OPERATIONS RESPONSIVENESS AND COMPETITIVE ADVANTAGE OF FAST-MOVING CONSUMER GOODS MANUFACTURERS IN NAIROBI COUNTY
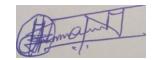
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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF BUSINESS ADMINISTRATION IN THEFACULTY OF BUSINESS AND MANAGEMENT SCIENCES, UNIVERSITY OF NAIROBI

2023

DECLARATION

To the best of my knowledge the content of within this research is an original works and as such has never been submitted in parts or in full to any college or university for any award of any kind. As far as academic integrity is concerned this paper has never been examined anywhere.

Signature   Date…28th November, 2023

GEOFREY OTIENO ODERO

D61/10611/2018

This supervision research project has been submitted with my approval as the appointed University supervisor.

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ACKNOWLEDGMENT

DEDICATION

This research is dedicated to my Family. To my grandmother, Pesilah Mugah (continue resting with Angels) and to my Grandfather Hesbon Ogol. To my father James Otieno Odero and to my mother Eunice Odero I will forever remain indebted to your guidance and I can never describe your sacrifices to us in words. To Margret you are a mother whose generosity knows no bound, to Godwin, when I was terribly down you hoisted me up, and placed a roof over my head, you are a true brother; may God grant you years to know that it was not all in vain. To the entire Odero's family I love all. To my son, Zion Imani Meisha, there is a foundation laid for you, I pray, you surpass Dad. To Joyce, I got to know you in the midst of my program, but you have already given me so much, and I seek to reciprocate back. To Mbuvi I will forever remember your stubbornness that made us persist with the project even when it was tiresome.

I say to you, ''thank you all''.

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LIST OF ABBREVIATION AND ACRONYMS

ANOVA   Analysis of Variance

CA   Competitive Advantage

CPM   Consumer Product Manufacturing

EPZA   Export Processing Zone Authority

FMCGMs   Fast-Moving Consumer Goods Manufacturers

FBM   Food and Beverage Manufacturers

KAM   Kenya Association of Manufacturers

OSR   Operations Systems Responsiveness

LPR   Logistics Process Responsiveness

SNR   Supplier Network Responsiveness

ABSTRACT

The study set to find how operations responsiveness and competitive advantage interacts among fast-moving consumer goods manufacturers in industrial area, Nairobi, Kenya. Dynamic capability, resource dependence and open systems theory supported this study. The study purposed to ascertain the contribution of operations responsiveness on competitiveness of fast-moving consumer goods manufacturers within the study area making them the units of analysis. Choice of study area was made because of proximity to the researcher, and its richness in information. The concept of responsiveness was found to be critical to manufacturing firms of fast-moving consumer products. Interest for study was also elicited by changing operating environment that requires firms to have production systems that accommodates dynamic environments. A review of previous studies showed a concentration on supply chain and agility aspect of responsiveness on competitive advantage, while related studies were all done outside Kenya giving rise to contextual and conceptual gap, justifying the current research. The study targeted 70 FMCGM firms, informed by the data base of KAM, 68 responses were obtained giving a 97% response rate. Response was obtained from operations, marketing managers or their equivalents to provide answers to semi-structured questionnaire used to gather primary data. The study concentrated on three facets of operations responsiveness: operations system responsiveness, logistics process responsiveness and supplier network responsiveness while investigating the impact of operations responsiveness on competitive position of focal firms. Conclusion were based on descriptive survey and inferential analysis. Most firms exhibited adoption of responsive practices. The research found a strong link between the study variables. The three facets of responsiveness were found to positively and significantly improve the competitive position of the firms involved in this study. According to the study supplier network responsiveness is the foundation of responsiveness while operations responsiveness was found to drive responsiveness through reliability and quality dependability. Logistics was found to be crucial in maintaining organizational presence in the market. However, to be responsive, product development time should be improved, and a robust and standardized production system that requires minimal reconfiguration in-between production runs adopted. A logistic system that accommodates routine and non-routine customer requests. The study relied on primary data collected from respondents employed by focal firms giving rise to response bias. Future studies are recommended to consider secondary and primary data. As well as exploratory and longitudinal design to open future research to more responses to eliminate the potential bias.

CHAPTER ONE: INTRODUCTION

1.1Background of the Study

Business pressure calls for a need to act quickly to events around the business because of the challenges they pose to the smooth routine operations of the firm; this calls for responsiveness from such entities. To be responsive includes strategies that are laid down to guarantee a competitive advantage by any organization that seeks an edge in competition. The demand from customers is the main pressure factor for a firm. Today, six key issues have been created by the contemporary business environment; the environment is more global, and currently, the customer drives the market and not the business; the available products have a short shelf life, requiring the frequent introduction of new products. Consumers constantly require low-quality products and quick responses to their demands (Young &Burns, 2003).

According to Thatte et al., (2012) responsive operation is how a production system copes with demand fluctuations through customers. A responsive operation applies to both products as well as service operations; according to Wu et al., (2001), it involves rearranging the production system to cater for varying unit required and new batches needed.

Three theories that supported this study were; Dynamic capability theory, Resource dependency theory and Open system theory. The first theory provides the link between competitive advantage and responsiveness, this is clear from the definition of (Teece et al., 1997), which alludes that, achieving a distinction in competition an organization must be flexible, and handle the change from the environment with speed. According to this theory a competent firm has a good chance of performing well. It requires proper matching of the firm's resources with the outside requirement

through appropriate conversion and resource-driven production; in short, responsiveness (Day, 1994). Preffer and Salancik (1978), suggested the theory of resource dependency, which argues that there are several constraints within the environment that affects normal business operations; this calls for actions aimed at navigating the constraints. The theory of open system is that environment influenced every decision made within the firm. The resources used in the firm are from the environment, and finished products are returned to the same environment, resulting interactions is open system. Ansoff and Sullivan (1993), pose it that businesses can get ahead only if they change to the environment, this is responsiveness.

There is high volatility in the markets all-round the globe; Kenya not spared; this uncertainty faced by businesses is a pressure trigger to stay competitive. All markets are faced with similar challenges. According to (Celen, Erdrogan & Taymaz, 2005), there is zero or low customer loyalty, increasing cost of operations, and a high level of competition. The only way to ensure survival and continuity in operations is to be responsive to the forces of environment.

1.1.1 Operations Responsiveness

Operations responsiveness surmises to how a manufacturing arrangement respond to the uncertainty from the external environment, which can affect production plan of the organization (Matson and Mc Farlane 1999). The backbone of operations responsiveness lies in the ability to significantly change product volume, meet unexpected orders, and match the expectations of customers through resource mobilization and utilization by adjusting manufacturing process (Lumus et al., 2000). To this end, the view of operations responsiveness comes out best if defined through the lens of manufacturing spectra.

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In every market anywhere in the world, regardless of the industry, two things are constant, increased competition and increased or changing demand by customers. Businesses therefore are forced to closely monitor the market to anticipate any change and match customers' expectations at a lower cost (Asamoah et al., 2021). This ability to respond to short term changes due to demand by customers is regarded as being responsive (Christopher, 2016). The performance of any business is achieved through quick service or product delivery ahead of others; this too is regarded as responsiveness (Hallgren and Olhager, 2009); meeting changes in demand using a manufacturing system is also considered as responsiveness albeit in operations (Thatte et al., 2012).

The role played by a responsive operation is integral to the manufacturing process and ensures on-time delivery of the right product in the right quality, quantity, and price that meet the needs of consumers. As change continues across the markets, many entities in manufacturing must be highly responsive in their production process, by bringing new products in the markets to compete with their peers in the industry. Responsive operations can be described as plans made by a firm to mitigate the change in environment with the view of satisfying their consumers by filling their current and recurrent needs (Thatte A., 2007).

1.1.2 Competitive Advantage

Competitive advantage according to Shusterman (2013) is the strategies a business employs to differentiate its product offering or service from its peers within the same industry, to give a consumer a choice to choose its products over competitors based on distinction. A defensive position created around a customer or a product is creating a competitive position (Li et al., 2006. To truly realize a competitive edge according to

Tracey et al., (1999), all distinctive features and qualities of the organization must be brought together; further, the right strategy must also be employed, correct and decisive managerial decisions must be made and taken at all times.

traditionally competition was approached from the lens of the market a firm chose to compete on (Day, 1994). This has drastically changed as competition is viewed from the angle of response to market needs promptly backed by a correct focus, (Stalk et al., 1992). Many managers agree that cost and quality remains the dominating dimension of competition, and that an organization that reduce cost and improves quality has an edge over others (D'Souza &Williams, 2000). Within the spectra of responsiveness, strategy to meet customer demand, changing or not ahead of others, is considered a competitive advantage. It is characterized by better quality, lower cost and short delivery period as dictated by the market and organization's logistics. Wheelwright (1978), confirms, production costs product quality, systems reliability and the speediness in distribution as the focal point for competitive manufacturing.

Adimo and Osodo (2014), alludes that competitive advantage is based on the value offered to the customer and not necessarily the price; the value offered, in this case, should be superior alongside other intrinsic benefits. According to Ojwang (2004), a firm must first have a competitive advantage before it can gain competitive edge; for this to happen that business unit must be efficient in its production and its product must possess the following qualities-high aesthetic appeal, durable, must be reliable, there should be speed of delivery into the market and must be cheap for customers.

Taking account of the studies that have been cited above and the work of other scholars, this study considers five elements of competitive advantage for this research; they are; the value placed on the product by the firm (its price/cost), perceived quality

by the customer (Product quality), delivery dependability, ability to innovate new products (Merchandise invention) and stretch to market (Li et al., 2006).

1.1.3 Kenya's Fast-Moving Consumer Goods Manufacturers

Brierly (2002), describes fast- moving consumer goods as those goods with short shelf life because of their nature or due to demand and availability of their substitutes; according to him, consumers view these goods as having low involvement when making purchase decisions, but to producers, these goods must be priced low, or within the range of competitor's prices, the low price is offset by mass production. According to Kinyua (2007), fast moving consumer goods, are goods classified based on their consumptions as either direct or indirect consumables. Their distribution network needs to be effective due to turnover. However, Wanjohi (2018), defines fast-moving consumer based on their characteristics, as those goods that sell quickly are usually cheap and have low-profit margins. However, because of frequency of purchase and demand, they have high- cumulative profit. In this industry products are used frequently, regularly and in mass (Acholla & Were, 2018).

The Kenyan history for Fast-Moving Consumer Goods is associated with the Dutch Shell corporation; when it first set shop in Kenya in the 1900s, at this time they were majorly dealt in importation of goods in bulk, distribution was done after bulk breaking products into smaller units for customers, the products were kerosene sold in cans and gasoline sold in drums, the company operations were domiciled in the coastal city of Mombasa because of the port. Following in the footstep of the Shell Corporation was the East Africa breweries which set shop in 1922; this trend continued, and after independence, the government of the day began to nationalize firms formerly owned by colonialist among them the Kenya industrial board which

was known for brands such as Cowboy, Omo Treetop and Kimbo, these were the household brands that dominated market till it became more liberal in the 1990s (www.co.cok.go.ke).

Within Kenyan boundary manufacturing is traced to pre-colonial era, though, real manufacturing of FMCGs became prevalent post-independence (EPZA, 2004). The growth of this industry at this time was slowed by low purchasing power and poor distribution network hampered by zero to inadequate supporting infrastructure due to low economic power. After the 1990s, post-second liberation era that had been associated with poor politics; media freedom arose, creating awareness, advertisements picked up, and information on various goods became more common. Further the improving the road network created a faster distribution network that allowed goods to reach many parts of the country. This move brought in many international entities that were searching for new markets for their products. The result has been a variety of products which has given the consumers autonomy and independence in choice variety.

Today the market is saturated but still creates opportunities and threats to players within the industry; this has leveled the playing field but has pushed competition higher.

1.2 Research Problem

The primary objective of firms is to operate continuously into the future by carrying out income activities uninterrupted. This aim is however put to serious test considering the turbulence in the external environment. Today the market faces stiff competition, both local and foreign; there is also change associated with the customers and products that they require. Many organizations, therefore, invests enormous

resources towards research and development to develop cheaper ways of production and better quality products with cheap price tags since the current customer demands value for money (Yeung, Henry & Coe, 2015). The constant change in the market is rapid and systemic and requires firms to be more responsive in their manufacturing process to provide an adequate response that meets customers' demand and outwit competitors to ensure survival, (Osei et al., 2019). Requirements by customers exact pressure on organizations, pushing them to be responsive in order to survive the stiff competition from the industry.

In the wake of covid-19 pandemic, there was a severe interruption in the normal manufacturing and distribution activities firms; this had a ripple effect on the customers who could not get the needed products at the time (Singh et al., 2021). While pursuing excellence in customer service, the need to maintain competition and relevance in the market, businesses strive to address different challenges that results from external and internal environment to survive. Managers and operations specialists must familiarize themselves with emerging trends, and businesses must be ready to address the changes in customer needs better than competitors to succeed. In studying the manufacturing supply chain industry, a study by Lambert (2014), postulated that there is a direct and sturdy association concerning responsiveness and demand by customers. Competitiveness is achieved when demands by customers are met quickly. Organizations that wish to compete their peers within their supply chain must comprehend what they need to accomplish faster than their peer. Building a responsive supply chain is key in an operation aimed at achieving competitiveness (Lambert, 2014).

All research work conducted so far reveal a positively skewed association of responsiveness vis a vi business performance, a view held by (Thatte, 2013) who studied how a responsive supply chain influences a firm's completion by carrying out a survey of 294 respondents from the Chinese supply chain, and its findings revealed that responsive supply chain contributes to competitive advantage. Another survey involving 200 manufacturing firms in Malaysia (Sukati, 2012), revealed a positive association between competition and supply chain responsiveness; this study used a multivariate regression analysis.

A firm that has responsive suppliers is able to bring to market new products faster than competitors. The speed of delivery is attained because of dependable suppliers. The measure of competition, in this case is, delivery speed and dependability. The competition itself is based on innovation and dependability (Rungtusanatham et al., (2003). A local study by Ndegwa, (2017) on responsive supply chain among hydropower-generating companies in Kenya revealed that, quick reaction by a supply chain to customer demand, permits competition in two frontages; time and quality. Similarly, a local study by Haji (2014) found that supply chain is better placed to adapt to fluctuating demands, it is also easier to overcome the environmental challenges at comparatively lower cost.

A review of past studies, local and international reveal that they all majored on the supply chain aspect of responsiveness. This current study however, sought to deviate from supply chain aspect of responsiveness and major on the operations aspects of responsiveness of a specific manufacturing unit and how it contributes to its competitive advantage. To address the observed gaps, the current research sought to employ a descriptive cross-sectional survey to answer the research question, what is

the contribution of operations responsiveness on competitive advantage of manufacturing firms in Nairobi? The unit of analysis were manufacturers of fast-moving consumer goods.

1.3 Research Objectives

The core focus of this research was to demonstrate how responsiveness in operations contributes to competitive advantage for manufactures of FMCGs within Nairobi County in Kenya. concisely the aim of the study was;

I.   To establish the extent of adoption of key dimensions of operations responsiveness in FMCGs manufacturers.

II.   Establish the relationship between operations responsiveness and competitive advantage of FMCGs manufacturers.

1.4 Value of the Study

This research is valuable in various ways to academicians, corporate and policy makers from different fields. Upon completion this study will be useful to both scholars and academicians in showing in-depth link between operations responsiveness and competitive advantage, it will guide future topics related to similar studies.

Managers usually seek to understand how environment affect the organizations that they lead, this study is useful to help management understand external environment and make resource response approaches to production thereby creating a competitive advantage since they shall have a knowledge of responsiveness and competitive advantage. To individual and policy makers such as Kenya Association of Manufacturers and Kenya National Chambers of Commerce and Industry, the research

is essential towards understanding the industry action in regards to the current environment as well provide a template or toolkit used in advising industry players as linked to dynamic theory so that they may have uninterrupted operation.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section cantered and delved into and explaining the literatures that supported the study; it also assessed the studies that have strived to explain the subject of responsiveness and competition. The objective was to reveal the research gaps that justified the need to carry out this study thereby answering the questions that had been raised by the researcher. This section also strived to provide insights to the study's that are similar to this current study, the chapter started by clarifying the major theories that guided this paper, they were; Dynamic Capability Theory, Resource Dependence Theory and Open System Theory.

2.2 Theoretical Foundations

This section centered the discussion on the theories that have made strides in explaining the subject of responsiveness and organizations' competiveness. The theory that introduced this study was Dynamic Capability Theory; it states that; a business's, the daily operations is integral and can push it to change its internal structure and resources to match the emerging trends as dictated by the environment. At the core of this theory is the internal operation of the firm and how its resources can be utilized to achieve competitive advantage. Resource dependence theory underscores a responsive approach in resource utilization to achieve competitive advantage. Systems theory is of the view that organization cannot exist in a vacuum and through the interaction with the environment its continuity in operations is assured.

2.2.1 Dynamic Capability Theory

Teece and Pisano (1994) explains Dynamic capability to refer to the speed and flexibility in handling a turbulent business environment to attain a competitive edge. Teece et al., 1997 opines that dynamic capability is matching the internal and external strengths of the business to strike a balance in a dynamic environment and to properly handle it.

The degree to which dynamic capability provides competitive advantage hinges on the industry that the firm operates (Shilke, 2014; Winter, 2003). Emphasis is always placed on a dynamic environment, because such environment requires firms to change more often, presenting the chance to carry out dynamic capability and recover the cost of development (Drnevich & Kriauciunas, 2011; Wilden & Gudergan, 2015). Teece (2007) suggest a basis to view dynamic capability comprising three elements; sensing, seizing and reconfiguring. Sensing concerns ongoing monitoring of firms' external environment and understanding the opportunities or threats posed, (Augier & Teece, 2009). Seizing is associated with continuous assessment of a firm's capability and resources (Wilden et al., 2013). Reconfiguration involves combining all resources of a firm its capacity to maximize its internal potential and balance the environment. (Sirmon et al., 2011, Teece, 2012) To develop both internally and externally and to make prudent use of resource can be done if an organization makes a resource responsive approach (Day 1994). Dynamic Capability is significant to this research since it explains the environment and strategies employed to achieve competitive advantage, it views responsiveness through the lens of input-output model of responsiveness.

2.2.2 Resource Dependence Theory

This concept was pioneered in 1978 by Pfeffer and Salancik and views firms as open systems which relies on the external environment, the theory postulates that constraints from external environment greatly affects the operations of firms; so they must seek ways of circumventing such interferences to ensure smooth uninterrupted operations, the basic assumption of resource dependency theory is events in the environment has a pointer to the decisions made in regards to internal operations of the organization, justifying the influence that external factors have on managerial decision taken within the organization as far as resources are concerned.

According to this theory, the resources a firm has, determines its position in the industry and its level of competition. Barnley (2001), the distinct assets of a firm sets it apart from others within the industry, gives it the needed advantage to compete favorably. The theory is significant to this study it explains responsiveness as the ability to decisively act promptly to key events that present opportunities or threats in order to compete by deploying resources of a firm optimally (Barclay and Dann 1996). The resource based view of achieving competition theorizes that extensive stretch of achievement by any firm is innovativeness, grounded on the in-house resources it posses and expending those resources to pursue competitive position over close alternatives (Holdford, 2018). Proper and optimal utilization of resources is key to responsiveness.

2.2.3 Open Systems Theory

This philosophy proposed that there is a continuous interaction between organizations and their environment, and that all organizations are greatly affected by their environment Scott (2005), suggests that that managers must interpret major events in

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the environment and the effect they have on performance of a firm to find a competitive edge over similar firms. According to Ansoff and Sullivan (1993), performance is enhanced when organization can get ahead and respond to change in the environment this they explained as; responsiveness.

Bourgeois (1980) suggested that, surrounding business environment greatly dictates the performance and operations by either creating new opportunities or threats, this interaction explains how the parts and the process in a system interacts and the relations formed, the relationship is depicted in operations input-output model, where the external environment provides raw materials, internal environment; using its systems transforms input and return them to the environment as outputs. Analysis of this theory reveal that the information shared between the firm and the environment during the acquisition of raw materials and other organizational variables and eventual marketing of the outputs determines performance (Burke and Litwin 1992). Open System Theory is significant to this study because it reveals key factors within the environment that are responsible for responsiveness.

2.3 Operations Responsiveness

Operations responsiveness (OR) is defined as ways in which a production system addresses changes in customers' demand which can occur in either service or manufacturing operations (Duclos, 2003), or the gradation to which a nod in the supply chain Manufacturing or Service addresses customers' requirements (Holweg, 2005; Prater et al., 2001). The concept of operations responsiveness anchors on flexibility conversion process, elucidated as the changing production system within a manufacturing setup (Upton, 1994; Parker & Wirth, 1999). Changing manufacturing is mainly focused on adjusting to changes during uncertainty with least problems

encountered. Prater et al., (2001), Duclos et al., and Lummus et al., (2003) singled out particulars that makes up supply chain flexibility and agility. In a constantly changing competitive environment there is need to structure firms to be flexible and responsive to customers (Gould, 1997; James- More, 1996). This researcher has singled out operations system responsiveness, logistics process responsiveness and supplier network responsiveness as what contributes overall to operations responsive. The subcontracts of operations responsiveness identified above are discussed below:

2.3.1 Operations Systems Responsiveness

ORS, is the capacity of a production process; to manage the change in customer demand in manufacturing or service operations. Operations within a service or manufacturing process are a key component of responsiveness (Duclos et al., & Lummus, 2003). The dimensions given for operation system responsiveness is inherent to a specific organization within a supply chain spectrum (Duclos et al., 2003), the dimensions are – quickly increasing or reducing volume of varying products as needed by clients, expediting emerging customer orders. To cope with this; the pre requisite enablers is a flexible system and a speedy response needed by the system are flexibility and speed of response.The dimensions of operations systems given to operationalize this construct include: promptly adjust the operation system to address the change in demand, promptly changing the manufacturing procedure of addressing changes in demand, reallocating personnel quickly to address change in capacity, reconfigure firm equipment to match the new demand, quickly expedite emergency orders, respond promptly to product volume variations of changes in as requested by customers.

2.3.2 Logistics Process Responsiveness

Logistics process responsiveness (LPR) is defined as the firms' outbound transportation and distribution network to fill customer demand, logistics is an important part in operation responsiveness as it deals with on time management of distribution of materials from supplier to the firm and then to consumption point, (Ricker & Kalokota, 1999). Focus of this study is outbound logistics of a specific business unit serving a known consumer market. Duclos et al., and Lummus et al., (2003) asserts that value to customer is created when a firm has the capability of filling unexpected orders, the dimensions for a responsive logistics that are considered in this study include; logistics ability to quickly respond to unexpected demand change, allocate the transport system to the demand changes, rearrange the warehouse to cope with the demand changes, speedily deliver expedited orders to customers.

2.3.3 Supplier Network Responsiveness

Supplier network responsiveness (SNR) is capacity with which main suppliers of a firm meet changes due to demand, by customers, this requires firms to have very responsive partners both upstream and downstream (Christopher &Peck, 2004), and they further add that responding quickly to a customer is dependent on the reaction time of suppliers in adjusting to volume changes. The dimension of supplier responsiveness construct for suppliers include, ability to change product volume quickly, change the product mix quickly to match requirement, on time delivery record from major suppliers, quickly process emergency orders, ability to accommodate new demands by customers.

2.4 Competitive Advantage

Christensen and Fahey 1984, Kay 1994, Porter 1980 all alludes that, the capability of outperforming competitors in the industry leveraging on organization attributes and resources is a competitive edge of a firm. The edge is gained by offering greater value than competitors. There are two ways in which competitive advantage can be achieved first, by cost advantage and second by differentiation. Cost advantage is the ability a business to offer similar products or services as its rivals at a lower cost. Differentiation on the other hand occurs when a business offers better products and services compared to competitor's porter (1985). Tracey et al., (1999), views competitive advantage as those qualities that distinguishes organizations from others within the market, to give them an edge in the market place. Competitive advantage is normally based on comparison; comparing yourself with other industry players to see where you rank. This study adopted the five dimension of competitive advantage by Koufteros et al., (1997), as way of measuring the performance of a unit of analysis which is the manufacturing firm, the dimensions are; Price/Cost, Quality, Delivery Dependability, Product Innovation and Time to Market.

Price compares the prices of our products with our competitors for similar goods within the market. Cost compares our production cost to those of competitors. To gain competitive advantage both our production cost and prices of our product must low compared to those of competitors (Daly,2002).

Quality compares our products to those of competitors according to the dimensions of quality as may be mentioned, which can be; functionality, performance, aesthetic appeal etc., to gain competitive advantage; the products offered by us by an individual firm must create higher value to customers in terms of performance (Koufteros, 1995).

Delivery dependability concerns the reliability of the firm to deliver the needed products by consumers in various markets; the consistency with which the firm provides the quantity and the quality of products to customers constitutes its dependability (Li et al., 1995). To gain competitive advantage the firm must be consistent in delivery, such that whenever a consumer seeks its brand he finds it.

Product innovation, a firm can choose to modify its product or introduce ones entirely, this process is undertaken to attract new customers, retain the old ones and to keep up with competition, if a firm can successfully modify its products or introduce new ones in the market frequently, then it is competing based on product innovation (Koufteros, 1995).

Lead time is a dimension of competition looks at the time frame between production and consumption, the shorter the period, the wider the market presence and the faster the acceptance rate for the product of that specific firm (Tersine et al., 1995).

2.5 Operations Responsiveness and Competitive Advantage

These two concepts can only be understood well if there is a specific customer and a market to serve in mind, firms prioritizes the needs customers, and try to achieve them quickly before competitors, this is linked to competitive advantage. Reacting to events, opportunities or emerging threats from the environment as an organization with the aim of maintaining a competitive edge is being responsive (Barclay and Dann 1996). According to Keen (1998), responsiveness is characterized by a close relationship with suppliers, is customer centered, is linked with information sharing and 'a get it right first time' principle.

Competitive Advantage compares different organization within the same industry, offering similar products and serving the same customer and market. Firms normally put in measures to mitigate any challenge that can arise from their environment competitors included (M.A Lewis, 2000). Bessant et al., (2003), postulates that a competing strategy in production must possess two things, flexibility and speed of response, this achieved using innovative response, these is called responsiveness. The view is shared by Slack (1993), which point that, responsiveness is a managerial responsibility of implementing changes geared towards achieving efficiency (cost reduction) and effectiveness (shortening lead time for production), to spur organizational performance.

2.6 Summary of Empirical Literature Review and Research Gaps

There are numerous knowledge gaps that are emergent from empirical works that were reviewed and the research gap is abridged in table (1.1) below. The works reviewed vary in outcomes, and in instances where the studies were looking at interrelated variables, the differences in verdicts can be elucidated by the design, unit of analysis or the region of the study where it was conducted.

Table 2.1: Summary of knowledge Gaps

Author	Area of Focus	Methodology	Study Outcomes	Gaps	Present Focus
Holweg (2005)	Investigation into supplier responsiveness	Exploratory study	Delivery dependability is a significant measure of responsiveness	Automotive Industry, Product dimensions of responsiveness	FMCGs- industry operations process of responsiveness

Author	Area of Focus	Methodology	Study Outcomes	Gaps	Present Focus
Thatte (2013)	Supply chain practices on responsive supply chain &competitive advantage of a firm	Survey design with 294 firms as target of the study	Supply chain practices contributes to supply chain responsiveness	Supply chain practices and supply chain responsiveness	Operations responsiveness and competitive advantage
Al-Hawajreh KM and MS Attiany (2014),	Effect of supply chain responsiveness on competitive advantage of manufacturing firms	Census Survey descriptive, correlation,and multiple regression technique use.	Operations system responsiveness contributes greatly to a firm competitive advantage	Study done in Jordan. operations systems, logistics process, and suppliers network responsiveness	The study focuses is based on the process dimensions of operations
Asamoah, Nuertey, Agyei-Owusu and Akyeh, J (2021)	Effect of supply chain responsiveness on customer development	Sample of 250 manufacturing and service firms	Operations systems responsiveness has a direct positive and significant effect on customer development	Ghana Kumasi region Customer development	Operation responsiveness and competitive advantage. Dimension of operations process responsiveness
Ali (2019)	Information sharing and supply chain responsiveness of manufacturing firms	Census survey 9 firms studied	Information sharing has positive relationship and significant effect on supply chain responsiveness of a firm	Firms listed at Nairobi Security Exchange Supply chain responsiveness of a firm	Fast-moving consumer goods manufactures. Operations responsiveness

Source: Author (2023)
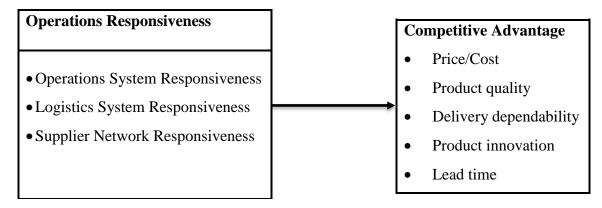
2.7 Conceptual Framework

Smyth (2004), describes theoretical framework as a skeleton designed by collecting concepts that forms a model which assists an investigator to accurately interrogate a problem centered around theoretic framework and existing literature, this project conceptualized an association in which dimensions of responsive operations (ORS, LPS, SNR) independent variable contributed to a firm's competitive advantage dependent variable as shown in the framework below.

Figure 1.1: Conceptual Framework

Independent Variable   **Dependent Variable**

Operations Responsiveness
• Operations System Responsiveness • Logistics System Responsiveness • Supplier Network Responsiveness

Competitive Advantage
• Price/Cost • Product quality • Delivery dependability • Product innovation • Lead time

Source Author: (2023)

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The format of this section, enumerated the methods employed to retrieve information of the study. Focus was on the design, population, method of data collection and the analysis method applied for the study.

3.2 Research Design

This research study employed descriptive research design. Specifically, descriptive survey design was preferred because it allowed the researcher to describe the fact of study at that specific time. This design had the merit of studying the respondent without manipulating the study variables, (Gage & Lewis, 2015). This design also allowed for collection of both qualitative and quantitative data using a questionnaire to provide accurate information (Creswell & Creswell, 2017). Descriptive survey design was important because it permitted the measure of issues using quantitative and qualitative data. Many scholars agree that descriptive research design gives accurate results, the findings from the studies proves the fact.

3.3 Population of the Study

Population of the study were all the subjects that the researcher decided to include in this study (Creswell, 2018). For this research, the population were the 70 FMCGs drawn from four sectors of the industry in Industrial area of Nairobi. The number of subjects for this study had been obtained from the database of KAM (Kenya Association of Manufactures). Population of the study was divided into two major categories, Food and Beverage Manufacturing (FBM) and Consumer Product Manufacturing (CPM). The sub categories are four; Fast Foods (Packed food,

Confectionery, Bread, Flour, Edible oil, Dairy Products and Tea leaves), Home and Personal Care products (Soaps, & Detergents, Skin Care Products and Sanitary Products), Beverages, (alcoholic and non-alcoholic) and Fashion, Apparel, beauty and cosmetics.

The table (1.2) below shows the sub- category and the numbers of firms that fall into each.

Table 3.1: Category of Firms

Category	No
1. Fast Food- Direct Consumable-(Packed Food, Confectionery Bread, Flour, Edible Oil, Dairy Products and Tea Leaves)	31
2. Home and Personal Care Products(Soaps & Detergents, Sanitary Products)	16
3. Beverages (Alcoholic and Non Alcoholic)	10
4. Fashion, Apparel Beauty and Cosmetics	13
Total	**70**

Source: Author (2023)

3.4 Data Collection Procedure for The Study

The collection of data relied heavily on primary data and the preferred tool of obtaining information was the questionnaire; this questionnaire was self-administered. It was divided into three distinctive sections, general information regarding the responds, the dimensions of operations responsiveness based on a desirable scale of 1 to 6. The third part of the research instrument was intended to cover competitive advantage based on objective and subjective measures of competitiveness on a scale of 1 to 6 also. Competitive advantage construct was tested using Price, Quality, Innovation, Lead Time and Dependability. In order to get accurate findings, the study had targeted operations or marketing managers or their equivalents as the main respondents, as they were able to give relevant information that was required for

operations activities and marketing activities that results in a competitive advantage. The research questionnaires were sent to responding firms using a means more that was convenient to them.

3.5 Reliability and Validity Tests

The goal of any research is to provide sound and valid findings which can be relied upon to make conclusions or decisions The soundness of any scientific investigation is known validity (Kaufman et al., 2005). Validity allows a researcher to confirm whether research instrument and the data provided can conclusively provide a meaningful information on the research (Kaufman et al., 2005). The validity test was for the research was conducted through a pilot test pre-study while reliability test was carried out by a Cronbach alpha test to measure both the reliability of the research data in order to draw meaningful conclusion.

3.5.1 Reliability Test Results

Before carrying out data analysis it was prudent conduct a reliability test to check for internal reliability and the consistency of items in a survey (Tavakol & Dennick, 2011), to do this a Cronbach alpha test is used, acceptable rule is; a data with a result of 0.7 and above is acceptable and reliable consequently a data while alpha values that are below 0.7 points to a weak and questionable validity of such data. In instances of low alpha values, some items used to measure a construct which creates ambiguity might be deleted to improve the overall reliability.

Table 2.2: **The results of Reliability**

Sub-variable	Total Items Measured	Alpha Results
ORS	7	.873
LPR	5	.856
SNR	5	.812
Competitive Advantage	13	.854

Source: Field Survey for Results of Reliability Test (2023)

Table 3 above shows the Cronbach alpha validity and test reliability results to indicate reliability, validity and internal consistency of the sub-constructs of operations responsiveness and the construct of competitive advantage. The above results show that operations system responsiveness which was operationalized by 7 items as having a score of .873 this shows a very good inter item reliability of this sub-construct. Logistic process responsiveness operationalized by 5 had a Cronbach alpha score of .856, this value is also good and acceptable and also show good internal reliability and consistency for analysis. Supplier network responsiveness was also operationalized by 5 items and it had .812 as its alpha value which is shows that it has good internal reliability and was consistent for analysis.

The construct of alpha of competitive advantage with 13 items measuring it gave an alpha value of .854, this also showed that it had a higher reliability level and internal consistency to allow for testing. In summery the results for Cronbach alpha value results for operations responsiveness and competitive were good for analysis for the study to give valid results

3.5.2 Validity Test

Validity test is critical in study as to assures a researcher, whether the technique employed by the study will achieve the desired conclusion. Blumberg et al., (2014) pose it that internal validity shows a causal link amongst the variable predicting the study. The current research purposed to elaborate if any of the 3 constructs of determinant variables within the study affected the dependent variable. External validity explained the replicability of the study findings in a larger sample or to wider population. According to Sekeran and Bourgie (2016), validity is either content or construct in nature. Construct validity can be gaged by through a research instrument employed by the study. The research construct objective was achieved by the questionnaire which its structure of construction borrowed from previous related literature.

Content validity relies on the format of the questions within the research questionnaire. Content objective was possible through conduct of a pilot study; the aim was to expose potential challenges inherent to administering the questionnaire. In the pilot test the researcher involved 45 manufacturing firms in industrial area not in the fast-moving consumer goods industry. The interviews were carried out using a questionnaire administered to marketing and operations managers or their equivalents. Of the initial target, 35 firms responded to the interview.

The filled pretest questionnaires were analyzed using SPSS. The structure of the questionnaire was divided in three sections. The pilot test results were descriptive and quantitative; these results revealed no problems with the data hence there was no need to readjust the questionnaire of research. These firms were not used in the final test, the final study concentrated on FMCGs.

3.6 Data Analysis

Preparation for data analysis involved examining the research instrument for completeness, arranging, coding and cleaning of data. The entity of investigation for this study were individual FMCGMs. The study employed descriptive unit of analysis such as mean score, frequency distribution and percentages to describe the demographical characteristics of the data, most data samples' sporadically clusters around the central measure of tendency and in capturing data, extensive considerations is on mean and standard deviation (Easterby-Smith et al., 2012).

It was important to establish the extent of adoption of operations responsiveness as well how the two study variable relates to each other that are; operations responsiveness and competitive advantage of the unit of analysis. To the demonstrate existence of relationship between all the variables Pearson model of correlation coefficient was used. For objective 1 descriptive statistics were used, to establish the extent of adoption of operation responsiveness by FMCGs manufacturers, and also to test objective 2 which was to institute the connection amid operations responsiveness competitive advantage of FMCGs manufacturers. To do this, the dimensions of operations responsiveness were regressed against competitive advantage. The regression equation appeared as:

$$CA = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \ldots\ldots\ldots\ldots\ldots\ldots\varepsilon$$

Where CA = Composite Index of Firm Competitive Advantage of Fast-Moving Consumer Goods Manufactures

β_0 = Constant

β_1, β_2, β_3 = Régression Coefficient

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$X_1 + X_2 + X_3 =$ ($X_1 =$ OSR, $X_2 =$ LPR, $X_3 =$ SNR) Composite Index for dimensions of Operations Responsive Measures

ε = Error Term

Table 3.3: Data Collection and Analysis

Research Objective	Analytical Technique	Interpretation
1.To institute the degree of implementation of key dimensions of operations responsiveness in FMCGs	Descriptive statistics	Percentage, Mean Scores and Standard deviation values To indicate the extent of adoption.
2.To establish the relation between operations responsiveness and competitive advantage	Multiple regressions analysis STEP1: $CA = \beta_0 + \beta_1 X_1 + ... \varepsilon$ STEP2: $CA = \beta_0 + \beta_2 X_2 +. \ \varepsilon$ STEP3: $CA = \beta_0 + \beta_3 X_3 +. \ \varepsilon$ STEP4: $CA = \beta_0 + \beta_4 X_4 +. \ \varepsilon$ Where: CA=Competitive advantage β_0= constant β_1=regression coefficients for operation responsiveness X= Composite Index for dimensions of Operations Responsive Measures	Adjusted R^2 to juxtapose the level of influence of OR to CA **F** to cumulatively conclude significance of regression models **t** test to determine the significance of dimensions of OR **β**to test to test the contribution of predicting variable to the study model

Source : Author (2023)

CHAPTER FOUR: DATA ANALYSIS PRESENTATION AND DISCUSSION

4.1 Introduction

Organization of this chapter followed this format; response rate, demographic characteristics, descriptive statistics the subsequently, correlations and regression analysis, a hypothesis based on the research objectives and the final part cover discussion and study's outcomes.

4.2 Response Rate

Response rate is the percentage of participants in a survey, research study or in a data collection drive as compared to those who are invited or qualifies to participate in the research. This study targeted 70 FMCGs manufacturers in industrial area, and collected 68 responses from the 70 indicating a 97% participation rate.

4.3 Demographic Characteristics of the Respondents

This section describes and measures the items under study using descriptive statistics models such as mean score of the respondents, standard deviations, minimum and maximum values of each study variables of the study in regards to the response given by the respondents. Means scores were utilized to show the position of the respondents based on their opinion on each question of the study while standard deviations simply indicated how far out the respondent's response were spread from the mean.

Table 4.1: Demographic Characteristics of the Respondents

Variable	Frequency (N)	Percentage (%)
Age	**68**	**100**
Below 30 years	2	2
31-40 years	14	20.6
41-50	37	54.4
Above 50 years	15	22.9
Gender	**68**	**100**
Male	40	58.8
Female	28	41.2
Education	**68**	**100**
Diploma	10	14.7
Bachelor's Degree	27	39.7
Post graduate Diploma	6	8.8
Master's Degree	22	32.4
Doctorate (PhD)	3	4.4
Position you hold in the company	**68**	**100**
Operations Manager	32	47.1
Marketing Manager	23	33.8
On whose behalf are you responding		
Operations Manager	6	8.8
Marketing Manager	7	10.3
Number of years who have worked in this firm	**68**	**100**
Less than 5 years	2	2.9
5-10 years	12	17.6

Variable	Frequency (N)	Percentage (%)
10-15 years	25	36.8
15-20	14	20.6
More than 20 years	15	22.1
Structure that best describe your company	**68**	**100**
Locally owned	14	20.6
Foreign owned	48	70.6
Foreign and locally owned	6	8.8
Structure of establishment of your company	**68**	**100**
Local presence only	13	19.1
Local and international	7	10.3
A subsidiary of international firm	48	70.6
Number of years in operations	**68**	**100**
Less than 5 years	0	0
5-10 years	0	0
10-15 years	7	10.3
15-20 years	11	16.2
More than 20 years	50	73.5
Category that best represent your firm	**68**	**100**
Food and Beverage Manufacturing (FBM)	43	63.2
Consumer Product Manufacturing (CPM)	25	36.8

Source: Field Survey (2023)

The characteristics of demography covered in table 4.1 above. Of the 68 respondents

in the study only 2 were below thirty years, 14 were between 31-40 years, 37 were

between 41-50 years and 15 were 50 years and above, this accounted for 2.9, 20.6, 54.4, 22.9 percent respectively. This shows that majority of respondents have matured in their profession and have been at it for a while and can provide relevant information concerning the topic of the study. The table shows that 40 of were male whilst 28 were female this represents a percentage of 58.8 and 41.2, from the figures the male to female ratio of respondents is fairly proportionate.

The education of respondents ranged from diploma to doctorate degree. Of the 68 participants 14.7% were diploma holders, 39.7% had bachelor's degree, 8.8% had post graduate diploma, 32.4% had master's while 4.4% had PhD's, cumulatively of the respondents 85.3% had at least bachelors as their lowest qualification in their respective professions the respondents were therefore, able to conceptualize the study instrument to provide appropriate responses as per the questionnaire including the diploma holders.

The respondents' job roles were sort by the study to validate their ability to give the information needed for the research and the study revealed that 32 respondents were operation while 23 were marketing managers accounting for 47.1 and 33.8 percent respectively, further; the study also considered a scenario where the main respondents were not present or unavailable to answer the research question, this was accounted through their designate or equivalent. Of the respondents; 6 responded on behalf of operations managers and 7 responded on behalf marketing managers this represented 8.8% and 10.3% respectively, again the total number of operation managers and marketing managers were 38 and 30 which shows that the ratio of the respondents as fairly apportioned.

Capturing how long the respondents had been in the service of their firm in order to gorge their ability to answer the question pertaining to operations responsiveness and competitive advantage of their specific firms, of this; 2 respondents had been with their firm for less than 5 years which was 2.9%, 12 respondents had worked between 5 to 10 years which represented 17.6%, 25 of the respondents had worked 10 to 15 years representing 36.8%, 14 of respondents had worked between 15 to 20 which accounts for 20.6% and 15 of those interviewed had been in employment of their firms for more than 20 years which is 22.1%. It was therefore evident that most respondents have been in the employment of their respective firms for over 5 years and this mean that they not only understand the operations of their specific organization but also its performance in terms of output, the summation of respondents that had been in service for their organizations for more than 5 years was 97.1% implying that the inherent answers by those who responded concerning their organization was accurate and in line with the goal of the research.

The ownership of each organization was considered for this study and the table reveals that 14 out the 68 of the firms surveyed are locally owned, this is 20.6%, 48 are foreign owned representing 70.6% while 6 are partly foreign and locally owned accounting for 8.8%, it is evident that majority of FMCGs are foreign owned. Further the study wanted to find out the establishment of each organization and it revealed that 13 have local presence only which is 19.1%, 7 have local and international presence represented by 10.3% while 48 are subsidiaries of international firms which is 70.6%, majority of firms are therefore subsidiaries of established international firms.

Addition to this, consideration accounted for years of operation of each sample unit as a pertinent issue for this study and it was established that 7 firms had operated for 10

to 15 years which was 10.3%, 11 firms have operated between 15 to 20 years this represents 16.2% while 50 of the firms have operated for more than 20 years which is 73.5%, it was clear that majority of firms have operated for a while and therefore understand the market and industry in which they operate. The study concluded by categorizing the firms into two main sub groups as either food and beverage manufacturer (FBM) or consumer product manufacture (CPM) and the number was 45 and 25 with a percentage of 63.2 and 36.8 respectively an indicator that most companies are food and beverage manufacturers.

4.4 Descriptive Measures of Study Variables

In this section the study presents the descriptive statistics of the variable in the study; operations responsiveness and competitive advantage. Mean and standard deviation of statistics components were used to describe the opinion of the respondents based on their agreement on the different statements covered within the study. Ranking of the obtained responses was carried out on six point Likert scale, not applicable represented by 1, not at all represented by 2, 3 represented to a small extent, to some extent was represented by 4 and 5 represented to a moderate extent while 6 represented to a great extent as a level of agreement.

Table 4.2: Dimensions of Operations Responsiveness

Dimensions of Operation Responsiveness	N	Mean	StD Deviation
Operations System Responsiveness	**68**	**5.02**	**1.47**
Our operations system is able to respond rapidly to changes in product volume demanded by customers		4.97	1.50
We are able to change our operations system to respond to change in product mix demanded by customers		5.06	0.60
Our operations system is able to efficiently expedite emergency orders demanded by customers		5.10	1.42
Our operations system can quickly reconfigure equipment so as to address demand changes		5.01	1.49

Source: Field Survey (2023)

Dimensions of Operation Responsiveness	N	Mean	StD Deviation
Operations System Responsiveness	**68**	**5.02**	**1.47**
Our operations system is able to promptly reallocate personnel to address demand changes		5.04	0.60
Demand changes influences our manufacturing process		4.99	1.36
Our operations capacity is demand		4.96	1.58
Logistics Process Responsiveness	**68**	**4.95**	**1.34**
Our logistics department responds to unplanned demand		5.09	0.68
Our logistics adjusts inventory levels to match demand changes		4.84	1.46
Our load and carrying capacity is dictated demand changes		4.84	1.61
We accommodate and deliver orders expedited by customers		4.76	1.56
We have fast delivery time of special orders		5.12	1.38
Supplier Network Responsiveness	**68**	**5.25**	**1.04**
Our suppliers are able to adjust merchandise capacity in a short notice		5.23	1.93
Our main suppliers have capability of varying mix of products at a moment notice		5.24	0.64
Our key suppliers are reliable		5.27	0.72
There is a history of timely routine delivery with our main supplier		5.24	0.72
Our major suppliers expedite unexpected orders by us		5.29	1.28
Total	**68**	**5.07**	**1.28**

Source: Field Survey (2023)

The independent variable of this research was operationalized by 3 sub-constructs that is; the dimension of OSR had 7 items that measured it while LPR and SNR were each measured by 5 items respectively. From the table above 4.2 the overall mean response for the items that measured the operation system responsiveness were between ($M = 4.96$, $SD = 1.56$ and $M = 5.10$, SD = 1.38) overall standard deviation was $SD = 1.28$. This result implies to a moderate extent that most firms have a responsive operations system all the standard deviations were above 1, this confirmed that majority of the

answers provided were scattered away from the mean, further confirming the level of agreement.

The logistics process responsiveness was measured by 5 items and it had a mean of between (M = 4.76, M = 5.12) and standard deviation of 0.68 and remainder being above 1, an indicator that majority of respondents agreed to a moderate extent to the fact that their respective firms has a logistics system that is moderately responsive, this goes ahead to establish that the organization represented by the respondents do have practice logistic responsiveness.

The supplier network responsiveness aspect of operations responsiveness was also measured using 5 items and all the items had mean score that was above 5 and a corresponding standard deviation of above 1 for all the items indicting that the respondents agreed that their respective firms do have a responsive supplier.

The overall mean for all the dimensions of operations responsiveness, was 5.07 which confirmed that the fast moving consumer goods manufactures in industrial area are responsive in their operation as indicated by the overall mean.

Table 4.3: Descriptive Measures of Competitive Advantage

Dimension of Competitive Advantage	N	Mean	StD Deviation
Competitive Advantage		**4.71**	**1.04**
Price		**4.30**	**0.76**
Our firm offer competitive prices		4.38	0.93
Our firm offer prices as low or lower than the market prices		4.22	0.64
Quality		**5.51**	**0.67**
Our firm is able to compete based on quality		5.66	0.61
Our product offer to customer is reliable		5.40	0.72
Our product offer to customer is durable		5.49	0.68
Our product offer to customer is of good quality		4.21	0.68
Delivery Dependability		**4.72**	**0.64**
We deliver to customer their orders on time		5.49	0.64

We are able to alter product offering to meet clients' needs		3.53	1.10
Innovation		**4.45**	**0.64**
We cater to customers' needs in the new products we plan to introduce		4.41	0.93
We provide customized products to customers		5.22	0.64
Lead Time		**4.11**	**0.79**
We turn over time in the market is higher than industry average		4.35	0.88
We introduce new products to the market faster than our competitors		4.49	0.68
We have fast product development time		4.44	0.70
Valid N (listwise)	68	**4.30**	**0.76**

Source: Field Data (2023)

Competitiveness (CA) was the reliant variable and was measured by 13 items, the items were divided under 5 main sub-components as; price, quality, delivery dependability, innovation and lead time. As depicted on the table above price aspect of competitive was measured by 2 items and had an overall mean of, ($M = 4.30$) and standard deviation of, ($SD = 0.76$) the implication is, most respondents interviewed agreed to some extent to offering competitive prices and at some point lower prices than that of the market. Quality aspect of competitive advantage was measured by 4 items and possessed a high overall mean score of, ($M = 5.51$, $SD = 0.67$) the value of standard deviation implies that most answers provide centered around the mean, measured items therein all had a mean above 5. Meaning that those interviewed agreed strongly to a moderate extent that their specific firm's base their competition on quality and that the specific product offer to customer is of good quality, reliable and durable.

The respondents were also gaged on how dependable their respective firms are in respect to consumers, in this the respondents agreed that they strive to deliver to customers their orders on time; and to some extent alter products offerings to meet

their customers' needs. Additionally, the concept of innovation was also measured by 2 items and there was a general agreement in to some extent that the firms' sometimes do provided customized items to customers and that majority of the firms cater to customer needs on the new products they plan to introduce. The last aspect of competitive advantage tested was lead time which was measured by 3 items, the respondents agreed they their firms to some extent do introduce their products on time before their competitors and that their firms to extent also strive develop new products faster their competitors and that the turnover time of their products is higher than the industry average.

4.5 Relationship Between of Operations Responsiveness (OR); OSR LPR, SNR and Competitive Advantage (CA)

The measure of strength and direction of association between two study variables is correlation analysis, according to Gogtay and Thatte (2017), the forte of relationship and the nature or the magnitude of the connection amongst variables course wise can either be positive or negative when presented in linear form. At the core of correlation analysis is coefficient of correlation denoted by r which establishes a linear relationship, it ranges from -1 to +1 on a straight line. A coefficient correlation of 0 indicates an absence of linear relation, a coefficient of 1 suggests a direct and perfect relationship between the study variables while that of -1 insinuate a perfect indirect relationship.

Table 4.4: Correlation Analysis Table for OR: (OSR, LPR, SNR) and CA

		OR	OSR	LPR	SNR	CA
OR	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	68				
OSR	Pearson Correlation	.635**	1			
	Sig. (2-tailed)	<.000				
	N	68	68			
LPR	Pearson Correlation	.610**	.747**	1		
	Sig. (2-tailed)	<.001	<.001			
	N	68	68	68		
SNR	Pearson Correlation	.738**	.757**	.770**	1	
	Sig. (2-tailed)	<.001	<.001	<.001		
	N	68	68	68	68	68
CA	Pearson Correlation	681. **	.678**	617. **	.615**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	
	N	68	68	68	68	68

**. Correlation is significant at the 0.01 level (2-tailed):
Source: Field survey of the study variables: 2023

It was very crucial to institute the relation concerning operations responsiveness and competitive advantage. The correlation table 4.4 above indicates the upshots of the analysis done. The results of study revealed that operations responsiveness (OR) in general measured with (OSR, LPR and SNR) and competitive advantage is positively and significantly related to competitive advantage (CA) the coefficient (*r*) showing the association for the two variable was $r(68) = 0.678$, $p= 0.001$ it was also statically significant with significance value of less than 0.05 meaning that any positive variation to OR is positively to CA. Relationship between operations system responsiveness and competitive advantage was also significant $r(68) = 0.617$, $p = 0.001$ with; the relationship between logistics process responsiveness and CA had a correlation coefficient value of $r(68) = 0.615$, $p = 0.001$, moreover the results of

correlation analysis between supplier network responsiveness and competitive advantage had correlation value of $r(68) = 0.681$, $p = 0.001$.

The results specified that operations responsiveness and the 3 sub constructs that operationalized it, all had a positive and a significant effect on competitive advantage. The implication is, a variation in the value of operations responsiveness and any of its 3 sub constructs will have a significant variation in the value of CA. The relationship between the two variables (independent & dependent) is direct or positive, meaning that an increased responsiveness leads to an increased CA. Consequently, a reduction in operation responsiveness also reduces CA. The study determined that the associated strength of the variables (OSR, LPR & SNR) and competitive advantage is strong. However, this result is not sufficient to draw a significant conclusion about the relationship.

4.6 Regression Analysis of the Study Variables

This statistical test investigated the nexus of operations responsiveness and CA. The analysis was critical for this study to establish the existence of a relationship between the two study variables; this was the second objective of the study. In order to do this multiple regression model was employed and F test was also performed for all the independent variables against the dependent variable; but first it was prudent to conduct a simple analysis amongst subcontracts of responsiveness variables against those of competiveness to test whether they contribute to competitive advantage before being summed up to carry out the multiple regression.

Table 4.5: Relationship Between Operations System Responsiveness (OSR) and CA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.678[a]	.366	.343	.50376

a. Predictors: (Constant), OSR.
b. Constant Dependent Variable: CA

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.595	1	0.595	11.601	.001[b]
	Residual	12.817	66	.254		
	Total	14.412	67			

a. Predictors: OSR.
b. Reliant Variable: CA

Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
(Constant)	.103	.892		.115	.001
OSR	.845	.248	.678	3.407	.002

a. Dependent Variable: Competitive advantage

The analysis between operations system responsiveness was done and it is presented as shown in the tables above to illustrate the relationship between the operations system responsiveness and its contribution to the dependent variable and the result was displayed above. Table 4.5 displays a positive connection for operations system responsiveness (OSR) pursued by fast moving consumer goods manufacturers and their competitive advantage as indicated by the r squire value of 0.366. The construct

of operations system responsiveness explains the extent of competitive advantage of the firms at 36.6% as indicated by the R square = 0.366.

The F value obtained by analysis of variance (ANOVA) to indicate model of fit for the data gave a result of an $F(167) = 11.601$ $p = 0.001$ which is less than 0.05. This indicated that the model was fit and strongly significant in use as a measure of competitive advantage at 95% confidence level. The results also indicated a linear relationship between operations systems responsiveness and competitive advantage of fast moving consumer goods manufactures. This was manifested by the results of regression coefficients. The beta coefficients of regression (β) composite scores for operations system responsiveness was $β = 0.678$, $t(68)3.407$, $p.002 < 0.05$. meaning that operations systems responsiveness significantly predicts competitive advantage.

4.6.1 Relationship Between Logistics Process Responsiveness and Competitive Advantage

The study also sought to find the relationship between logistics process responsiveness (LPR) and competitive advantage the results were subsequently illustrated as displayed.

Table 4.6: Model Summary of Relationship Between Logistics Process Responsiveness and Competitive Advantage

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.617[a]	.306	.273	.15404

c. Predictors: (Constant), LPR
d. Reliant Variable: CA
Source: Field Survey of LPR and CA (2023)

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	10.817	3	10.817	9.602	.001[b]
	Residual	3.248	64	0.13		
	Total	14.065	67			

Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
(Constant)	.582	.184		4.214	.000
LPR	.717	.041	.617	14.102	.007

a: Competitive advantage

The results from the table 4.6 above revealed that logistics process responsiveness (LPR) influences competitiveness directly the obtained coefficient results was 0.617. The result also indicates the influence of LPR on CA as statistically significant with an R square value of 0.306, and an F value 9.602; the implication is that; 30.6% variation in CA attributed to LPR alone. The ratio of *F* ratio illustrates the results from regressing LPR and CA the test result reveals a statistically significant outcome because of a p value that is less 0.05, this was a confirmation of goodness of fit of the regression model.

4.6.2 Relationship Between Supplier Network Responsiveness and Competitive Advantage

Lastly the study conducted an analysis between supplier network responsiveness against measures of competitive advantage and the outcome of which is displayed below.

Table 4.7: Model Summary of Relationship Between Supplier Network Responsiveness and Competitive Advantage

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.615[a]	.280	.263	.40531

a. Predictors: (Constant), SNR

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	12.554	1	12.554	35.161	.000[b]
	Residual	2.253	66	0.34		
	Total	14.012	67			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.102	.892		4.813	0.000
	LPR	.847	.249	.617	18.702	0.000

a. Dependent Variable: CA
Source: Field Survey for SNR and CA (2023)

The analysis carried out to illustrate the association amid supplier network responsiveness(SNR) and competitive advantage of firms was done and the results were presented in the tables 4.7 above. As displayed above there is a positive association amid supplier network responsiveness (SNR) of fast moving consumer goods manufacturers and their competitive advantage (CA) as indicated by the r squire value of 0.280. The supplier network responsiveness construct of independent variable explains the extent of competitive advantage of the firms at 26.3% as indicated by the R square = 0.263.

The F value obtained by analysis of variance (ANOVA) to indicate model of fit for the data gave a result of an F value of 35.161 with p-value of 0.001 which is less than

0.05. This indicated that the model was fit and strongly significant in use as a measure of competitive advantage at 95% confidence level. There is also a linear relationship between SNR and CA of fast moving consumer goods manufactures. As manifested by the regression coefficients results. The standardized regression coefficients (β) of the composite scores for supplier network responsiveness was 0.678 with a t-test of 18.702 and a p-value of .000**.**

4.6.3 The Relationship Between Operations Responsiveness and Competitive Advantage

Lastly a multiple regression analysis was carried out between operations responsiveness (OR) and competitive advantage. This analysis involved the independent variable (OR) and all its 3 sub constructs that is: operations system responsiveness, logistics process responsiveness and supplier network responsiveness (OSR, LPR and SNR). To show the contribution of each constructs to competitive advantage when combined and to reveal the resultant regression that expressed the relationship. The result from the analysis was presented below;

Table 4.8: Model Summary of Relationship Between Operations Responsiveness and Competitive Advantage

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.681[a]	.535	.530	.15404

e. Predictors: (Constant), OSR, LPR, SNR
f. Constant Dependent Variable: CA

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.519	3	0.506	181.121	.000[b]
	Residual	12.894	64	4.298		
	Total	14.412	67			

c. Predictors: (Constant), OSR, LPR SNR.
d. Dependent Variable: CA

Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
(Constant)	.582	.158		4.231	.000
OSR	.786	.373	.752	2.440	.016
LPR	.717	.389	.684	2.029	.007
SNR	.663	.212	.567	2.618	.013

a. Dependent Variable: Competitive advantage

From the table, operations systems responsiveness (OSR) had a Beta value of 0.752, logistics process responsiveness (LPR) had a value Beta of value of 0.684, while that of supplier network responsiveness (SNR) 0.567. Prior to any intervention from the dependent variables, competitive advantage is at constant value of 0.582. This implies increasing operations system with 1 unit, increases competitive advantage by 0.752, similarly increasing logistics process responsiveness increases competitive advantage by 0.684 units, additionally a 1 unit change in supplier network responsiveness and to a 0.567 unit change in competitive advantage. The significant values for the three sub-constructs were, 0.016, 0.007 and 0.013 respectively, this means that the association between operations system is a direct significant for operations system responsiveness (OSR) and CA is direct and significant, there is also direct linear relationship between

logistics process responsiveness (LPR) with CA, as well as SNR and competitive advantage due to their p values of (0.016, 0.007 and 0.013) which are all below 0.05 respectively, this indicates a significant a relationship between these three variables and CA.

From the result of the regression equation presented, prior to any intervention the competitive advantage of firms is at constant of .582 units. However, any slight responsiveness in operations leads to improvement in organization competitive advantage by 0.786 units. The results also showed that logistics process responsiveness and supplier network responsiveness increases competitive advantage with 0.717 and 0.683 units respectively. The implication from the study as revealed by the results attest to presence of a positive connection amongst the dimension of operation responsiveness and CA of FMCGs manufacturers investigated by the study. All the dimensions investigated also had p-values of 0.16, 0.007 and 0.13 respectively < 0.05 which demonstrated that the relationship was statistically significant.

Y= .0.582 + .752 Operations Systems Responsiveness + .684 Logistics Process Responsiveness + .567 Supplier Network Responsiveness.

From the illustration above; the regression equation shows that without operations system responsiveness competitiveness of FMCGMs in industrial area will stand at 0.582 units. An increase in operations system responsiveness construct of operations responsiveness necessitates a 0.752 increase in CA. Likewise, increasing LPR and SNR increases competitiveness by 0.684 and 0.567 units respectively. This implies that there is a positive relationship between competitive advantage development and operations responsiveness dimensions investigated.

The study outcome also espouses a significant relationship concerning all the dimensions of operations responsiveness since their p-values were less 0.05. Confirming that the relationship as statistically significant in contributing to CA.

4.7 Discussion and Interpretation of Findings

The result came up with the following study findings from the analysis of the data that had been obtained from the operations managers, marketing managers the designate of either, operations or marketing managers of fast-moving consumer goods manufacturers in industrial area. 68 respondents participated in the study, of the 68, 66 were above 30 years old; with a majority of these further revealed to be above 40. Only 2 of respondents were below 30 years. This revealed that age is a consideration to strategic position among firms in fast-moving consumer goods industry. The study further revealed that 54 of those interviewed had been employed by their companies for over 10 years, with 12 having worked for more than 5 years. This revelation confirmed that key leadership positions (operations and marketing) are based purely on experience in the specific area of specialization within the respective firms. The experience and length of service meant that individual respondents, understand their company and the overall industry are in a position to make strategic decisions.

Additionally, with age and the length of service, these individuals are seen to have matured in their profession, and tend to handle work pressure and make decisions in a composed and reserved manner as compared to younger individuals whose behavior might still be erratic. This study had targeted operations managers and marketing managers of firms in fast-moving consumer goods industry, but in envisioning a scenario where the marketing or operations manager were unavailable or unable to respond, their equivalents (designate) were considered. The findings revealed the

number of operations and marketing managers to be fairly apportioned. As evidenced by 55.9 and 44.1% that represented the operations and marketing managers respectively. The reason for this could be attributed to the nature of this particular industry, which is heavily reliant on manufacturing and intense sales of the finished products. The gender of the respondents was represented by 58.8% for male and 41.2% for female, this further revealed that the position of operations or marketing in FMCGs is slightly balanced. The higher number for male respondents however, could be explained by requirement of operations management that requires more dexterity and is more demanding and sometimes needs longer working hours as compared to marketing especially for peak seasons.

The study also revealed that 45.6% of the respondents had post-graduate qualification, 39% had a degree qualification with only 14% having diploma level of education, the implication was that all respondents had the ability to understand, grasp and comprehend the various issues contained in the study questionnaire and relate them to their firms, this also implied that these managers can prepare or come up with action plan for solving the issues that are either concerned with operations or marketing to achieve competitive advantage by their firms. At firm level the study recognized that most of the firms are foreign owned at more than 70% and only 20% are locally owned with 8% being owned both by foreign and local investors, this implied that majority of the firms operates as subsidiaries of foreign firms at over 70 percent with both local and international presence.

50 of the firms investigated had also operated in the country for more than 20 years representing 73.5% of the firms investigated, 11 firms have been operating for 11-20 years accounting for 16.3% while only 10.2% have operated between 5-10 years.

Consequently, the study also shown that most firms under investigation were in food and beverage manufacturing at 63.2% the rest were in consumer product manufacturing.

4.7.1 Operations Responsiveness Findings

Operations responsiveness was the autonomous variable of this study and it was operationalized by three sub-constructs; OSR, LPR and SNR. On OSR, the study revealed that most respondents agreed to moderate extent that their operations system expedites emergency orders when demanded by customers. The respondent also agreed that their operations is able to change the product mix demanded by customers. In order to achieve capacity, the respondents agreed that they sometimes have to reallocate personnel and change manufacturing process to confirm or align to demand. The respondents further agreed to some extent that their operations system has capability of reacting swiftly to demand variations of product by customers. This meant that the capacity of production is adjusted from time to time to confirm to product volume, most of the respondents interviewed agreed that this is the case with their operations systems.

The other aspect of operations responsiveness covered was, logistics process responsiveness. This is the function that is concerned with transporting both raw materials in for processing and finished products to the market. In regards to this aspect of operations responsiveness, the study established that, the logistic process of majority of the firms under the study responds quickly to unexpected demand. At the same time the logistics systems are able to effectively deliver expedited shipments to customers as indicated by the respondents. The study also found out that, the logistics systems of the focal firms account for unusual and unique customer request and are

also able to vary transportation carriers to account for demand variations to some extent. warehouse capacity of FMCGs are also adjusted based on demand as, revealed in the results.

On supplier network responsiveness, there was a general agreement that majority of the suppliers of the firms under study expedite emergency orders and also accommodate their clients (fast-moving consumer goods manufacturers) requests. Major suppliers were espoused to deliver on time, and change product mix within a short time to reflect particulars orders. The respondents also acknowledged to a moderate extent that, their suppliers are able to adjust product volume to match their orders within a short time.

4.7.2 Manifestation of Competitive Advantage

Competitiveness as a variable was measured by 13 items. The overall score in mean for competitive advantage was 4.71, the implication of this was that the was some level of agreement concerning the issues measured. Specifically, there was a general agreement among the managers on quality issue of competitive advantage variable. The respondents agreed to a great extent with all quality aspects of CA. There was a general agreement that their specific firms are able to compete on quality. And that their product offers to customers is good, durable, reliable and of good quality. This implies that quality is a key measure of competitive advantage.

The study also established that delivery dependability aspect of competitive advantage determines the level of competitiveness to a moderate extent. Specifically, the study established that delivering customer orders on time greatly contributes to competitive advantage to a great extent as pointed out by study's participants. While altering product offers to meet customer need only contribute to CA to some extent. The study

established that innovation also contributes to competitive advantage, and by catering to customer needs in new product development as well as offering customized products upon request; most respondents established to a moderate extent their capability to create competitive advantage. These findings were similar to Yusuf, Adeleye and Sivayoganathan (2003) who found that time to market, dependability, product innovation and greatly contributes to competitive advantage. There was an agreement to some extent by respondents concerning the price aspect of CA. Most respondents interviewed also agreed that their firms offer competitive or prices as low or lower than market prices to small extent. This response could be due to the fact that majority of the firms would want recoup their cost of product fast. Another explanation could be most companies set their prices in equivalence with the industry average.

The industry turnover time for majority of firms was however, established to be moderate. Many firms were discovered to introduce new products a head of their competitors to some extent, product development time was also discovered to be slow in majority of the firms.

4.7.3 The Outcome of Operations System Responsiveness, Logistic Process Responsiveness and Supplier Network Responsiveness on Competitive Advantage

The study established a positive and a significant relationship between the three sub constructs of responsiveness and competitive advantage. From the results obtained in correlation and regression analysis revealed that, a positive interaction between the two variables (independent and dependent). Correlation analysis revealed a strong interrelationship between the three dimensions of operation responsiveness amongst

themselves. The results of this study conformed to that of Ibrahim & Babicker (2020). Their study had equally indicated a strong interrelationship among the dimensions of supply chain. The scholars had carried an investigation into the relationship between operations responsiveness and logistics system responsiveness. Findings established that these variables strongly and significantly influence each other.

Similarly, the outcome of the present study indicates a positivity of relation amongst operations system responsiveness and CA. A positive relation was also determined to exist between supplier network responsiveness and competitive advantage. Additionally, logistics responsiveness also exhibited a positive relationship with competitive advantage. This mean that three dimensions of operations responsiveness considered on individual basis each contribute to competitive advantage.

The current research conforms to a study by Thatte (2013), which found that supply chain responsiveness to have a direct relationship, contributes positively and significantly to competitive advantage. The study is also similar to that of Al-Hawajre and Attiany, (2014), who found out that operations systems responsiveness greatly contributes to competitive advantage

4.7.4 The Influence of Operations Responsiveness (OR) on Competitive Advantage (CA)

The influence of operations responsiveness on CA was undertaken through the use of multiple regression. The analysis was employed to ascertain whether operations responsiveness had a significant influence on competitive position of FMCGs consumer goods manufacturers in industrial area, Kenya. The study was undertaken at a 95% confidence level. From the outcomes, the results demonstrated that OR

positively and significantly influences CA of FMCGs manufacturing companies in industrial area.

Operations system is the nerve of responsiveness, responsible for production and conversion of raw materials to finished goods was found to be key in determining degree of consumer fulfillment. This is realized by availing the finished products and ensuring demand in various are met which contributes to overall competiveness of the firm. This is carried out by expediting customer requests, responding to customer product mix, equipment reconfiguration and personnel reallocation in line with demand. However, manufacturing process and capacity adjustment are done moderately in respect to demand. These findings were similar to Thatte and Agrawal (2017), Al-Hawajreh and Attiany (2014), who established that high level of operations system responsiveness (concerned with production) creates the highest level of competitive advantage.

Logistics process responsiveness by various FMCGs within industrial area is carried out moderately. The firms specifically react quickly to unexpected demand and also effectively deliver expedited shipment demanded by customers, a slow response would mean losing out to competitors. The bottom line is achieving reliability through delivery dependability hence competitive advantage through customer loyalty. These findings differed with Thatte and Agrawal (2017), who found OSR and SNR to contribute significantly competitive advantage but not logistics process responsiveness. However, their study concentrated on supply responsiveness aspect of firms to competitive advantage while this study based itself on operations responsiveness and competitive advantage.

Supplier network of operations responsiveness was found to greatly contribute to competitive advantage by not only ensuring continuous operations; but that quality is guaranteed right from the source. Without reliable and a continuous supply of input, production would stall. Expediting emergency requests, on time delivery, supplier reliability, ability to adjust capacity are key determinant in building a responsive supplier network which can guarantee competitive advantage. These capabilities are initiated by a responsive supplier but consequently completed by a responsive logistics.

The study findings of the current were in line with other studies related to similar studies done. The result of this study confirm the results of prior studies of Asamoah et al., (2021), Ibrahim & Babicker (2020), Al-Hawajreh & Attiany (2014), had found a positive influence a positive influence of supply chain responsiveness on competitive advantage. The effect of supply chain responsiveness of competitive advantage of manufacturing firms. The study found that all sub constructs of supply chain operation system responsiveness (OSR), logistics process responsiveness (LPR) and supplier network responsiveness (SNR) affect competitive advantage (CA). The results also indicated that higher level of OSR created a higher level of CA. These result confirmed findings of Sarpong (2022) who found that all the subcontracts of responsiveness (OSR, LPR and SNR) are interrelated and contributes significantly to performance.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter culminates the study that examined operations responsiveness and competitiveness of FMCGs manufacturers within industrial area, Nairobi Kenya. the entire research, explained the dynamics of external environment and the challenge they pose to firms, and how these organizations strive to respond to such challenge in bid to continue operations while maintaining a position of competitive advantage.

Within this chapter, this study aimed to provide succinct summary of the key findings and discernment contained herein, drawing from the analysis carried out to provide a concise understanding of the contribution, of operations responsiveness to competitive advantage. The researcher also presented as per the evidence obtained in the course of the study, that highlighted the significance of responsiveness in giving organizations a competitive edge over others in the market. By providing these insights, the study will add knowledge to how operations responsiveness can improve a competitive position of a firm. Consequently, the specific drivers of responsiveness that contribute to overall responsiveness at each node were highlighted.

5.2 The Summary of the Study Findings

The interest of research, was in showing the contribution of responsiveness operations to competitive advantage of manufacturers of fast-moving consumer goods manufactures in industrial area, Nairobi Kenya, specifically the study set to the find the extent of adoption and the nexus between operations responsiveness (OR) and competitive advantage of firms. The study employed questionnaires as the main tool

for data collection. The result from the survey was primary data collected from 68 respondents out of the initial target of 70. The respondents were, operations, marketing managers or their equivalents working in manufacturing firm's within industrial area, their views were captured and used to illustrate the aspects of operation responsiveness of firms.

The findings showed all manufacturing firms to be responsive based on each of their mean value obtained. Specifically, results showed that, majority of firms change their operations systems to match product mix demanded by customers, this is achieved by reconfiguring equipment's to align with demand changes, or reallocating personnel to batch units that require immediate attentions. Logistics system was found to contribute to responsiveness by efficiently delivering expedited shipment. Firms also exhibited strong responsiveness through a network of suppliers and are able to adjust product volume as demanded in a comparatively short time, firms therefore align to demand. However, product development time by FMCGM firms were found to be low, this can be explained by the considerations that go into the process of developing a new product, overall the time length from idea conception, to bringing the product into the market. Consequently, majority of firms were found to be cautious in setting prices as low or lower than the market. This could be attributed to individual firm production factor consideration

The study inferential statistics to explore the effect of operations responsiveness on competitive advantage of manufacturing firms fast-moving consumer goods which was its second objective. The result revealed the relationship between competitive advantage and operations responsiveness to be positive and significant through operations logistics and supplier network. Operations responsiveness, with focus on

supplier network responsiveness allow firms to compete based on quality and to offer reliable products as required by customer. Combined logistics and operations responsiveness ensures that customer orders are delivered on time and that products are of the right mix as demanded by customers.

5.3 Conclusions on the Study Variables

From the outcome of the study, the researcher made several deductions regarding the outcome the research, the autonomous variable had on the reliant variable. These conclusions were made on operations responsiveness and its sub-variables as well the effect this variable had on competitive advantage as highlighted in the subsequent sections. The outcomes were restricted to the study variable as portrayed in the findings.

To ascertain this relationship, regression analysis was employed to probe the influence of operations on competitiveness of FMCGs manufacturing firms within industrial area. From the results of the study as demonstrated form the outcomes, there exist a significant and a positive association between and competitive advantage. Operations system responsiveness demonstrated a dominant contribution to competitive advantage by ensuring timely, consistency, and quality in production for reliable products that meet customers' expectations. The study also established that an operation system allows firms to compete based on quality.

The study also acknowledged the role played by an active supplier network towards operations system responsiveness. Quality of products delivered to customers starts from the source (suppliers). Reliability and dependability is also linked directly by the ability of suppliers to accommodate firms' requests. Therefore, there is need to

maintain a collaborative relationship with suppliers to guarantee a mutual and a strategic relationship rather than a traditional relationship that is transactional.

However, the study found fast product development time as an issue that limits firm competition. Hence the need to have a creative research and development department that can assure this aspect of responsiveness. The researcher also established that the sub-variables of operations responsiveness at individual level had positive and significant relationship. The quality dimensions, lead time were discovered to be the most visible indicator to achieving competitive advantage. It was also discovered that the interrelation between the dimensions of responsiveness lead to overall responsiveness; and that, supplier network responsiveness is vital to responsiveness as it establishes the foundation for operations system responsiveness charged with manufacturing.

5.4 Recommendations of the Study

The current research examined the effect operations responsiveness on competitiveness of FMCG's manufacturers. Also examined was the extent of adoption and relationship between the variables operations responsiveness and CA. The research was affixed on three theories: Dynamic capability, Resource dependence and Open system theories. A good study when completed should contribute to a corpus of knowledge, fill existing gaps and benefit managers, policy makers and scholars (Magutu, 2013).

The study established that operations responsiveness positively influences firm competitive advantage. These findings confirm Dynamic Capability theory. The goal of Dynamic capabilities is to achieve competitiveness from new frontiers by amplifying flexibility and speed while acclimating dynamic and turbulent

surroundings (Teece & Pisano 1994). Operations responsiveness through its three sub-variables are subset to greater firm capabilities. The mode in which firms respond to changes form the environment is linked greatly to the business processes of the firm; which is, its operations. Operations responsiveness have been rooted to stimulate performance thus endorsing the suppositions of dynamic capabilities.

The emergent market conditions due to change in environment, elicits the need for responsiveness, which is crucial for survival of business in service or manufacturing. Survival of these firms is hinged on their ability to compete. Achieving this feat on the other hand is proving difficult, because of the complexity of achieving product differentiation, due to similarity in functionality and use of products. However, the research underscored how responsiveness can be utilized at different nodes of operations within a firms' business operation to create competitiveness.

Responsiveness at the node of operation system in charge of production and conversion of raw materials was found to be key in determining competitive advantage. This is achieved by availing finished products as well as meeting demand by expediting customer requests and personnel reallocation in line with demand. These findings, supports Resource Dependence Theory which strive to balance between the constraints from the environment and internal resources to create superior competitive positions. This theory also has a speculative assessment about the associations between organizations including its alliances, and relationship between buyers and sellers (Barringer & Harrison, 2000).

Further, the findings of logistics and overall operation responsiveness supported the suppositions Open Systems Theory. Response is necessitated by the environment or a customer, such response can either be, pro-active or reactive in nature depending on

the organization's strategy. To achieve a meaningful responsiveness all three sub-variables of responsiveness, operations systems, logistics process and supplier network of a focal firm must work closely. This was revealed by findings of the study which showed interrelations among the three variables.

5.4.1 Managerial Recommendations

The study revealed that, the contribution of logistics to competitive advantage is timely delivery and ability to accommodate non routine customer request, as customer demands continue to be unique. Therefore, there is need for firms to have logistic systems that can accommodate non-routine customer requests. The reason for this is that, these unexpected requests are likely to be the new norm due to change in consumer demand consumption pattern that is becoming more unique.

Quality was found to be priority in responsiveness. Therefore, managers should not limit quality to products only, but apply it to the whole organization. An organization wide approach to quality, offer quality, reliable and durable products to customers. Additionally, quality is linked to the image (brand) of the organization allows it to compete based on quality. An organization wide quality therefore, goes a long way in ensuring that the competitive position of the organization is secured. The new operation system should not only guarantee quality in production but also quality policy embedded in activities of the organization. The study therefore strongly advocates for organization wide quality action to manufacturing firms, with a management strategy linked to the same.

Responsiveness in organization should not be option but a key in all business strategy to match the environment. Upfront to this, should be supplier network responsiveness, which avails the raw materials for the organization. It is also suggestion by the study

that new relationships to be adopted should be collaborative in nature, in line with suggestion (Arturo 2010). By establishing such relationships, it is easier to achieve long term goals outside the customary commercial and transactional relationship, (Chen et al.,2017, Dubey et al., 2020). This relationship also allows individual firms achieve a strategic lead time.

5.4.2 Scholarly Recommendation

The literature of responsiveness is a new frontier specifically with regards to operations as had been revealed by the reviewed literature. Majority of the existing literature have leaned towards agility as an aspect of responsiveness. The studies that have the literature of responsiveness have all delved into supply chain responsiveness of organizations. The findings of this study added knowledge on how responsive operations contributes to competiveness. It also succeeded in elucidating how the theories of Resource Dependence, Dynamic Capability and Open Systems links to responsiveness of firms. This study has therefore laid down a foundation for which future research works regarding operations responsiveness of organizations will be based.

5.5 Limitations of the Study

In the course of the study, the researcher met several challenges in obtaining data from the survey respondents. Access to majority of the firms in industrial area was met with a lot off bureaucracy, which made the data collection process unnecessarily long. The study also relied on data obtained through statement of the respondents working for the firms. This exposes the study to response bias, where majority of the responses might have been given in favor of their organizations.

The area of focus provided another challenge to the study. The study only targeted fast-moving goods consumer manufacturers in industrial area of Nairobi. By restricting the research to a specific industry and in specific geographic area, the generalizability of the study to other industry's might be questionable, as the factors surrounding fast-moving consumer goods manufacturers might not be representative of the challenges faced by other industries. Caution is invited before extrapolating the finding of this study to other industry. The study also encountered mobility challenges, moving from one industry to another within the confines of industrial area proved a constraint to the researcher, because one has to use a motor bike for transportation which was quite expensive, the researcher had to preplan the industries to be covered per day before an actual visit to a virtual route. Industry's along the same route were therefore covered at once

5.6 Suggestion of Areas for Further Studies

The study looked at how competitiveness in the manufacturing arena is influenced by operation responsiveness. The study also looked at how the three dimensions of operations responsiveness interacted with and affected the outcome of competitive advantage. Subsequent studies should introduce an intervening and mediating variable to the dimensions of operations responsiveness. Such as management characteristics to reveal whether management style of a firm enhances responsiveness of a focal firm or not. Further, this mediating variable will expose the role management plays in a firm's responsiveness and its competiveness.

Future studies should include a wider sample, this study only focused on fast-moving consumer goods manufactures, future studies on the other hand should mix all the manufacturing or consider service operations to find out whether there is a

relationship between responsiveness of such firms and their performance. To eliminate potential bias from the respondents, overreliance on primary data should be eliminated for data collection, the study proposes a mix method of data collection as well as analysis specifically longitudinal design should be considered for subsequent studies. Future studies should therefore, employ both primary and secondary data. With a mix method of data collection.

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APPENDICES

Appendix I: Questionnaire

Thank you for agreeing to participate in this survey. This instrument is designed for collecting data from FMCGs Manufacturers in industrial area. The data will be purposeful in exploring how operations responsiveness contributes to the competitive advantage of FMCGs manufacturers within Nairobi County, Industrial area. The purpose for collection of data is strictly academics and confidentiality is assured.

This questionnaire is to be completed by either, operations manager or sales and marketing manager or designate of either the two. This tool is categorized in parts to achieve the goal of the research. Kindly provide answers as truthful to the best of your knowledge. If there is any clarification you might need, please seek it.

Section A: General Information

Provide your answers by ticking the option that is accurate to you.

1) From the choices kindly mark your age.

Below 30 years	
Between 30 to 40 years	
Between 40 to 50 years	
Above 50 year	

2) Which gender describes you? (Male)....... (Female)…….
3) Which qualification matches your education?

Diploma	
Bachelor's Degree	
Post graduate Diploma	
Master's Degree	
Doctorate (PhD)	

4) The position that you currently hold in the company.

Operations manager () .... Marketing Manager ()

5) In case you are responding on behalf of someone (designate) indicate on whose behalf you are responding.

Operations manager () .... Marketing Manager ()

6) Indicate the number of years you have worked for this firm

Less than 5 Years () .... 5-10 Years () .... 10-15 Years () .... 15-20 Years () ....More than 20 Years () ....

7) What structure listed below best describes this firm.

Owned by Locals ()

Owned by foreigners ()

Partly owned by foreigners and locals ()

8) Describe the structure of establishment of your company.

Local Presence only ()

Local and international ()

A subsidiary of an international firm ()

9) Please indicate the number of years your firm has been operation

Less than 5 Years () .... 5-10 Years () .... 10-15 Years () .... 15-20 Years () ....

More than 20 Years () ....

10) Please show the category that best represent your firm.

Food and Beverage Manufacturing (FBM)....... ()

Consumer Product Manufacturing (CPM)........ ()

SECTION B: Operation Responsiveness of Your Firm

This scale should guide you in answering each item as related to your firm:

1= Not applicable 2= Not at all 3= To a small extent 4= To some extent 5= To a moderate extent 6= To a great extent

Operation Responsiveness- is defined as an organization's operations systems capacity to promptly fulfill varying demands of customers through, ORS, LPR and SNR.

Kindly insert a number which relate to the responsiveness of your firm to the listed dimensions.

11) Operation System Responsiveness

The capacity of your manufacturing system to tackle changes in customer demand.

Dimensions that operationalizes operations responsive system	Scale					
	1	2	3	4	5	6
Our operations system is able to respond rapidly to changes in product volume demanded by customers						
We are able to change our operations system to respond to change in product mix demanded by customers						
Our operations system is able to efficiently expedite emergency orders demanded by customers						
Our operations systems can quickly reconfigure equipment based on demand						
Our operation system is able to promptly reallocate personnel consequent to change in demand						
Demand changes influences our manufacturing process						
Our operation system capacity is demand based						

11) Logistics Process Responsiveness

The capability of outbound transportation and distribution network to fill customers demand.

Dimensions that operationalizes logistics system responsiveness	Scale					
	1	2	3	4	5	6
Our department for logistics responds to unplanned demand						
Our logistics system is able to adjust inventory levels to match demand changes						
Our load capacity is dictated by demand changes						
We accommodate and deliver orders expedited by customers						
We have fast delivery time of special orders						

13)Supplier Network Responsiveness

The capacity with which your firms' major suppliers address the changes in demand created by customers

Dimensions that operationalizes suppliers network responsiveness	Scale					
	1	2	3	4	5	6
Our suppliers are able to adjust merchandise capacity comparatively in a short time						
Our main suppliers are able to vary the mix of products at moment notice						
Our key suppliers usually billet our orders						
Faster transport to our facilities guaranteed by our main suppliers						
There is a history of timely routine delivery with our main suppliers						
Our key suppliers expedite unexpected orders by us						

Section C: Competitive Advantage of Your Firm

The qualities that distinguishes your firm from competitors to give your firm a competitive edge in the market.

14) Please mark a number for each statement that is congruent with your firm's activities concerning responsiveness

Dimensions that operationalize competitive advantage	Scale					
	1	2	3	4	5	6
Our firm offer competitive prices						
Our firm changes prices equivalent to the market						
Our firm is able to compete based on quality						
Our product offer to customers is reliable						
Our product offer to customers are durable						
Our product offer to customer is of good quality						
We deliver to customers their orders on time						
We provide customized products to customers						
We are able to alter products offering that meets expectations						
We consider the needs of customer when planning new products						
We introduce new products to the market faster than our competitive						

Our turnover time in the market is above the industry	
We have a fast product development time	

Appendix II: List of FMCGs Manufacturers in Nairobi Industrial Area
A. Fast Food- Direct consumables (Food, Confectionery, Bread Flour, Edible Oil, Dairy products and Tea leaves)

1. Kapa Oil Refineries
2. Bidco Africa ltd
3. United millers
4. Brittania
5. House of Manji
6. Ketepa
7. James Finlay
8. KTDA
9. Pwani oil
10. Mondelez
11. Brookside
12. Tropical heat
13. Farmers choice
14. Frigokens
15. Ben and Jerries
16. Safariland
17. Weetabix
18. IFFCO
19. Cardbury
20. Delmonte Foods
21. Fresh Delmonte Consolidated
22. Kraft Heinz Company
23. Land O Lakers
24. Nestle
25. United Aryan
26. Alysra
27. JV- Gokal
28. Patco industries
29. Pembe flour mills
30. Nairobi flour mills
31. Unilever

B. Home and personal care products (soaps & detergents, sanitary products)

1. Unilever
2. Proctor and Gamble
3. Reckitt
4. Henkel
5. Kimberly clerk
6. Godrej
7. Silent night
8. SC Johnson
9. PZ Cussions
10. Colgate Palmolive
11. Ori flame
12. L O Real
13. Colgate Palmolive
14. United Millers
15. Elex Products Limited

C. Beverages (alcoholic& non-alcoholic)

1. Kenya breweries
2. Brittania
3. Coca cola
4. Diageo
5. Heineken
6. EABL
7. Brown foreman
8. PernodRicard
9. Fresh Delmonte
10. Kenya wine agencies

D. Fashion, Apparel, Beauty & Cosmetics

1. Interconsumer products ltd
2. Henkel
3. Nike
4. LC Waikiki
5. Maisha

6. West Style

7. Mans

8. Twist Kenya

9. Diana

10. Revlon

11. United Aryan

12.Biesdorf

13. Godrej