh)	Frequency	Percent (%)	Valid Percent	Cumulative Percent
Less than Kes 1 million	14	28	28	28
Between Kes 1.1 million – Kes 5 million	20	39	39	67
Over Kes 5 million	17	33	33	100
Total	51	100	100	

Source: Research Data, (2017)

4.4.2 Expenditure on Training

The respondents were also asked to indicate how much their companies spend on training. According to the findings, 22 (43%) of the respondents indicated that they spend less than Ksh 1 million on training while 17 (33%) indicated that they spent between Ksh1.1 million and Ksh 5 million. It was also established that only 12 (24%) were spending over Ksh 5 million on training as shown in table 4.7.

Table 4.7: Expenditure on Training

Amount (Ksh)	Frequency	Percent (%)	Cumulative Percent
Less than Kes 1 million	22	43	43
Between Kes 1.1 million – Kes 5 million	17	33	76
Over Kes 5 million	12	24	100
Total	51	100	

Source: Research Data, (2017)

4.4.3 New Product Introduced in the Market

The study also sought to find out the number of new product that their company introduced to the market since 2016. Based on the findings, 22 (43%) of the respondents had less than 2 products introduced in the market while 19 (37%) had between 3 and 5 new products. The findings also revealed that 10 (20%) of the respondents firms had introduced more than 5 new products in 2016 as shown in table 4.8.

Table 4.8: New Product Introduced in the Market

Number of new products	Frequency	Percent (%)	Cumulative Percent
Less than 2	22	43	43
Between 3 – 5	19	37	80
Over 5	10	20	100
Total	51	100	

Source: Research Data, (2017)

4.4.5 Dynamic Capabilities in Organizations

The respondents were presented with statements on the aspects of dynamic capabilities in organizations to rate on a scale of 1-5 where 1 – Not at all, 2 – To small extent, 3 – To a moderate extent, 4 – To a large extent, 5 – To a very large extent. The data was analysed using mean and standard deviation. The summary of findings is shown in table 4.9.

Table 4.9: Dynamic Capabilities in Organizations

Statement	N	Mean	SD	Rank
Organization uses managers to pool their business expertise to make the choices that shape strategic moves of the firm	51	3.70	0.692	7
The organization uses knowledge based transfer processes related to routines for replication (i.e. to copy, transfer and recombine resources)	51	3.83	0.577	5
The organization use resource allocation routines to distribute scarce resources such as manufacturing assets from central points within the hierarchy	51	3.85	0.717	4
Managers use knowledge creation routines to build new thinking within the firm	51	3.95	0.852	1
Management use alliance and acquisition routines that bring new resources into the firm from external resources	51	3.75	0.753	6
Managers use exit routines that jettison resource combinations that no longer provide competitive advantage as markets undergo change	51	3.86	1.073	3
Organization uses managers to combine their varied skills to create revenue producing products and services.	51	3.88	0.768	2

Source: Research Data, (2017)

The respondents agreed to a large extent that managers use knowledge creation routines to build new thinking within the firm as shown by a mean of 3.95 and a standard deviation of 0.852. The respondents also indicated that to a large extent that their

organization uses managers to combine their varied skills to create revenue producing products and services (M=3.88, SD=0.768).

It was also established that managers use exit routines that jettison resource combinations that no longer provide competitive advantage as markets undergo change (M=3.86, SD=1.073) and their organization use resource allocation routines to distribute scarce resources such as manufacturing assets from central points within the hierarchy (M=3.85, SD=0.717). Further findings indicated that the organizations use knowledge based transfer processes related to routines for replication (M=3.83, SD=0.577), management use alliance and acquisition routines that bring new resources into the firm from external resources (M=3.75, SD=0.753) and organization uses managers to pool their business expertise to make the choices that shape strategic moves of the firm (M=3.70, SD=0.692). The findings imply that manufacturing firms had capability dynamism because the mean ranged between 3.70 and 3.95 which mean that the firms had implemented the aspects of capability dynamism to a large extent.

4.4.6 Implementation of Dynamic Capabilities Activities

In seeking to establish the extent to which the SMEs had successfully implemented the dynamic capability activities, the respondents were presented with statements to rate using the following scale: 1. Not at all 2, rarely implemented, 3. occasionally implemented, 4. always implemented, 5. greatly Implemented. The data was analysed using mean and standard deviation. The summary of the findings is shown in table 4.10.

Table 4.10: Implementation of dynamic capabilities

Capabilities	Activities	N	Mean	SD	Rank
Sensing Capability	Scanning the environment for opportunities & threats	51	3.94	0.688	2
	Customers & competitors monitoring	51	4.16	0.877	1
	Access to external science & technology	51	3.03	0.834	3
Seizing Capability	Seizing the opportunities	51	4.06	0.900	1
	Seizing information	51	3.71	0.753	3
	Leveraging knowledge	51	3.91	0.971	2
Reconfiguration capability	Resource allocation	51	3.87	0.842	2
	New resource configurations	51	3.79	0.940	3
	Integrating resources	51	4.02	0.836	1

Source: Research Data, (2017)

In sensing capabilities the respondents indicated that customers and competitors monitoring is always implemented as shown by a mean of 4.16 and a standard deviation of 0.877. Scanning the environment for opportunities & threats is also always implemented (M=3.94, SD=0.688) while access to external science & technology is occasionally implemented (M=3.03, SD=0.834). With regards to seizing capability, the respondents indicated that their firms always seize opportunities (M=4.06, SD=0.900) and leverage knowledge (M=3.91, SD=0.971) but seize information occasionally (M=3.71, SD=0.753). In relations to reconfiguration capability, their firms always

integrate resources (M=4.02, SD=0.836), allocate resources (M=3.87, SD=0.842) and undertake new resource configurations (M=3.79, SD=0.940).

4.4.6 Competitive Advantage

The study also sought to find out the competitive advantage of firms due to capability dynamism. The respondents were asked to give the percentage (%) figures relating to the increase or decrease in the parameters in table 4.11 for the period of five years. For increase or decrease the benchmark was 100%.

Table 4.11: Competitive Advantage

Constructs considered	Annual growth or decline as a percentage (%)						Overall Annual growth
	2011=100%	2012	2013	2014	2015	2016	
Market Share	100%	22	25	25	25	31	25.6
Profitability	100	22	22	28	30	35	27.4
Working capital/sales	100%	15	15	20	21	24	19.0
Increase in R&D spending	100%	8	12	14	15	15	10.8
organization's social performance	100%	5	5	8	8	8	6.8
Product return rate	100%	-10	-14	-15	-15	18	-14.4
Order cycle time	100%	12	15	20	20	25	18.4

Source: Research Data, (2017)

Profitability, working capital/sales and expenditure on R & D grew by 27.4%, 19.0% and 10.8% respectively. It worth noting that organization's social performance grew by a small value of 6.8% over the last five years. Product return rate reduced by 14.4% while order cycle time increased by 18.4% over the last 5 years. The overall growth in: market

share was 25.6% which indicated that the manufacturing firms with capability dynamism were competitive than their rivals.

4.5 Relationship between Capability Dynamism and Competitive Advantage

The relationship between capability dynamism and competitive advantage was measured by the following multivariate regression analysis.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e \text{ where;}$$

Y= Competitive advantage, α = Autonomous factors, X_1 = Sensing capability, X_2 = Seizing capability, X_3 = Reconfiguring capability, β s represents the beta coefficients of the independent variables and e= Error term.

Table 4.12: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.797052	0.63529	0.634786	0.8143

Source: Research Data (2017)

Predictors: (Constant), Sensing capability, Seizing capability, Reconfiguring capability.

The goodness of fit shown by the regression summary model in table 4.12 had a value of 0.63529 shown by R^2 which is coefficient of determination. It can therefore be deduced that capability dynamism (Sensing capability, Seizing capability, Reconfiguring capability) explain 63.52 percent of the variations of competitive advantage of manufacturing SMEs in Nairobi. Other factors that are not considered in the study contribute approximately 36.48% of the competitive advantage of SMEs.

The study further conducted ANOVA to test significance. ANOVA comprises of the computations that give rise to information pertaining levels of variance within particular regression models and hence forms a basis for the testing of significance.

Table 4.13: Summary of ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig. (p-value)
1	Regression	1.825	3	1.209	3.546	.000 ^b
	Residual	1.273	47	.051		
	Total	3.098	50			

a. Dependent Variable: competitive advantage
b. Predictors: (Constant), Sensing capability, Seizing capability, Reconfiguring capability

Source: Research Data (2017)

The significance level as shown in table 4.13 was 0.0% indicating that the data was good in reaching a conclusion since the p-value was less than 0.05%. In comparing the critical value and the F value, it was concluded that the F value was greater hence the model is statistically significant when it comes to prediction of how capability dynamism affects competitive advantage of manufacturing SMEs. The F critical at 5% level of significance was 3.546. Since F critical is far much greater than the F calculated (value = 2.21), this satisfies that the overall model was statistically significant and thus we reject the null hypothesis.

The study also ran the regression analysis to obtain the coefficients to fit into the regression model. The equation obtained after running regression analysis in SPSS was

$$Y = 2.083 + 0.732X_1 + 0.561X_2 + 0.495X_3 + e$$

Table 4.14: Summary of Coefficients of Regression Model

	Unstandardized Coefficients		Standardized Coefficients	T-values	Sig. (p-value)
	Beta	Std. Error	Beta		
(Constant)	2.083	.620		0.912	.000
Sensing capability (X ₁)	.732	.336	.97	2.322	.036
Seizing capability (X ₂)	.591	.127	.787	2.275	.025
Reconfiguring capability (X ₃)	.497	.253	.630	2.028	.032

Source: Research Data (2017)

The regression equation shows that taking all factors into constant (sensing capability and seizing capability, reconfiguring capability), competitive advantage will be 2.083 at 95% confidence. Holding all other predictor variables constant at zero, a unit increase in sensing capability will increase competitive advantage by 0.732. An increase in seizing capability by one unit will increase competitive advantage by 0.591. A unit increase in reconfiguring capability will increase competitive advantage by 0.497.

The Beta coefficients show the extent to which each variable contributes to the model. The larger the value means the larger the effect of predictor variable on dependent variable. The T and p values indicate the effect of predictor variable on criterion variable. From the results shown in table 4.14, all the calculated T values of the independent variables are greater than the critical value (1.708) thus we reject the null hypothesis. P-values as shown in table 4.14 were greater than 0.05 affirming the statistical significance of the model.

4.6 Discussion of Results

The findings indicated that majority of the SMEs had a budget for research and development. The expenditure was also allocated for staff training and development. Given that the firms were small scale enterprises, the amount allocated for research and development did not exceed Ksh 1 million. The availability of funds enables a firm to introduce new products in the market. It was established that the number of new products introduced in the market had a direct correlation with the amount of expenditure in research and development. New products development would strengthen the brand identity of the firm, give a firm competitive edge over its competitors and increase the profitability of distribution.

Research and development capability is very crucial to any firm. For it to sustain its performance it must have the ability to discover and develop new products, improvement of existing products, processes and service. The application of that capability or knowledge creates new and improved products, processes and services that fill market needs. Research and development can be viewed as a means by which business can experience future growth by developing new products or processes to improve and expand their operations. Eisenhardt and Martin, (2000) posited that the reliance on specific set of nurtured capabilities has changed and instead, emphasis has shifted to development of new firm capabilities as a critical pre-requisite for sustainable competitive advantage

In terms of capability dynamism, the study indicated that managers used exit routines that jettison resource combinations that no longer provide competitive advantage, use resource allocation routines to distribute scarce resources such as manufacturing assets, use knowledge based transfer processes related to routines for replication, use alliance and acquisition routines that bring new resources into the firm and pool their business expertise to make the choices that shape strategic moves of the firm. Eisenhardt and Martin (2000) argued that capability dynamism value that generates competitive advantage is found in resource recombination. They posit that capability dynamism are prerequisite but not enough settings for competitive advantage. They further posit that capability dynamism could be of use enhancement of firm resources that are obtainable in quest for long-standing competitive advantage and to build fresh resource combinations in the quest of momentary return.

The study also established that manufacturing SMEs implement three dynamic capabilities which include: sensing capability, seizing capability and reconfiguring capability. The findings concur with Teece (2009) who using an analytical perspective indicated that capability dynamism can be categorized into three (1) seizing capability, 2) sensing capability and 3) reconfiguring capability. Sensing capabilities implies that firms must constantly do environmental scans in order to spot new opportunities internally and externally. Routine practices in sensing capability involves scanning for potential innovators or assessing customer needs, R&D processes that create new understanding and knowledge on technological improvements.

The competitive advantage of firms was measured using market share, profitability, working capital/sales, increase in R&D spend/sales, organization's social performance, product return rate and order cycle time. It was noted that profitability and market share grew by a very large percentage of more than 25% in the last five years. It is also important to note that product return rate reduced by 14.4%. Dynamic capability was found to be a useful theoretical approach to investigate how firms achieve and maintain competitive advantage in changing environments.

A product innovation requires the firm to have competences relating to technology in an effort to meet customer needs and each of these competences is constituted by a set of resources. This capability in technology to accomplish is by use of materials like equipment, machinery, manufacturing know-how and advancement in flexible manufacturing systems. Teece et al, (1997) argued that dynamic capabilities are rooted in the firm's internal processes. Dynamic capabilities build, integrate or reconfigure operational resources and do not directly affect the output where they reside but indirectly contribute to output of the firm through other operations.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The study was carried out to establish the relationship capability dynamism and competitive advantage of manufacturing small and medium enterprises in Nairobi County. This chapter presents the summary of findings for the research objectives, conclusion, limitations, recommendations made based on the findings and suggestions for further research.

5.2 Summary of the Study

The respondents were asked to indicate how much their company had spent on research and development in a bid to uncover new trends. Given that majority of the firms were small scale enterprises many firms spent between Ksh1.1 million to Ksh 5million. This implies that the firms take research and development seriously based on their expenditure. The respondents were also asked to indicate how much their companies spend on training. According to the findings majority of the respondents indicated that they spend less than Ksh 1 million on training followed by those who had spent between Ksh1.1 million and Ksh 5 million. The study also sought to find out the number of new product that their company introduced to the market since 2016. Based on the findings, many of the respondents had less than 2 products introduced in the market while just a few had between 3 and 5 new products.

The respondents agreed to a large extent that managers use knowledge creation routines to build new thinking within the firm. The respondents also indicated that to a large extent that their organization uses managers to combine their varied skills to create revenue producing products and services. It was also established that managers use exit routines that jettison resource combinations that no longer provide competitive advantage as markets undergo change and their organization use resource allocation routines to distribute scarce resources such as manufacturing assets from central points within the hierarchy. Further findings indicated that the organizations use knowledge based transfer processes related to routines for replication, management use alliance and acquisition routines that bring new resources into the firm from external resources and organization uses managers to pool their business expertise to make the choices that shape strategic moves of the firm.

In sensing capabilities the respondents indicated that customers and competitors monitoring is always implemented. Scanning the environment for opportunities & threats is also always implemented while access to external science & technology is occasionally implemented. With regards to seizing capability, the respondents indicated that their firms always seize opportunities and leverage knowledge but seize information occasionally. In relations to reconfiguration capability, their firms always integrate resources, allocate resources and undertake new resource configurations.

The study also sought to find out the competitive advantage of firms. The respondents were asked to give the percentage (%) figures relating to the increase or decrease in the parameters presented to them for the period of five years. For increase or decrease the benchmark was 100%. The overall growth in: market share was 25.6%. Profitability, working capital/sales and expenditure on research and development grew by more than 10%. It worth noting that organization's social performance grew by a small value of less than 10% over the last five years.

5.3 Conclusion of the Study

The study concludes that most organization possess valuable, rare, inimitable and non substitutable resources which lead to competitive advantage. Most organization possess valuable, rare, inimitable and non-substitutable resources that enable them to achieve productivity, working capital / sales, working capacity utilization, organization's market share and a number of new customers.

The study also revealed that organizations utilize dynamic capabilities mainly those related to resource integration and reconfiguration. Gaining and releasing of resources is practiced to a lesser extent. The resource integration involves use of skills and functional combination, business, financial and personal expertise pooling. Resource configuration entails knowledge base transfer, resource allocation routines co-evolving routines and patching routines. SMEs also practice gaining and releasing of resources, which include knowledge creation, alliance and acquisition and exit routines. Most SMEs integrate, reconfigure their resources and are involved in gaining and releasing of resources.

5.4 Recommendations of the study

Opportunity exist when there is disequilibrium between market needs and the means to satisfy those needs, so it can be inferred that the ability to notice opportunity would require knowledge of those needs and means. Capability dynamism is one of the means to satisfy those needs and factors considered during the development are critical.

In order to reduce the failure rate of newly established firms, awareness needs to be created regarding the benefits related to extensive use of advanced technologies. Costs could be reduced by government intervention in reducing customs and excise taxes on ICT, while vendors could increase awareness campaign to SMEs. Kenyan SMEs need to move from the level of acquiring VRIN resources to developing dynamic capabilities. SMEs are therefore encouraged to develop sensing, seizing and reconfiguration capabilities to remain competitive. Competitive advantage is not achieved from gathering resources, but from effective transformation of VRIN resources to capabilities.

5.5 Limitations of the Study

First one is that the study gathered solely qualitative data was therefore unable to present quantitative aspects of dynamic capabilities in SMEs. Furthermore, it is important to point out that the findings are context-specific and should be interpreted as such. This study confines its view of competitive advantage in manufacturing SMEs. Due to the small size of the sample scientific validity of the findings suffers to some extent. The shortcoming is compensated by presenting very detailed data that might be of interest for practicing managers.

5.6 Suggestions for Further Research

First, it would be valuable to test the interaction between dynamic capabilities and organizational inertia in a stable environment and to perform longitudinal research in order to understand how the interrelation between dynamic capabilities and organizational inertia develops and differs over time. In addition, a longitudinal study should reveal how non-financial performance gains, caused by dynamic capabilities, are transformed into financial gains. Second, this study calls for a broader sample of organizations, since it was controlled for organizational age and size, and concerned SMEs only. Larger organizations and multinational companies might produce different results relating to dynamic capabilities and competitive advantage. Third, crucial questions surrounding where, when, and how organizational resources, processes, and path dependencies can be reconfigured should be the focus of future scientific enquiry.

REFERENCES

- Akwei, C., Peppard, J., & Hughes, P. (2012). The process of creating dynamic capabilities. *British Journal of Management*.
- Bakar, L.J.A. & Ahmad, H. (2010). Assessing the Relationship between Firm Resources and Product Innovation Performance: A Resource-Based View, *Business Process Management Journal* 16(3): 420-435
- Barney, J. B. (1991). Looking inside for Competitive Advantage. *Academy of Management Executives*, 9, 4.
- Brush, C.G. & Chaganti, R. 1998. Businesses without glamour? An analysis of resources on performance by size and age in small service and retail firms. *Journal of Business Venturing*, 14, 233-257.
- Eisenhardt, K.M., & Martin, J.A. (2000), Dynamic capabilities: What are they?. *Strategic Management Journal*, 21(10/11), 1105-112.
- Ethiraj, S. K. ; Kale, P. ; Krishnan, M. S. ; Singh, J. V. (2005). Where do Capabilities come from and how do they matter? A Study in the Software Services Industry. *Strategic Management Journal* 26, 1, pp. 25-46.
- European Commission. (2014). The New SME Definition: User Guide and Model Declaration. *Official Journal of the European Union*, 124, 36.
- Gathungu, M. & Mwangi, K. (2012), Dynamic Capabilities Talent Development and firm performance. *DbA Africa Management Review*. Vol 2 No 3, pp 83 – 100
- Grimm CM, Smith KG. (2010). *Strategy as Action: Industry Rivalry and Coordination*. South-Western College Publishing: Cincinnati, OH.

- Helfat CE, Peteraf MA. (2009). Understanding dynamic capabilities: progress along a developmental path. *Strategic Organization* 7(1): 91–10.
- Hitt MA, Bierman L, Shimizu K, Kochhar R. (2011). Direct and moderating effects of human capital on strategy and performance in professional service firms: a resource-based perspective. *Academy of Management Journal* 44(1): 13–28.
- Julianti, L., Bakar, A. & Ahmad, H. (2010). Assessing the relationship between firm resources and product innovation performance: A resource-based view. *Business Process Management Journal*, 16(3), pp. 420-435.
- Kotha, S., Rajgopal, S., & Rindova, V. (2001). Reputation building and performance: An empirical analysis of the top-50 pure internet firms. *European Management Journal*, 19(6), 571-586.
- Lawrence, P.R., & Lorsch, J.W. (1967). *Organization and environment; Managing differentiation and integration*. Division of Research Graduate School of Business Administration Harvard University: Boston, MA.
- Lerner, M. & Almor, T. (2002). Relationships among strategic capabilities and the performance of women-owned small business, *Journal Small Business Management* 40(2), 109-125.
- Li, D. Y., and Liu, J. (2014). Dynamic capabilities, environmental dynamism, and competitive advantage: Evidence from China. *Journal of Business Research*, 67 (1), 2793-2799.
- Lin, Y., & Wu, L.-Y. (2014). Exploring the role of dynamic capabilities in firm performance under the resource-based view framework. *Journal of Business Research*, 67(3), 407-413.

- Machuki, V.N. (2011). External environment, strategy co-alignment, firm level institutions and performance of publicly quoted companies in Kenya. (Unpublished Ph.D. Thesis). School of Business, University of Nairobi, Kenya.
- Magutu, P.O. (2013). *Supply chain strategies, technology and performance of large scale manufacturing firms in Kenya*. (Unpublished Ph.D. Thesis). School of Business, University of Nairobi, Kenya.
- Murgor, P.K. (2014). External environment, firm capabilities, strategic responses and performance of large scale manufacturing firms in Kenya. (Unpublished Ph.D. Thesis). School of Business, University of Nairobi, Kenya.
- Mutugi, R. M. (2006). Strategic responses of BBK limited to changes in retail banking in Kenya. University of Nairobi, Nairobi.
- Ndofor HA, Sirmon DG, He X. (2011). Firm resources, competitive actions, and performance: investigating a mediated model with evidence from the In-vitro diagnostics industry. *Strategic Management Journal*. Forthcoming.
- Nelson R., & Winter S. (1982). *An Evolutionary Theory of Economic Change*. Cambridge, MA: Belknap Press.
- Ongeti, W.J. (2014). Organizational resources, corporate governance structures and performance of Kenyan State corporations. (Unpublished Ph.D. Thesis). School of Business, University of Nairobi, Kenya.
- Peteraf MA, Barney JB. 2003. Unraveling the resourcebased tangle. *Managerial and Decision Economics* 24(4): 309–323.
- Porter, M. (1980). *Competitive Strategy: Techniques for analyzing Industries and Competition*, New York: Free Press.

- Priem RL. 2007. A customer perspective on value creation. *Academy of Management Review* 32(1): 219–235.
- Protogerou, A., Caloghirou, Y., & Lioukas, S. (2011). Dynamic capabilities and their indirect impact on firm performance. *Industrial and Corporate Change*, 21(3), 615-647.
- Rindova. V.. & Fombrun, G. 1999. Constructing competitive advantage: The role of firm-constituent interactions. *Strategic Management Journal*, 20: 691-710.
- Schilke, O. (2014). On the contingent value of dynamic capabilities for competitive advantage: The nonlinear moderating effect of environmental dynamism. *Strategic Management Journal*, 35, 179-203.
- Schreyögg, G. and Kliesch- Eberl, M. (2007): “How dynamic can organization capabilities be? Towards a dual-process model of capability dynamization”, in: *Strategic Management Journal*, 38(9), p. 913-933.
- Sirmon DG, Hitt MA, Ireland RD, Gilbert BA. 2011. Resource orchestration to create competitive advantage: breadth, depth, and life cycle effects. *Journal of Management*. Forthcoming.
- Smith KG, Ferrier WJ, Ndofor H. (2001). Competitive dynamics research. In *Handbook of Strategic Management*, Hitt MA, Freeman RE, Harrison JR (eds). Blackwell Publishers: Oxford, U.K.; 315–361.
- Teece, D. J. (2012). Dynamic capabilities: Routines versus entrepreneurial action. *Journal of Management Studies*, 49 (8), 1395-1401.

- Teece DJ. (1997). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal* 28(13): 1319–1350.
- Wang, C. L., & Ahmed, P. K. (2007). Dynamic capabilities: A review and research agenda. *International journal of management reviews*, 9(1), 31-51.
- Zahra, S. A., Sapienza, H. J., & Davidsson, P. (2006). Entrepreneurship and dynamic capabilities: A review, model and research agenda. *Journal of Management Studies*, 43(4), 917–955.

APPENDIX ONE: QUESTIONNAIRE

SECTION A: GENERAL INFORMATION

1. Name of Organization (Optional):
2. Years of operation in Kenya (Tick one as appropriate)
1-5years { } 6-10years { } 11-15years { } Over 15years { }
3. What size classification does your organization fall into?
Small { } Medium { }
4. Number of employees (Tick one as appropriate)
Less than 10 { } 10-50 { } 50-500 { }
5. Sector of the organization;
Building { } Chemical { } Energy { } Food { } Metal and Allied { } Motor { }
Leather { } Paper { } Pharmaceuticals { } Plastics { } Textiles { } Wood Products { }

SECTION B: CAPABILITY DYNAMISM

6. a) In an uncertain environment, does your firm posit dynamic capabilities to adjust to the environment?
Yes { } No { }
- b) If Yes to question 8(a), how much did your company spend on research and development in a bid to uncover new trends in the year 2016?
 - i). Less than Kes 1 million { }
 - ii). Between Kes 1.1 million – Kes 5 million { }
 - iii). Over Kes 5 million { }
- c) If Yes to question 8(a), how much did your company spend on training?
 - i). Less than Kes 1 million { }
 - ii). Between Kes 1.1 million – Kes 5 million { }
 - iii). Over Kes 5 million { }
- d) If Yes to question 8(a), how many new product has your company introduced to the market in the year 2016?
 - i. Less than 2 { }
 - ii. Between 3 – 5 { }
 - iii. Over 5 { }
- e) How has your company benefited from having dynamic capabilities?

i. Developed absorptive capacity –that is, exploring knowledge from external sources { }

ii. Developed desorptive capacity,-that is, exploitation of external knowledge { }

iii. Developed technology transfer propensity- that is, technology transfer mechanisms{ }

7. To what extent are these capabilities easy to copy, substitute or transfer? Use a scale of 1-5 where; 5=Very great extent, 4=Great extent 3=Moderate extent, 2=Little extent and 1=No extent

a) Easy to copy (1) (2) (3) (4) (5)

b) Substitute (1) (2) (3) (4) (5)

c) Transfer (1) (2) (3) (4) (5)

8. Which mechanisms has the organization adopted to safeguard its strategic capabilities?

.....

9. The statements below describe the aspects of dynamic capabilities. In a scale of 1-5 indicate the extent to which the statements apply to your organizations (Where 1 – Not at all, 2 – To small extent, 3 – To a moderate extent, 4 – To a large extent, 5 – To a very large extent). (Tick one as appropriate).

Statement	1	2	3	4	5
Organization uses managers to pool their business expertise to make the choices that shape strategic moves of the firm					
The organization uses knowledge based transfer processes related to routines for replication (i.e. to copy, transfer and recombine resources)					
The organization use resource allocation routines to distribute scarce resources such as manufacturing assets from central points within the hierarchy					
Managers use knowledge creation routines to build new thinking within the firm					
Management use alliance and acquisition routines that bring new resources into the firm from external resources					
Managers use exit routines that jettison resource combinations that no longer provide competitive advantage as markets undergo change					
Organization uses managers to combine their varied skills to create revenue producing products and services.					

10. Indicate on scale of 1-5 the extent of which you have successfully implemented the activities listed below. Indicate by ticking (√) the appropriate box. 1. Not at all 2. Rarely implemented. 3. Occasionally implemented. 4. Always implemented 5. Greatly Implemented

Capabilities		1	2	3	4	5
Sensing Capability	Scanning the environment for opportunities & threats					
	Customers & competitors monitoring					
	Access to external science & technology					
Seizing Capability	Seizing the opportunities					
	Seizing information					
	Leveraging knowledge					
Reconfiguration capability	Resource allocation					
	New resource configurations					
	Integrating resources					

SECTION C: COMPETITIVE ADVANTAGE

11. How does the company achieve a competitive advantage against its rivals?

.....

12. Please give the percentage (%) figure relating to the increase or decrease in the parameters in the table below for the period of five years. For increase or decrease the benchmark is 100%

Constructs considered	Annual growth or decline as a percentage (%)						Overall Annual growth
	2011=100%	2012	2013	2014	2015	2016	
Market Share	100%						
Profitability	100						
Working capital/sales	100%						
Increase in R&D spend/sales	100%						
organization's social performance	100%						
Product return rate	100%						
Order cycle time	100%						