EFFECT OF AGILE SUPPLY CHAIN STRATEGY ON COMPETITIVE ADVANTAGE OF FIRMS IN THE FAST MOVING CONSUMER GOODS INDUSTRY: A CASE OF UNILEVER KENYA

BY

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UNITED STATES INTERNATIONAL UNIVERSITY – AFRICA

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A Research Project Report Submitted to the Chandaria School of Business in Partial Fulfillment of the Requirement for the Degree of Master of Business Administration (MBA)

UNITED STATES INTERNATIONAL UNIVERSITY AFRICA

SPRING 2017
DECLARATION

I, the undersigned, declare that this report is my original work and has not been submitted to any other college, institution or university other than the United States International University - Africa for academic credit.

Signed: ……………………… Date: ………………………
Claire M. Gichuki (ID: 646375)

This project report has been presented for examination with my approval as the appointed supervisor.

Signed: ……………………… Date: ………………………
Fred Newa

Signed: ……………………… Date: ………………………
Dean, Chandaria School of Business
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ABSTRACT

The study sought to assess the effect of agile supply chain management on the competitive advantage of Unilever Kenya, an international FMCG operating in Kenya with a very wide market penetration and share in Kenya. The study sought to find answers to the research questions: To what extent does process integration, partners’ network, market sensitivity, and virtual enterprises affect the competitive advantage of Unilever Kenya?

The study answered these questions by adopting a descriptive research design on a population of 106 management employees within the Unilever Kenya Supply Chain department. Stratified random sampling technique was employed from which a sample of 36 employees was derived. To collect data from the sample respondents, the study utilized a closed-ended questionnaire. A five point Likert scale was employed in seeking responses for the closed-ended questions. A response rate of 86% was realized. During data analysis, the Statistical Package for Social Sciences (SPSS) tool was used for data analysis – both descriptive and inferential statistics were used in the analysis of the data. Descriptive statistics included frequency distributions, mean and standard deviations whereas correlation and regression analysis were performed for inferential statistics. The data was then presented in the form of tables and figures to communicate underlying patterns and to generalize the sample findings to the population.

The study found that Unilever Kenya has implemented process integration practices, such as focusing on management of core competencies, outsourcing non-core activities, leveraging shared information with partners, joint product development, and focus on integrating with distributors, suppliers and internally within functions confirming that process integration at the firm is at an advanced stage. The study established existence of a significant positive influence of process integration practices at the firm on the company competitive advantage.

Virtual enterprise practices were also observed to exist at the firm. The study found existence of a framework involving exchange of data between the firm, its consumers, suppliers, and competitors relying on information technology, and consequently creating a virtual supply chain creating a network of suppliers, manufacturers and administrative services to accomplish specific objectives for the firm. Further analysis confirmed that virtual enterprises contribute to the gain in
competitive advantage by sharing infrastructures, research and development and resources; linking complementary core competencies; reducing concept-to-cash time through information sharing; expanding production capabilities; gaining access to markets, and sharing markets or customer loyalty with partners in the virtual supply chain.

It was found that Unilever Kenya works within a network of strategic partners, has a great influence in running the network of partners, focuses on development of long term stable relationships with its partners, who (the partners) have valuable resource profiles, have joint rules of engagement with the partners, share clear joint vision with partners, and employs a non-competitive approach to information flow/knowledge transfer, an indication that its partners network practices are well advanced. It was further observed that partners network practices at the firm increased the probability of the firm’s competitiveness.

The study revealed that Unilever Kenya is to a great extent market sensitive in both customer and competitor viewpoints. It was observed that market sensitivity offers higher levels of service quality and customer satisfaction generating increased customer loyalty, price leadership and profitability and hence firm competitiveness. The study found that market sensitivity offers the firm a positively competitive advantage.

The study therefore confirmed that agile supply chain management represented by its four elements of process integration, partners’ network, market sensitivity, and virtual enterprises have a significant positive influence on competitive advantage at Unilever Kenya. Agile supply chain was found to influence the company’s production lead times, on-time-in-full scores, flexibility in responding to changes, products preference by target customers, and product prices. The study therefore concludes that agile supply chain management is an important strategy in the FMCG industry as it influences the firm’s competitiveness.

The study recommends that Unilever Kenya management should further enhance agile supply chain elements of process integration, partners’ network, market sensitivity, and virtual enterprises in their firm to ensure that they are able to acquire the benefit of gaining or improving the competitive advantage. The study also suggests a further comparative study to be undertaken to assess the influence of agile supply chain management on the competitive advantage targeting the whole FMCG industry.
ACKNOWLEDGEMENT

My deepest appreciation and thanks goes to all my lecturers at the United States International University for their guidance and constructive criticisms that helped me stay focused from the beginning of the course to the end. Key among these is my supervisor, Fred Newa, who offered me guidance and patience in seeing this project successfully completed. My utmost gratefulness also goes to my classmates whose friendship and support in various aspects have helped me accomplish this degree. I would also like to thank my family and friends who stood by me throughout this process.
DEDICATION

I dedicate this work to my family.
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<td>3PL</td>
<td>Third Party Logistics Providers</td>
</tr>
<tr>
<td>API</td>
<td>Application Program Interface</td>
</tr>
<tr>
<td>CPG</td>
<td>Consumer Packaged Goods</td>
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<tr>
<td>ECR</td>
<td>Efficient Consumer Response</td>
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<tr>
<td>EDI</td>
<td>Electronic Data Interchange</td>
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<td>FMCG</td>
<td>Fast - Moving Consumer Goods</td>
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<tr>
<td>HPC</td>
<td>Home &amp; Personal Care</td>
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1.0 INTRODUCTION

1.1 Background of the Study

In the dynamic modern business environment, firms are faced with increasing market instability finding it hard to cope. Within this operational environment, the fundamental resource competencies essential to realize the long-term firm objectives are often difficult to mobilize and retain by individual firms (Kaihara & Fujii, 2008). Companies therefore have to look beyond cost and quality as their source of competitive advantage. They have expanded their competitive strategies to encompass speed, quality and flexibility suiting modern consumers and markets (Christopher & Towill, 2010). Entrance of speed into this discourse is necessitated by significance of time as a competitive weapon. In order to become more reactive to the market needs, firms need acquiring more than speed in their supply chain; they also require high level of maneuverability which is termed as agility (Stock & Boyer, 2009).

A firm responding to change occurring in its business environment requires speed to express agility demonstrated in its ability to offer change which is speedy, flexible, competent and accountable. The agility concept encompasses the business-wide capabilities that embrace organizational structures, information systems, logistics practices and mindsets (Agarwal, Shankar & Tiwari, 2006). Agile company is one that applies “market knowledge and a virtual corporation to exploit profitable opportunities in a volatile marketplace”, (Moron & Swierczek, 2009). They observed that instead of relying on speculative notions of what is demanded, the quantity demanded, and location of that demand, agility employs a ‘wait-and-see’ approach to demand where they do not commit to products until demand is known.

Agile supply chain is defined by Tajidjan, Mustadjab & Muhaimin (2013) as the whole supply chain and its members’ capacity to adjust their network rapidly and their operational activities to be able to face the dynamic and changing needs of their demands. Baramichai, Zimmers & Marangos, (2007) define supply chain agility as “an integration of business partners to enable new competencies in order to respond to rapidly changing, continually fragmenting markets”. They proposed that the key enablers of agile supply chain are the “dynamics of structures and relationship configuration, the end-to-end visibility of information, and the event-driven and event-based management”. This was simply
summarized by Christopher (2000) into four dimensions which are: process integration, partners’ network, market sensitivity and virtual enterprise.

The use of information technology to share data between buyers and suppliers is, in effect, creating a virtual supply chain. Virtual supply chains are information based rather than inventory based. Baramichai et al. (2007) observed that Shared information between supply chain partners can only be fully leveraged through process integration. Process integration refers to collaborative working between buyers and suppliers, joint product development, common systems and shared information. This form of co-operation in the supply chain is becoming ever more prevalent as companies focus on managing their core competencies and outsource all other activities (El-Tawy & Gallear, 2012). This idea of the supply chain as a confederation of partners linked together as a network provides the fourth ingredient of agility.

There is a growing recognition that individual businesses no longer compete as stand-alone entities but rather as supply chains. We are now entering the era of ‘network competition’ where the prizes will go to those organizations’ who can better structure, co-ordinate and manage the relationships with their partners in a network committed to better, closer and more agile relationships with their final customers (Gilaninia, Das, Narasimhan, & Talluri, 2011). It can be argued that in today’s challenging global markets, the route to sustainable advantage lies in being able to leverage the respective strengths and competencies of network partners to achieve greater responsiveness to market needs.

The basic premise of an agile supply chain is that it is responsible in making the products available at the right place, to the right customer, at the right price in right time. Agile supply chain is focused on improving compliance and flexibility and offers the ability to respond and react quickly and effectively to changing markets (Lin, Chiu, & Tseng, 2006). According to Kharlamov & Ferreira (2012), agile supply chain management allow organizations to quickly respond to short-term changes in demand or supply and managing external interferences smoothly while altering supply chain design to fit structural shifts in markets and modify supply networks strategies, products and technologies aligning the interests of all stakeholders and participating organization in the supply chain with their own. These aspects
of agile supply chain management embrace almost all identified classifications of practices of competitive advantage, an indication that they can induce the gain of competitive advantage.

In the world of business, competitive power emanates from creation of companies with identified effective, efficient and appropriate management system to ensure optimal performance. The emphasis on supply chain management recently increased due to the fact that the practitioners and academics appreciated its role as a key factor necessary to not just compete, but also to stay in the market place. Firms perceive supply chain management as a fundamental means to success in the highly complex and competitive business environment as it enables them to provide their product or service offerings to the market place in an efficient and effective manner (Kim, 2009).

According to Christopher & Towill (2010), companies within the private and public sectors are recognizing the importance of supply chain management and its role in achieving success inside their companies. Kaihara & Fujii (2008) argued that “competition in the future will not be between individual enterprises but between competing supply chains”. Supply chains have since evolved, growing into networks, and broadening management scope beyond organization boundary, downstream into their customers and customers’ customers, and upstream into suppliers, and then into suppliers’ suppliers, making the argument posed by Christopher to seem real. Competitive reality has also changed too, with the proposition that networks compete with networks, rather than simply firms with firms (Martin, 2014).

FMCG industry, otherwise known as CPG industry, is characterized by firms manufacturing products with short shelf life, regularly purchased and at relatively low cost. The FMCG sector is thus a classic case of low margin, high volume business. Large FMCG are well known around the world over with the sector comprising of companies such as Coca-Cola, Johnson and Johnson and Unilever. Some of the products offered by this industry range from food and beverages category, personal care category and home care category. Within these categories, FMCG products are often near-identical and for this reason, price competition between providers is intense and product innovation has to be relatively high in order for the firms to remain relevant (Linet, 2014). However, despite the high volume characteristic of FMCGs and relatively high Kenyan population size, KPMG (2014) reports that the Kenyan market, and the East African market generally, remains underserved by FMCG companies.
Unilever Kenya limited is a subsidiary of The Unilever Company, one of the world largest FMCG producer and distributor indicating a continuous growth path since its inception. Globally, Unilever Company’s products are available in 190 countries including Kenya with over 400 brands being marketed globally hence has a very complex supply chain. Unilever pays particular attention to emerging markets as they have been demonstrating the stable sales growth for over 20 years. Today their share in the company total turnover is over 40% (Nazarova, 2015). Its sales in 13 emerging countries are in excess of EUR 0.5 billion, and the sales growth in these countries outpaces the total corporate sales growth. The company focuses on implementing innovations and creating new products in all consumer segments. Unilever’s approach is that of open innovation, which helps to source new ideas all over the world (Nazarova, 2015). As one of Kenya's oldest manufacturers, Unilever Kenya commits itself to creating a better future every day by providing individuals and families across the country with brands that help them feel good, look good and get more out of life.

Unilever Kenya Ltd is organized into four main divisions – foods, refreshments (beverages and ice cream), home care and personal care. The company has created trusted local brands designed to meet the specific needs of consumers in their home market. Developed around the sustainability strategy i.e. the Unilever Sustainable Living Plan (USLP), products such as Blue Band, Pureit, Pepsodent and Lifebuoy bring the much needed positive impact in the lives of Kenyans countrywide. As a market leader in Kenya and the world over, Unilever has numerous competitors in all product categories. In pursuit of this with regards to its supply chain, the supply chain management strategy adopted by the company is widely regarded as being one of agility characterized by take overs and strategic partnerships with firms that has helped the organization to create an extensive competitive advantage. The company claims that their products must be sustainable at every stage in their life-cycle with strategies aimed at “working with others, including suppliers, consumers, governments, NGOs and other businesses” to create the major changes that offer superiority to their products (Jones, 2015).

1.2 Statement of the Problem

With reference to supply chain management and its effect on competitive advantage, the study sought to investigate the effect supply chain agility and its four dimensions on the competitive advantage of Unilever Kenya. It is broadly argued that the success of organizations is largely dependent on managing across all supply chain parties (Li, Rao,
Ragu-Nathan, & Ragu-Nathen 2005; Kumar, 2009; Gilaninia et al., 2011; Kharlamov & Ferreira, 2012). Krishnapriya & Rupashree (2014) established that agile supply chain reduces the costs, while leading to competitive advantage for firms on other dimensions as well. Eyong (2009) also found that in as much as product durability, adaptability, and reliability are crucial for consideration, important business competitive driving forces such as speed, quality, flexibility, efficiency, innovation, and pro-activity, and time to market can be the determining factors for firm competitiveness. Empirical study of Unilever Kenya aimed at supporting or disagreeing with the aforementioned scholars.

In this research, there was need to investigate the impact process integration has on the competitive advantage of the organization. Various studies by varied scholars (Flynn, Huo, & Zhao, 2010; Ding, Kam, & Lalwani, 2012; Eyong, 2009; Kharlamov & Ferriera, 2012) have argued a positive relationship between internal and external process integration and competitive advantage with Tajidan et al. (2013) arguing this as true with respect particularly to the FMCG industry. Hosseini (2009) and Ambe (2010) however argue otherwise with their findings showing no or negative consequences of integration on competitive capabilities. By comparing views and recommendations by various authors and philosophers with the situation on ground at Unilever Kenya, we will be able to weigh or assess the importance of process integration for the Unilever performance especially considering the large investments has recently put towards API transformations with software tools such as LeverEdge, SAP in order to enhance its adaptive integration capability.

Unilever is always in a continuous process of rationalizing its supplier and distributor bases in order to establish long term relationships and synergies with its partners. It engages in long term joint collaboration with key partners and massive investments in the vendors with programs such as supplier financing and investing in vendor capacity building. This is despite empirical research by scholars such as Sukati, Bakar, Rohaizat, Mohd, & Melati (2012) generally being pessimistic about partner networks due to fickleness and self-preservation nature of individuals in partnerships. It was therefore essential to investigate the impact of partner networks on the competitive advantage of Unilever.

The dynamism – both from customer orientation and competitor orientation perspectives - in the FMCG industry in which Unilever operates is quite high; this is depicted by Reckitt
Benckiser Group (2014) report that documented that 40% of brands on the top 100 list twenty years ago have been replaced by new names today. An assessment of the extent of market sensitivity and its effect on Unilever’s competitive advantage is therefore necessary. In the recent past, Unilever has been having challenges in responding to customer and distributor demands due to third party logistics challenges – to be able to show the effect this has on its competitive capabilities would prove very useful to the organization.

In finality, there is need to assess the extent to which virtual enterprise affects the competitive advantage of Unilever. The extent of information exchange between Unilever, its distributors & retailers and suppliers relies on information technology, which consequently creates a virtual supply chain. Key information technologies invested in by Unilever for virtual enterprise include the LeverEdge e-commerce system as well as the Smollan Perfect Store tracking hand-held technology used in the downstream supply chain. Unilever shareholders seek to assess the return of investment of these technologies as a measure of the company’s ability to use its assets to generate additional value for shareholders (Reh, 2014).

A number of studies have been done to establish the relationship between the adoption of agile supply chain management and competitiveness (Kumar, 2009; Rampier & Bala, 2012), but very little has targeted the FMCG sector (El-Tawy & Gallear, 2012; Une & Sangle, 2014) despite the important role of agile supply chain management in the performance of FMCG companies. At the international level, only a few researches covered the topic of agile supply chain management and competitive advantage in the FMCG sector. However, very little has been done in the Kenyan context to find out this relationship despite the importance of agile supply chain management in the FMCG sector and its observed influence on competitive advantage. This study therefore sought to determine the effects of agile supply chain management on competitive advantage of Unilever Kenya.

1.3 Purpose of the Study
The purpose of the study was to determine the effect of agile supply chain strategy on the competitive advantage of firms in Unilever Kenya.
1.4 Research Questions
The study sought answers to the following research questions:

1.4.1 To what extent does process integration affect the competitive advantage of Unilever Kenya?

1.4.2 To what extent does partners network affect competitive advantage of Unilever Kenya?

1.4.3 To what extent does market sensitivity affect the competitive advantage of Unilever Kenya?

1.4.4 To what extent does virtual enterprise affect the competitive advantage of Unilever Kenya?

1.5 Significance of the Study
The findings of this study were aimed at providing helpful information to the following groups of beneficiaries:

1.5.1 The Unilever Kenya’s Supply Chain
This study will assist to determine the effectiveness and efficiency of agile supply chain management practices adopted along the organization’s supply chain from Procurement and Inbound logistics to the outbound logistics – by assessing the impact of these practices on supply chain performance.

1.5.2 The Unilever Kenya’s Supply Chain Partners
The study is also beneficial to the upstream and downstream partners including its suppliers, 3PL providers, distributors and retailers by determining the importance and contribution of these partners towards the Unilever strategy and hence the translation to Unilever’s as well as the partners’ competitiveness.

1.5.3 The Unilever Kenya’s consumers
Agility is about speed and responsiveness to the needs of the end users i.e. the consumers. This research would assist to determine whether the agile supply chain strategies adopted result in reduced time to market and delivery of products that meet consumer needs.
1.5.4 The Unilever Kenya stakeholders
This study would offer information to its shareholders of the application of agile supply chain management practices of Unilever Kenya which will consequently affect competitiveness layout within the industry, and hence how this translates into profitability for the firm.

1.5.4 The FMCG Industry
Other firms within the Fast Moving Consumer Goods industry would benefit from the study findings by being able to establish competitive supply chain management practices that may cut across the different sectors within this industry. This will assist them find ways of addressing competitiveness and consequently enhance performance.

1.5.5 Policy Makers
The study will also significantly benefit policy makers in the FMCG industry in Kenya – an industry that Unilever Kenya operates in. Based on the study findings, policy makers will be able to come up with effective supply chain management policies that are appropriate in enhancing competitive advantage. The establishment of competitive agile supply chain practices among FMCGs will be important to firms performance as it will help to optimize the level of customer service and firms will also be in a position to understand the agile supply chain management practices they can adopt to acquire competitive advantage.

1.5.6 Researchers and Scholars
The findings from this study will be able to provide more knowledge on the agile supply chain management and its relationship to competitive advantage. It will enable future researchers and scholars on the industry to acquire better understanding of the relationship between agile supply chain management and competitive advantage. It will offer researchers interested in this area of study access to more information on this topic. The study will act as a reference to future scholars providing them with a platform upon which other related studies can be done to reveal more on the subject.

1.6 Scope of the Study
This study sought to establish the influence of agile supply chain management and the competitive advantage of Unilever Kenya. The study therefore sought study data from a population of Unilever Kenya from which a sample was acquired. The study targeted the Nairobi region in Kenya as the geographical target, the primary region of its supply chain
operations for the company mainly being the area the company is headquartered. The study was cross sectional in nature, & sought to understand the target institution’s agile supply chain management at the time of the study and its subsequent effect on competitive advantage. Therefore, the timeframe of the study was year 2016 and early of 2017.

1.7 Definition of Terms

1.7.1 Agility
This is defined as the ability of an organization to respond rapidly to changes in demand in terms of volume and variety, (El-Tawy & Gallear, 2012).

1.7.2 Agile Supply Chain
This refers to the integration of business partners to enable new competencies in order to respond to rapidly changing, continually fragmenting markets (Baramichai et al., 2007).

1.7.3 Competitive Advantage
This refers to the value a business provides that motivates its customers (or end users) to purchase its products or services rather than those of its competitors and that poses impediments to imitation by actual or potential direct competitors (Gilaninia et al., 2011).

1.7.4 Supply Chain Management
Supply chain management is the coordination of resources and optimizations of activities across the value chain to obtain competitive advantages (Gunasekaran, Lai, & Cheng, 2008).

1.7.5 Process integration
Process integration is the limit to which a manufacturer works with its partners strategically, and manages internal and external processes in a participative manner (Flynn et al., 2010).

1.7.6 Market sensitivity
This relates to the ability of the supply chain to read and respond to real demand. Due to the sensitivity of the market, supply chain will have capability and capacity to respond to market real demand (Martin, 2014).

1.7.7 Partners Network
This relates to the idea of the supply chain acting as a network orchestrator, leveraging on partners’ capabilities and core competencies (Harrison, Christopher, & Van Hoek, 1999).
1.7.8 Virtual enterprise
This refers to development of partnerships founded on core competencies for achieving agility in a supply chain environment (El-Tawy & Gallear, 2012).

1.8 Chapter Summary
This is an introductory chapter which delivered the background of the study highlighting key elements of the study such as the agile supply chain strategy within the FMCG industry and the problem that the study seeks to solve. The purpose and research questions of the study have consequently been stated and the significance of the research to key groups in the study along with its theoretical and practical implications justified. The chapter also explained the scope of the study and defined the operating terms applied. Chapter two of the study reviews other scholarly works done on agile supply chain management and competitive advantage within the scopes of theoretical and empirical reviews. Subsequently, Chapter three outlines the methodology used in conducting this research and tools to be used for data collection and analysis. Chapter four offers the findings upon analysis and interpretation of the collected data pertaining to each research objective. Finally, summary and discussions of the findings giving conclusions and recommendations to the study are documented in Chapter five.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

The previous chapter was an introduction to the study topic, setting out the purpose of study, posing the research questions and scope, and explained the significance of the study to various stakeholders. This chapter looks at various aspects of agile supply chain strategy and how it impacts a firm’s competitive advantage with an objective of reviewing the existing literature. It goes further to review literature on agile supply chain, examining how process integration, partners network, market sensitivity, and virtual enterprise impact firm competitiveness. The chapter will bring out the relationship within the phenomena of the study which will be conceptualized.

2.2 Process Integration and Competitive Advantage

2.2.1 Competitive Advantage

There are a number of factors that in a combined manner help to define a company's competitiveness including among others, production lead time, flexibility in responding to changes in demand volume and variety, quality, price, responsiveness to customer delivery requirements. Clearly, all these competitive base criteria aim to help a company deliver to its customers in an efficient and effective manner, while maintaining cost as low as possible. In the end, value is created for the customer on one hand, and the company itself and other chain members on the other hand (Martin, 2014). This can be perceived as two ends of a line in which one end seeks to ensure quality and efficiency in operations, while the other end maintains flexibility and responsiveness to customer need. The fundamental aim is to reduce cost and increase customer satisfaction.

In the 1980’s the theory of competitive advantage was introduced by Michael E Porter. With this theory Porter wanted to explain the present day global business environment. This theory attempts to identify the fundamental determinants of the competitiveness of an industry or of a nation and how they interact as a system (Lee & Wilhelm, 2010). Porter distinguishes two basic types of competitive advantage a firm can have, low cost or differentiation. The two
basic types of competitive advantage combined with the scope of activities for which a firm seeks to achieve them, lead to three generic strategies for achieving above average performance in an industry: cost leadership, differentiation, and focus. According to Porter, a firm will have a sustainable competitive advantage when it provides above-average performance in the long run (Porter, 1985)

According to Barney (1991), firms should consider four important questions about their resources and capabilities while creating the analysis that will help them try to gain competitive advantage: the question of value, the question of rareness, the question of imitability and the question of organization. Peteraf (1993) discusses that these resources are heterogeneous, which means that characteristics of resources vary between companies. It can also be a base for competitive advantage to exist. Companies endowed with these kinds of resources are able to compete in a marketplace and to better meet customer need. These resources which are the basis of a company’s strategy must meet three other conditions besides heterogeneity if a firm will gain competitive advantage: ex post limits to competition, imperfect resource mobility and ex ante limits to competition.

The question of value, Barney (1991), writes is the first question to be asked by managers while evaluating competitive advantage. In other words the question is whether the firm’s resources and capabilities add value. He also reminds that they may have added value in the past, but that changes in customer tastes, industry structure or technology, for instance, may have reduced the value. Therefore “one of the most important responsibilities of strategic managers is to constantly evaluate whether or not their firm’s resources and capabilities continue to add value, despite changes in the competitive environment” (Barney, 1991; 102). The answer links the analysis of internal resources and capabilities with the environmental analysis.

**2.2.2 Process Integration**

Shared information between supply chain partners can only be fully leveraged through process integration. Process integration means collaborative working between buyers and suppliers, joint product development, common systems and shared information. This form of co-operation in the supply chain is becoming ever more prevalent as companies focus on managing their core competencies and outsource all other activities (El-Tawy & Gallear,
In this new world a greater reliance on suppliers and alliance partners becomes inevitable and, hence, a new style of relationship is essential. In the ‘extended enterprise’ as it is often called, there can be no boundaries and an ethos of trust and commitment must prevail. Along with process integration comes joint strategy determination, buyer-supplier teams, transparency of information and even open-book accounting.

It involves defining the key business processes involved in producing a company’s product or service. SCM then, encourages the active management of such processes across internal departments and across other supply chain partners namely, suppliers and customers, in order to deliver the externally based targets, especially real customer value. Integration of supply chain processes enables the effective delivery of value-adding results for customers. Integration thus facilitates a “seamless chain along which information, knowledge, equipment and physical assets flow as if water,” (Krishnapriya & Rupashree, 2014). The aim of integration therefore is to enhance key supply chain outcomes and hence performance.

Process integration within and between organizations in the supply chain is a key characteristic of the conceptual domain per se (e.g. Mentzer et al., 2001; Lambert & Garcia-Dastugue, 2006). From a marketing perspective, processes are seen as an element of the organizational context in which marketing is embedded and which should be influenced in such a way that customer value creation is maximized (Srivastava, Bartol & Locke, 1999). Because of their cross-functional nature, processes cannot always be easily assigned to either marketing or SCM. The most widely held distinction which still leaves room for interpretation, is between demand creation processes as marketing and demand fulfilment processes as supply chain processes (e.g. Christopher & Payne, 2002; Juttner, Godsell & Christopher, 2006). Integrating demand creation and fulfilment processes is seen as the key to delivering products that convey superior customer value while deploying resources efficiently. The exploration of the interdependencies between the processes should lead to marketplace success rather than the focus on individual process optimization (Srivastava et al., 1999).

Rainbird (2004) introduces a process fusion model for demand and supply process integration. He differentiates eight supply processes, ranging from order receipt/entry to delivery options, as well as seven demand processes, e.g. macro-market definition and
customer relationship management (CRM). Rainbird argues that the ‘‘fusion’’ or linkage between these processes can be achieved through either management, specific organizational capabilities or technology. Building on this work, Juttner et al. (2007) suggest a three layered process integration model, in which links demand and supply processes to the customer’s buying life cycle. By adopting the extended supply chain perspective and linking marketing and supply chain processes to customer value creation, the process perspective captures a wider range of the interface spectrum between marketing and SCM than the inter-functional perspective.

2.2.3 Effect of Process Integration on Competitive Advantage

Process integration and competitive capability have been investigated empirically based on different approaches of different researchers and it will be useful to review their findings. A study by Ding et al. (2012) argues that internally, individual company integration of logistics processes and their supporting technologies are important to the success of a firm; however, alone they will not ensure sustainable competitive advantage; the company has to integrate with its supply chain partners to fully leverage future productivity through shared information. This form of integration in the supply chain is becoming more prevalent as organizations focus on managing their core competencies and outsourcing other activities (Krishnapriya & Rupashree, 2014). Hosseini, Azizi, & Sheikhi (2012) investigated the impact of integrated supply chain strategy on one key competitive capability variable, customer service, in the automotive industry of North America. According to the findings, supply chain integration has direct positive impact on customer service.

Tajidan et al. (2013) investigated the impact of process integration strategies on competitive capability of the company with respect to manufacturers of consumer products. They measured competitive capability with 4 variables of product quality, delivery reliability, process flexibility, and cost leadership. Process integration is defined in 4 levels of close internal integration, close integration with material suppliers, close integration with distributors/retailers, and close integration with customers. According to the findings, manufacturers with high level integration have better conditions of product quality, delivery reliability, process flexibility, and cost leadership. They also measured the impact of size as a control variable. High level integration with respect to the size variable leads to improved measures of competitive capability dimensions. These findings are more comprehensive than
the former as they added close integration with distributors/retailers to the dimensions of supply chain integration.

The impact of this development of the concepts of process integration and competitive capability can be observed in earlier researches. For example, Swink, Narasimhan, & Wang, (2007) evaluated the impact of process integration on competitive capability in different industries of North America more or less with such measures, but their findings were different. They investigated process integration based on 4 dimensions of strategic integration with customers, strategic integration with suppliers, product-process technology integration, and corporate strategy integration; and competitive capability with 5 dimensions of cost, quality, delivery, process flexibility, and new product flexibility. Findings show that integration with suppliers and integration with customers have no significant relationship with competitive capabilities. Corporate strategy integration and product-process integration seem to be stronger drivers to manufacturing capability development compared to other kinds of strategic integration.

Studies have been done in years of 2009 and 2010 mainly emphasis on three critical dimension of supply chain: integration with suppliers; internal integration; and integration with customers. According to these researches, companies with more developed supply chain have significant differentiation with the ones with less developed supply chain. Five researches done within this period and their findings are briefly discussed in this section. Kim (2009) investigated the impact of the level of integration on company’s competitive capability. Process integration has been measured based on three dimensions of internal integration, integration with suppliers and integration with customers; and competitive capability has been evaluated with four variables of cost leadership, customer service, innovative marketing technology, and differentiation. According to the findings of the work with investigating a wide range of Japanese and Korean companies in different industries, supply chain integration leads to competitive capabilities in Japanese companies and these capabilities affect the company’s performance in relation with supply chain operational capability. While, in Korean companies with smaller sizes competitive capabilities in relation with supply chain operational capability lead to supply chain integration and affect the company’s performance. Oghazi (2009) undertook a similar study of manufacturing companies in different industries of Sweden and his findings show that process integration
influences on competitive capabilities positively. Also, company size was used as a control variable and no significant impact have been observed.

Kharlamov & Ferreira (2012) investigated the impact of participation with suppliers and customers on competitive advantage as a matter of external integration with concentration on resource-based view (RBV) and knowledge-based view (KBV). The investigation is done in different industries in China. Competitive capability has been measured by means of product quality, cost leadership, delivery reliability, process flexibility, and customer service and size of company and type ownership have been considered as control variables. Their findings show that participation with customers has significant influence on product quality, delivery reliability, process flexibility, and customer service, but no influence on cost leadership. Participation with supplier has significant influence on cost leadership, but has no influence on product quality, delivery reliability, process flexibility, and customer service. Also they have found out that private sector companies do better in delivery reliability, process flexibility, and customer service compared to public sector companies, but public sector companies have advantage in cost leadership relative to others.

Eyong (2009) found that consumer products’ manufacturers with high level of integration can gain better positions and opportunities in cost leadership. Findings of Feng, Sun & Zhang (2010) evidence that integration with suppliers affects cost leadership to some extent. They mention based on resource based view and knowledge based view that participation with suppliers can help the company to create value in process of cost management. Also, based on Kharlamov & Ferreira (2012), participation with suppliers as the initial steps of creation and development of a new product is a powerful method of suppliers’ knowledge utilization in order to reduction of costs and work times. Current research shows that supply chain integration influences on cost leadership capability that is consistent with works of Hosseini (2009), and Feng et al. (2010).

On the other hand, the result of negative influence of supply chain integration on both competitive capabilities is aligned with the findings of Ambe (2010) who claim that over-integration with suppliers may have undesirable consequences. Baramichai et al. (2007) mention according to their work’s findings that having deviation from ‘optimum level’ of integration with suppliers affects negatively on company’s performance. According to the
theory of Agency, over-integration with suppliers expose companies to different problems like less motivation of suppliers to have high level of performance because they feel that they have strong border of security in their position and their trading benefits are assured for long time. The opportunity of finding new more appropriate suppliers will thus be threatened.

2.3 Partners Network and Competitive Advantage

2.3.1 Partners Network
The concept of a supply chain being a confederation of partners interlinked as a network provides the second element of agility. There is a growing recognition that individual businesses no longer compete as stand-alone entities but rather as supply chains (Martin, 2014). Agile supply chain introduced the era of network competition where those organizations with the ability to better structure, co-ordinate and manage the relationships with their partners in a network committed to better, closer and more agile relationships with their final customers are rewarded. Martin (2014) argued that in today’s challenging global markets, the route to sustainable advantage lies in being able to leverage the respective strengths and competencies of network partners to achieve greater responsiveness to market needs.

The term network indicates a social structure that includes a set of relationships between a group of individuals, while the term networking is used for the activity by which this kind of structure is built, developed and run. The concept of network includes four key components: actors, links, flows and mechanisms (Conway & Jones, 2006). The actors are the individuals that make up the network and are usually represented graphically as the nodes of a web. They may be different kinds of entities, according to the nature of the phenomenon to be analyzed: human beings, places, computers, organizations or – in the case of our area of interest – firms. The links (or ties) are the arches that connect individuals/nodes and represent the relationships between the actors. They may have different forms, directions, lengths and intensities. The flows principally indicate the knowledge and information flows that occur between the actors within the network. Other flows could include: flows of money, goods, power, friendship, etc. Finally, the mechanisms of the network are the modes and rules of interaction employed by the actors within the networks. Depending on the different aims of the networks, they include face-to-face interactions, meetings, planning, and joint
participation (for instance) in trade fairs or business seminars and can be more or less structured, formalized, planned and active.

Christopher & Towill (2010) have demonstrated through simulation the beneficial impact that information feedback can have on reducing upstream amplification and distortion of demand. In the past, upstream long-term collaboration with suppliers have been the key thrust of supply chains. However, downstream and lateral collaborations with customers and competitors respectively have crept into the supply chain management discourse as means of integrating the total value creation process.

With particular reference to the information & knowledge flow process within the partners of a network, Antoldi, Christopher, Peck, & Towill, (2011) sustain that social capital plays a critical role in such a process, and that conditions facilitating this transfer are strongly associated with the facets of the three dimensions of social capital (structural, cognitive, relational). Concerning the structural dimension, for instance, knowledge transfer is facilitated by strong ties and repeated exchanges among the nodes, as well as by the physical proximity of member firms, stable personal relationships, the existence of multiple connections among partners and by a non-competitive approach to knowledge transfer. As far as the cognitive dimension is concerned, knowledge transfer is facilitated by the adoption of norms and rules to govern informal knowledge exchange and by goal clarity among partners. A shared vision and defined strategic objectives reduce conflicts and aid negotiation. Finally, regarding the relational dimension, there is fairly clear evidence that when knowledge sharing is embedded in social ties, the risk of opportunistic behavior is limited. Therefore, when relationships between firms are embedded with trust, the transfer of distinctive knowledge and valuable resources is more likely to be smooth and effective.

2.3.2 Effect of Partners Network on Competitive Advantage

Strategic networks between firms can be a source of competitive advantage in that it does not occur spontaneously; this is considering that the complexity of strategy increases the barriers to imitation (Rivkin, 2000). The competitive advantage that can be gained from partner networks according to Grant (2013) is difficult to imitate making it more resistant to erosion through competition – this is achievable through inter-organizational cooperation as a means to share resources and create synergies between firms. According to a study undertaken by
Alvarez, Fonfria & Marín (2009) to analyze whether a firm’s competitiveness profile can be explained by its networking ability yielded that partner networks indicators between two or more members of the supply chain tended to increase the probability of a firm’s competitiveness. Partner networks with downstream partners i.e. customers also lead to better firm performance as it would provide better information about their needs as well as reduce the risks associated with new product introduction into the market (Von Hippel, 1988). The positive effects of partner networks on organization productivity and efficiency levels is also an issue confirmed by recent empirical evidence for Dutch firms – a study carried out by Belderbos (2004).

A number of studies have also shown that firms rely extensively on networks in pursuing international opportunities. A study by Chetty & Agndal (2007) shows that network resources help firms to overcome the risks and challenges associated with foreign market entry decisions. According to Mesquita & Lazzarini (2008), in developing countries – or at least in countries without a supportive environment, due to the weakness of infrastructures and institutions – SMEs can achieve greater efficiencies and obtain access to global markets by building vertical and horizontal ties with other small firms. They support this statement with the results of an empirical analysis of 232 Argentine furniture firms in the Province of Buenos Aires, concluding that horizontal relations promote collective sourcing of resources and joint product innovations, while vertical relations can increase manufacturing productivity.

Although organizations form strategic networks for diverse motives, and partners generally expect to benefit from their collaboration, analysts encounter difficulties in untangling the impact of environmental, economic, organizational, and inter-organizational factors on alliance outcomes and consequences. Authors of “how to” guides typically trumpet the alleged positive consequences of joint ventures and equity arrangements on competitive capabilities (Flynn et al., 2010). Empirical researchers generally appear more pessimistic about partners’ abilities to overcome the inherent tensions between competition and cooperation to achieve lasting results. Sukati et al. (2012) observed that “the essentially fickle and tentative nature of partner cooperation should not be overlooked” because it renders many strategic networks “fundamentally self-defeating, unstable, and transitional in nature”. Conceptual and measurement problems plague performance and productivity
assessments, whether using objective outcome indicators (e.g., financial gains, innovations) or subjective indicators (e.g., partner satisfaction with the collaboration). Evaluating international networks is especially complicated, because firms from different countries and cultures generally apply divergent success criteria (Ambe, 2010). Despite such operational difficulties, researchers have investigated a variety of factors affecting several dimensions of partners networking consequences.

Studies show that repeated collaborations and partner networking enhance mutual learning experiences as inter-organizational trust emerges to substitute for formal protections against the fear of being ripped off. A study of 212 alliances in six manufacturing and service industries found that higher levels of relational capital (social capital based on trust, respect and friendship) and integrative conflict resolution mechanisms (ensuring fairness and procedural justice) increased both corporate learning and protection of proprietary assets (Gilaninia et al., 2011).

One outcome hypothesis attracting recent research attention is that strategic networks contribute to superior production performance by the parents. Research on 142 Canadian biotechnology startup firms found that their initial performances were enhanced by establishing alliance networks that provided access to “diverse information and capabilities with minimum costs of redundancy, conflict, and complexity,” gave more opportunities to learn from established rivals, but avoided risky intra-alliance rivalries (Martin, 2014). In particular, the startups’ alliance networks boosted their innovativeness as measured by rates of patenting and R&D growth. A comparative study of alliance networks among 138 steel and 130 semiconductor firms from 1990-1994 found that the influence of network characteristics on firm performance varied with industry contexts (Chetty & Agndal, 2007).

In another analysis, Mesquita & Lazzarini (2008) investigated the impact of partner networks on innovation rates and economic growth. He measured innovation as the number of patents granted and growth as annual semiconductor sales. The crucial factors were not the size of each firm’s alliance portfolio (number of alliances formed during the previous five years), but the resource profiles of its partners. Specifically, both innovation and sales rates increased substantially if a firm was connected to more technologically innovative and revenue rich partners. An important implication of this analysis is that firms derive advantage
from their partners’ corporate social capital, even if their partner network fails to achieve its professed formal objectives.

On the contrary, an empirical study conducted by Joao & Vasco (2013) who studied four cases of partner networks in the Portuguese textile and apparel industry showed it difficult to prove the relationship between partner networks and competitiveness, particularly where there’s objectives and goals of the partners are ambiguous & not clearly defined initially. However, the study showed that even if network objectives are not achieved, the firms see them as an opportunity for inter-organization learning and collective development of competitive advantage for the future – competitiveness arises collectively within the networks.

2.4 Market Sensitivity and Competitive Advantage

2.4.1 Market Sensitivity

The agile supply chain is market sensitive. By market sensitive is meant that the supply chain is capable of reading and responding to real demand. Most organizations are forecast-driven rather than demand-driven. In other words because they have little direct feed-forward from the marketplace by way of data on actual customer requirements they are forced to make forecasts based upon past sales or shipments and convert these forecasts into inventory (Hosseini, 2009). The breakthroughs of the last decade in the form of Efficient Consumer Response (ECR) and the use of information technology to capture data on demand direct from the point-of-sale or point-of-use are now transforming the organizations ability to hear the voice of the market and to respond directly to it.

Conventional logistics systems are based upon a paradigm that seeks to identify the optimal quantities of inventory and its spatial location. Complex formulae and algorithms exist to support this inventory-based business model. Paradoxically, what we are now learning is that once we have visibility of demand through shared information, the premise upon which these formulae are based no longer holds. Electronic Data Interchange (EDI) and now the Internet have enabled partners and networks in the supply chain to act upon the same data i.e. real demand, rather than be dependent upon the distorted and noisy picture that emerges when orders are transmitted from one step to another in an extended chain.
Market sensitivity will consider two components of market orientation i.e. customer orientation which focuses on “the sufficient understanding of one’s target buyers,” and competitor orientation which emphasizes the understanding of “the short-term strengths and weaknesses and long-term capabilities and strategies of both the key current and potential competitors” (Mason-Jones, Mohammed, & Denis, 2007). Inter-functional coordination, a third dimension of market orientation, promotes the coordinated use of company resources and customer-related activities throughout the entire organization. Researchers seem to agree that inter-functional coordination is critical for responding to the market intelligence effectively (Hosseini, 2009).

Customer orientation emphasizes understanding one’s target customers sufficiently so as to continuously create superior value for them. Because customers’ needs change rapidly, a customer orientation requires a clear understanding of the cost and revenue dynamics of target customers in both the present and the future. Due to its external focus on collecting, analyzing, and disseminating information about customers, a customer-oriented firm can anticipate its customers’ changing needs and respond to them through continuous innovation (Feng et al., 2010). Moreover, when a firm clearly recognizes a gap between its customers’ needs and its market offerings, the firm can direct resources toward filling that gap through successful innovations (Martin, 2014). Recent empirical research has also found customer orientation to be an important determinant of an organization’s innovativeness and new product advantage (Oghazi, 2009).

A customer orientation can also enable a firm to develop a competitive advantage based on market differentiation. With the knowledge of what customers desire, a customer-oriented firm can then make its market offerings more appealing by adjusting its marketing mix (Porter, 1985). Further, because the major objective of a customer-orientation is to achieve long term customer satisfaction, a customer-oriented firm is highly motivated to provide offerings that uniquely meet the particular needs of its target market (Rampier & Bala, 2012). Thus, a customer-oriented firm appeals to its customers by developing a unique image through the effective tailoring of its marketing mix.

Competitor orientation essentially focuses on identifying (1) current and potential competitors, (2) the technologies they utilize, and (3) whether they represent an attractive
alternative from the perspective of the target customers (Rampier & Bala, 2012). Competitor oriented businesses watch competitors closely, match the marketing initiatives of competitors quickly, and attempt to understand both the short-term strengths and weaknesses and long-term capabilities and strategies of current and potential competitors. Then, using their rivals as a frame of reference, competitor-oriented firms can identify their own advantages and disadvantages. With a clear understanding of its own strengths and weaknesses as well as those of its competitors, a competitor-oriented firm could utilize information “internalizing a competitor’s strengths by imitation, or nullifying a competitor’s strength by product innovation” (Tajidan et al., 2013).

2.4.2 Effect of Market Sensitivity on Competitive Advantage

Market sensitivity establishes norms and beliefs that shape an integrated supply chain effort to respond efficiently and effectively to customers and competitors. Empirical research generally supports that sensitivity to the market, in terms of both competitor and customer orientation, has a positive effect on firm performance (Zhou et al., 2005; Hult & Ketchen, 2001). However, competitor orientation appears to have double-edged effects on innovation as a source of competitive advantage. On the one hand, with a better understanding of its relative standing in the marketplace, a competitor-oriented business can create a competitive advantage through continuous product innovation. On the other hand, a competitor-oriented firm may simply choose to imitate its competitors rather than develop innovative goods and services to decrease the high cost of product innovation. Empirical research by Rampier & Bala (2012) indicates that competitor oriented firms tend to present the market with “me-too” products and eschew “new-to-the-world” innovations. On balance, then, these conflicting effects of competitor orientation on innovation may cancel each other, resulting in a non-significant relationship between competitor orientation and innovation differentiation advantage.

Because the emphasis of competitor orientation is to “meet and beat the competition,” a competitor-oriented firm matches closely its capacities and offerings with those of its competitors (Gunasekaran et al., 2008). By focusing on its competitors, a firm may be unaware of its real interest, which may lead to inconsistent strategies and behaviors and, consequently, unstable product offerings (Une & Sangle, 2014). Furthermore, a competitor-oriented firm tends to assume that what the competitors have done is correct, and thus may
risk overlooking the products or services that are uniquely fitted to a particular market segment (Rampier & Bala, 2012). Therefore, competitor-oriented firms may have difficulty in developing a market differentiation advantage.

An innovation differentiation advantage implies that firms provide their customers with the most up-to-date and innovative product offerings of superior value (Li, et al., 2005). The more value the market offering provides, the more satisfied and loyal the firm’s customers; and the higher the value, the more likely the firm’s customers will perceive the market offering as being of higher quality (Hosseini, 2009). Similarly, firms with a market differentiation advantage have successfully created unique images for their market offerings by specifically tailoring their marketing mixes to their target customers and, thus, can reap the benefits of high levels of customer loyalty and satisfaction (Tajidan et al., 2013).

A firm’s customer orientation will positively affect its competitiveness. Higher levels of service quality and customer satisfaction generate increased customer loyalty; and, because loyal customers are less sensitive to price changes, firms can command premium prices or sell more of their products at a given price, leading to a higher profit or market share (Porter, 1985). In addition to lower costs of servicing existing customers, the positive reputation that results from higher levels of market performance enables the firm to attract new customers, introduce new products, and weather short-term environmental fluctuations more easily. In service industries (e.g., hotel), business success depends critically on the interactions between employees and customers (Une & Sangle, 2014), making service quality and customer satisfaction a key link between competitive advantage and financial performance. That is, differentiation advantage enhances financial performance indirectly through fostering market sensitivity.

An empirical study by Zhou, Brown, Dev & Agarwal (2007) on the hotel industry globally analyzed the effect of market sensitivity on firm competitiveness and performance. Market sensitivity was based on the two key dimensions of customer orientation and competitor orientation. The findings show that competitor orientation results in the reconfiguration of the value chain to secure scarce resources leading to cost advantage, whereas customer orientation generally leads to understanding customer needs better leading to differentiation advantage. A customer advantage is more appropriate in rich environments where there are
readily available resources and favourable business conditions however; whereas competitor orientation is more effective in leading to competitive advantage where there are lean market conditions with poorer local business conditions and lower levels of resource availability.

A subsequent study was conducted two years later by the same scholars, Zhou et al. (2009) to assess how customer value affects a firm’s market orientation and consequent competitive advantage with the worldwide hotel industry as the empirical setting. The findings generally supported the basic tenet of their initial study. However, customer orientation appears to be the dominant factor responsible for achieving competitive advantage in the service industry – findings showed that competitor orientation has a negative impact on a firm’s market differentiation advantage and has no significant influence on its innovation differential advantage. This supports literature by other scholars (Deshpande et al., 1993; Hult et al., 2005) that customer and competitor orientations can be antithetical to each other.

2.5 Virtual Enterprises and Competitive Advantage

2.5.1 Virtual Enterprises

A Virtual Enterprise is the temporary union of enterprises, business organizations, units, or individuals to provide a product or service (Guerra, 2006). By focusing on what each member does best, members of virtual enterprises collaborate and take advantage of market opportunities that they cannot individually satisfy. Virtual enterprises have been defined in various ways in the literature. Robertson (2006) defined virtual enterprise as ‘legally separate but operationally interdependent companies focused on responding to a market opportunity’. Virtual organizations create a network of suppliers, manufacturers and administrative services to accomplish specific objectives, such as flexibility and responsiveness (Feng et al., 2010). The exchange of data between the firm, its consumers, suppliers, and competitors rely on information technology, consequently creating a virtual supply chain which is information based rather than inventory based for the firm. Information – accurate, complete, standardized, and real time (or as near real time as possible) – is the glue of the virtual enterprises in the agile supply chain and its currency (Guerra, 2006).

Virtual Enterprises focus on gaining access to a set of core competencies that are available globally. The firm, therefore, may concentrate on its core competencies and pursue a strategy of intensive outsourcing reaching across other organizations that possess the core
competencies needed to take advantage of new market opportunities. Definitely, Information Technology plays an important role in this approach, but it has been shown that the use of IT in itself does not provide a significant competitive advantage (Une & Sangle, 2014). Historically, enterprise software was constructed to automate the ERP – and then the supply chain systems extended the ERP. However, in virtual enterprise, the supply chain system needs to sit above each of the partners’ ERPs that are distributed across the virtual enterprise. This is important so that flow of material and information through multiple organizations can be managed seamlessly – collaborative & consistent user experience is essential to be able to react and respond to information as it is presented. Closely associated with the no borders characteristic is the use of distributed facilities to carry out the product development process. Distributed facilities allow a concurrent development process. By working concurrently, instead of sequentially, companies shorten their product development processes and therefore can bring products or solutions to market faster (Antoldi et al., 2011).

Virtual enterprises depend heavily on innovation since they are market-oriented organizations. As explained earlier, they need to react quickly and reconfigure to satisfy new market demands and customer trends. Innovation is not constrained only to technical innovation. It can include innovation in other functions such as management strategies that allow the organization to satisfy its objectives fully. This dependency on innovation is strongly related to the scope of the mass customization provided by the organization as well as its development as a learning organization (Mesquita & Lazzarini, 2008).

Thus, virtual enterprise constitutes a natural outgrowth or evolution of both tapered and non-integration strategies and network organizational structures (Guerra, 2006). Companies gain competitive advantages by providing customers with better and faster service. In practice, many manufacturing companies have begun to use the virtual enterprise concept to gain and maintain a competitive edge. For example, Dell Computer, by leveraging its virtual enterprise with electronic commerce has enabled itself to compress its supply chain and become closer to its customers (Antoldi et al., 2011). Dell Computer, a virtual manufacturer, growing two to three times faster than its rivals, has boosted its earnings and unit shipments four times better than the industry averages.
2.5.2 Effect of Virtual Enterprises on Competitive Advantage

Christoper, Lawson & Peck (2004) from a review of virtual enterprises within the fashion industry argues that virtual enterprises results in the reduction of transaction costs hence efficiency in the supply chain – this is particularly if the cooperating parties move to co-managed inventory where supply chain partners collaborate with retailers to manage the flow of products – on-shelf availability can therefore be achieved with much less inventory.

In a manufacturing setting, a virtual enterprise is constructed by partners from different companies, who collaborate with each other to design and manufacture high quality and customized products (Guerra, 2006). A virtual enterprise is product-oriented, team-collaboration styled, and featured as fast and flexible operations. Thus, a virtual enterprise is distinctively different from a traditional enterprise. The authors argued that one efficient way to satisfy customer needs is to collaborate with qualified partners with the necessary physical resources and capabilities. This collaboration is viewed as virtual enterprise formation. The virtual enterprise organization structure should be fluid and organic and it should generate the smooth flow of product, process, and business-related information.

Antoldi et al., (2011) argued that virtual enterprise was synonymous with the emergence of organizational structures that relies upon the extensive use of outsourcing, strategic alliances, and other forms of partnering. The author claimed that virtual enterprise could yield many situational or competitive advantages such as sharing infrastructures, R&D, and resources; linking complementary core competencies; reducing concept-to-cash time through information sharing; expanding production capabilities; gaining access to markets and sharing markets or customer loyalty; migrating from selling products to selling solutions. Although the authors presented the importance of the virtual enterprise concept in manufacturing settings, their work fell short of providing any empirical linkages between virtual enterprise and competitiveness.

Further studies in virtual enterprise included: Une & Sangle (2014); Guerra (2006); Feng et al. (2010); Antoldi et al. (2011). In summary, many virtual enterprise studies pinpointed the link between virtual enterprise and competitive advantage, however these studies did not include any empirical analysis to support their claims. Further, these linkages were not related to the business performances of the firms.
First, the goal of the virtual enterprise is to create value from changing opportunities in its environment. This feature makes the virtual organization distinct from traditional management approaches. As in the introductory case, where the new tool-machine could only be achieved with a new co-operation of partners, the confluence of more than one source of value can create strong opportunities as a favorable constellation in the competitive environment (Mesquita & Lazzarini, 2008). The virtual enterprise has the ability to identify these opportunities, which require a distinct set of methodologies.

The virtual enterprise is a temporary co-operation to achieve objectives. Second, the virtual enterprise is an alternative way to differentiate and integrate work under dynamic conditions. To capture a new opportunity quickly, cooperation between distributed sites is necessary. This co-operation is structured for a limited period of time, with a limited purpose, and with a minimum of overhead for coordination. Again, this feature makes the virtual enterprise distinct from existing paradigms where stability supports task execution efficiency. In traditional management approaches, organizational routines, bureaucracies, strategies and planning procedures protect the operational core from the uncertainty of the changing environment (Mesquita & Lazzarini, 2008).

In this scenario, the operative core was not only exposed to external uncertainty, but also took an active role in creating the new machine and building the industrial structure to manufacture it. In a virtual enterprise, then, the operational structure is closely linked to its adaptation to the new opportunity (Kharlamov & Ferreira, 2012). The managerial issue in the virtual enterprise is to develop the routines for this structural innovation.

Finally, if the virtual enterprise is permanently adapting, it follows that solutions to support it must share dynamic characteristics. For Schumpeter, it is the entrepreneur who provides innovation of industrial structures with the process of “creative destruction” (Schumpeter, 1943). Although the entrepreneur provides innovation, this innovation must be translated into systematic routines for change. This translation represents another difference between virtual enterprises and traditional organizational approaches. Positions, job profiles and organizational charts all describe elements of the organization at one point in time. However, restructuring is a change-process over time (Mesquita & Lazzarini, 2008). In other words, the
enterprise is defined from its maneuvers rather than from its command structure, from the operations rather than from the organization.

2.6 Chapter Summary
This chapter reviewed literature on the impact of agile supply chain strategy on the organizational competitive advantage where aspects such as process integration, partner network, market sensitivity, and virtual enterprises and competitiveness were looked into. The next chapter, chapter three, will look into the research methodology. This will include the research design, population and sampling design, data collection, research procedure and data analysis.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction
This chapter discusses the research methodology that the study adopted. The chapter commences with a research design of the study, followed by a discourse of the study population, sample design, and data collection methods. The research procedure to be adopted is also discussed which encompass a review of the method of pre-testing adopted in the study. The chapter further discusses the various data analysis methods used.

3.2 Research Design
A design is a scheme or plan that is used to generate answers to research problems. According to Kothari, (2012), a research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. This study therefore adopted a descriptive research design. A descriptive survey seeks to obtain information that describes existing phenomena by asking individuals about their perceptions, attitude, behavior or values (Mugenda & Mugenda, 2012). A descriptive research design therefore enabled the study to access comprehensive information to enable the establishment of impact of agile supply chain strategy on the competitive advantage of firms in the FMCG industry in Kenya. The dependent variables were the agile supply chain variables; process integration, partner network, market sensitivity, and virtual enterprise; whereas the independent variable was the competitive advantage of FMCG firms.

3.3 Population and Sampling Design

3.3.1 Population
The study population comprises of individuals, objects, organizations, events and products. Cooper & Schindler (2014) argue that population is the total collection of elements from which the inferences of the study are made. It can therefore be simplified as a set of people, events or objects that are being investigated. The Unilever Supply Chain includes both the internal supply chain and external supply chain, however due to constraints of resources; the
focus of the study was on the supply chain within the Unilever boundaries. The population of the study therefore consisted of key Unilever management staff within the Unilever Supply Chain – consisting of the Procurement, Make (Operations) & Supply Chain Go-To-Market Teams. At the time of data collection, there were a total of 106 management employees within the identified teams – this constituted the population of the study.

Table 3.1: Study Population Distribution

<table>
<thead>
<tr>
<th>SAMPLE FRAME</th>
<th>Population Size</th>
<th>%age Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procurement</td>
<td>23</td>
<td>22%</td>
</tr>
<tr>
<td>Supply Chain Go-To-Market (GTM)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Service</td>
<td>11</td>
<td>10%</td>
</tr>
<tr>
<td>Logistics</td>
<td>6</td>
<td>6%</td>
</tr>
<tr>
<td>Supply Planning</td>
<td>11</td>
<td>10%</td>
</tr>
<tr>
<td>Demand Planning</td>
<td>7</td>
<td>7%</td>
</tr>
<tr>
<td>GTM Quality</td>
<td>3</td>
<td>3%</td>
</tr>
<tr>
<td>Make (Operations)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foods Production</td>
<td>10</td>
<td>9%</td>
</tr>
<tr>
<td>HPC Production</td>
<td>10</td>
<td>9%</td>
</tr>
<tr>
<td>Make Quality</td>
<td>6</td>
<td>6%</td>
</tr>
<tr>
<td>Safety</td>
<td>5</td>
<td>5%</td>
</tr>
<tr>
<td>Engineering &amp; Projects</td>
<td>10</td>
<td>9%</td>
</tr>
<tr>
<td>Manufacturing Excellence</td>
<td>4</td>
<td>4%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>106</td>
<td>100%</td>
</tr>
</tbody>
</table>

3.3.2 Sampling Design

Sampling procedure refers to the process undertaken by a researcher to select a number of individuals or objects from a population to be the subject of a study (Cooper & Schindler, 2014). They observed that the selected group should contain representative characteristics of the desired study population. The sampling design comprised of the sampling frame, the sampling techniques and the sample size.

3.3.2.1 Sampling Frame

A sampling frame is a complete listing of all the sampling units or simply a list of elements from which the sample is drawn. It represents a complete and correct list of population of members only (Cooper & Schindler, 2014). The sampling frame gives a list of population units from which the sample will be selected. The sampling frame for this study was the
entire list of 106 management staff within the different sections and teams earlier identified in the population of the study section.

3.3.2.2 Sampling Techniques

This is defined as the choice of number of units from which to data is acquired to draw conclusions about a larger group (Kothari, 2012). Selection of a sample must be done using a certain technique depending on the qualities one intends to capture (Barratt, 2009). Sampling techniques are generally categorized as Probability and Non-Probability sampling designs. Probability sampling is chosen based on known probabilities where the researcher chooses the samples at random whereas non-random probability sampling is based on unknown probabilities and the sample selection is not based on random methods. This study therefore adopted probability sampling; and in particular, stratified random sampling technique to identify the study sample from the population. This is a probability sampling procedure in which the target population is divided into a number of strata, and a sample drawn from each stratum (Cooper & Schindler, 2014). The targeted managers of Unilever Kenya in Nairobi were stratified within the various teams within the internal supply chain within which the respondents were selected randomly. Mugenda and Mugenda (2012) observed that the strength of this technique lies in its ability to allow all population groups to be represented in the final sample thus reducing variability and offering high degree of representativeness.

3.3.2.3 Sample Size

This represents a subset of the study population from which all population characteristics are represented, (Kothari 2012). It offers the total number of population elements from which data is to be actually collected. Cooper & Schindler (2014) recommends that sample sizes be 30% of the population. Therefore, when the population is stratified, the number of respondents to be sampled from each stratum is proportional to the population since this is a case study; hence the 36 management employees were selected to be part of the study sample (See Table 3.1).
Table 3.1: Sampling Frame

<table>
<thead>
<tr>
<th>SAMPLE FRAME</th>
<th>Populatio n Size</th>
<th>Sample Size</th>
<th>%age Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procurement</td>
<td>23</td>
<td>8</td>
<td>22%</td>
</tr>
<tr>
<td>Supply Chain Go-To-Market (GTM)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Service</td>
<td>11</td>
<td>4</td>
<td>10%</td>
</tr>
<tr>
<td>Logistics</td>
<td>6</td>
<td>2</td>
<td>6%</td>
</tr>
<tr>
<td>Supply Planning</td>
<td>11</td>
<td>4</td>
<td>10%</td>
</tr>
<tr>
<td>Demand Planning</td>
<td>7</td>
<td>3</td>
<td>7%</td>
</tr>
<tr>
<td>GTM Quality</td>
<td>3</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Make (Operations)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foods Production</td>
<td>10</td>
<td>3</td>
<td>9%</td>
</tr>
<tr>
<td>HPC Production</td>
<td>10</td>
<td>3</td>
<td>9%</td>
</tr>
<tr>
<td>Make Quality</td>
<td>6</td>
<td>2</td>
<td>6%</td>
</tr>
<tr>
<td>Safety</td>
<td>5</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Engineering &amp; Projects</td>
<td>10</td>
<td>3</td>
<td>9%</td>
</tr>
<tr>
<td>Manufacturing Excellence</td>
<td>4</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>106</strong></td>
<td><strong>36</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

3.4 Data Collection Methods

This refers to the process undertaken to gather information among the sampled respondents from which the study draws its inference and conclusions (Mugenda & Mugenda, 2009). This study collected primary data using a questionnaire developed in line with the research questions. The questionnaire consisted mainly of closed ended questions. The use of closed ended questions method was employed because it enabled isolation of the responses from external influences unlike the open ended questions (Cooper & Schindler, 2014). A five point Likert scale was employed in seeking responses for the closed ended questions.

The questionnaire comprised of six sections, which are: general information, virtual enterprises, process integration, market sensitivity, partners network, and competitive advantage.

3.5 Research Procedures

In line with the research design, the research used a structured questionnaire to collect primary data from the selected respondents in Unilever Kenya. The questionnaire was pre-tested using a random sample of 5 respondents in order to determine the validity and reliability of the questionnaire. The questionnaire was then fine-tuned to ensure the research
questions are well structured and relevant, the wording is clear and that the length of the questionnaire is appropriate.

The fine-tuned questionnaires were then administered to the target respondents. Questionnaires were emailed to respondents in the Industrial Area factory site whereas a physical drop and pick method was used for the respondents in the Karen Head Office. The respondents were given one week to complete the questionnaires – however most respondents reverted with their questionnaires promptly within a day of receiving the questionnaire therefore negating the need for any reminders.

3.6 Data Analysis Methods
Mugenda & Mugenda (2009) defined data analysis as a process of inspecting, transforming, cleaning and modeling data with the objective of bringing out useful information, supporting a decision and suggesting a conclusion from a research. The raw data collected was sorted and edited as the first step towards its analysis. The questionnaires were then organized and classified according to the patterns given by the respondents and their homogeneity. The data was then coded and keyed into the Statistical Package for Social Sciences (SPSS) for analysis. This is a computer aided tool for the analysis that help to generate descriptive statistics such as means, standard deviations and percentages which was used in analyzing the data. Both descriptive and inferential statistics were used in the analysis of the data. Descriptive statistics included frequencies from which mean and standard deviation were derived. Inferential statistics included correlation and regression. The analyzed data was summarized and findings reported. Data was presented in form of tables and figures to communicate underlying patterns and to generalize the sample findings to the population.

3.7 Chapter Summary
This chapter gives the research methodology that the study adopted in identifying respondents, data collection and analysis. The study adopted a descriptive research design to study a representative sample of 36 management employees of Unilever Kenya acquired through stratified random sampling. A questionnaire was used to collect data whose reliability and validity was assessed by pre-testing, after which descriptive and inferential analysis was undertaken on collected data for interpretation. Chapter four provides data analysis and interpretation.
CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction
This chapter presents the results of data analysis, and interpretation of the study findings derived from the analysis of data collected. The findings have been presented using charts and tables. A total of 36 questionnaires were administered to the target sample at Unilever Kenya from which 86% response rate was realized with only 5 respondents failing to respond to the submitted questionnaire pertaining to the study. This chapter provides information on the demographic outlay of the study, findings from each of the research objectives, and a chapter summary.

4.2 Demographic Review
The demographic characteristic depicted within a study sample is important as it assists in understanding the population under study in terms of character, behavior and culture. The study collected data from respondents who came from different backgrounds. The following sections discuss their demographic characteristics.

4.2.1 Gender
The study sought to highlight the gender representation in various echelons of the organization under study. This was captured in the study among the respondents who took part as presented in Figure 4.1.

Figure 4.1: Gender Distribution
It was observed that majority of the respondents who took part in this study were male (55%) while female respondents accounted for 45% of the respondents. Given that the male segment is a bit higher than the female segment in most Kenyan workplaces, this shows that the participation mimicked the population characteristic, hence the study can be said to be representative in terms of gender. This confirms that there was adequate representation of both gender in the study hence the study lacked gender biases.

### 4.2.2 Respondent Education Background

The level of education of a person shows the expertise a person has and their ability to process and comprehend information provided to them. The education level of the employees interviewed at Unilever Kenya is shown in Figure 4.2.

![Figure 4.2: Education Background of Respondents](image)

The employees of Unilever Kenya interviewed in this study had various education qualifications. Most of them had reached the graduate level of education (45%) with those who had undergraduate level being 29% followed by those who had diploma level who were 16% of the respondents. The study further found that 10% of the respondents had acquired a postgraduate education level. This confirms that all the employees at Unilever Kenya have tertiary level of education (10%), an indication that most of those employed to work within the supply chain at Unilever Kenya are well educated.

### 4.2.3 Respondents Age, Years of Service and Level of Experience

The study sought to understand the age distribution of workers involved in the study. The age distribution of the respondents comprising of the Unilever Kenya employees is as shown in Figure 4.3.
The study found that majority of the respondents were between the age of 35-44 years (32%), followed by those between 25-34 years (26%) and then those between 45-54 years (19%) and those below 25 years (19%). Those within the age group of above 55 years were observed to be only 3%. This indicates representation of all age-groups in the study, though the middle aged group (25-44 years) had a higher representation. This might be due to the fact that most of the employees at Unilever Kenya are within this age group with fewer being observed to be beyond this age gap. It was therefore noted that the Unilever Kenya employees age is distributed this way with those in their late youth and early forties being the majority while those beyond 50 years and those below 25 years being significantly fewer.

The issues of age and period of service and the level of experience go hand in hand. The study sought to find out the length of service period offered by the respondents at Unilever Kenya. The findings of this inquiry are as presented in Figure 4.4.
The study found that most of the respondents (39%) had spent between 5 to 10 years working within the Unilever Kenya supply chain while an additional 19% had spent above 10 years at the institution. Those who had been working at Unilever Kenya for 3-5 years were 26% while an additional 16% of the respondents had spent less than 3 years period in the company. The study also looked at the level of experience based on the number of years the respondents had operated in the supply chain industry whose outcomes are presented in Figure 4.5. It was found that majority of the respondents had 11-15 years of experience (35%), while 29% of the respondents had 5-10 years of experience, 19% had 16-25 years of experience and 10% had below 5 years of experience. Only 6% of the respondents had more than 25 years of experience in the supply chain industry.

Figure 4.5: Level of Experience

These are indications that most of the respondents involved in the study knew the company well and its supply chain and are experienced enough to be able to offer the information required in the study, while not leaving out the views of the new entrants albeit minimal. We can therefore confirm that the study ensured representation of all age groups in the study population with varying level of experience and period of service at Unilever Kenya.

4.2.4 Departments Representation at the Unilever Supply Chain

The study also looked at the placement of the respondents at the various sections of the company for each of the respondents and the following findings were made as presented in Figure 4.6.
As presented in figure 4.6, it was observed that most of the respondents involved in the study worked in the procurement department (29%), while a significant number worked in the engineering and projects (19%), customer service & logistics (16%), and production (13%). Only a few of the study respondents were acquired from the quality (6%), planning (6%), manufacturing excellence (6%), and safety (3%) departments. All these respondents involved in the study were therefore in a position to provide all the desired information that the study required, and also confirms the representation of the face of the company.

**4.3 Process Integration and Competitive Advantage**

Process integration is one of the elements of agile supply chain management that ensures sharing information between supply chain partners, making it possible to have collaborative working between buyers and suppliers, joint product development, common systems and shared information. The study looked at various common process integration practices in the agile supply chain, and asked the respondents to rate their implementation at Unilever Kenya on five point Likert scale where 1= no extent 2= less extent, 3= moderate extent, 4= great extent and 5= very great extent. The outcomes of this inquiry are as presented in Figure 4.7.
The study found that according to its respondents, to a great extent, Unilever Kenya: focuses on managing its core competencies (M=4.318); outsources its non-core activities (M=3.829); is able to leverage shared information with its partners (M=4.068); does joint product development with their partners (M=3.795); and focuses on integrating with its distributors (M=4.021), suppliers (M=3.921), and internally within its functions (M=4.023). However, it was found that the company ‘to a moderate extent’: develops supply chain strategy jointly with its partners (M=3.041); jointly manages its processes with its partners (M=2.699), and openly shares information with its partners (M=2.966). These outcomes confirm that the company level of process integration is very relatively high at a mean rating of 3.67.

4.4 Partners Network and Competitive Advantage

Partners’ network is a key element of agility in the supply chain. It ensures organizations have better structure, co-ordinates and manages the relationships with their partners in a network committed to better; closer and more agile relationships with their final customers. The study looked at various partners network practices in the agile supply chain, and asked the respondents to rate their implementation at Unilever Kenya on five point Likert scale where 1= no extent 2= less extent, 3= moderate extent, 4= great extent and 5= very great extent. The outcomes of this inquiry are as presented in Figure 4.8.
Figure 4.8: Partners Network Ratings at Unilever

The study found that respondents’ views regarding the partners’ network practices at Unilever Kenya is such that to a great extent: the company works within a network of strategic partners (M=4.269); the firm has a great influence in running the network of partners (M=4.117); company focuses on development of long term stable relationships with its partners (M=4.094); the company employs a non-competitive approach to information flow/knowledge transfer (M=4.089); the company have joint rules of engagement with the partners (M=3.779); the company and partners share clear joint vision (M=3.531); and the company is in partner networks with partners who have valuable resource profiles (M=3.734). These confirm that partners’ network practices at Unilever Kenya are there to a great extent, at a mean of 4.06.

When asked to rate the extent of interactions with suppliers, distributors and competitors, the study found that the company maintains a network to a great extent with the: upstream partners i.e. suppliers (M=4.251); downstream partners i.e. distributors (M=4.462); and lateral partners i.e. competitors (M=4.312); an indication that a great level of networking with the partners for the company happens at all levels of the firm.
4.5 Market Sensitivity and Competitive Advantage

A supply chain is capable of reading and responding to real demand, hence is regarded as being market sensitive, more so for agile supply chain. Market sensitivity establishes norms and beliefs that shape an integrated supply chain effort to respond efficiently and effectively to customers and competitors. Market sensitivity considers two components of customer orientation and competitor orientation. This study sought to understand the various practices of market sensitivity instituted at Unilever Kenya. The study requested respondents to rate the observation of various market sensitivity practices at Unilever Kenya on a five point Likert scale where 1= no extent 2= less extent, 3= moderate extent, 4= great extent, and 5= very great extent. The outcomes are as presented in Figure 4.9.

![Market Sensitivity Ratings at Unilever](image)

**Figure 4.9: Market Sensitivity Ratings at Unilever**

The study found that the respondents rated the market sensitivity practices at Unilever Kenya to a great extent. It was observed that the respondents rated market sensitivity to a great extent that Unilever Kenya: is more demand-driven than forecast-driven (M=4.163); has sufficient understanding of target customers (M=3.550); has invested on market intelligence to capture demand trends (M=4.000); has invested on the use of IT to capture demand trends (M=4.279); is motivated to provide offerings that uniquely meet the needs of the target market (M=3.953); have a shared view of real demand along the supply chain (M=4.116); and generally understands the strategies of the key competitors in the industry (M=4.934).
To a moderate extent, Unilever Kenya: generally understands the strengths of key competitors in the industry (M=3.465); and generally understands the weaknesses of the key competitors in the industry (M=3.349).

4.6 Virtual Enterprise Practices and Competitive Advantage

Agile supply chains are also hinged on the virtual enterprises. The study sought to find the link between virtual enterprise practices at Unilever Kenya and competitive advantage. The study assessed virtual enterprise practices through ratings by the study respondents on a five point Likert scale where 1= no extent 2= less extent, 3= moderate extent, 4= great extent, and 5= very great extent. The results realized are as presented in Figure 4.10.

![Figure 4.10: Virtual Enterprise Practices at Unilever Kenya](image)

The study found that to a great extent, Unilever Kenya: is involved in temporary union with other firms as a strategic response (M=4.023); at times collaborate with other firms to take advantage of market opportunities (M=3.721); uses information technology as a link-up with network of partners (M=4.256); and that virtual enterprise practices are a deliberate strategy rather than a reaction to an emerging opportunity (M=4.093). These confirm that Unilever Kenya has implemented virtual enterprises practices that allow it to acquire agility.

However, the study found that to a less extent, the role played by managers themselves in Unilever Kenya relations with key partners has today been taken over by technological interfaces (M=2.109).
4.6.1 Competitive Advantage

The study also looked at various indicators of competitiveness available at Unilever Kenya to assess its competitive advantages. Respondents commented on the extent to which they observed various competitive indicators presented to them on a 5 point Likert scale where: 1= no extent, 2= less extent, 3= moderate extent, 4= great extent, and 5= very great extent. The outcomes are as shown in Table 4.1.

Table 4.1: Ratings of Unilever Competitiveness

<table>
<thead>
<tr>
<th>Competitiveness</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our production lead times are optimal</td>
<td>3%</td>
<td>0%</td>
<td>15%</td>
<td>50%</td>
<td>32%</td>
<td>4.068</td>
</tr>
<tr>
<td>Our On-time-In-Full scores are competitive</td>
<td>4%</td>
<td>14%</td>
<td>13%</td>
<td>44%</td>
<td>25%</td>
<td>3.720</td>
</tr>
<tr>
<td>We have flexibility in responding to changes in order volumes</td>
<td>8%</td>
<td>7%</td>
<td>19%</td>
<td>32%</td>
<td>34%</td>
<td>3.780</td>
</tr>
<tr>
<td>We are responsive in responding to consumers tastes &amp; preferences</td>
<td>0%</td>
<td>4%</td>
<td>26%</td>
<td>42%</td>
<td>28%</td>
<td>3.920</td>
</tr>
<tr>
<td>Our firm offers supply of supporting services, such as after-sales service</td>
<td>1%</td>
<td>2%</td>
<td>22%</td>
<td>43%</td>
<td>32%</td>
<td>4.022</td>
</tr>
<tr>
<td>Our products are the most preferred by our target customers</td>
<td>1%</td>
<td>5%</td>
<td>28%</td>
<td>42%</td>
<td>24%</td>
<td>3.829</td>
</tr>
<tr>
<td>Our product prices are relatively lower than those of competitors</td>
<td>1%</td>
<td>7%</td>
<td>33%</td>
<td>43%</td>
<td>16%</td>
<td>3.655</td>
</tr>
</tbody>
</table>

The study found that to a great extent, Unilever Kenya’s: production lead times are optimal (M=4.068); are responsive to consumer’s tastes and preferences (M=3.920); offers supply of supporting services, such as after-sales service (M=4.022); products are the most preferred by the target customers (M=3.829). The study therefore confirms that from these competitiveness indicators, the company is fairly competitive (M=3.85). However, the company could improve its flexibility and delivery timeline scores which stand at a mean of 3.78 and 3.72 respectively. Its lowest mean scores are on product pricing relative to competitors (M=3.655); a fair score considering that not all its products offerings are positioned to serve the low cost market segment e.g. Flora, Dove and Domestos.
4.7 Inferential Analysis
The study’s main objective was to determine the effect of agile supply chain management on competitive advantage. The study undertook quantitative analysis that involved a correlation and a regression analysis that provided that offered the relationship between the study variables.

4.7.1 Correlation Analysis
The inferential analysis consisted of a Pearson correlation analysis that sought to find out the relationship between the agile supply chain management practices and the competitive advantage. The correlation analysis outcomes are as presented in Table 4.2.

<table>
<thead>
<tr>
<th>Correlation between Agile SCM practices and Competitive Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Process Integration</strong></td>
</tr>
<tr>
<td>Pearson Correlation: 0.431*</td>
</tr>
<tr>
<td>Sig. (2-tailed): 0.029</td>
</tr>
<tr>
<td>N: 31</td>
</tr>
<tr>
<td><strong>Partners Network</strong></td>
</tr>
<tr>
<td>Pearson Correlation: 0.626*</td>
</tr>
<tr>
<td>Sig. (2-tailed): 0.010</td>
</tr>
<tr>
<td>N: 31</td>
</tr>
<tr>
<td><strong>Market Sensitivity</strong></td>
</tr>
<tr>
<td>Pearson Correlation: 0.533*</td>
</tr>
<tr>
<td>Sig. (2-tailed): 0.045</td>
</tr>
<tr>
<td>N: 30</td>
</tr>
<tr>
<td><strong>Virtual Enterprises</strong></td>
</tr>
<tr>
<td>Pearson Correlation: 0.692**</td>
</tr>
<tr>
<td>Sig. (2-tailed): 0.000</td>
</tr>
<tr>
<td>N: 31</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

The study found that process integration has a statistically significant positive correlation with the competitive advantage of the firm (r=0.431; p<0.05). This is to imply that process integration and the competitive advantage realized in the firm are correlated 43.1% of the time when other factors are held constant. Similarly, the other factors such as partners’ network (r=0.626; p<0.05), market sensitivity (r=0.533; p<0.05), and virtual enterprises (r=0.692; p<0.01) were found to have statistically significant positive correlation coefficients. The significant positive correlations have the implication that the more emphasis firms apportion to agile supply chain management practices of process integration, partners’ network, market sensitivity, and virtual enterprises, the greater the chances that the firm will acquire competitive advantage.
4.7.2 Regression Analysis

The study assessed the impact of the study variables in process integration, partners’
network, market sensitivity, and virtual enterprises on the firm competitiveness using a
regression analysis. The outcomes of this analysis produced the outcomes presented in
Tables 4.3, 4.4 & 4.5. Table 4.3 gives a regression analysis summary which consisted of a
coefficient of determination, ANOVA and model specification statistics.

Table 4.3: Regression Analysis Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.853(a)</td>
<td>0.606</td>
<td>.510</td>
<td>.0317</td>
</tr>
</tbody>
</table>

* a Predictors: (Constant), process integration, partners’ network, market sensitivity, virtual enterprises

Table 4.3 discusses the regression model summary. It was observed that the study model
showed a high correlation coefficient of 0.853, an indication that there is a much defined
relationship between competitive advantage in Unilever Kenya and factors of agile supply
chain such as process integration, partners’ network, market sensitivity, and virtual
enterprises. This view was further enhanced when a very high coefficient of determination
\( R^2 \) of 0.606 was realized which indicates that the study independent variables (process
integration, partners’ network, market sensitivity, and virtual enterprises) can be able to
explain 60.6% of the variability in the dependent variable (competitive advantage), which
gives the indication that there exists a relationship between competitive advantage in FMCG
companies and their implementation of agile supply chain management, and the factors have
significant impact on competitiveness.

An ANOVA of the study model was carried out to further investigate this link and the
following outcomes of the study are presented in Table 4.4.
Table 4.4: ANOVA Test

<table>
<thead>
<tr>
<th>Model</th>
<th>Analysis</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>1.437</td>
<td>3</td>
<td>.455</td>
<td>1.208</td>
<td>.028(a)</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>12.164</td>
<td>28</td>
<td>.379</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>13.591</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a) Predictors: (Constant), process integration, partners’ network, market sensitivity, virtual enterprises

b) Dependent Variable: Competitive Advantage

The study carried out an analysis of variance (ANOVA) to test the variability between process integration, partners’ network, market sensitivity, virtual enterprises and competitive advantage presented in Table 4.4. According to the outcomes presented, the p-value (sig.) was 0.028 (P<0.05) indicating that process integration, partners’ network, market sensitivity, and virtual enterprises, have statistically significant influence on the competitive advantage of Unilever Kenya, an FMCG company. This confirms that the ability of process integration, partners’ network, market sensitivity, and virtual enterprises to influence competitiveness as observed in goodness of fit model (model summary) is statistically significant.

A further analysis towards confirming this relationship gave off the outcomes presented in Table 4.5 showing the regression model coefficients.

Table 4.5: Regression Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Variables</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>1.673</td>
<td>1.108</td>
<td>3.455</td>
<td>.031</td>
</tr>
<tr>
<td></td>
<td>Process Integration</td>
<td>.064</td>
<td>.294</td>
<td>2.582</td>
<td>.044</td>
</tr>
<tr>
<td></td>
<td>Partners Network</td>
<td>.454</td>
<td>.306</td>
<td>2.721</td>
<td>.039</td>
</tr>
<tr>
<td></td>
<td>Market Sensitivity</td>
<td>.181</td>
<td>.113</td>
<td>2.885</td>
<td>.033</td>
</tr>
<tr>
<td></td>
<td>Virtual Enterprises</td>
<td>.862</td>
<td>.136</td>
<td>4.392</td>
<td>.000</td>
</tr>
</tbody>
</table>

a) Dependent Variable: Competitive Advantage

The information contained in table 4.5 reveals the results of the regression analysis model. According to the findings, process integration (0.064, p<0.044); partners network (0.454, p<0.044), market sensitivity (0.171, p<0.033), and virtual enterprises (0.862, p<0.000), influence competitive advantage in Unilever Kenya since its relationship was observed to be
The regression model indicates that the relationship between the independent variables (process integration, partners’ network, market sensitivity, and virtual enterprises) and dependent variable (competitive advantage) have positive regression coefficients and a constant of 1.673. The regression model of this relationship is presented as:

\[ Y = 1.673 + 0.064 X_1 + 0.454 X_2 + 0.181 X_3 + 0.862 X_4 + \varepsilon \]

Where

- \( Y \) = Competitive Advantage
- \( X_1 \) = Process integration
- \( X_2 \) = Partners network
- \( X_3 \) = Market sensitivity
- \( X_4 \) = Virtual enterprises
- \( \varepsilon \) = error term

Therefore, we can confirm that agile supply chain management composed of process integration, partners’ network, market sensitivity, and virtual enterprises have a positive impact on competitive advantage in Unilever Kenya and similarly in the FMCG industry. It was observed that changes in agile supply chain management practices related to process integration, partners’ network, market sensitivity, and virtual enterprises would cause a subsequent change in competitive advantage of the firm at the FMCG industry. Therefore, agility has the ability to rapidly respond to changes in market and customer demands as the bearer of competitive advantage.

4.8 Chapter Summary

This chapter offers data presentation and the findings after data was collected and analyzed. The study outcomes were presented in form of pie charts, tables and figures for both descriptive and inferential statistics. The findings are documented under the various research questions being analyzed and discussed. The subsequent section is chapter five which offers a thorough discussion of findings and conclusions. The chapter also provides the study recommendations for improvement on each specific objective followed by recommendations for further studies.
CHAPTER FIVE

5.0 DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction
This chapter consists of four sections commencing with a summary followed by discussion of findings, conclusions, and recommendations. It confers the findings in the discussion section and relates with the previous literature and studies. It then draws the conclusions from the discussion of findings, the observed recommendations, and suggests further areas of study based on the study’s specific objectives.

5.2 Summary
Until recently, supply chains were understood mainly in terms of long-term upstream collaboration with suppliers, but an equal amount of emphasis is now paid to downstream collaboration with customers and lateral collaboration with competitors as a means of integrating the total value creation process. Hoek et al., (2001) is of the views that agility of the total supply chain is a measure of how well the relationships involved in the processes mentioned above enhance four pivotal objectives of agile manufacturing comprising of process integration, partners network, market sensitivity and virtual enterprises.

The purpose of the study was to assess the effect of agile supply chain management on the competitive advantage of Unilever Kenya, an FMCG company operating in Kenya. The research questions therefore sought to explore the effect of the various elements of agility specified as process integration, partners’ network, market sensitivity, and virtual enterprises on Unilever Kenya’s competitive advantage.

The study sought to answer these questions by studying the population comprising of the management team at Unilever Kenya from which a sample of 36 employees was sought with the collected data (collected using a structured questionnaire) being analyzed quantitatively to come up with the insights that inform the study questions. In data analysis, descriptive statistics and frequency distributions were used to analyze the quantitative data. SPSS was the data analysis tool used to interpret the findings. Mean, standard deviation and other data analysis techniques were used to determine the various views the respondents had on the
effect the four agile supply chain elements had on the competitive advantage of the organization.

The general findings are that agile supply chain has some influence on the competitive advantage realized at Unilever Kenya. The study found that all four agile supply chain components are applied and practiced in the company to a great extent – with process integration having a mean of 3.67, partner networks 4.06, market sensitivity 3.87 and virtual enterprise 3.64. The study also found that the ratings for the competitiveness of Unilever Kenya were high at a mean of 3.85 with confirmation that to a great extent, Unilever Kenya production lead times are optimal, On-time-In-Full scores are competitive, have flexibility in responding to changes in order volumes, responds to consumers tastes and preferences, offers supply of supporting services such as after-sales services, have products preferred by their target customers and product prices are relatively lower than those of competitors.

Through an inferential analysis, the study sought to find the influence of agile supply chain through its four elements of process integration, partners’ network, market sensitivity, and virtual enterprises on competitive advantage of Unilever Kenya. The study found positive correlation coefficients on the relationship between all four agile supply chain management variables and the competitive advantage of the firm. The study further found that at the company, process integration, partners’ network, market sensitivity, and virtual enterprises can be able to explain 60.6% of the variability in competitive advantage, an influence the study found to be statistically significant with each of the four agile supply chain management variables being observed to have positive regression coefficients, and hence change in agile supply chain management practices related to process integration, partners’ network, market sensitivity, and virtual enterprises causes a subsequent change in the competitive advantage of the firm.

5.3 Discussion

The business environment within the FMCG industry where Unilever Kenya lies can be considered as dynamic and complex. This has compelled companies plying in this industry to seek the more adaptive agility within their supply chains. In order to be able to achieve their goals, to respond and to deal with such high level of uncertainty, agility is considered as the successful way to stay inside their market place (Agarwal et al., 2006). Unilever Kenya has
not been left behind and operates within the agile supply chain management with all the elements of process integration, partners’ network, market sensitivity, and virtual enterprises being practiced in the organization.

5.3.1 Process Integration and Competitive Advantage
With a mean distribution of 3.67, it can be noted that the respondents agree that process integration is practiced on a moderate to great extent. The study found that Unilever Kenya has to a wide extent implemented process integration practices, such as focusing on management of core competencies, outsourcing non-core activities, leveraging shared information with partners, joint product development, and focus on integrating with distributors, suppliers and internally within functions. These confirm that process integration at the firm is at an advanced stage. This is supported by El-Tawy & Gallear (2012) who state that process integration involves to the collaborative working between buyers and suppliers, joint product development, common systems and shared information. It involves defining the key business processes involved in producing a company’s product or service. SCM then, encourages the active management of such processes across internal departments and across other supply chain partners namely, suppliers and customers, in order to deliver the externally based targets, especially real customer value.

Rainbird (2004) argues that the linkage between the (integration) processes can be achieved through either management, specific organizational capabilities or technology, but from the views posited by respondents, Unilever Kenya leverages all the three to undertake integration processes. Tajidan et al. (2013) found four levels of close internal integration, close integration with material suppliers, close integration with distributors/retailers, and close integration with customers similarly observed at Unilever Kenya, where they found that manufacturers with high level integration have better conditions of product quality, delivery reliability, process flexibility, and cost leadership which are all central to the realization of competitive advantage.

The study further found a link between process integration and competitive advantage where a statistically significant positive correlation and regression coefficients were realized; confirming that improvement in process integration practices at the firm would lead to improvement in the company competitive advantage. This is in line with findings of
Krishnapriya & Rupashree (2014) who found that process integration facilitates a “seamless chain along which information, knowledge, equipment and physical assets flow as if water,” enabling the effective delivery of value-adding results for customers thus enhancing key supply chain outcomes, performance and eventually the competitive advantage. Similarly, Juttner et al. (2006) observed that integrating demand creation and fulfillment processes is the key to delivering products that convey superior customer value while deploying resources efficiently thus contributes to competitive advantage.

The study further confirmed Ding et al. (2012) findings that both internal integration and integration with partners are important to the success of a firm. He claimed that internally, individual company integration of logistics processes and their supporting technologies are important, it was unable to confirm argument that though; they will not ensure sustainable competitive advantage alone as the company has to integrate with its supply chain partners to fully leverage future productivity through shared information. Unilever Kenya was observed to integrate internally and with its partners at a mean distribution of 4.0, hence the realization of competitive advantage. This study therefore confirms that process integration influences the competitive advantage of Unilever Kenya and would have a similar effect on other firms operating in the FMCG industry.

5.3.2 Partners Network and Competitive Advantage

Martin (2014) iterates that agile supply chain introduced the era of network competition where those organizations with the ability to better structure, co-ordinate and manage the relationships with their partners in a network committed to better, closer and more agile relationships with their final customers are rewarded. The concept of network includes four components of actors, links, flows and mechanisms. The study found that Unilever Kenya is greatly involved in a partner network within its agile supply chain at a mean distribution of 4.06. As was observed by Antoldi, et al. (2011) that social capital play a critical role in the partners network process, and that conditions facilitating this transfer are strongly associated with the facets of the three dimensions of social capital (structural, cognitive, relational), Unilever Kenya seem to have widely invested in social capital.

The study found that the company works within a network of strategic partners, has a great influence in running the network of partners, focuses on development of long term stable
relationships with its partners, who (the partners) have valuable resource profiles, have joint rules of engagement with the partners, share clear joint vision with partners, and employs a non-competitive approach to information flow/knowledge transfer. This level of adoption of partners network is expected to have had an impact on the competitive advantage of Unilever Kenya. It has been found that partners network with horizontal relations promote collective sourcing of resources and joint product innovations, while vertical relations can increase manufacturing productivity.

The study found that Unilever Kenya is within a partners network comprising of upstream partners i.e. suppliers, downstream partners i.e. distributors, and lateral partners i.e. competitors, a confirmation that the firm believes in enhancing a wide network with its partners. Empirical researchers seem to rally in support of the partners’ abilities to overcome the inherent tensions between competition and cooperation to achieve lasting results (Sukati et al., 2012). Repeated collaborations and partner networking enhance mutual learning experiences as inter-organizational trust emerges to substitute for formal protections against the fear of being ripped off. A study in manufacturing service industries found that higher levels of relational capital (social capital based on trust, respect and friendship) and integrative conflict resolution mechanisms (ensuring fairness and procedural justice) increased both corporate learning and protection of proprietary assets and hence the competitive advantage of the firm (Gilaninia et al., 2011).

Further inferential analysis revealed that partners network correlates with the competitive advantage of the firm and have positive regression coefficient confirming that partners network influences the competitive advantage of the firm. Alvarez et al. (2009) offers that a firm’s competitiveness profile is explained by its networking ability with partner networks indicators between two or more members of the supply chain tending to increase the probability of a firm’s competitiveness. Joao & Vasco (2013) observed that even if network objectives are not achieved, the firms acquires an opportunity for inter-organization learning and collective development of competitive advantage for the future competitiveness collectively within the networks. The views of these scholars are confirmed from the results of our study - correlation and regression analysis revealed that partners network has a statistically significant and positive influence on Unilever Kenya’s competitive advantage. Our results also confirm the views of Alvarez et al. (2009) who yielded that partner networks
between two or more members of the supply chain tend to increase the probability of a firm’s competitiveness.

5.3.3 Market Sensitivity and Competitive Advantage
The study found that to a great extent Unilever Kenya is more demand-driven than forecast-driven, has sufficient understanding of target customers, has invested on market intelligence and IT to capture demand trends, have a shared view of real demand along the supply chain, is motivated to provide offerings that uniquely meet the needs of the target market, and generally understands the strategies of the key competitors in the industry, and also generally understands - in moderation - the strengths and the weaknesses of key competitors in the industry. This confirms that Unilever Kenya is to a greater extent, market sensitive in both customer and competitor viewpoints; this is at a mean distribution of 3.87. Customer oriented market sensitivity offers higher levels of service quality and customer satisfaction which generate increased customer loyalty allowing the firm to command premium prices or sell more of their products at a given price, leading to a higher profit and/or market share and therefore competitiveness (Une & Sangle, 2014). According to Zhou et al. (2009), competitor orientation results in the reconfiguration of the value chain to secure scarce resources leading to cost advantage, hence the practices of Unilever Kenya enhance competitiveness.

Market sensitivity considers two components of market orientation i.e. customer orientation which focuses on “the sufficient understanding of one’s target buyers,” and competitor orientation which emphasizes the understanding of “the short-term strengths and weaknesses and long-term capabilities and strategies of both the key current and potential competitors” (Mason-Jones, et al., 2007), both of which are motivations of the firm towards innovation, product differentiation and customer led improvements in company products that positively influence the company performance and competitiveness.

Further correlation and regression analysis revealed that market sensitivity of Unilever Kenya positively and statistically significantly influences the company’s competitive advantage. The study confirmed that market sensitivity led agile supply chain influences the competitive advantage of Unilever Kenya. Similar outcomes were observed by various empirical research such as Zhou et al. (2005) and, Hult & Ketchen (2001) who observed that sensitivity to the market, in terms of both competitor and customer orientation, has a positive
effect on firm performance and eventually its long term competitiveness. However, Une and Sangle (2014) are of a negative view claiming that focusing on competitors, a firm may be unaware of its real interest, which may lead to inconsistent strategies and behaviors and, consequently, unstable product offerings. However, their views are not tenable in that their reference is only on the competitor side of sensitivity which when connected with the consumer sensitivity alleviates the fears observed by Une and Sangle. The study therefore confirms that market sensitivity have a significant influence on competitive advantage.

5.3.4 Virtual Enterprises and Competitive Advantage

The existence of firms as virtual enterprises is present in the FMCG industry and Unilever Kenya was found to have characteristics that point towards its involvement in virtual enterprises. Virtual enterprises are legally separate but operationally interdependent companies focused on responding to a market opportunity. They exist within a framework involving exchange of data between the firm, its consumers, suppliers, and competitors relying on information technology, and consequently creating a virtual supply chain which is information based rather than inventory based for the firm. The study found that to a great extent at a mean distribution of 3.64, Unilever Kenya is involved in temporary union with other firms as a strategic response, collaborates with other firms to take advantage of market opportunities, uses information technology as a link-up with network of partners, and undertakes virtual enterprise practices as a deliberate strategy rather than a reaction to an emerging opportunity. This confirms that Unilever Kenya have instituted virtual enterprise practices in its agile supply chain. Virtual enterprises are said to create a network of suppliers, manufacturers and administrative services to accomplish specific objectives, such as flexibility and responsiveness (Feng et al., 2010).

It has been widely accepted that virtual enterprises results in the reduction of transaction costs hence enhancing efficiency in the supply chain and allowing firms to achieve on-shelf availability and therefore much less inventory (Antoldi et al., 2011). Feng et al. (2010) confirms that virtual enterprises yield competitive advantages such as in sharing infrastructures, research and development and resources; linking complementary core competencies; reducing concept-to-cash time through information sharing; expanding production capabilities; gaining access to markets and sharing markets or customer loyalty; and migrating from selling products to selling solutions. The virtual enterprises within
Unilever Kenya have the characteristics of those explained by Antoldi et al., (2011) and Feng et al., (2010). The observations that Unilever Kenya is involved in temporary union with other firms as a strategic response, collaborates with other firms to take advantage of market opportunities, uses information technology as a link-up with network of partners, and undertakes virtual enterprise practices as a deliberate strategy rather than a reaction to an emerging opportunity indicates how vital the concept of virtual enterprises is at the firm.

Further inferential analysis of this relationship revealed a positive correlation coefficient and a positive regression coefficient, an indication that virtual enterprise practices at Unilever Kenya influences the competitiveness of the firm. It was found that a positive and statistically significant link exists between virtual enterprises and competitive advantage. This is in line with the findings by Une & Sangle (2014); Guerra (2006); Feng et al. (2010); Antoldi et al. (2011) who found that virtual enterprises does influence the competitive advantage of firms, though none of these had done an empirical research to confirm these sentiments. Therefore, virtual enterprises influence the competitive advantage of Unilever Kenya and other similar companies in the FMCG industry.

5.4 Conclusion

5.4.1 Process Integration and Competitive Advantage

Process integration is a key influence to the competitive advantage of Unilever Kenya. The study shows the importance of collaborative work between buyers and suppliers, joint product development, and common systems through which shared information between supply chain partners is leveraged. However, though inter-firm relationship role for firms is well recognized, there is a great failure rate in achieving its benefits, a key reason can being the failure to provide sufficient information sharing and flows within their supply. This could be a downfall to Unilever as it does not to a great extent share information openly with its partners – an element that it should greatly improve on. Process integration offers a firm the ability to use the concept of information sharing efficiently while benefitting from it. Manufacturers with high level integration have better conditions of product quality, delivery reliability, process flexibility, and cost leadership. Consumer products’ manufacturers with high level of integration can gain better positions and opportunities in cost leadership. The study, based on the results obtained, therefore concludes that process integration in agile
supply chain management is a key source of competitive advantage in Unilever Company and other similar FMCG companies in Kenya.

5.4.2 Partners Network and Competitive Advantage
The study found that partners network have a significant influence on competitive advantage at Unilever Kenya. Partners’ network is a key element in agile supply chain which seeks to leverage the respective strengths and competencies of network partners to achieve greater responsiveness to market needs. The competitive advantage that can be gained from partner networks is difficult to imitate making it more resistant to erosion through competition achievable through inter-organizational cooperation as a means to share resources and create synergies between firms. Partnership with customers has significant influence on product quality, delivery reliability, process flexibility, and customer service, but no influence on cost leadership, and partnership with supplier has significant influence on cost leadership, but no influence on product quality, delivery reliability, process flexibility, and customer service hence advocated for a combined customer and supplier customer partnerships. The study therefore concludes that partners network in agile supply chain management influences the competitive advantage of companies within the FMCG industry.

5.4.3 Market Sensitivity and Competitive Advantage
Market sensitivity was found to have a direct influence on the competitive advantage of Unilever Kenya. A market sensitive firm’s supply chain is capable of reading and responding to real demand. Market sensitivity establishes norms and beliefs that shape an integrated supply chain effort to respond efficiently and effectively to customers and competitors. Sensitivity to the market, in terms of both competitor and customer orientation, has a positive effect on firm performance and eventually its competitive advantage. The study therefore confirms that market sensitivity influences the competitive advantage of firms in the FMCG industry.

5.4.4 Virtual Enterprises and Competitive Advantage
The study observed that virtual enterprises have a significant positive influence on competitive advantage of firms. Virtual enterprises create a network of suppliers, manufacturers and administrative services with the need to accomplish specific objectives, such as flexibility and responsiveness. Companies gain competitive advantages by providing
customers with better and faster services. One efficient way to satisfy customer needs is to collaborate with qualified partners with the necessary physical resources and capabilities. Virtual enterprises could yield many situational or competitive advantages such as sharing infrastructures, R&D, and resources; linking complementary core competencies; reducing concept-to-cash time through information sharing; expanding production capabilities; gaining access to markets and sharing markets or customer loyalty; migrating from selling products to selling solutions. The study therefore concludes that virtual enterprises have a significant impact on competitive advantage of firms in the FMCG industry.

5.5 Recommendations

5.5.1 Recommendations for Improvements
The study found that agile supply chain management influences competitive advantage. Therefore, the general study recommendation is that firms in the FMCG industry should emulate Unilever Kenya and adopt agile supply chain management so as to acquire competitive advantage associated with it. Additionally, companies within the FMCG industry should ensure that their strategic teams deliberately focus and implement all the elements of agile supply chain so as to realize further competitive advantage.

5.5.1.1 Recommendations on Process Integration
The study recommends heightening of process integration practices as they are critical to improve competitive advantage of firms within the FMCG industry. Unilever should also particularly focus on joint managing processes and openly sharing information with its partners to further improve on its process integration.

5.5.1.2 Recommendations on partners’ network
Partners network as a key agile supply chain segment was found to be a key contributor to Unilever Kenya competitiveness and therefore the study recommends that the company should ensure that its relationships with its partner networks is well maintained for the competitive advantage to be sustainable.

5.5.1.3 Recommendations on market sensitivity
Market sensitivity was observed to have a significant influence on the competitive advantage of Unilever Kenya, and hence was found to be central to the sustainability of the firm.
competitiveness. The study revealed that the organization to a moderate extent focuses on understanding its competitors’ strengths and weaknesses – it is recommended therefore that they improve on these to improve their market sensitivity.

5.5.1.4 Recommendations on virtual enterprises

It is recommended that Unilever better utilize technology in taking over some relationships with key partners that managers still handle – this will leave the managers to focus on more strategic functions. The study also recommends that other firms seeking to adopt agile supply chain management ought to consider introducing virtual enterprises at their institutions to leverage the benefits of acquiring a competitive advantage.

5.5.2 Recommendations for Further Studies

This was a case study and therefore was very limited in scope to only one organization and therefore suggests a comparative study to be undertaken to assess the influence of agile supply chain management on the competitive advantage of a group of firms in the FMCG industry which would be easier to generalize.

The study also suggests that more studies to be done in other geographical locations to clearly bring out this relationship and therefore ensure more understanding of the relationship between agile supply chain management and competitiveness of a firm.

Further analysis can be performed on this study as well to determine the relationship between respondents’ demographics and their resulting responses. This is so as to find out the influence of factors such as past experience in the FMCG industry and functional department on the views and opinions of the respondents.
REFERENCES


APPENDICES

Appendix 1: Introduction Letter

Claire M. Gichuki
United States International University
P.O. Box 14634 – 00800,
Nairobi.

To Whom It May Concern

RE: REQUEST TO COLLECT DATA ON UNILEVER AGILE SUPPLY CHAIN STRATEGY

I am undertaking a research to determine the effects of agile supply chain strategy on the competitive advantage of your organization. This is in partial fulfillment of the requirement of the Master of Business Administration (MBA) degree in Strategic Management program which I am undertaking at the United States International University.

Unilever has been chosen for the study based on its strategic importance in the achievement of the objective of this study. I therefore kindly request your participation in the collection of data through the attached questionnaire.

This is an academic research and therefore, the information obtained during the research process will be used strictly for academic purposes and will be treated with utmost confidentiality. Your kind support in this regard will be highly appreciated.

Thank you in anticipation.

Claire M. Gichuki
MBA Student,
United States International University - Africa
Appendix II: Research Questionnaire

This questionnaire is designed to collect data on the impact of agile supply chain strategy on the competitive advantage of firms in the FMCG industry with a focus on Unilever Kenya. Kindly respond to all the questions honestly and to the best of your knowledge, the information will be used for academic purposes only and will be treated as confidential.

Section 1: General Information

1. Kindly indicate your gender:
   - Male [ ]
   - Female [ ]

2. Indicate your age bracket:
   - Below 25yrs [ ]
   - 25yrs - 34yrs [ ]
   - 35yrs - 44yrs [ ]
   - 45yrs - 54yrs [ ]
   - 55 & above [ ]

3. Indicate your level of education:
   - Diploma Level [ ]
   - Undergraduate Level [ ]
   - Graduate Level [ ]
   - Postgraduate Level [ ]

4. What section of the Supply Chain are you involved in?
   - Procurement [ ]
   - Customer Service & Logistics [ ]
   - Planning [ ]
   - Quality [ ]
   - Production [ ]
   - Safety [ ]
   - Engineering & Projects [ ]
   - Manufacturing Excellence [ ]
5. How long have you worked within the Supply Chain department of the organization?
   Under 3 Years [  ]
   3-5 Years [  ]
   5-10 Years [  ]
   Above 10 Years [  ]

6. For how long have you been working in FMCG industry in Kenyan market? _____ Years

Section 2: Process Integration
7. Kindly rate the extent to which the following process integration practices are observed within Unilever. Rate your response on a five point Likert scale on which 1= no extent 2= less extent, 3= moderate extent, 4= great extent and 5= very great extent.

<table>
<thead>
<tr>
<th>Process Integration Practices</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unilever focuses on managing its core competencies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unilever outsources its non-core activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We develop our supply chain strategy jointly with our partners</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We jointly manage our processes with our partners</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We openly share information with our partners</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We have been able to leverage shared information with our partners</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We do joint product development with our partners</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. Kindly rate the extent of internal and external process integration within the firm and with external partners. Rate your response on a five point Likert scale on which 1= no extent 2= less extent, 3= moderate extent, 4= great extent and 5= very great extent.

<table>
<thead>
<tr>
<th>External Vs Internal Process Integration</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unilever focuses on integration with its distributors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unilever focuses on integration with its suppliers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unilever focuses on integration internally within its functions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


**Section 3: Partners Network**

9. Kindly rate the extent to which the following partners networking practices are observed within your firm. Rate your response on a five point Likert scale on which 1= no extent 2= less extent, 3= moderate extent, 4= great extent and 5= very great extent.

<table>
<thead>
<tr>
<th>Partners Networking Practices</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unilever works within a network of strategic partners</td>
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<tr>
<td>Our firm has a great influence in running the network of partners</td>
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<tr>
<td>Unilever focuses on development of long term stable relationships with its partners</td>
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<tr>
<td>We employ a non-competitive approach to information flow/knowledge transfer</td>
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<tr>
<td>We have joint rules of engagement with our partners</td>
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<tr>
<td>Unilever &amp; its partners share a clear joint vision</td>
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<tr>
<td>Unilever is in partner networks with partners with valuable resource profiles</td>
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</tbody>
</table>

10. Kindly rate the extent of horizontal and vertical networks in Unilever possesses with its partners. Rate your response on a five point Likert scale on which 1= no extent 2= less extent, 3= moderate extent, 4= great extent and 5= very great extent.

<table>
<thead>
<tr>
<th>Horizontal Vs Vertical Partner Networks</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate the extent of Unilever with its Upstream partners i.e. suppliers</td>
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<tr>
<td>Rate the extent of Unilever with its Downstream partners i.e. Distributors</td>
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<tr>
<td>Rate the extent of Unilever with its Lateral partners i.e. competitors</td>
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</tbody>
</table>
Section 4: Market Sensitivity

11. Kindly rate the extent to which the following market sensitivity are observed in Unilever.
   Rate your response on a five point Likert scale on which 1= no extent 2= less extent, 3= moderate extent, 4= great extent and 5= very great extent.

<table>
<thead>
<tr>
<th>Firm’s Market Sensitivity</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unilever is more demand-driven than forecast-driven</td>
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<tr>
<td>Our firm has the sufficient understanding of our target customers</td>
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<tr>
<td>The firm has invested on market intelligence to capture demand trends</td>
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<tr>
<td>The firm has invested on the use of IT to capture demand trends</td>
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<tr>
<td>The firm is motivated to provide offerings that uniquely meet the needs of the target market</td>
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<tr>
<td>Unilever and its partners have a shared view of real demand along the supply chain</td>
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<tr>
<td>Our firm generally understands the strengths of key competitors in the industry</td>
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<tr>
<td>Our firm generally understands the weaknesses of the key competitors in the industry</td>
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<tr>
<td>Our firm generally understands the strategies of the key competitors in the industry</td>
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</tbody>
</table>

Section 5: Virtual Enterprise Practices

12. Kindly rate the extent to which the following virtual enterprise characteristics are observed within Unilever. Rate your response on a five point Likert scale on which 1= no extent 2= less extent, 3= moderate extent, 4= great extent and 5= very great extent.

<table>
<thead>
<tr>
<th>Virtual Enterprise Characteristics</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>5</th>
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</thead>
<tbody>
<tr>
<td>The firm is involved in temporary union with other firms as a strategic response</td>
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</tbody>
</table>
Virtual Enterprise Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td>The firm at times collaborate with other firms to take advantage of market opportunities</td>
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<tr>
<td>Information technology has been highly useful in linking up our network of partners</td>
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<tr>
<td>The firm’s virtual enterprise practices are a deliberate strategy rather than a reaction to an emerging opportunity</td>
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<tr>
<td>Part of the role that used to be played by managers themselves in our firms’ relations with key partners has today been taken over by technological interfaces</td>
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</tbody>
</table>

Section 6: Competitive Advantage

13. Kindly rate the extent to which the following competitiveness characteristics are observed within your firm. Rate your response on a five point Likert scale on which 1= no extent 2= less extent, 3= moderate extent, 4= great extent and 5= very great extent.

<table>
<thead>
<tr>
<th>Competitiveness</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our production lead times are optimal</td>
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<tr>
<td>Our On-time-In-Full scores are competitive</td>
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<tr>
<td>We have flexibility in responding to changes in order volumes</td>
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<tr>
<td>We are responsive in responding to consumers tastes &amp; preferences</td>
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<tr>
<td>Our firm offers supply of supporting services, such as after-sales service</td>
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<tr>
<td>Our products are the most preferred by our target customers</td>
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<tr>
<td>Our product prices are relatively lower than those of competitors</td>
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<tr>
<td>Our product reach the market before those of our competitors</td>
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<tr>
<td>There is evidence of R&amp;D growth relative to our competitors</td>
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</tbody>
</table>

THANK YOU FOR YOUR PARTICIPATION