CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Trade liberalization propelled by globalization has continued to change the way firms' activities are carried out as a result of increased competition (Kushwaha, 2012). Every firm in Nigerian bakery industry seems to face a lot of threats from competitors. This scenario may have led to continuous search by both industrialists and academics for ways to overcome these threats through acquisition of distinctive capabilities and establishing defensible positions in their industries. To achieve this, firms that have common interest started to collaborate, cooperate and coordinate their activities and decision making with the ultimate goal of achieving some advantage by a way of consensus actions, thus the emergence of supply chain management. All firms that are involved directly or indirectly in fulfilling customer orders are referred to as supply chain (Chopra & Meindl, 2010). Supply chain is therefore, a phenomenon that exists in every industry whether it is acknowledged and effort made to improve its efficiency or not (Mentzer, Dewitt, Keebler, Min, Nix, Smith, & Zacharia, 2001). Firms in a supply chain are required by necessity to take some calculated actions to improve on their performances, hence the emergence of supply chain management.

Supply chain management is seen as all activities undertaken to deliver product to customers starting from sourcing of raw materials to the delivery of the product to the final consumer, (Sukati, Hamid, Baharun, Tat & Said, 2011). Management of supply chain is aimed at presenting a formidable force to produce a synergistic effect that increases the capabilities of firms involved in order to achieve competitive advantage.

Supply chain management effectiveness could be achieved by proper management of upstream, internal and downstream sections of a supply chain. The dimensions of supply chain management are still subject of debate as different authors tend to use different dimensions. However appreciable number of authors have used supplier strategic partnership, customer relationship, information sharing, quality of information sharing, postponement and supply chain integration as supply chain management dimensions (Li, Ragu-Nathan, Ragu-Nathan, & Rao, 2006; Sukati et al., 2011; Miguel & Brito, 2011; Shiraz & Ramezami, 2014). Effective management of these dimensions could lead bakery firms in South-East, Nigeria to achieve some level of sustainable competitive advantage.

Having competitive advantage suggests that a firm has one or more capabilities that are not available to its competitor(s) (Li et al., 2006). Competitive advantage is the degree to which an organisation has the ability to create a differential position over its rival in the market (Veerendrakumar & Shivashankar, 2015). Achieving such capabilities may not be easy in Nigerian bakery industry probably because of improved technology and its availability, improved communication and transportation. Competition are no longer between companies but among supply chains (Li et al., 2006), thus, efforts to achieve sustainable competitive advantage are intensified through supply chain management. This is important in bakery sector where such advantage seems difficult to achieve may be because of similarities of techniques and raw materials. Competitive advantage is easily maintained when competitors are unable to identify its source (Lippman & Rumult, 1982 in Bergmasth, & Henriksson, 2005). Studies suggest that supply chain management could

give firms competitive advantage (Li et al., 2006; Sukati et al., 2011). The advantage is obtained when a firm can perform better than the competitors in one or more of the following competitive advantage dimensions, namely: price/cost, delivery dependability, quality, product innovation, time to market (Li et al., 2006; Sukati et al., 2011; Miguel & Brito, 2011; Bratic 2011; Mbuthia & Rotich, 2014). This could also provide a veritable source of competitive advantage for bakery firms in the South-East, Nigeria when properly managed.

Onwumere, Nwosu & Nmesirionye (2012) observe that bakery industry is characterized by the rising of one enterprise and the falling of others, noting that some of the bakery firms fizzle out within a short period of their establishment. This might not only result from challenges posed by infrastructural deficit, but also lack of supply chain management which leads to difficulty in obtaining required industry information, high inventory, undue delay in decisions making and so on. Despite the challenges, output of bakery industry has continued to increase steadily in response to increase in demand. Bakery industry is among the largest in the food processing industry in Nigeria with bread and biscuit accounting for 82 per cent of their output; the industry in Nigeria and South-East, Nigeria in particular is characterized with high level of competition (Onwumere et al., (2012).

The history of bakery industry in Nigeria as presented by Kilby (2009) dates back to nineteenth century when freed slaves returning to Lagos from Brazil introduced bread-making. Commercial baking began shortly after 1900, but large scale production started

around 1920s, as a result of technical innovations introduced by Amos Shackleford who became the bread king. Shackleford brought two major innovations into Nigerian baking industry; first, he introduced a kneading device known as dough brake and secondly, the wholesale system whereby distributors were appointed and commission paid to them for their services which gave rise to large scale production (Okafor, 2010). The industry expanded rapidly from 1920s and the growth was propelled by three companies: African Home and Foreign industries, Sterling Brothers Baking Company, these two were owned by Indians, and the third owned by a Nigerian, Mrs. Phibean Coker (Okafor, 2010). Since then, the number of firms involved in bread baking has continued to increase probably as a result of increase in bread consumption. However, bakery in Nigeria has remained relatively small-scale in its operations. Anudu (2017) observed that even though the industry is worth about $421M, it is dominated by small scale bakers. Kilby (2009) also noted that firms in the industry hardly achieve economies of scale because units' costs are roughly the same for both small and large producers, surprisingly, different results are obtained by baking plants which use similar techniques in Nigeria. This scenario suggests that all is not well in the industry.

Bakery industry is categorized into organized and unorganized sectors. All the firms that produce packaged bread and biscuits are grouped in organized sector while those manufacturing and selling in their locality or surroundings are regarded as being in unorganized sector (Warren, 2003 in Onwumere et al., 2012)

Flour**,** sugar, condensed milk, baking powder, salt, jelly, flavouring, dry fruit, are some of the raw materials frequently used in the bakery industry (Onwumere et al., 2012). However, flour is the main raw material which is a byproduct of wheat, and 97 per cent of wheat used for production in Nigeria is imported, only 3 per cent are sourced locally (Njoku & Kalu, 2015). Products of bakery firms are categorically classified into two: dry bakery products and moist bakery products (Onwumere et al., 2012). Various types of biscuits are mainly referred to as dry bakery products, while bread of different types fall under moist bakery products. This study focuses on moist bakery products, specifically bread.

The bakery industry in the South-East, Nigeria shares the same history with others in Nigeria and in the problems bedeviling the bakery industry as well. Some of the problems as listed by Njoku & Kalu (2015) includes but not limited to low profit margin as a result of high cost of production, infrastructural deficit, high operation cost, exchange rate volatility and stiff competition. Increase in the price of wheat in the international market has also had adverse effect on bakery industry in South-East, Nigeria. Hence, having competitive advantage seems the only way to survive in the industry.

The challenges faced by firms in the industry led to the formation of Masters Bakers Association in 1956 (Muo, 2017). It is an umbrella organisation that brings together all bakery firms in Nigeria, the branches are in all the States in Nigeria with its headquarters located at Abuja. The association seeks to protect the interest of their members and also promote quality of their products. Membership of the association is not compulsory, thus,

this study considers only registered members of the association in the South-East, Nigeria with a total population of 667 bakery firms.

Despite the effort of the association, the challenges faced by bakeries in South-East, Nigeria seem unabated. While the problem might be multifaceted, supply chain management has been proved to be effective in achieving competitive advantage in many sectors of economies of different countries (Miguel & Brito, 2011; Bratic, 2011; Alipour & Mohammadi, 2011), and other sectors of Nigerian economy (Adebayor, 2012; Somuyiwa, Mcilt & Adebayor, 2013). This study is therefore imperative to understand supply chain management and how its application can help the bakery firms in achieving competitive advantage.

1.2 Statement of the Problem

The story of bakery industry in the South-East, Nigeria is replete with that of closure of many firms. Many firms that were noted for quality products are no more heard of today. For instance, in Ebonyi State, Winny bread and Chi Chi bakery fizzled out few years after establishment. In Enugu Susan, Hope Fine, Manna Favour also closed shop; the popular Ejidike bread is hardly heard of in Anambra. In all the states of South-East, Nigeria, the story is almost the same. Despite increase in the demand for bread in the region, the records of Masters Bakers Association show that many bakery firms have closed down though new ones are also being established. This does not portray a truly growing industry. The major challenge faced by bakery firms in the South-East, Nigeria may be summed under competition. Since the market for their products is available, the

question remains; why are some bakeries closing down when new ones are being established?

It seems survival and growth in the industry is dependent on the ability of a firm to achieve some competitive advantage. Cost of operation is known to be high; there is lack of infrastructure and price of flour which is the major raw material for producing bread is highly volatile owing to foreign exchange instability. Absence of strategic partnership with suppliers may have contributed to increase in cost of production of some of the bakery firms since they hardly obtain first hand information on changes and expected trend in the market. Failure to establish such partnership may have affected some of the firms in the industry negatively and may have resulted to closures of some since they are taken unawares without making necessary adjustments.

Lack of customer relationship management may also have affected negatively delivery dependability of the bakery firms in the South-East, Nigeria. Since most of the bakery firms mostly depend on independent distributors to sell their breads, relationship between the distributors and the bakery firms which ought to be cordial seems not obtainable currently.

Again, non-utilization of information sharing channels between bakery firms, suppliers and customers to obtain necessary information may be affecting the quality of some of the breads produced by the bakery firms in South-East, Nigeria negatively. Information sharing between supply chain members could help mitigate errors, provide the right raw

materials, improve product quality and facilitate introduction of new product faster. No gain saying that some of the bakery firms that closed down in South-East may have failed to introduce new products at the right time. Thus, lack of quality information may be having negative effect on the time-to-market of bakery firms in South-East, Nigeria.

Again, absence of product innovation seems to be another challenge bakeries in South-East Nigeria grapple with. Failure to integrate the functional units of a bakery firm will most likely stifle innovation because innovation of any type is achieved mostly when everyone contributes from his/her functional area. Bakery firms may not likely innovate easily when their supply chain is not integrated. The above issues seem to represent the situation in bakery firms in South-East Nigeria, and it is against the same that this study has become imperative.

1.3 **Objective of the Study**

The general objective of the study is to determine the extent of relationship that exists between supply chain management and competitive advantage of bakery firms in South-East, Nigeria. Specifically, the study seeks to:

i. Determine the extent of relationship that exists between strategic supplier partnership and cost of production of bakery firms in South-East, Nigeria.
ii. Examine the extent of relationship that exists between customer relationship management and bakery firms delivery dependability in South-East, Nigeria.
iii. Ascertain the extent of relationship that exists between information sharing and quality of bread produced by bakery firms in South-East, Nigeria.

iv. Examine the extent of relationship that exists between information quality and time to market of bakery firms in South-East, Nigeria.

v. Determine the extent of relationship that exists between supply chain integration and product innovation of bakery firms in South-East, Nigeria.

1.4 Research Questions

The study addresses questions posed below:

i. To what extent is strategic supplier partnership related to cost of production of bakery firms in South-East, Nigeria?

ii. What is the extent of relationship between customer relationship management and delivery dependability of bakery firms in South-East, Nigeria?

iii. To what extent is information sharing related to quality of bread produced by bakery firms in South-East, Nigeria?

iv. What is the extent of relationship between quality of information sharing and time to market of bakery firms in South-East, Nigeria?

v. To what extent is supply chain integration related to product innovation of bakery firms in South-East, Nigeria?

1.5 Research Hypotheses

The following hypotheses were formulated to guide the study:

H_{01}: There is no significant positive relationship between strategic supplier partnership and cost of production of bakery firms in South-East, Nigeria.

H_{02}: Customer relationship management has no significant positive relationship with delivery dependability of bakery firms in South-East, Nigeria.

H_{03}: There is no significant positive relationship between information sharing and quality of bread produced by bakery firms in South-East, Nigeria.

H_{04}: Quality of information sharing has no significant positive relationship with time-to-market of bakery firms in South-East, Nigeria.

H_{05}: There is no significant positive relationship between supply chain integration and product innovation of bakery firms in South-East, Nigeria.

1.6 Significance of the Study

Bakery industry in South-East, Nigeria is a very important sector that needs attention of stakeholders and academics to resolve some of the challenges that have continued to prevent the firms from achieving the needed competitive advantage. The sector has the potentials to provide jobs for the teaming unemployed youths in South-East, Nigeria and also improve the quality of lives of the people by providing affordable bread and other staple foods. Therefore, this study is very important and timely as it will likely provide answers to issues that led to collapse of some firms in the industry in South-East, Nigeria. Since it seems firms in this area pay lip service to supply chain management, this study will likely bring to light the benefits derivable from proper management of supply chain and by so doing contribute to the solution required in the sector. Hence, the bakery firms in South-East, Nigeria in particular is expected to benefit from the work by understanding some of the supply chain management practices that are relevant in achieving competitive advantage in their industry.

Secondly, academic work relating to supply chain management seems limited in Nigeria, this study will contribute to the needed literature and also contribute in the area of competitive advantage which seems to be under researched in our environment. It will therefore, benefit researchers by providing the needed literature in supply chain management.

As a student and a potential manager, the study enriches the researcher with knowledge in the area of operations management. Since supply chain management is all encompassing, and competitive advantage seems to be taking center stage in operations management, the researcher will benefit immensely by getting acquainted with these areas.

1.7 Scope of the Study

The study covered all the 667 bakery firms that are duly registered with Master Bakers Association of Nigeria in the South-East, namely Abia, Anambra, Ebonyi, Enugu and Imo. The five states selected are made up of mostly Igbo people with homogenous culture and are seen as distinct people. Thus, there is a likelihood of similarities in their industrial practices and approach to businesses.

Secondly, the study is restricted to registered members of Master Bakers Association. While they are not the only group of people in the region that produces bread, the association was chosen for the purpose of accessibility, and to enable someone who may be interested in replicating the study to do so.

The study also focused on supply chain management and competitive advantage. While there are many dimensions of supply chain management as can be seen from the literature, the study considered strategic supplier partnership, customer relationship management, level of information sharing, quality of information sharing, postponement and supply chain integration. In respect to competitive advantage, the study considered cost/price, quality, delivery dependability, time to market and product innovation. The essence of the study was to establish extent and direction of relationship between supply chain management and competitive advantage. It was carried out between 2017 and 2018.

1.8 Limitations of the Study

The first limitation of the study stems from the survey type of research which relies on the use of questionnaire for data collection. Some of the respondents were unwilling to fill the questionnaire. Accesses to the bakeries were not easy either. The fear of government agencies led to hostile disposition of some bakery owners to unknown persons as they assume that some persons coming to them are government spies. This scenario was more pronounced in Anambra and Imo State. It was very difficult for the researcher as the Anambra and Imo State chairmen proved very difficult in releasing list of their registered members to the researcher. However, through the effort of the Enugu state Chairperson, who doubles as the National welfare officer of the association, the researcher was able to access members of the association in Anambra State who filled the Questionnaire. Nevertheless, through persistence and assistance of some of the chairmen of the Master Bakers Associations in some of the states, access to the bakery owners were made possible and requisite data was generated for the study.

Secondly, access to materials that relate to the study area was challenging. Locally, studies in the subject area are limited. Persistent search, with the help of friends abroad and in Research Gate greatly contributed to surmounting this challenge. This helped the researcher to access reasonable numbers of empirical studies that helped in understanding the extent of work done in the area and identifiable gap that the present work was meant to fill.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Conceptual Review

2.1.1 Supply Chain

The concept of supply chain is different from supply chain management. Supply chain is seen as all parties involved directly or indirectly in fulfilling customer needs (Chopra & Meindl, 2010); a collection of processes transcending organisational boundaries (Harrison & Van Hoek, 2005); an interrelated processes within and across different firms that produce a product(s) or service to satisfy customers (Krajewski, Ritzman, & Malhorta, 2013). The above definitions looked at the concept from the point of processes which are meant to be streamlined among the members of a supply chain, others see it as a network. For instance, Christopher (1992, p. 2) see supply chain "as a network of organisations that are involved, through upstream and downstream linkages, in different processes and activities that produce value such as products and services which are delivered to the ultimate consumer". A supply chain is a network of organizations that perform varieties of processes and activities to generate value in form of products and services to end customers (Sukati et al, 2011).

Lotfi, Mukhtar, Sahran & Zadeh (2013) described supply chain as a series of organisations that are involved in different processes and activities to produce products and services for ultimate customers, thus, supply chain, therefore, is made up of a number of companies including suppliers, distributions and end-customers. It is a set of three or more entities (organizations or individuals) directly involved in the upstream and downstream flows of products, services, finances, and/or information from a source to a

customer (Mentzer et al., 2001). A supply chain therefore refers to the collection of parties involved in exchange that result to the creation of value that a customer needs. Such collection may include but not limited to manufacturers and suppliers, transporters, warehouses, retailers, wholesalers, agents and customers (Abushaikha, 2014).

Relatively, recent definitions seem to have achieved appreciable consensus on the concept. From the definitions, there is a consensus that a supply chain is made up of more than one organisation. In other words, it does not in any way mean single organisation activities that relates to its sourcing of raw materials, rather more than one organisation is involved. Secondly, supply chain deals with upstream (suppliers) and downstream (customers and/or consumers) and finally, the focus is on the processes and activities of the organisations involved. Since the definitions are similar, a supply chain is defined in this study as 'a collection of organisations that are involved directly or indirectly in the activities and/or processes that leads to value creation in form of products or services that are delivered to the ultimate consumer.' This definition is suitable given that this study is situated within modern logistics and industrial organisation school. Supply chain exist whether they are managed or not (Mentzer et al., 2001). It is a business phenomenon that cannot be wished away in today's globalized business world. Whether firms that are involved in one relationship or another take active step(s) to make the operations effective and efficient or not, the phenomenon remains a reality.

As explained by Mentzer et al. (2001), three types of supply chain can be distinguished based on their degrees of complexity. This is presented in figure 1. A direct supply chain is made up of a company, a supplier and a customer that are involved in flow of

information, services or products in upstream and/or downstream as shown in figure 1a. Extended supply chain incorporates both immediate supplier's suppliers and immediate customer's customers, all involved in upstream and/or downstream flow of products, services and/or information as shown in figure 1b. Finally, figure 1c is an ultimate supply chain which refers to all organisations involved in both downstream and upstream flow of products, finance, services and/or information from the ultimate supplier to the ultimate consumer. This study seeks to accommodate all types of supply chain. However, ultimate supply chain offers more detailed information about what supply chain is all about and the idea is central to the study.

FIGURE 1a: DIRECT SUPPLY CHAIN

FIGURE 1b: EXTENDED SUPPLY CHAIN

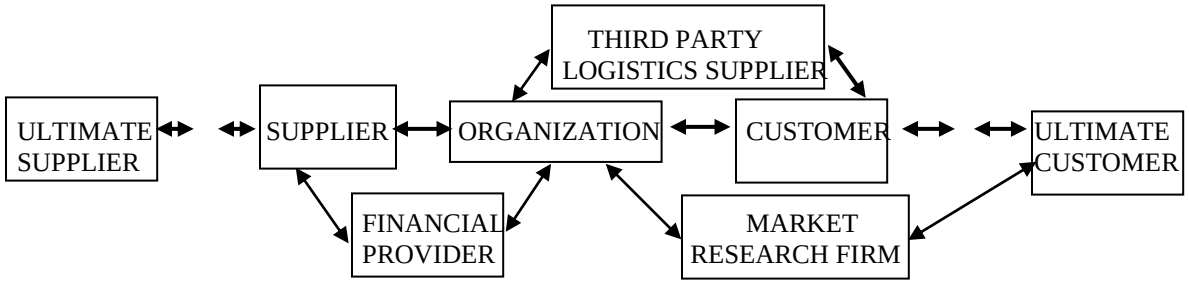

FIGURE 1c: ULTIMATE SUPPLY CHAIN

Source: Mentzer et al. (2001, p. 5). Defining Supply chain management. Journal of Business Logistics, 22(2), 1-25

2.1.2 Supply Chain Management

Supply Chain Management is relatively new concept in the business world that emerged in 1980s (Sukati et al., 2011), but has attracted much attention from practitioners and researchers alike resulting in rapidly growing literature (Laerson & Rogers, 1998). Most recent literature agree that it encompasses customer integration at the downstream and supplier integration at the upstream (Sukati et al., 2011). However, no generally accepted definition (Feldmann & Muller, 2003) despite the increase in literature and increased attention paid to the concept by academics. This is relatively because of the interdisciplinary origin and evolutionary nature of supply chain management (Li et al., 2006). This does not mean the definitions are so divergent to the extent that they are not related, rather, the key words or breath of supply chain management has been in contention. Gibson Mentzer and Cook (2005) observe that inconsistencies in supply chain management definition has resulted in some definitional deficiencies since some authors focus on strategy, some focus on activities, others focus on processes while some cover the three.

The focus and scope of supply chain management covers every engagement, dispositions and activities undertaken to ensure efficient and effective operations of the supply chain. Because of this large scope, Mentzer et al. (2001) observe that supply chain management is viewed (defined) from three perspectives based on previous definitions.

1. **Supply Chain Management as a Management Philosophy:** As a management philosophy, firms in a supply chain are viewed as a single entity. The system view results in seeing the firms involved as a multi-firm that formed partnership aimed at achieving

holistic process of managing the flow of goods from point of entry to the final consumer. Supply Chain Management as a philosophy seeks to synchronize and/or combine intra-firm and inter-firm operational and strategic capabilities into a unified, compelling marketplace force (Cooper, Lambert & Pagh, 1997). Therefore, as a philosophy, the major objective of Supply Chain Management is the synchronization of all activities of organisations or participants in the supply chain to create greater value for customers which would not have been possible had the firms taken unilateral actions, but are made possible by harnessing individual firm's competencies, thereby producing synergistic effect on the entire processes. Mentrzer et al. (2001) summarized the characteristics of Supply Chain Management definitions as a management philosophy as follows

i. Systemic view of the entire supply chain and collective management of flow of goods and services from the supplier to the ultimate consumer.
ii. A strategic orientation that seeks to achieve synchronized and converged intra-firm and inter-firm operational and strategic capabilities into unified whole.
iii. Directing all firms in the supply chain to focus on creating unique and individualized sources of customer value to enhance customer satisfaction.

From this perspective, Supply Chain Management as a philosophy leads to identification of specific objectives that guides the operations of a supply chain. It is worthy to note that those characteristics listed only explains what is obtainable or the world view of a firm that has supply chain management as a philosophy and not objectives of supply chain management. It rather serves as a mission statement upon

which specific objectives are derived to help determine the areas or activities that requires greater attention.

2. Supply Chain Management as a Set of Activities to Implement a Management Philosophy: Mentzer et al. (2001) observe that many authors have focused on the activities that are undertaken in the implementation of Supply Chain Management philosophies in their definitions. Some of the prominent activities identified are integrated behaviour, mutually sharing information, mutually sharing risks and rewards, cooperation, the same goal and the same focus on serving customers, integration of process and partners to build and maintain long-term relationships. The list identified is not exhaustive especially bearing in mind that so many things have changed in the globalized world of business since their study was undertaken.

3. Supply Chain Management as a Set of Processes: The last perspective is Supply Chain Management as a process. Authors that define supply chain from this perspective emphasise the importance of streamlining the functional processes of different organisations involved in a supply chain to focus all activities towards satisfying the customer rather than focusing on individual activities. This perspective views activities as end product of a process, hence, a process in this case is seen as specific ordering of work activities with a beginning, an end, clearly identified inputs and outputs and a structure for action across time and place (Mentzer et al., 2001). From process perspective, Lanbert, Stock and Ellram (1998) identified key processes in Supply Chain Management as customer relationship management, customer service management, demand management, order fulfillment, manufacturing flow management, procurement, product development and product commercialization. The list is also not exhaustive as

recent studies suggest. These three perspectives agree with the observation of Gibson, Mentzer & Cook (2005) that authors define Supply Chain Management in different ways depending on their focus.

Mentzer et al. (2001) also argued that the coordination of a supply chain from system perspective or broad strategic context referred to as a management philosophy is more accurately referred to as supply chain orientation while the actual implementation of the orientation situated within set of activities and set of processes is Supply Chain Management. Their categorizations, therefore, mean that some authors were actually defining supply chain orientation as supply chain management. Supply chain orientation was therefore defined by Mentzer et al. (2001, p. 11) as "the recognition by an organisation of the systemic, strategic implications of the tactical activities involved in managing the various flows in a supply chain". An organisation is said to posses supply chain orientation if it sees the implications of managing the downstream and upstream flow of resources and information. If the organisation focus is on the supplier side or customer side alone, then it does not possess supply chain orientation. More so, a single firm cannot implement supply chain orientation. Implementation is only possible if several firms directly connected in the supply chain posses Supply Chain Orientation. Mentzer et al. (2001, p. 11) concludes "Supply Chain Orientation is a management philosophy, and Supply Chain Management is the sum total of all the overt management actions undertaken to realize the philosophy."

For any meaningful success to be achieved in research and implementation/application of best practices advocated in Supply Chain Management, there is need to understand the concept and to establish sound theoretical background based on previous explanations and/or definitions. In this regard, attempt is made to define Supply Chain Management in this study by looking at previous definitions. Hammer (2006) presented some definitions in a tabular form, which we may use as a starting point for understanding the concept this is adapted and presented in Table 1:

Table 1: Selected Supply Chain Management (SCM) Definitions

Author (s)	Definitions
Lambert et al., (1998, p.1)	"SCM is the integration of business processes from end user through original suppliers that provides products, services, and information that add value for customers and other stakeholders."
Mentzer et al. (2001, p. 18)	"SCM is the systemic, strategic coordination of the traditional business functions and the tactics across [these] business functions within a particular company and across businesses with the supply chain, for the purpose of improving the long-term performance of the individual companies and the supply chain as a whole."
McCormack & Johnson (2001, p. 34)	"SCM is the art and science of creating and accentuating synergistic relationships among the trading partners in supply and distribution channels with the common shared objective of delivering products and services to the 'right customer', in the 'right quantity', and at the 'right time'.
Standtler (2002, p. 9)	"SCM is the task of integrating organisational units along a supply chain and coordinating material, information, and financial flows in order to fulfill (ultimate) customer demands with the aim of improving competitiveness of a supply chain as a whole."
Kuhn & Hellingrath (2002, p.10)	"SCM is integrated, process-oriented planning and management of material, information and financial flows along the entire value chain; from the customer to the supplier of raw material […]."

Table 1: Selected Supply Chain Management Definitions *Continued*

Author (s)	Definitions
Swaminathan & Tayur (2003, pp. 1387-1388)	"SCM is the efficient management of the end-to-end process, which starts with the design of the product or service and ends with the time when it has been sold, consumed, and finally, discarded by the consumer. This complete process includes product design, procurement, planning and forecasting, production, distribution, fulfillment, after-sales support, and end-of-life disposal."
Simchi-Levi et al. (2003, p. 2)	"SCM is the process of planning, implementing and controlling the efficient, cost effective flow and storage of raw materials, in-process inventory, finished goods, and related information from point-of-origin to point-of-consumption for the purpose of conforming to customer requirements."
Chen & Paulraj (2004, p. 147)	"SCM, as we envision, is a novel management philosophy that recognizes that individual business no longer compete as solely autonomous units, but rather as supply chains. Therefore, it is an integrated approach to the planning and control of materials, services and information flows that adds value for customers through collaborative relationships among supply chain members."
Göpfert (2004), p. 32	"SCM is a modern concept of company networks to exploit inter-company success potentials by means of R&D, design and steering of effective and efficient material, information and financial flows."
CSCMO (2005)	"SCM encompasses the planning and management of all activities involved in sourcing and procurement, conversion and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners which can be suppliers, intermediaries, third-party service providers, and customers. In essence, SCM integrates supply and demand management within and across companies."
Christopher (2005), p.5	"SCM is the management of upstream and downstream relationships with suppliers and customers to deliver superior customer value at less cost to the supply chain as a whole."

Source: Hammer, (2006). Enabling supply chain management coordination, collaboration and integration for competitive advantage. A dissertation submitted to the University of Mannheim. Available at: https://ub-madoc.bib.uni-mannheim.de/33157.

From the definitions, very divergent views are observed. Unlike the definition of supply chain itself where most of the definitions have the same key words, as a result, no conclusion can be attained based on the Table. A look at the definitions as presented in Table 1 emphasizes the point made by Mentzer et al. (2001) that no consensus among authors. Several other definitions and descriptions abound in literature, for instance:

Lummus and Vokurka (1999) are of the view that all activities involved in delivering products from raw material to customer is termed Supply Chain Management, Giannocearo and Pontrandolfo (2002) say it is integrated and process oriented approach to the management, design and control of the supply chain, with the aim of producing value for the end consumer. Lalonde (1997) also defines Supply Chain Management as the process of managing relationships, information, and material flow beyound organisational boundaries aimed at delivering greater customer service and economic value through synchronized management of the flow of physical goods and information from source to consumption. “Supply Chain Management is all activities involved in delivering product from raw material to customer, including sourcing of raw materials and parts, warehousing inventory, order management, manufacturing and assembly, distributions, delivery to customers and information systems required to monitor all activities.” (Sukati et al. 2011,. P. 3), it is “the systematic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole” (Mentzer et al. 2001, P. 18).

Gibson et al. (2005, p. 18) through their study involving Council of Supply Chain Management Professionals define the concept as encompassing "the planning and management of activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers. In essence, supply chain management integrates supply and demand management within and across companies". They observe that for any Supply Chain Management definition to achieve appreciable level of consensus acceptance, there must be strategic and key organisational activities in it. They went further to aver that collaboration was mostly accepted as one of the key components of Supply Chain Management while majority accepts information technology as an important activity. On their part, Njoku & Kalu (2014, P. 92) see supply chain management is "a system of technology, activities, information and resources involved in moving a product or service from suppliers to customers" while Al-Zubi, Tarawneh, Abdullah, Fidawi (2015, p. 65) see it as "the management of a network of relationships within a firm and between interdependent organisations and business units consisting of material suppliers, purchasing, production facilities, logistics, marketing and related systems that facilitate the forward and reverse flow of materials, services, finances and information from the original producer to final customer with the benefits of adding value, maximizing profitability through efficiencies and achieving customer satisfaction."

Looking at the definitions, the one of Mentzer et al. (2001) is mostly related to this study based on earlier expressed ideologies. Therefore, Supply Chain Management is defined in

this study as "a process of coordinating strategic, tactical and operational business functions within, and integrating such functions across organisations in a supply chain with a view to achieving greater efficiency and effectiveness for the benefit of the organisation, customers and the entire supply chain members." The definition seeks to capture the essence of supply chain management from the philosophy, activity and process perspective. The key words are explained briefly in the subsequent sections.

Coordination

The aim of coordination is to achieve collectively, goals that cannot easily be achieved individually by supply chain members (Kaipia, 2007). Coordination is seen as "managing dependencies between activities and the joint effort of entities working together towards mutually defined goals" (Labiad, Beidouri, & Bouksour, 2014, p. 617). Romano (2003) sees coordination as decision making, communication and interaction among supply chain partners aimed at better planning, control and to adjust resources in support of key business processes in supply chain network. It is the act of making separate things work together by aligning decision making of firms in a supply chain in order to improve overall performance (Moharana, Murty & Khuntia, 2012). The necessity of coordination arises because of dependencies of activities. In supply chain, activities of some firms depend on another thereby requiring coordination, because none of the supply chain members has absolute control over all necessary conditions to achieve a desired goal (Kaipia, 2007). Since firms in a supply chain, obviously depends on one another to achieve better performance, coordination is therefore critical to efficient performance of a supply chain.

In this regard, Gibson et al. (2005) revealed from their study that coordination was generally accepted as key component of supply chain while majority accepts information technology as an important activity. They therefore suggested that any definition of supply chain management should include coordination with suppliers and customers. Nevertheless, the suggestion seems not to have attained appreciable consensus among scholars.

Supply Chain Integration

Supply chain integration as a concept and its dimensions are still up for debate (Marin-Garcia, Altalla-Luque & Medina-Lopez, 2013). There is no consensus as to its components and how to measure it (Li, Rao, Ragu-Nathan & Ragu-Nathan, 2005). This has resulted to inconclusive and conflicting results as it concerns supply chain integration and operational variables and performance measures (Flynn, Huo and Zhao, 2010). There is no general accepted definition, though to an extent, authors seem to portray in similar way what the concept is all about. Romano (2003) sees supply chain integration as a mechanism to support business processes along the supply network to overcome challenges associated with inter and intra organisational boundaries. Bagchi, Ha and Skjoett-Larson (2005) see supply chain integration as comprehensive collaboration between organisations in supply chain in strategic, tactical and operational decision making. Flynn et al. (2010) see supply chain integration as the degree to which a manufacturer strategically collaborates with its supply chain partners and collaboratively manages intra and inter organisational processes.

Fewcett and Magnan (2002) classified supply chain integration into 3 namely backward integration, forward integration and complete forward and backward integration. However, most researchers agree that supply chain integration is made up of two primary constructs: internal and external integration (Marin-Garcia et al., 2013). External integration is further classified into clients or customers and suppliers integration (Flynn et al., 2010, Topolsek, 2011), thus, customer, internal and supplier integration are more accepted as general classification and therefore used in this study.

External integration is the degree to which a company collaborates with both clients and suppliers with the aim of developing inter-organisational strategies and shared practices to effectively and efficiently satisfy the clients' needs (Marin-Garcia et al., 2013, Flynn, et al., 2010). Customer integration deals with working closely with the critical customers while supplier integration is coordination with critical suppliers.

Internal integration refers to the organisational ability to synchronize its practices, procedures, information, decision and conduct between its functional areas to enable it deliver clients' requirements and effectively interact with its suppliers (Topolsek, 2011; Marin-Garcia et al., 2013). Internal integration is all about synchronization of organisational internal processes to achieve better collaboration among the functional areas. The essence of internal integration is to break down barriers between organisational functional areas to ensure that they operate as part of one process.

It is suggested that external integration to an extent can be effective only if internal integration is effective (Flynn et al., 2013), and the level of integration an organisation achieves determines the extent of gain they derive from it (Frohlich & Westbrook, 2001),

however, studies have found it difficult to determine clear relationship between different levels of supply chain integration and performance improvement (Hertz, 2001). The divergent dimensions and a broad range of scales used in measuring supply chain integration may have contributed to inconclusive research on the concept. Some authors consider supply chain integration as a uni-dimensional constructs while others treat it as a multi-dimensional constructs (Kim, 2009; Vijayasarathy, 2010; Koufteros et al, 2007). Others focused their study of supply chain integration on business process integration (Lambert & Cooper, 2000). This approach emphasizes the ability of firms involved to achieve high level of customer relationship management, customer service management demand management, product development, commercialization and returns management. In this case, the main focus is achieving high level of collaboration between organisations in supply chain in areas of product development, buyers and suppliers and information sharing.

Some authors however focus their studies of supply chain integration on information integration, data and physical integration and material integration (Cigliano, Caniato & Spina 2007; Nguyen & Harrison, 2004; Nurmilaakso & Kotinuurmi 2004). None of the approaches are exclusive but just explains the area of major emphasis. Just as there are different approaches to the study of supply chain integration, there are different measures. This study adopted the classification of supply chain integration dimensions as supplier integration, internal integration and customer integration (Flynn et al., 2010; Narasimhan & Kim, 2001).

Gimenez and Ventura (2005) observe that low level of internal integration hinders external integration. Therefore, achieving high internal integration is very crucial to achieving high external integration (Harrison & Van Hoek 2005; Fewcett & Morgan 2002). The goal of supply chain integration is to achieve efficient and effective flow of products and services, information, money and better decisions with ultimate objective of providing maximum value for the customer at lower cost and higher speed (Flynn et al., 2010; Frohlich & Westbrook 2001). In other words, all activities in supply chain integration have the customers as focus.

2.1.3 Objectives of Supply Chain Management

The strategic, tactical and operational business functions are determined by the objectives that the organisations in supply chain seek to achieve. Supply Chain Management transverses all organisational levels, as such, distinct objectives are set at different levels for better coordination. With this in mind, Hammer (2006) classified supply chain objectives into strategic, tactical, and operational. He listed major strategic objective of Supply Chain Management as identified in literature as:

i. Maximization of customer and business value at the lowest possible total cost.

ii. Superior speed-to-market by means of agility at the lowest possible cost.

iii. Fulfillment of a desired level of customer service performance.

Gopfet (2004) added lower costs, improved quality, more effective technological development and reduced lead times which he termed efficiency as a strategic objective. The strategic objective therefore, aims at achieving competitive advantage. All the superior performance measures that are sought through strategic objective are aimed at achieving competitive advantage. Therefore, the strategic objective of Supply Chain

Management is a broad articulations of expected behaviour or policies that its implementation is expected to lead to sustained competitive advantage.

Tactical objectives are not measurable because they are just abstractions that links strategic objective to operational objectives. Hammer (2006) listed better communication, collaboration, customer orientation, fulfillment, efficiency and improved product and higher process quality as some of the tactical objectives.

Operational objective specifies performance measures that need to be improved in day-to-day running of supply chain. They are centered on specific cost reduction activities such as achieving lower inventory, lower production cost, lower distribution cost, lower lead time, better resource utilization, and so on.

2.1.4 Dimensions of Supply Chain Management

Scholars have divergent views about supply chain management dimensions (or Practices). Just as there is no consensus among authors and scholars on the definition of supply chain management, there are no generally accepted dimensions or constructs of supply chain management. Several authors have used different constructs to measure supply chain management practices in different organisations and industries. For example, Alvarado and Kotzab (2001) used concentration on core competencies, use of inter-organisational systems such as electronic data interchange (EDI) and postponement. Tan et al. (2002) through factor analysis, identified six supply chain dimensions as supply chain integration, supply chain characteristics, customer service management, geographical proximity, Just-In-Time capability and information sharing. Sahay and Mohen (2003) used alignment between supply chain strategies with business strategies,

long-term relationship, communication, cross-functional teams and supplier involvement to measure buyer-supplier relationship. Chen and Paulraj (2004) identified supply chain dimensions as supplier base reduction, long-term relationship, cross-functional teams, supplier involvement, and communication while Min and Mentzer (2004) used information sharing, agreed vision and goals, risk and reward sharing, process integration, cooperation, long-term relationship, and leadership as supply chain management dimensions. Li et al. (2006) operationalized supply chain management as strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing and postponement. Thus, there is no consensus on what constitutes supply chain dimensions or practices. However, since the publication of Li et al. (2006) many scholars have adopted strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing, postponement as supply chain management dimensions or practices, for instance Bratic (2011); Sukati et al. (2011); Sumiyiwa et al. (2013); Shiraz and Ramezani (2014); Mbuthia and Rotich (2014); Asha (2015) and so on. For the purpose of this study, strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing, postponement and supply chain integration are adopted as the dimensions of supply chain management.

2.1.4.1 Strategic Supplier Partnership

This is a long term relationship between organisation and its suppliers (Li et al., 2004). Such relationships are aimed at promoting mutual planning and joint problem solving between the partners (Gunasekaran, Patel & Tirtiroglu, 2001) and also to mutually benefit from the key strategic areas like technology, products and market. The target is to have

few reliable suppliers carefully selected based on the priorities of the organisation instead of numerous suppliers that their processes cannot be predicted (Sukati et al., 2011). It could also help such organisations to work closely with few suppliers who show more interest in the success of the organisation. The idea of having few reliable suppliers could enable organisations have better focus on the areas of operations they need to strengthen to be able to compete better in the market. Tan, Lyman and Wisner (2002) note that suppliers that partner with organisations during their early stage of product design could help in selecting best components, technologies and also offer cost effective choices. Organisations involved in strategic partnership may share both reward and risk depending on their level of involvement, thus, firms are encouraged to take actions that are of mutual benefits. By doing so, firm suppliers' integration are enhanced.

Strategic supplier partnership enables the participating organisation to benefit from both strategic and operational capabilities of participating organisations. (Balsmeier & Voison 1996, Noble, 1997). In this case, some responsibilities could be passed to the supplier (Li et al., 2006) which may engender more commitment on the part of the suppliers. Organisations that are strategically aligned to its suppliers can also reduce time and effort wastage (Gunasekaran et. al., 2001), these are helpful in gaining competitive edge.

2.1.4.2 Customer Relationship Management

This is seen as the downstream aspect of supply chain management. It deals with organisation's ability to communicate and also ensure the delivery of appropriate products and services to customers at the right quality. Customer relation deals with all strategies and effort deployed by organisation to handle issues relating to customers

complaint, build long-term relationship with customers and improve their level of satisfaction (Li et al, 2006). It involves several activities such as sharing product information with customers, receiving orders from customers, interacting with customers to understand their demand, sharing the status of orders with customers, and activities relating to product delivery. Close relationship with key customers could help organisation achieve high product differentiation, sustain customer loyalty and increase their satisfaction (Thatte, 2007). Effective customer relationship management is vital in supply chain success because customers' commitment is very important to achieve sustainable advantage (Day, 2000). Close relationship with customers sustains customers' loyalty and helps organisation provide them better value (Magretta, 1998). Mbuthia and Totich (2014) observe that effective customer relationship is a key element in supply chain management, especially in this era of mass customization.

2.1.4.3 Information Sharing

This refers to giving access to private data between business partners (Simatupang & Sridharan, 2002). Such information could relate to tactical or strategic operations, marketing data or other information that could enhance the performance of the organisation such as supply issues. Information sharing is considered very important to the success of supply chain in improving competitive advantage because it helps the organisations in the supply chain to work as one entity (Stein & Sweat, 1998). Sharing information also enables partners to monitor progress of orders as they pass through various processes (Sukati et al., 2011; Somuyiwa et al., 2012). Information that may be relevant include demand and forecast data, inventory status, and location order status, cost related data and performance status, (Sukati et al., 2011). Such information when

made available to partners could help in better decision making. It can also lead to better understanding of customers' needs thereby enhancing the ability to respond quickly to changing demands.

Some studies suggest that exchange of information is a key to supply chain improvement (Lee, 2000; Frolilich & Westbrook, 2001; Bagchi et al., 2005). It is very necessary that information being shared is reliable, therefore organisations in a supply chain should choose carefully information to share (Zhou & Benton, 2007). Exchange of reliable and up to date information positively impacts production plans, inventory and distributions (Li et al., 2006), thereby helping the organisation in the marketplace.

2.1.4.4 Quality of Information

Information quality deals with the accuracy, timeliness, adequacy and credibility of information (Moberg, Cutler, Gross & Speh, 2002; Li et al., 2006). Ensuring high quality of information is very critical to the success of supply chain given that many organisations are always reluctant to give away some vital information as it is perceived as loss of power (Li et al., 2006). Organisations sometimes deliberately distort information given to their suppliers and customers because of fear that it might be leaked to their competitors (Karimi & Rafiee, 2014). Organisations also resist sharing with their partners information such as inventory level, production schedules and so on because of fear of giving away competitive and sensitive information (Somuyiwa et al., 2012). It might be better not to have information than have wrong or highly inaccurate information. This has made it critical to ensure that information shared is qualitative (Feldmann & Muller, 2003). Asha (2015) listed essential characteristics of qualitative

information as timeliness, relevance, accuracy, sufficient, unambiguous, complete, unbiased, explicit, and reproducible.

2.1.4.5 Postponement

Postponement is a practice of moving to a later date one or more operations or activities in the supply chain (Naylor, Naim & Berry, 1999; Li et al., 2006). The two important considerations in developing postponement strategy are numbers of steps to postpone and the particular steps to postpone. The benefit of postponement lies in enabling organisational flexibility in developing different versions of products in order to meet changing customer needs.

2.1.5 Evolution of Supply Chain Management

Many disciplines contributed to the development of Supply Chain Management, however, logistics seems to have played major role in this regard. In early 1970s, market were controlled by suppliers who were also the original manufacturers of such products, those who supply the raw materials to them were merely seen as servants (Hammer, 2006), thus, no meaningful cooperation existed and emphasis were mainly on cost reduction. Hammer (2006) acknowledged the role played by Material Requirement Planning (MRP) at its introduction in early 1970s. It created awareness of the far reaching effect of inventory on other key variables used as the basis of performance measurement such as cost, quality and so on, thereby highlighting the need for cooperation and coordination within an organisation.

The roles of suppliers, transporters, and distributors in the smooth operations of manufacturing organisations were made more manifest with the introduction of quality

initiatives such as ISO certifications, Just-In-Time (JIT) manufacturing, Manufacturing Resource Planning II (MRP II). By Early 1990s, the need for strategic alliances has gained reasonable attention (Hammer, 2006). Within the same period, Enterprise Resource Planning (ERP), Computer Integrated Manufacturing (CIM) and Product Data Management were also introduced. Suppliers were included in order to reduce cost and ensure better quality, this continued to broaden to include both service providers and customers (Tan, Michael & Williams, 2000).

The origin of the term Supply Chain Management is traced back to the work of Forrester (1961) on Industrial Dynamics (Abushaikha, 2014, Arshinder, Kanda, & Deshmukh, 2008). From this perspective, supply chain was used in relation to physical distribution and transportation. The published work of Oliver and Webber (1982) titled supply chain management: logistics catches up with strategy is also cited by authors as the first time the term was used (Hammer, 2006). In that work, supply chain management was used to refer to management techniques which sought to reduce the level of inventory held by companies of the same supply chain, related by customer-supplier relationship (Romano, 2003). Interest in the concept from both researchers and practitioners developed in the 1980s after the publication of Oliver and Webber (Croom, Romano, & Giannakis, 2000), owing to growing competition and intensification of globalization which resulted to shift of attention of most firms from mass production to customer service and shorter lead time in new product development. Initially, the concept had intra-organisational connotation (Flynn, Huo & Zhao, 2010), with emphasis on how organisation could organize its activities mainly to reduce amount of inventory held at a particular time.

However, with time, supply chain management scope has broadened and now focuses more beyound organisational boundary (Koufteros, Cheng & Lai, 2007). Many scholars have used different terminologies to describe supply chain management phenomenon. Some of the terminologies are strategic supplier alliance, supply base management, buyer-supplier partnerships, supply network, network supply chain, integrated logistics, supplier integration (Croom et al., 2000). This is understandable given the combining nature of the concept from strategic management, logistics, production management, inventory management, accounting management, forecasting and operations research (Shapiro, 2001; Sukati et al., 2011; Li et al., 2006). Bechtel and Tayaram (1997) through an extensive literature review classified studies in supply chain management into five main streams namely:

Supply Chain Awareness School: authors in this school believe there is a continuous chain of functional areas through which materials flow from suppliers to the final distributors (Cigolini, Cozzi & Perona, 2004). The key characteristics of the supply chain awareness school are:

(1) Their definitions agree that supply chain covers the flow of material from suppliers to end users.
(2) They emphasize the importance of all channel members from beginning to the end.
(3) Their definitions do not consider information flow but concentrate on materials. Cigolini et al., (2004), listed studies of Jones and Rileg (1985), Houlihan (1985) and that of Novack and Simco (1991) as members of the school.

The second school is **Traditional Logistics,** authors in this school were concerned with reducing the fluctuations of material flows between the channel actors. The main focus of

this school was reduction of inventory level while little emphasis was paid to supply chain effectiveness, notable among the authors listed in this school was Scott and Westbrook (1991).

The third school was **Tagged Modern Logistics School.** Notable people in the school were Christopher (1992), Lee and Bellington, (1992, 1993). The modern logistics school incorporated the need for information flow in the supply chain rather than material only. They viewed information as very critical since it provides feedback and drive behaviour (Cigoline et al., 2004) they also emphasized the importance of system wide coordination of material and information flow; brought into focus service delivery and quality improvement as against only cost reduction by pervious schools.

The fourth school was **Integrated Process Design**, this school focused on the use of quantitative models to design the entire supply chain to obtain more effective and efficient flow of both information and material. Cigolini et al., (2004) listed Disney et al., (1991), Berry and Towill (1992); Towill et al., (1992,1997), as some of the prominent authors in this school. Some of the authors developed quantitative models to address the behaviour of multi-echelon supply chain system (Cigolini et al., 2004). The fifth is **Industrial Organisation**, this school emphasis is on strategic alliances between the various members of a given supply chain. They emphasized the need to form alliances with those companies that are regarded as strategic partners while transactional relations, long term partnership and co-operative arrangement could be maintained with others. Cigolini et al. (2004) listed Ellran (1991); Ellran and Cooper (1990, 1993), as some members of the school.

This study is situated within modern logistics and industrial organisation school. Therefore, emphasis encompasses effective information and material flow, coordination among all the members of supply chain, partnership and co-operative arrangement etc. most importantly the consideration of cost reduction, quality improvement considered in achieving competitive advantage also falls within these schools.

2.1.6 Competitive Advantage

Porter (1985) was among the early authors that emphasized the importance of a firm achieving some advantage over others in the same industry. To him, such advantage is achieved when a firm can provide higher value to customers, and was of the view that such advantage can only be achieved in 3 ways, namely; cost leadership, differentiation, and focus strategy (Porter, 1985). A firm using cost leadership strategy tries to exploit all opportunities that will make it produce at lowest cost in its industry by way of efficient utilization of resources (Tanwar, 2013; Al-alak & Tarabieh, 2011). Firm using differentiation approach tries to achieve product uniqueness by having some attributes highly valued by customers embedded in their services or products (Tanwar, 2013). While firms that wishes to achieve competitive advantage using focus strategy selects a narrow market segment within the industry that it serves better and achieve brand loyalty, thereby making customers feel that all their needs are being met and have no reason to look for alternative (Henderson, 2011; Al-alak & Tarabieh, 2013; Tanwar, 2013).

Competitive advantage, therefore, refers to organisation ability to create defensible position over its competitors (McGinnis & Vallopra, 1999), Smith (2013) sees it as the

extent to which firm in a particular region competes with firms elsewhere, Newbert (2008) says it is the degree at which firms explores its opportunities, reduces costs of its operations and neutralizes threats. Competitive advantage is all about firm's capability to offer superior products and services compared to that of its competitors (Gosksoy, Vayvay & Ergeneli, 2013). Such advantage is achieved when an organisation acquires distinct capabilities that allow it to differentiate itself from other organisations in the same industry. Koufteros, Vonderembse and Poll (1997) believe that competitive capability are achieved through pricing (price), premium pricing, value to customers, quality, dependable delivery, and product innovation. In the same vein, Thatte (2007); Sukati et al. (2011); Li et al. (2006) are of the view that competitive advantage dimensions are cost/price, quality, delivery dependability, time to market and product innovation. Li et al., (2006) observe that researchers have been consistent in using the dimensions listed above. This study therefore operationalizes competitive advantage as cost/price, quality, delivery dependability, time to market and product innovation in line with previous studies.

2.1.6.1 Cost/Price

Optimal utilization of resources such as elimination of non-value adding activities, reduced cycle time, set up time could lead to cost reduction (Asha, 2015). Such activities can easily be optimized when supply chain is effectively managed. If a firm's returns does not compare favourably with its peers in an industry, there is obvious need to adjust its strategy (Namu & Kaimba, 2014). Achieving competitive advantage most often centers around cost leadership or reduction. It is central to all activities in supply chain as every effort is geared towards providing greater value to the customer at a lower cost. the

cost of performing a particular activity declines over time as company personnel gains more experience in that area (Namu & Kaimba, 2014), thus, emphasizing the role of company specific resources in cost reduction. Reducing cost of production seems the easiest way a firm can provide competitive pricing.

2.1.6.2 Delivery Dependability

Delivery dependability is the ability of an organisation to provide the type and quantity of products required by customers on time consistently (Somuyiwa et al., 2012). The importance of dependability lies in the possibility of losing your customers when there is frequent order failures. As rightly observed by Hill (2000) cited in Asha (2015), continued failure to deliver at agreed time could not only lead to customers' stoppage of considering such firm as a potential supplier which leads to loss of market share, but also loss of the entire business. Thatte, Agrawal, and Muhammed (2009) observed that delivery dependability is a critical dimension of competitive advantage.

2.1.6.3 Quality

High quality reputation helps in maintaining market share of existing customers over the product life cycle and also market share for new customers (Asha, 2015). Quality is associated with offer that gives the customer higher value (Somuyiwa et al., 2012). Implementation of supply chain management practices helps in improving product quality (Asha, 2015).

2.1.6.4 Time to Market

Time based has become one of the important weapons to achieve competitive advantage because of fast changes in both technology and customer requirements (Chen, Reilly, & Lynn, 2005). It is a competitive strategy that seeks to reduce the required time in developing new product (Stalk 1988 cited in Chen et al. 2005). It is seen as a differentiation strategy because it encourages faster learning and seeks to achieve products proliferations in the market. Time-to-market deals with how quickly an idea moves from conception to its first commercialization or introduction to the market (Chen et al., 2005).

2.1.6.5 Product Innovation

"Product innovation is the development of new products, making changes in the current product design or using new techniques and means in the current production method" (Reguia, 2014, P. 147). Product innovation help firms to cope with competitive pressures, short product life cycle, changes in tastes and preferences of consumers and adapt to technological changes (Kanagal, 2015). Successful product innovation is beneficial not only to the company involved, but also the industry and customers because the introduction of new or improved product or services could give rise to new market, thus, generating growth for the firm and value to the customers (Reguia, 2014). This also could help firms stay ahead of competition.

2.1.7 Conceptual Framework

From the literature reviewed, a tentative relationship could be established between Supply Chain Management and Competitive Advantage, this is presented in Figure 2 below:

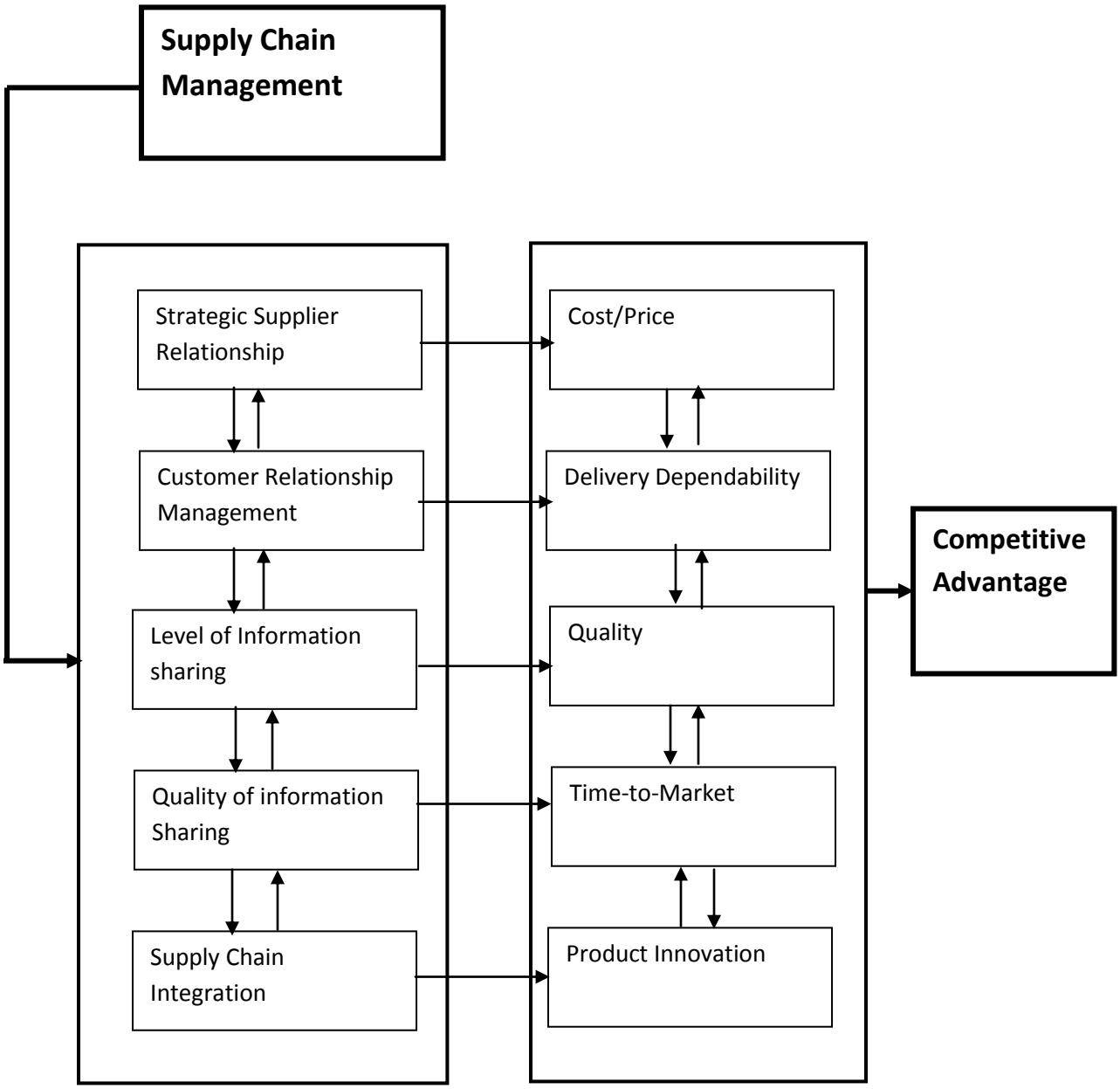

Figure 2: Conceptual Framework
Source: Researcher's Conceptualization, (2018).

Figure 2 shows the relationship between Supply Chain Management and competitive advantage. The diagram shows that organisations with supply chain orientation may not choose only one dimension for implementation because of the interconnectedness of the dimensions.

Therefore, achieving effective and efficient Supply Chain Management may likely be possible if all or most of the dimensions are given equal attention. Hence, no definition of Supply Chain Management is acceptable without consideration of both upstream (suppliers), downstream (customers) and internal integration of functional processes.

In the same vein, competitive advantage will hardly be achieved if one dimension of competitive advantage is singled out for implementation. For instance, if a bakery firm has bread with equal mass to that of a competitor and sells at lower price and the quality is lower, the lower price will likely be associated with the level of its quality and the bread will likely be seen as being inferior. But if the size and quality are the same and the price is lower, then, consumers will likely prefer the one with lower price all other things being equal. This is why the arrows connecting the dimensions are pointing both up and down showing that interrelationship may be obtainable

There are also arrows that connect each dimension of supply chain management to each dimension of competitive advantage. This is so because of the pair wise analysis that is conducted in the study. The diagram shows that each dimension of supply chain is related to another dimension of competitive advantage. The effect of this individual relationship is combined to achieve sustainable competitive advantage.

2.2 Theoretical Framework

This study is anchored on Resource Based Theory. The origin of the theory is traced back to the work of Edith Penrose in 1959 by many authors (Olavarrieta & Ellinger, 1997; Hitt, Carnes & Xu, 2015). Although Penrose's work was in the area of Industrial Organisation Economics, management researchers saw the theory as a good tool to explain most relative performances in organisations. Thus, Wernerfelt (1984) was among the first to link competition among product market positions to competition among resource positions, thereby, bringing the theory to management. From this point, many authors made contributions to the development and understanding of the theory. Olivarrieta and Ellinger (1997) listed Remult (1987); Barney (1986, 1991); Aaker, (1989); Prahalel & Hamel (1990); Schoemaker, (1993); Peteraf (1993); Collins & Montgomery, (1999) as some of the people that contributed to the development of the theory. However, Bromiley and Rau (2016) argue that the work of Barney (1986, 1991) and that of Peteraf (1993) are mostly cited by most scholars as the basis of Resource Based theory.

Today, Resource Based Theory or Resource Based View is mostly credited to Barney (1991) because of his development of the VRIS-model, which is today seen as the most influential contribution to the development of Resource Based Theory (Netland & Aspelund, 2013; Priem & Butler, 2001). Although the model is the consolidation of the major variables identified in resource based theory, the model has become the most popular model in strategic management research as it presents the easiest and simplest way to understand and explain the resource based theory (Hitt, Carnes & Xu, 2015).

Today, Resource based theory is very popular among operations management researchers especially studies in supply chain management because of its ability to deconstruct the sources of a firm's competitive advantage both internally and across cooperative partnerships (Hitt et al., 2015). The framework provided by VRIS-model is mostly adopted despite diverse literature of resource based theory owing to its popularity (Olavarrieta & Ellinger, 1997). Thus, Resource Based Theory is used in this study in line with the exposition presented by Barney (1991).

Dieriekx and Cool (1989) were the first to identify that interconnectedness, social complexities and causal ambiguity could lead to competitive advantage. They argue that sustainable competitive advantage of a firm stems from the firms' ability to continuously combine its asset stocks and deploy same to new market opportunities. Barney (1991); Peteraf (1993) also, argue that resources through which organisations can achieve sustainable competitive advantage must be imperfectly imitable. Most often, such resources are derived from unique historical conditions of the firm, causal ambiguity and/or social complexity. Causal ambiguity means that even the firm that possesses such imperfect imitable resources may also not understand how it works (Bromiley & Rau, 2016). In line with these arguments, Hitt et al. (2015) also agree that intangible resources are more likely to give a firm competitive edge because of difficulty in imitation and can easily produce ambiguous cause and effect, thus, making their functions more difficult to substitute. At this juncture, we present Barney (1991) VRIS model of Resource Based Theory:

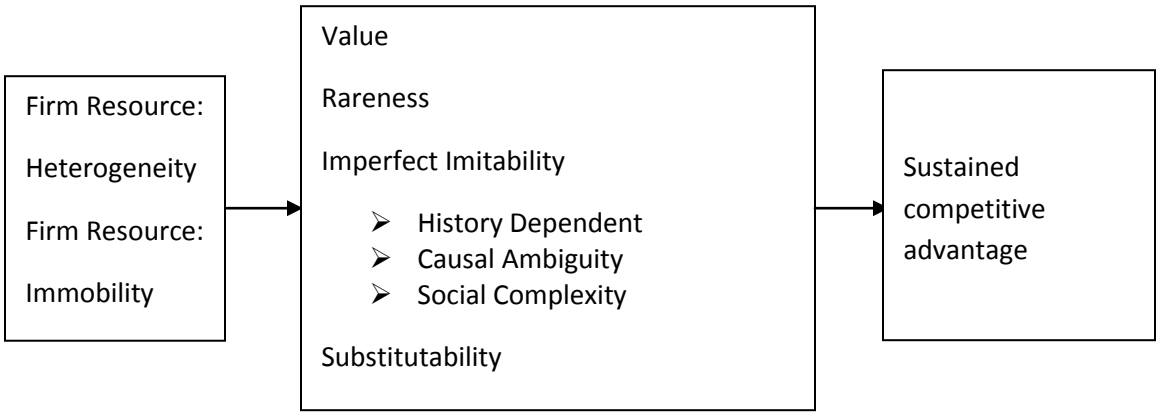

Figure 3: The VRIS Attributes of Resources

Source: Barney, J. B. (1991, p. 112). Firm resources and sustained competitive advantage. *Journal of Management 17*(1), 99-120. Doi: 10.1016/S0742-3322(00)17018-4

The major assumption of the model is that specific resources are the real source of firm's success (Olavarrieta, 1996). Resource Based Theory has three major postulates: firms as bundles of resources, firms as rent seekers and the association between a firm's superior resources and superior performance (Olavarrieta & Ellinger, 1997). As a bundle of resources, firms are seen as comprising of all inputs that helps in implementing its strategies, resources here are both tangible and intangible. This might be acquired from the market or developed within the firm over a period of time.

Resources were categorized into 3 by them, these are: input factor, assets and capabilities (Olavarrieta & Ellinger, 1997). Input factors are those resources that are acquired directly from market, it could be raw materials, skills and so on. From input factors, assets and capabilities are derived.

Assets refer to available stocks of factors of production owned and controlled by a firm (Amit & Schoemaker, 1993). It is mainly generated through investment and accumulation

over a period of time and comprises of tangible things such as plant warehouse, capital equipment and intangible things such as codified knowledge, brand name and so on (Olavarrieta & Ellinger, 1997).

Capabilities are embedded in human skills; it is a product of assets and knowledge that is accumulated within an organisation over a period of time. Capabilities could be dexterity, supplier relationships abilities, ability to work in teams, service delivery and order fulfillment ability (Olavarrieta & Ellinger, 1997) or even special know how through which organisation runs its processes and co-ordinates its activities.

Thus, the major difference between assets and capabilities is that the former relates to "possession" while the later relates to "doing" or "action". Therefore, capabilities are knowledge based resources that make use of both action and cognition (Day, 1994). They are firm specific since they reside in collective memory and become more refined and sophisticated as they are utilized, making it more difficult to imitate (Olavarrieta & Ellinger, 1997). From the above argument, the theory explains the importance of supply chain management for achievement of competitive advantage. Let us examine the variables in the model as presented by Barney (1991):

Value

Valuable resources are the first thing organisations need to have before considering competitiveness (Netland & Aspelund, 2013). Although, any resource that contributes to the creation of economic value is seen as valuable, the value of every resources probably

depends on the type of threats and opportunities that exist in a firm's environment. Hence, the value of a resource is measured by its contribution to profit and/or prevention of losses (Miller & Shamsie, 1996). Therefore, resource is considered valuable if it generates positive rents (Netland & Aspelund, 2013).

Rareness

A valuable resources that can generate positive rents but readily available to all organisations in the industry cannot give any firm a competitive advantage (Self, Weiner & Dunlop, 2002). Therefore, rareness as used in the model simply means that such resources must not be readily available to other players in the industry (Netland & Aspelund, 2013).

Imperfect Imitability

Imperfect imitable resources refer to those resources that cannot be transferred easily between firms without incurring significant cost (Netland & Aspelund, 2013). Imperfect imitable resources are mainly obtained through unique historical development of a firm, causal ambiguity and social complexity (Barney, 1991). This simply means that such resources are hardly acquired from the market, rather, it is developed within the firm and are people based.

Substitutability

This means that the same result cannot be obtained while using similar resources by another organisation (Netland & Aspelund, 2013). Non-substitutable resources are

completely firm specific and therefore the real source of firms' success (Olavarrieta, 1996).

Priem and Butler (2001) criticized resource based theory on the ground that a) the theory makes implicit assumptions about product market. They argue that product market to an extent determines the value of resources by virtue of its changes which can render the valuable resources an organisation possesses valueless. b) They also argue that value variable in resource based theory is exogenous to the theory. c) Overly inclusive definitions of resources make it difficult to establish contextual and prescriptive boundaries. e) In their view, the theory is static and yet to answer the question of causal 'how' and 'why', stressing that the theory has failed to explain how resources are used to create a competitive advantage.

In response to Priem and Butler (2001) criticisms, Sirmon, Ireland and Hitt (2007) did a study on managing firm resources in dynamic environment to create value. They came up with the resource management model to address most of the criticisms raised by Priem and Butler. To them, "resource management is comprehensive process of structuring resources to build capabilities, and leveraging those capabilities with the purpose of creating and maintaining values for the customers and owners" (Sirmon et al, 2007, p.273). They argue that the ability of managers to accumulate/develop, divest resources to maintain most effective resource portfolio at any given time resolves the issues raised in the criticism. They also maintain that firms should be able to develop new capabilities in discontinuous environment to counter changes overtime which can reduce the value of

resources in their possession. In response to the same criticisms, Hitt et. al (2015) say that the idea of dynamic nature of bundling, unbundling and re-bundling resources have gone a long way in addressing the criticisms. Bundling is seen as the process of combining a firm's resources to either construct or alter capabilities (Sirmon et al., 2007). Concluding their argument, Hitt et al. (2015) opine that regardless of terminology, intangible resources remains the most likely source of competitive advantage because of difficulties in imitation, hence, resource based theory remains very popular among all the theories in the study of supply chain management.

Resource Based Theory is appropriate for this study because it provides a unique means of analyzing the supply chain to examine the activities along the supply chain individually and collectively (Williams, Maull & Ellis, 2002). It explains why two different firms with similar investment over the same period of time may still achieve different outcomes thereby identifying the source of competitive advantage of firms (Hitt et al. 2015). The major postulation of the theory is that firm's sustainable competitive advantage stems from resources that are rare, valuable, hard or impossible to imitate or duplicate and hard to substitute (Bromiley & Rau, 2016). As such, provides the needed framework to explain how firms in a supply chain can achieve competitive advantage by pooling together individual firm's capabilities to produce unique resources that can hardly be substituted.

Each specific objective of the study is explained by all the variables in the Resource Based Theory model (VRIS-model), because the central message of the variables are

developing unique capabilities that cannot be easily imitated or substituted within a supply chain. Such capabilities come from the pooling of individual firm's competencies, thus, producing causal ambiguity.

2.3 Empirical Review

Koufteros, Vonderembse, and Jayaram (2005) investigated internal and external integration for product development: the contingency effects of uncertainty, equivocality, and platform strategy in United States of America. The objective of the study was to consider whether internal integration affects external integration and to determine whether external integration affects product innovation and performance. It was a survey research and data was generated from 244 manufacturing firms. Structural equation modeling was used for hypotheses testing. The result showed that internal integration has positive effect on external integration. They also found that customer integration has statistically significant positive relationship with product innovation. Secondly, a negative statistically significant relationship was found between supplier integration and product innovation. The study observed that assigning many responsibilities to suppliers in product development stage may not be all that healthy as this may lead to deterioration of product quality.

Li et al. (2006) studied the impact of supply chain management practices on competitive advantage and organizational performance in New Orleans United States of America. The purpose of the study was to test empirically framework identifying the relationship among supply chain management practices, competitive advantage and organisational

performance. Supply Chain Management Practices was operationlized as strategic supplier partnership, customer relationship, information sharing, quality of information sharing and postponement while competitive advantage was operationalized as price/cost, quality, delivery dependability, product innovation and time to market. It was a survey research and copies of questionnaire were sent to 3,137 target respondents, however, only 196 completed and returned usable responses representing a response rate of 6.3 per cent was used for analysis. From the analysis, the standardized coefficient between SCM and competitive advantage is ($\beta = 0.55$ and $P < .01$), they concluded that SCM has direct impact on organisational competitiveness and in turn performance.

Koh, Demirbag, Bayrakta, Tatoglu and Zaim (2007) assessed the impact of supply chain management practices on performance of SMEs. The study was aimed at determining the underlying dimensions of supply chain management practices and identifying their relationships with operational performance and organisational performance with emphasis on small and medium size enterprises in Turkey. The study identified twelve supply chain management practices namely: just-in-time supply, many suppliers, holding safety stock, subcontracting, few suppliers, close partnership with suppliers, strategic planning, outsourcing, 3PL. close partnership with customers, e-procurement, and supply chain benchmarking. Operational performance was seen from the perspective of flexibility, reduced lead time, forecasting, resource planning and cost saving and reduced inventory level. It was a survey research and questionnaire was distributed to 800 SMEs operating in the Fabricated Metal Product and General Purpose Machinery in Istanbul city, out of the 800 questionnaire distributed, 203 were retrieved. Multiple regression

analysis was used in hypotheses testing, and it was observed that supply chain management practices have both positive and significant impact on both operational performance and organisational performance.

Agus and Hassan (2008) studied the strategic supplier partnership in a supply chain management with quality and business performance in Malaysia. The purpose of the study was to investigate the association among strategic supplier partnership practice, product quality performance and business performance in Malaysian manufacturing industry. It was a survey research and data was generated from 110 respondents. Analysis was carried out using Pearson Product Moment Correlation, Cluster Analysis and Structural Equation via Statistical Package for Social Sciences (SPSS). High correlations were observed among the variables while structural equation modeling (SEM) showed that strategic supplier partnership enhances both product quality performance and business performance. They concluded that strategic supplier partnership in supply chain management has positive and structural effect on product quality performance and business performance

Baharanchi (2009) investigated impact of supply chain integration on product innovation and quality in automotive industry in Iran. The objective of the study was to investigate how different aspects of integration (Internal & External) are linked with product innovation and product quality. It was a survey research and data was gathered from 111 respondents. Data analysis was carried out using correlation analysis. The result showed that internal, supplier and customer integration have strong relationship with product

innovation and product quality. The study also observed that customer integration has the strongest relationship with product innovation.

Lau and Yam (2010) explored the effects of supplier and customer integration on product innovation and performance; empirical evidence in Hong Kong manufacturers. The objective of the study was to examine how an organisation can achieve better product performance through innovation enhanced by supply chain integration. It was a survey research and 251 manufacturers in Hong Kong participated. Correlation was used to test their hypotheses. They found a direct relationship between supplier and customer integration and product performance. This performance was mediated by product innovation. There was no direct relationship found between customer/supplier integration and product innovation. They recommended that extensive effort should be made to improve supplier and customer integration in order to augment product innovation and performance.

Flynn, Huo, and Zhao (2010) undertook a study on the impact of supply chain integration on performance: A contingency and configuration approach in China. The objective of the study was to examine the relationship between internal, customer and supplier integration and both operational and business performance. The focus of the study was on manufacturing companies in China and 617 useable copies of questionnaire were collected out of 1,356 distributed. Operational performance was measured by companies' ability to adjust appropriately in terms of time, new product development, changes in market demand etc while business performance was measured by managers' perceptual

measures of growth in sales, return on sales, growth in profit and so on. The study found that internal integration and customer integration have direct relationship with both operational and business performance. Supplier integration has no direct relationships with operational performance and business performance, but its interaction with customer integration was related to operational performance. The study concludes that internal integration provides a vital link between customer integration and supplier integration. Therefore, without effective internal integration, companies cannot reap the full benefits of their supply chain integration effort.

Rashed, Azeen and Halim (2010) studied effect of information and knowledge sharing on supply chain performance; a survey based approach. The objective of the study was to investigate the effect of operational information and knowledge sharing on supplier-buyer relationship and also to explore the impact of such relationship on supplier operational performance. It was a survey research and data was generated from 8 companies with combined population of more than 10,000 employees. Pearson Product Moment Correlation was used to test their hypotheses. The result showed weak relationship between information sharing and buyer-supplier partnership relationship, they also observe negative effect of information sharing on performance.

Battor and Battor (2010) examined the impact of customer relationship management capability on innovation and performance advantages: testing a mediated model in the United Kingdom The objective of the study was to investigate the mediating role of innovation between customer relationship management and performance advantage and

also to examine the direct impact of customer relationship management and innovation on performance advantage. It was a survey research and data was generated from 1000 companies having more than 50 employees. Structural equation modeling was used to test the relationship among the constructs. The result shows direct impact of both innovation and customer relationship management on performance advantage. Customer relationship management is also found to have indirect impact on performance through innovation .

Intaher (2010) explored agile supply chain strategy for competitive advantage. The study was aimed at determining the link between agile supply chain and competitive advantage. Agile supply chain was operationalized as customer sensitivity, virtual integration, process integration and network based while cost, quality, competency and speed were competitive advantage construct. It was a conceptual study based on literature review, hence, no data was generated. The study, however, concluded that supply chain agility is vital for business success in complex industrial landscape because it helps firms to perform better.

Alipour and Mohammadi (2011) did a study on the effect of customer relationship advantage of manufacturing tractor in Iran. The purpose of the study was to investigate the impact of customer relationship management in gaining competitive advantage in truck manufacture. Customer relationship management was operationalized as attracting and protecting customer, understanding and separateness, development and specialization and complain while dimensions of competitive advantage was seen as durability, damage

and value. It was a survey research and a sample of 82 respondents was drawn from a population of 150 management staff. Spearman correlation and multiple regressions were used for analysis. Finding showed direct linear relationship between customer relationships management and competitive advantage. The researchers recommended that more attention should be paid on product quality promotion, customers' perceptions and customers' complaint.

Sukati et al. (2011) investigated the relationship between supply chain management practices and competitive advantage of firms in Malaysia. The objective of the study was to find the effect of supply chain management practices on supply chain responsiveness and competitive advantage of the firm. Supply chain management was operationalized as strategic supplier partnership, customer relationship, information sharing while competitive advantage was operationalized as price, quality, delivery dependability, time to market and product innovation, but treated as a one-dimensional construct in the analysis. It was a survey research and a sample of 200 respondents made up of corporate executives, purchasing, manufacturing/production managers, distribution/logistics, transportation and operation of consumer goods were considered. A strong relationship was observed between strategic supplier partnership, customer relationship, information sharing and competitive advantage (0.444'', 0.423'', and 0.392). The regression analysis showed that the order of the importance of the dimensions of SCM used is information sharing, customer relation and strategic supplier partnership. They conclude that better supply chain management leads to improved competitive advantage. The researchers

recommend that more emphasis should be on information sharing in order to improve competitive advantage.

Miguel and Brito (2011) assessed supply chain management measurement and its influence on operational performance in Brazil. The objective of the study was to explore the impact of supply chain management as a multi-dimensional construct on different operational performance. Supply Chain Management was operationalized as information sharing, risk and reward sharing, cooperation, and process integration while operational performance was operationalized as cost, quality, delivery and flexibility. The study was a survey research and 103 out of 140 responses obtained were useable and used for analysis in the study. The structural equation model was used for analysis. The study affirmed positive relationship between supply chain management and all operational performance used in the study (cost, quality, delivery and flexibility). They reinforced the need of supply chain management in emerging economy, stressing that it can be a source of competitive advantage which in turn may lead to superior performance in all operational performance dimensions simultaneously.

Bratic (2011) carried out a study on achieving a competitive advantage by supply chain management in Croatia. The aim of the study was to identify 5 key dimensions of supply chain management practices and their relationship with competitive advantage. Supply chain management practices was operationalized as strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing and postponement while competitive advantage was measured with price/cost, quality,

delivery dependability, product innovation and time to market. It was a survey research. Data was generated from 113 respondents through questionnaire. Data generated was analysed via correlation and the author observed that supply chain management may directly affect competitive advantage since relationship was established.

Gharakhani, Mavi and Hamidi (2012) studied the impact of supply chain management practices on innovation and organisational performance in Iranian companies. The objective of the study was to empirically test the framework identifying the relationships among supply chain management practices, innovation and performance of Iranian companies. Supply chain management was operationalized as strategic supplier partnership, customer relationship management, information technology, information sharing, and supply chain integration. Innovation was classified as technological (product and service) and process while performance was measured with five dimensions, namely: sales growth, lead time, cost reduction, quality improvement and returns on investment. It was a survey research, and data was gathered from 186 company managers in Iran. The study showed positive relationship between supply chain management dimensions and performance dimensions including cost and lead time. They concluded that firms with well-developed supply chain management practices would likely achieve higher level of performance. Secondly, positive relationship was found between supply chain integration and product innovation and therefore concluded that firms with high level of supply chain integration would achieve high level innovation.

Adebayor (2012) examined supply chain management practices in Nigeria today: impact on supply chain management performance. The purpose of the study was to understand the level at which Nigerian manufacturing companies are involved in supply chain management practices and also to determine the effect of such practices on supply chain management performances. The study adopted strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing and postponement as dimensions of supply chain management. However, the measure of supply chain management performance was not specified in the study. It was a survey research and data was generated from 31 companies. Correlation and regression model were used to analyse the generated data. The author observed a positive correlation between supply chain management and supply chain management performance. The regression showed that customer relation accounted for the highest variation (53.3%) while postponement accounted for the lowest (9.8%) contribution to supply chain management performance. The study concludes that supply chain management practices are positively related to supply chain management performance.

Chi, Hamid, Rasli and Tat (2013) assessed the impact of supply chain integration on operational capability in Malaysian manufacturers. The objective of the study was to explore the effect of supply chain integration on operational capability. Supply chain integration was seen in terms of customer relationship, manufacturing participation in strategy and inventory control, while operational capability was operationalized as cooperation and reconfiguration. It was a survey research and 201 usable copies of questionnaire were retrieved from the respondents. Structural equation modeling was

used to test the hypotheses. Findings support the hypotheses and affirm that supply chain integration practices have positive impact on operational capabilities.

Hatani, Djumahir and Wirjodirjo (2013) studied competitive advantage as relationship mediation between supply chain integration and fishery company performance in Southeast Sulawesi Indonesia. The objective of the study was to determine whether the implementation of supply chain integration can make an impact on competitiveness and company performance both directly and through the mediation of competitiveness. Supply Chain Integration was measured with internal integration and external integration while competitive advantage was measured with price, quality, reliability, product innovation, time to market and post-sales service. It was a survey research and data was generated from 44 big scale fishery companies. Data was analysed using Generalized Structured Component Analysis (GSCA). A positive and significant impact of internal supply chain integration on competitive advantage and firm performance was observed, while external integration has no significant impact on firms' performance. This they say may likely result from the characteristics of the product under study given that most studies in the area of supply chain integration were conducted in manufacturing sector. They concluded that supply chain management implementation anchored on the philosophy of integration can improve competitiveness and also enhance company performance.

Annan, Otchere, and Daniel (2013) assessed supply chain management practices on organisational performance at the West African examination Council (WAEC) Ghana

national office, Accra. The objective of the study was to assess the supply chain management practices and the critical success factors with its associated benefits on organisational performance at WAEC. Supply chain management was operationalized as product quality, joint-problem-solving with suppliers, continuous improvement, customer interaction and periodic evaluation of performance. It was a survey research and questionnaire was used to generate data from 44 respondents drawn from a population of 160 staff. The study revealed that identified supply chain practices (product quality, joint problem solving with suppliers, continuous improvement, customer interaction and periodic evaluation are practiced in the organisation. They went further to observe that partnership with both suppliers and customers are problematic and recommended that WAEC should incorporate new supply chain philosophy such as total quality management, just-in-time and lean management into its processes.

Somuyiwa, Mcilt and Adebayo (2013) conducted a study on firm's competitiveness through supply chain responsiveness and supply chain management practices in Nigeria. The study sought to ascertain the effect of supply chain responsiveness on competitive advantages of firms in Nigeria resulting from the implementation of supply chain management practices by those firms. Supply chain management practices adopted in the study were strategic supplier partnership, customer relationship, and information sharing while competitive advantage was operationalized as price/cost, quality, delivery dependability, product innovation and time to market. The study was a survey research and data was generated from 115 manufacturing firms in Nigeria. Multiple regression analysis was used to analyze data generated. The study observed that competitive

advantage is influenced by supply chain management positively with customer relationship being the highest contribution (β = 0.314) to variations observed in competitive advantage. They recommended establishment of mutual trust within supply chain to share vital information as a way of improving the effectiveness of supply chain management practices

Moshkdanian and Molahosseini (2013) studied impact of supply chain integration on the performance of Bahman group in Iran. The objective of the study was to investigate the effect of information and material flow integration between supply chain partners on operational performance, and to specifically examine the role of long-term supplier relationship as the driver of the integration. Supply chain integration was operationalized as information integration, logistic integration and long-term relationship. The study however, failed to define performance measures. It was a survey research, and data was generated from 75 respondents via questionnaire. Analysis was based on path-analysis and structural equation. Finding showed that information integration and logistics integrations impacts on performance. However, the study did not observe any direct relationship between long term relationship and performance in Bahman group. They recommended more focus on information technology capacities and information sharing to improve performance.

Imeleny (2014) conducted empirical study on the effect of buyer-supplier partnership on better service delivery within non-governmental organisation in Kenya, a case of World Vision International. The objective of the study was to investigate how buyer-supplier

partnerships affect service delivery of the organisation. It was a survey research and data was generated from 40 staff of the organisation. Collected data was analysed using descriptive statistics via SPSS. The researcher found that partnership helps in enhancing service delivery because it helps to get requirements (supplies) on time. The researcher concludes that buyer-supplier partnership helps in achieving business excellence.

Karimi and Rafiee (2014) studied the impact of supply chain management practices on organisational performance through competitive priorities in Iran Pumps Company. The purpose of the study was to empirically identify the relationships among supply chain management practices, competitive advantage and organisational performance. Supply chain management practices were seen as strategic supplier partnership, customer relationship management, level and quality of information sharing. Competitive advantage was operationalized as price/cost, quality, delivery dependability and product innovation, while organisational performance was measured in terms of market performance, financial performance and customer performance. It was a survey research and data was generated form 196 respondents out of 2137 copies of questionnaire distributed. Structural equation modeling was used for hypotheses testing. It was observed that supply chain management practices have impact on both competitive advantage and organisational performance. Greater impact was observed on competitive advantage which in turn impacted positively on organisational performance.

Ideet and Wanyoike (2014) examined the role of buyer supplier relationship on supply chain performance in the energy sector in Kenya. The objective of the study was to

establish the role of buyer-supplier relationship on supply chain performance in the Kenyan energy sector. Buyer supplier relationship (strategic supplier partnership) was seen in terms of trust, partnership initiatives and information sharing). It was a survey research and descriptive research design was employed. Questionnaire was used to collect data, out of 58 copies of questionnaire distributed to the employees of the two organisations that are highly involved in supply chain activities, 36 copies were completed and returned. Multiple regression analysis was used to analyse collected data. The result showed that all aspect of supplier relationship affects supply chain performance positively with trust having the highest effect (ß = 477), followed by partnership initiatives (ß = 0.402) and information sharing (ß = 0.381)

Rajwinder, Sandhu, Metri and Rajinder (2014) carried out a study on supply chain management practices, competitive advantage and organisational performance: a confirmatory model. The objective of the study was to understand the relationship among supply chain management practices, competitive advantage and organisational performance. Supply chain management dimensions used in the study were use of technology, supply chain speed, customer satisfaction, supply chain integration and inventory management while customer satisfaction profitability and customer base satisfaction were used as competitive advantage dimensions. It was a survey research and data was generated from 10 non-livestock organized retails operating in some major Indian cities. Hypotheses testing were done using structural equation modeling, finding showed high impact of supply chain management practices on competitive advantage.

Shiraz and Ramezami (2014) surveyed the impact of supply chain management strategies on competitive advantage in manufacturing companies of Khuzestan province Iran. The objective of the research was to determine the impact of supply chain management strategies on competitive advantage of the manufacturing firms. Supply chain management was decomposed into strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing and internal lean strategies while competitive advantage was operationalized as quality, cost, product modernization, time, flexibility and delivery assurance. It was a survey research and data was generated from 201 companies through questionnaire. The result showed strategic supplier partnership, customer relationship, quality of information sharing and lean strategies have positive effect on competitive advantage. Only level of information sharing has not. They however recommended business partners to share special information and knowledge about essential business processes.

Mutuerandu and Iravo (2014) studied the impact of supply chain management practices on organisational performance, a case of Haco Industries limited in Kenya. The objective of the study was to assess the relationship between supply chain management practices and organisational performance. Supply chain management practices was operationalized as customer relationships, strategic partnership, training and information sharing while organisational performance was measured with operational performance (cost/price, quality, time to market and flexibility). It was a survey research and data was generated from 31 respondents. Method of analysis was not made clear, the researchers however,

found a positive impact of supply chain management practices on organisational performance.

Abdallah, Obeidat and Aqqad (2014) assessed the impact of supply chain management practices on supply chain performance in Jordan: the moderating effect of competitive intensity. The objective of the study was to investigate the moderating effect of competitive intensity on the relationship between supply chain management practices and supply chain performance. The study was a survey research and data was gathered from 104 manufacturing companies in Jordan. Hierarchical regression analysis was used to test the hypotheses. The result showed that competitive intensity moderates the relationship between supply chain integration and supply chain effectiveness performance.

Zeinab, Hamid and Fariddeddin (2014) analysed the impact of supply chain management techniques: a competitive advantage in the market. The objective of the study was to identify the impact of supply chain management techniques on gaining competitive advantage in the organisation. Supply chain management was operationalized as strategic partnership with suppliers, customer relationship management, information sharing, information quality and procrastination while competitive advantage was treated as a one-dimensional construct. It was a survey research and a sample of 167 marketing managers was drawn from 500 marketing managers of the industrial town of Nain in Iran. The generated data was analysed using structural equation modeling by Liserel software. The study affirmed relationship between all the dimensions of supply chain management and competitive advantage.

Al-Abdallah, Abdallah and Hamdan (2014) studied the impact of supplier relationship management on competitive performance of manufacturing firms using data genereated from manufacturing companies from Japan, Korea, United Sates of America and Italy. The objective of the study was to examine the impact of supplier relationship management on competitive performance in the manufacturing sector. One of the measures of supplier relationship was supplier partnership while competitive advantage was measured with cost quality, flexibility and delivery dependability. It was a survey research and data was generated from 122 plants. Hierarchical regression analysis was used to test the hypotheses. Gestalt analysis was performed on competitive performance. It was found that supplier partnership was significantly associated with competitive performance.

Mbuthia and Rotich (2014) explored the effect of supply chain management practices on competitive advantage in retail chain stores in Kenya, a case study of Nakumatt Holding limited; the purpose of the study was to determine the impact of supply chain management practices on competitive advantage. The study proxies strategic supplier partnership, customer relationship, information sharing and postponement for supply chain management while competitive advantage was decomposed as price/cost, quality, delivery dependability product innovation and time to market. It was a survey research and data was generated from 100 respondents via questionnaire. Correlation analysis and multiple linear regressions were employed for data analysis. Findings showed that significant association/relationship exist between strategic partnership, customer

relationship and competitive advantage while no significant relationship was observed between, information sharing, postponement and competitive advantage. The authors conclude that competitive advantage being enjoyed by the supermarket is derived from other functions in addition to supply chain management.

Njoku and Kalu (2015) carried out a study on the effect of strategic supply chain management on the profitability of flour mills in the Sub-Saharan Africa. The major objective of the study was to examine the effect of strategic supply chain management on profitability of flour mills in the region. Strategic supply chain management was treated as a one-dimensional construct in the study while profitability was measured with profit after tax. The study made use of time series and data was collected from annual report of the selected organizations from 2005-2013, regression analysis was employed for analysis. The authors observed poor implementation of strategic supply chain management among the firms studied and that resulted to little benefit from huge investment in their supply chain and insignificant effect on their profitability. The study concludes that adopting a sound supply chain management in the industrial sector will lead to all round development when combined with proper exploitation of human resources abundant in the region.

Bahrami and Sabetfar (2015) investigated the impact of supply chain integration on competitive capabilities in automobile parts manufacturing industry in Qazrin Province in Iran. The objective of the study was to determine the impact of supply chain integration on competitive capabilities. Supply chain integration was operationalized as internal

integration and external integration (supplier and customer), while competitive capabilities dimensions were product innovation, cost(price), delivery time, quality and flexibility. A sample of 57 managers was drawn from the managers in the industry. Test of hypotheses were carried out using regression analysis. The researchers found a strong relationship between both internal and external integration and competitive capabilities.

Veerendrakumar and Shivashankar (2015) did an exploratory study on achieving sustainable competitive advantage through supply chain innovation for strengthening organisational performance. The objective of the study was to examine the linkage between organisational capabilities, competitive advantage and supply chain innovation. The study was carried out in Karnataka State in India. It was a survey research and data was gathered from 53 respondents who were all senior managers in their organisations. Descriptive statistics was used to present the data generated. The study observed that organisational capabilities such as continuous improvement capabilities, ability to adapt to change, develop and manage new technologies are highly important in ensuring a sound supply chain management that could lead to competitive advantage. Also, when strong relationship is formed in supply chain, it gives rise to formal cooperation and therefore provides impetus to improve competitive advantage.

Nyamesege and Biraori (2015) assessed the effect of supplier relationship management on the effectiveness of supply chain management in Kenya Public sector. The main objective of the study was to assess the factors affecting the effectiveness of supply chain management practices in Kenyan Public sector. It was a survey research, and data was

generated from 60 management staff from the ministry of finance. Analysis was carried out using Pearson Product Moment correlation. The study found that supplier relationship greatly determines supply chain management effectiveness in the ministry.

Chaghooshi, Arbatani and Samadi (2015) studied the effect of supply chain management processes on competitive advantage and organisational performance: case study of food industries based in West Azerbaijan Province. The objective of the study was to examine the effect of supply chain management processes on organisational competitiveness and performance. Supply Chain Management was operationalized as customer relationship management, supplier relationship, customer service management, demand management, order fulfillment, flow management, product development and returned management while competitive advantage was seen in terms of price/cost, quality, reliability of delivery and time of delivery to market. It was a survey research and the population of the study was made up of 150 senior managers in the food industry from where a sample of 108 was drawn. Formulated hypotheses were tested using Pearson Product Moment Correlations. Significant positive relationship was observed between supply chain management processes and competitive advantage. Significant positive relationship was also observed between competitive advantage and organisational performance.

Owuor, Muma, Kiruri and Karanj (2015) examined the effect of strategic supplier relationship management on internal operational performance of manufacturing firms: a case of East African Breweries Limited Kenya. The objective of the study was to determine the effect of strategic supplier relationship management on internal operational

performance of manufacturing firms. The study further decomposed strategic supplier relationship management as business supplier communication and business supplier joint decision making. It was a survey research and data was generated from 54 employees of the organization of study through questionnaire. Regression analysis was used to test the effect of strategic supplier relationship management on internal operational performance. Finding showed a positive effect. The authors conclude that organisations that effectively manage strategic supplier relationship (supplier communication system, buyer supplier joint decisions) are likely to have improved internal operational performance.

Faroglian and Mazhas (2015) studied the effect of customer relationship management on performance of small-medium sized enterprises (SMEs) using structural equation. The objective of the study was to investigate the effect of customer relationship management on the performance of small and medium size enterprises in Mashhad Industrial Park, Iran. Customer relationship was operationalized as customer support, technology and market support. It was a descriptive survey research and data was generated from 98 managers/practitioners via questionnaire. Hypotheses testing were conducted through correlation analysis. The study observed that customer relationship management dimensions (customer support, market support and technology) has significant positive relationship with SMEs performance

Roushdy, Mohamed, Hesham and Elzarka (2015) investigated the impact of supplier relationship management on firms' performance: a multiple case study approach on manufacturing companies. The objective of the study was to investigate the extent to

which supplier relationship management is implemented in Egypt and its impact on firms' performance. It was an exploratory study and semi-structured questionnaire was used to generate data from four main business sectors, namely: pharmaceutical, steel, and fertilizers. Descriptive statistics was mainly used to present data generated. The study identified practiced supplier relationship as suppliers evaluation, penalties, training and early involvement. The study concludes that supplier relationship management leads to performance improvement across the supply chain, reduces cost and enhances growth and development.

Marinagi, Trivellas and Reklitis (2015) did a study on information quality and supply chain performance, a mediating role of information sharing. The objective of the study was to investigate the role of information sharing between information quality and supply chain performance in Central Greece. One-dimensional measures were adopted for the constructs. Data was generated from 200 manufacturing SME. The data generated was analysed using regression analysis. The analysis showed that information quality has direct positive effect on supply chain performance, secondly, they found that information sharing fully mediates the effect of information quality on supply chain performance.

Annan, Boso and Essuman (2016) investigated the path from supply chain integration to business performance evidence from a Sub-Saharan African Economy in Ghana. The purpose of the study was to empirically examine whether or not the effect of supply chain integration performance is channeled through customer value creation and whether such performance is dependent on longevity of product life cycles. Supply chain integration

was operationalized into internal integration, customer integration and supplier integration while business performance was operationalized as value creation and financial performance. It was also a survey research and data was generated from 79 copies of useable questionnaire. Structural Model Estimation was method of analysis and finding showed that supply chain integration is positively related to financial performance, while value creation mediates the relationship between supply chain integration and financial performance. They concluded that higher level of supply chain integration is associated with higher level of business performance.

Wright (2016) studied supply chain integration and performance in Romania. The objective of the study was to investigate the link between supply chain integration and firm performance in Romania. It was a survey research, the researcher, therefore, generated data from 202 companies in Romania. Logistic regression was used to analyse data collected. The researcher found no link between supply chain integration and company performance. He observed that what is needed by firms are high operational efficiency which is more likely to help achieve high performance. Hence, he concluded that supply chain integration does not increase the probability of high performance.

Wijetunge (2016) investigated the role of supply chain management practices in achieving organisational performance through competitive advantage in Sri Lankan SMEs. The objective of the study was to examine the relationship between supply chain management practices and organisational performance and the mediation effect of competitive advantage. Supply chain management was operationalized as strategic

partnership with suppliers, level of information sharing, quality of information sharing, customer relationship, postponement and lean practices while competitive advantage was viewed in terms of price/cost, quality, delivery dependability, product innovation, and time-to-market. It was a survey research and questionnaire was used to generate data from 155 owner/managers of SMEs in Colombo district out of 548 copies of questionnaire distributed. Hypotheses were tested using Pearson Product Moment correlation. First, the study identified strong relationship between supply chain management and competitive advantage, secondly, the study observed a significant mediation effect of competitive advantage between supply chain management and organisational performance. However, despite operationalization of the variables, the author went ahead to test the variables as one-dimensional. This method may not be the best method as some of the second order variables may not necessarily be important or significant but carried by others.

Olendo and Kavale (2016) examined the effect of supplier relationship management on supply chain performance at Bamberi Cement Mombasa, Kenya. The objective of the study was to establish the effects of supplier relationship management on supply chain performance. It was a survey research and data was generated from 45 employees of the firm. Multiple regression analysis was used to analyse the generated data. Significant positive relationship was established between supplier relationship management and supply chain performance.

Vencataya, Seebaluck and Doorga (2016) assessed the impact of supply chain management on competitive advantage and operational performance. The study was conducted in Mauritius four star hotels. The objective of the study was to assess the impact of supply chain management on competitive advantage and operational performance. Supply chain management was operationalized as strategic supplier partnership, customer relationship, information system, logistics outsourcing, constructs of competitive advantage were not specified. It was a survey research and a sample of 34 hotels was drawn from 56 four star hotels in Mauritius. Chi-square and Pearson Product Moment correlation were used for hypotheses testing. The result showed that supply chain management has a significant impact on their competitive advantage and operational improvement

Ogunlela and Lekhanya (2016) studied the use of integrated supply chain management model for promoting competitiveness in the fast moving goods manufacturing industry in Nigeria. The main objective of the study was to explore and evaluate critical factors affecting implementation and use of integrated supply chain management model in the Nigeria fast moving consumer goods manufacturing industry. Integrated supply chain was mainly seen from internal and external perspective. It was a survey research and data was generated from 80 respondents at Unilever Nigeria, Logos. Descriptive statistics was used to present the generated data. Researchers conclude that integrated supply chain management plays a vital role in achieving competitiveness and sustainability of any business. The study recommends the appointment of senior management staff member,

who will direct and monitor change initiatives and communicate to both staff and partners, also, building trust among partners, ensuring flexibility were also emphasized.

Shrinkant and Ravi (2017) explored supply chain practices and organisational performance: an empirical investigation of Indian manufacturing organisations. The purpose of the study was to empirically test a framework which identifies the relationship between various supply chain practices and organisational performance in Indian organisations. Supply chain management practices was operationalized as information and communication technology, supply chain integration, operational responsiveness and closed loop green practices while performance was seen as operational performance, customer satisfaction and financial performance. It was a survey research and 292 responses were generated. Generated data was tested using structural equation modeling. Finding showed that successful supply chain management practices implementation leads to improvement in operational performance, customer satisfaction and financial performance.

Gbadeyan, Boachie-Mensah and Osemene (2017) studied effect of supply chain management on performance in selected private hospitals in Ilorin, Nigeria. The objective of the study was to evaluate the impact of supply chain management in hospitals on patient satisfaction, competitive advantage and performance. Supply chain management, organisational performance and competitive advantage were all measured as one-dimensional constructs. It was a survey research and data was generated from 10 private hospitals out of 58 that are operating in the area. Partial least square (PLS) was used to

test the hypotheses. The result showed that supply chain management has strong direct impact on patient satisfaction, the test of second hypothesis shows that supply chain management has strong direct impact on hospital competitive advantage.

Al-Qeed, Al-Sadi and Al-Azzam (2017) investigated the impact of customer relationship management on achieving service quality of banking sector in Jordan. The objective of the study was to investigate the relationship between customer relationships management and service quality of Jordan banking sector. It was a survey research and data was generated through questionnaire. Test of hypotheses was carried out using Pearson Product Moment Correlation. A significant positive relationship was observed between customer relationship management and service quality in the banks.

Kumar, Esinaulo, Garza-Reyes, Humari, Rocha-Lona, and Lopez-Torres (2017) studied the impact of supply chain integration on performance: evidence from the United Kingdom food sector. The objective of the study was to test if supply chain performance can be achieved from integrated design and also to know if integration could lead to competitive advantage. Supply chain integration was operationalized as customer, supplier, internal, and information integration, while cost, flexibility, order fulfillment rate inventory turns were looked at as supply chain performance. It was a survey research and data was collected through web based questionnaire from 60 respondents. The test of hypotheses was carried out using correlation analysis. The variables were treated as one-dimensional construct. Findings shows that supply chain integration is positively related

to supply chain performance, they suggested that strong integration could lead to competitiveness.

Zekic and Samarzija (2017) analysed the impact of selected supply chain management factors on the performance of wood industry clusters in the republic of Croatia. The objective of the study was to investigate the relationship between supply chain management and supply chain performance and also to determine the relationship between supply chain performance and competitive advantage. Supply chain management was operationalized as information technology, partner relationships, and value added process. It was a survey research and data generated through questionnaire was analysed using multiple regression analysis. The study observed that only partner relationship (supplier strategic partnership) has significant relationship with supply chain management performance and thus, competitive advantage while information technology and value added have not. The study suggested a change in management focus by paying greater attention to functional integration.

Dotun, Pei-Lee, and Pervaiz (2018) explored the impact of supply chain relationships and integration on innovative capabilities and manufacturing performance; the perspective of rapidly developing countries in Brazil, India, and China. The objective of the study was to investigate the relationship between supply chain relationships/integration, innovative capabilities and manufacturing performance it was a survey research and data was generated from 171 organisations from the three countries. Analysis was performed using

structural equation modeling. The study found that supply chain integration is positively related to both product and process innovation.

2.4 Summary of Related Literature Reviewed

The literature reviewed was presented in different subheadings. The review had broadened our understanding of supply chain management and how it relates to competitive advantage. It has also given us insight on the level of work already done in the area till date by authors. The concept of supply chain is different from supply chain management. Supply chain in its simplest term is a network or collection of organisations that perform different but related activities that provide value in form of product and/or services to customers. These organisations are connected through upstream and downstream linkages, meaning that at any point in time, there has to be exchange of values between them with the aim of providing greater value to customers. As noted by Mentzer et al. (2001), supply chain is a phenomenon in the business world, it exists in every sector whether it is acknowledged and managed or not. Thus, supply chain is defined conceptually in this study ‘as a collection of organisations that are involved directly or indirectly in the activities or processes that lead to value creation in form of products or services to the ultimate consumer.’ Supply chain could be direct: this involves the supplier, the organisation and the customer; extended which involves supplier’s supplier and customer’s customer and ultimate supply chain which involves many other people that provide different support services.

Supply chain management on the other hand occurs when those organisations that have to exchange values for the purpose of providing greater value to the ultimate consumers take deliberate actions in form of collaboration, cooperation, coordination, integration to achieve a more effective and efficient way of relating with each other. Such move is meant to achieve certain objectives such as cost reduction, improved quality and so on.

Though no consensus has been achieved on the definition of supply chain management, Mentzer et al. (2001) summed all definitions into "supply chain orientation" and "supply chain management". To them, a firm is said to posses supply chain orientation if it takes into considerations the implications of managing their downstream and upstream flow of resources and information while supply chain management is the sum total of all deliberate management actions undertaken to ensure that both upstream and downstream operate efficiently. Therefore, supply chain management is defined conceptually in this study as 'a process of coordinating strategic, tactical, and operational business functions within a firm, and integrating such functions across organisations in a supply chain with a view to achieving greater efficiency and effectiveness for the benefit of the organisation, customers and the entire supply chain members.'

The review also showed that supply chain management is a multi-dimensional construct and there is no consensus yet on the dimensions or practices as some authors call it. This divergent views have led to inconclusive findings as it concerns the benefits, applications in organisations and most importantly, its role in achieving sustainable competitive advantage. However, the operationalization of supply chain management as strategic

supplier relationship, customer relationship management, information sharing, quality of information sharing and postponement by Li et al. (2006) has been widely accepted and subsequently used in many studies as shown in the reviewed literature. Hence, they were adopted in this study with the addition of supply chain integration which also has been widely accepted.

Finally, the review showed that competitive advantage refers to firms' ability to offer superior products/services to the market compared to its competitors. This could be achieved by performing better in some of the competitive advantage dimensions (cost/price, quality, delivery dependability, time-to-market or product innovation).

2.4.1 Gap in Knowledge

The empirical studies reviewed did not present conclusive findings in respect of Supply Chain Management and Firms competitive advantage. While some studies observed significant positive relationships with all the dimensions, for instance Li et al. (2006); Sukati et al. (2011), others such as Mbuthia and Rotich (2014); Shiraz and Ramezami (2014) did not. More worrisome is that information sharing as a dimension of Supply Chain Management, which is seen as a critical factor in achieving competitive advantage has not shown significant relationship in some of the studies, this calls for more studies, hence this study.

Secondly, Supply Chain Management and Competitive advantage seem to have received little attention in Nigeria. Most of the studies reviewed did not show consistency at all.

For instance, only the study by Somuyiwa et al. (2013) identified clearly some dimensions of Supply Chain Management but went ahead to consider only three out of numerous dimensions identified in the literature. Studies in area of Supply Chain Management seem grossly inadequate and cannot in its present state be used to generalize what is applicable in the Nigerian environment. Moreover, none of these studies took place in the South-East, Nigeria despite its distinct culture and industrious nature of the people, this also constitutes a gap. With rapid changes in business and economic world, we can hardly use studies conducted as far as 2013 to generalize today. So many things such as economics situation, technology and so on, have changed and may likely affect the applicability of such findings today. This also constitutes a gap.

Most of the studies reviewed were not conducted in bakeries, both in Nigeria and elsewhere. Given the importance of this industry, it is necessary that studies that will improve their competitiveness and thus survivability is carried out. This presents a strong justification for this study given the potential and importance of the industry. This study is therefore meant to fill these gaps.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

This study is quantitative in nature and therefore, adopts the deductive research method of the positivist paradigm. Hence, data collected was subjected to statistical treatment with a view to support or refute the formulated hypotheses as obtainable in most quantitative research (Cresswell, 2003). Survey type of research was most appropriate, because it has been acclaimed for being able to "accurately access information about tangible resources and probably one of the best methods to capture the intangible resources and capabilities within a firm" (Hitt et. al, 2015. P. 83).

Based on the arguments presented above, descriptive survey design was employed in the study. Studies that are concerned with describing the characteristics of individual or group, determine the frequency with which something occurs or its association with something else are grouped under this design (Kathari & Garg, 2014).

The design entails gathering data from the respondents who are from the bakery firms in South-East, Nigeria. Data generated was subjected to some treatments such as sorting, coding and so on. The analysis of generated data helped to determine the extent of relationship that exists between dependent variable (Competitive advantage) and independent variable (Supply Chain management). Since both dependent and independent variables were operationalized, they were treated as multi-dimensional construct. Thus, pair-wise analysis was carried out to determine the extent of relationship among the second order variables namely: supplier strategic partnership, customer relationship management, level of information sharing, and supply chain integration for

supply chain management and, cost/price, quality, delivery dependability, time-to-market and product innovation for competitive advantage. While this approach may not give room for understanding the general interactions between the second order variables and the first order variables, it however, helped to specifically clarify which aspect of supply chain management correlates highly with another dimension of competitive advantage.

3.2 Area of Study

The study was carried out in all the five States in the South-East, Nigeria, namely, Abia, Anambra, Ebonyi, Enugu and Imo. Only bakery firms that are members of Master Bakers Association participated in the study. The people of South-East, Nigeria are known to be industrious, yet, unemployment is still very prevalent in the area. This may be attributed to near absence of world class industries in the area. So many people are into bakery, albeit the operations and performance of the industry in the area seems below average. There is still crave for Benin Bread, and bread produced in the Western part of the country. For Bakery industry in South-East Nigeria to take its rightful place in the country and even outside, there is need for a paradigm shift from the individualistic posture in the industry to cooperative stance which is part of what supply chain management seeks to achieve.

3.3 Population of the Study

Population of the study is made up of all registered members of Master Bakers Association in South-East Nigeria. The numbers per State are as follows: Abia State 140, Anambra State 98, Ebonyi State 49, Enugu State 80, and Imo State 300. Therefore, the

population of the study is 667 bakery firms. (See appendix V). This is presented in figure 4 below:

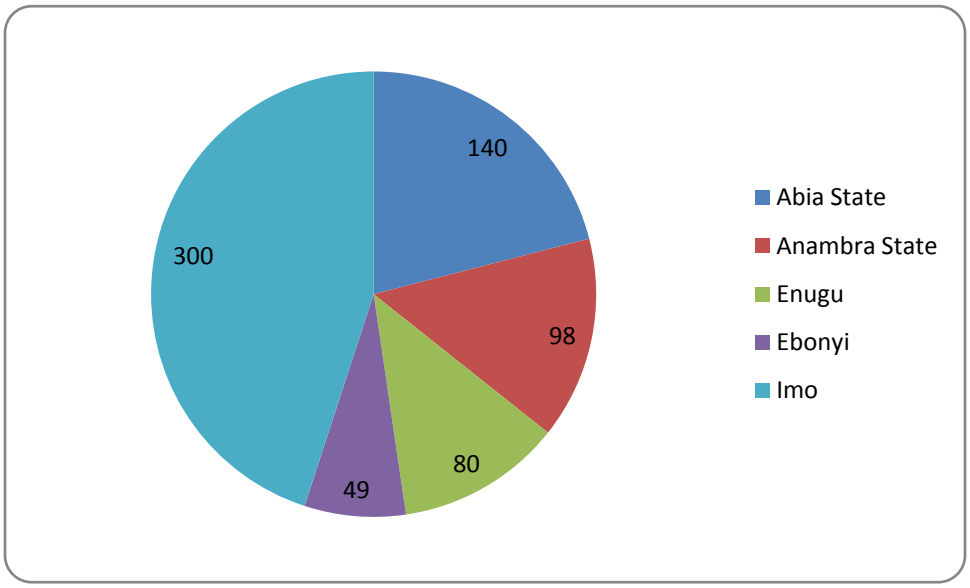

Figure 4: Population Distribution per State
Source: Master Bakers Association South-East, Nigeria Records.

3.4 Sample Size Determination

Sample size was determined using Taro Yamene's equation as stated below

$$n = \frac{N}{1 + N(e)^2} \qquad \text{eq. 1}$$

Where: n = Desired sample size

N = Population of the study

e = Error margin (5%)

1 is constant.

$$\Rightarrow \quad n = \frac{667}{1 + 667\ (0.05)^2}$$

$$n = \frac{667}{1 + 667\ (0.0025)}$$

$$n = \frac{667}{1 + 1.7625}$$

$$n = \frac{667}{2.7625}$$

$$n = 241$$

Bowley's Allocation formular was used to determine the number of bakeries that were allotted in the sample for each state.

The formular states: $nh = \frac{n(Nh)}{N}$

Where: nh = Number of sample from a particular state

n = Total sample size

Nh = Total population in each state

N = Total population

For Abia State with a population of 140: $nh = \frac{241 \times 140}{667} = 50.585 = 51$

For Anambra State with a population of 98: $nh = \frac{241 \times 98}{667} = 35.41 = 35$

For Ebonyi State with a population of 48: $nh = \frac{241 \times 49}{667} = 17.7 = 18$

For Enugu State with a population of 80: $nh = \frac{241 \times 80}{667} = 28.9 = 29$

For Imo State with a population of 300: $nh = \frac{241 \times 300}{667} = 108.396 = 109$

Total Sample Size = 241

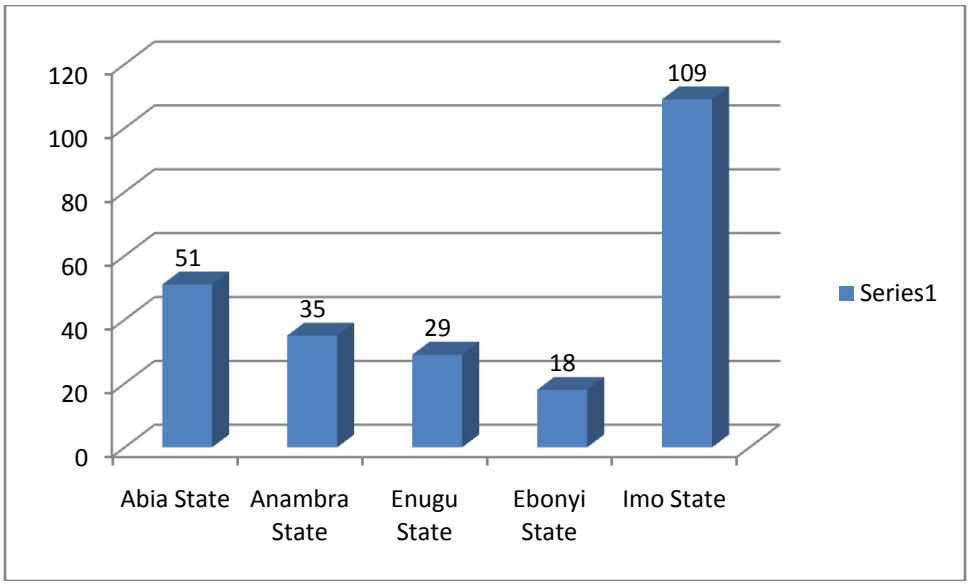

Figure 5: Sample Size per State
Source: Researcher's computation, 2018.

Figure 5 is a bar chart showing sample size from each of the five states in the South-East Zone. The figure shows that Ebonyi State has the lowest numbers (18), while Imo State has the highest (109).

3.5 Sampling Technique

Simple random sampling was employed. This gives every bakery firm in South-East, Nigeria that is a member of Master Bakers Association equal opportunity to be selected. Questionnaire was randomly distributed to firms in each state based on allotted numbers. Since there was no conditions attached before being selected other than membership of the association, accessibility played a role. Each bakery was given a copy of the questionnaire which was completed by the owner and in most cases a staff at the management cadre. To ensure that the right people filled the questionnaire, administration of questionnaire were mainly carried out during meetings.

3.6 Sources of Data

The study made use of primary and secondary data. Primary data was sourced using structured questionnaire from the respondents while secondary data was sourced through journals, internet material downloads, books and so on.

3.7 Instrument for Data Collection

Questionnaire was used to collect data for the study. The questions were close ended; this implies that respondents could only choose from the provided answers. The questionnaire was made up of two sections. Section A sought to ascertain the demographic information of the respondents. The essence of the section is to have adequate information about the respondents in terms of their experience in the industry, level of education and so on. This section contains 5 demographic questions.

Section B addressed questions relating to the objectives of the study. The instrument was designed using Likert scale. The scale was categorized, and ranges from: not at all-1, to a small extent-2, to a moderate extent-3, to a great extent-4 and to a very great extent-5. Section B of the questionnaire contains questions that helped generate data that was used to test the hypotheses. The study employed scale items that have been used in similar studies. These items were grouped in line with the objectives. As earlier stated in section 2.1.4, strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing, postponement and supply chain integration were adopted as the dimensions of supply chain management. Each dimension was measured with a set of items that have been validated and used in previous studies.

Supply chain management was measured using 34 scale items. Because of the multidimensionality of the construct, the questionnaire addressed different dimensions with different sets of close ended questions. Strategic supplier partnership was measured with six items, customer relationship was measured with five items, level of information sharing was measured with six items, level of information quality was also measured with five items (See Appendix I). The items that were used to measure supply chain management were adapted from the study of Li et al. (2006); Sukati et al. (2011)

Supply chain integration as a dimension of Supply Chain Management is also multidimensional (supplier integration, customer integration and internal integration) and therefore, the three dimensions were measured differently. Supplier integration was measured using 4 items (See Appendix I). The items were adapted from the study of Kannan and Tan (2005); Swink and Naire, (2005); Vachon and Klassen (2007); Flynn et al. (2010); and Marin-Garcia et al. (2013). Customer integration was measured with 4 items (See Apendix I). The items were adapted from the studies of Kim (2009); Swink and Nair (2007); Vachon and Klassen (2007); Flynn et al. (2013) and Marin-Garcia et al. (2013). In the same vein, Internal Integration was also measured with 4 items (See Appendix I). The items were adapted from the works of Kim (2009); Flynn et al. (2010); and Marin-Garcia et al. (2013).

Competitive advantage was measured in this study as a multidimensional construct. Price/cost was measured with 2 items, quality was measured with 4 items, delivery

dependability was measured with 3 items, time-to-market was measured with 4 items while product innovation was measured with 3 items. These items were adapted from the studies of Li et al. (2006), Sukati et al. (2011)

3.8 Method of Data Collection

Data was sourced directly from the respondents through structured questionnaire. The researcher personally distributed some copies of the questionnaire, while some copies were distributed through the chairmen and secretaries of Masters Bakers Association of each state.

3.9 Validity of the Instrument

Factor analysis was used to establish the content validity of the measuring instrument through factor loadings; principal component analysis with varimax rotation. As suggested by Hair, Black Anderson and Tatham (2006), by this mode of extraction, the content validity of the instrument was established. In this case, all the items meant to measure a particular construct should load highly on the construct but where otherwise is the case, such item was deleted (Al-Swidi & Al-Hosam, 2012). Majority of the items loaded very highly on the construct that it is meant to measure. However, one item that was meant to measure level of information quality (Information exchange between our trading partners and us is always complete) loaded as a different construct and was deleted, thus, three items were used to measure level of information quality as against four items. Two items meant to measure supply chain internal integration (management works together with all departments in all important decision; generally, everyone in the factor works as a team) loaded as a construct and was also excluded, hence, two items

were used to measure supply chain internal integration. Finally, two items that were meant to measure time to market also loaded differently (we deliver product to market quickly, we are always first in introducing new product to the market), they were excluded and time to market was measured with two items as against four items. Validity was also enhanced by using questionnaire items that have been used in similar studies. The scale items in the instrument have passed through rigorous validation methods and have established their ability to measure what supply chain management and competitive advantage in organisations. (See appendix II).

3.10 Reliability of the Instrument

Reliability measures the internal consistency of the measuring items. Cronbach alpha (α) is considered the most popular indicator of internal consistency and high values are most preferable (Pallant, 2011). The reliability of instrument for this study was established using Cronbach alpha (α). This is presented in Table 2, from the Table, there is evidence to suggest that the instrument is highly reliable. The total items reliability is 0.898, while customer relationship management alpha is 0.810, the highest among all the variables. The entire constructs alpha loadings are satisfactory.(See appendix III)

Table 2: Reliability of Constructs

Construct	Cronbach Alpha (α)	Number of items
Strategic Supplier Partnership	.731	6
Customer Relationship Management	.810	5
Level of Information Sharing	.755	6
Level of Information Quality	.739	3
Supply Chain Integration	.741	10
Competitive Advantage	.775	14
Reliability of all Items	.898	44

Source: SPSS, ver. 23.0

3.11 Method of Data Analysis

Descriptive statistics was used to present collected data. Pearson Product Moment Correlation was used to test the hypotheses. All presentations and analysis were carried out using Statistical Package for Social Sciences (SPSS) version 23.0.

3.12 Decision Rule

Hypotheses was tested at 95% level of confidence. Alternate hypotheses were accepted when p-value was less than 0.05 while the reverse was the case when P-value is greater than 0.05.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Data Presentation

Table 3 : Questionnaire Distribution/Response Rate

Questionnaire	Number	Percentage %
Retrieved and correctly filled	207	85.89
Retrieved but wrongly filled	14	5.809
Not retrieved	20	8.299
Total Distributed	241	100

Source: Field Survey, 2018

Table 3 shows the total number of questionnaire distributed and retrieved. A total of 241 copies of questionnaire were distributed, 221 copies were retrieved, and out of the number retrieved, 14 being 5.809% were wrongly filled. These mainly involved incomplete filing of the questionnaire items which made it impossible to be used. The copies of questionnaire that were not retrieved were 20 constituting 8.299%. The analysis was based on 207 copies of questionnaire correctly filled and retrieved which represented 85.89% of distributed copies of questionnaire. The rate of return is good enough for the study. The response rate per state is presented in Figure below:

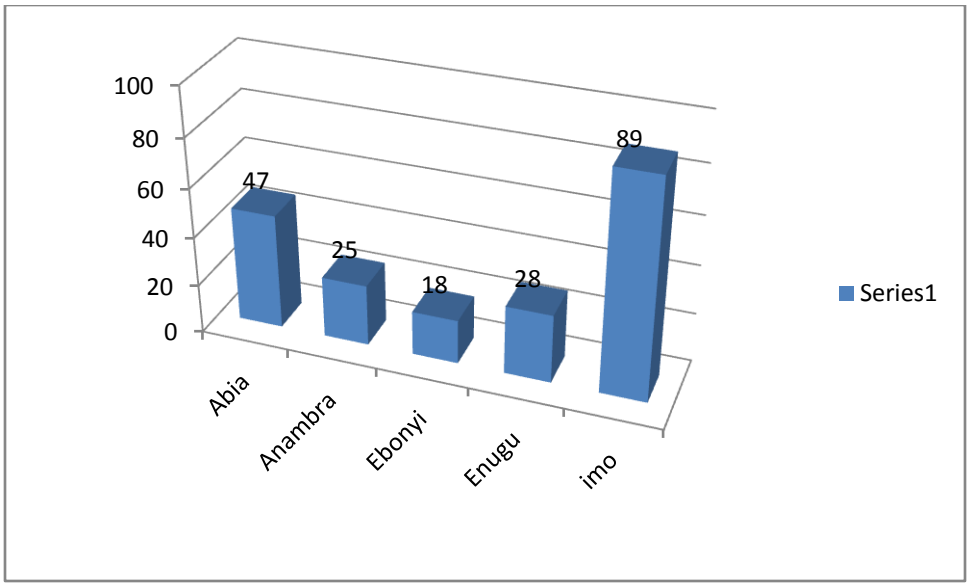

Figure 6: Response Rate Per State.
Source: Field Survey, 2018.

Figure 6 shows the rate of response per state. Ebonyi State recoded 100% return rate, this may be attributed to the favourable disposition of the Chairman and number of firms involved which is the fewest. The highest failure rate was recorded in Anambra State. A failure rate of 29.6 per cent was recorded (25 was retrieved out of 35). This may be attributed to the hostile disposition of the chairman of the association in the state. However, 71.4 percent response rate is good enough for the study.

Table 4: Gender of Respondents

	Categories	Response Rate	
		Frequency	Percentage
Gender	Male	91	44.0
	Female	116	56.0
	Total	207	100.0

Source: Field Survey, 2018

Table 4 shows the gender of respondents, the number of females is slightly above that of males with 116 (56%) respondents, while males are 91 (44%) respondents. Though the numbers of females are slightly higher, the genders of the respondents are relatively balanced. The industry is concerned with food and that may account for the large number of female bread factory owners/managers.

Table 5: Age of Respondents

	Categories	Response Rate	
		Frequency	Percentage
Age Group	18-24	3	1.4
	25-31	33	15.9
	32-38	34	16.4
	39-45	75	36.2
	Above 46	62	30.0
	Total	207	100.0

Source: Field Survey, 2018

Table 5 shows that the respondents between ages 18-24 are only 3 (1.4%), 33 (15.9%) were between the ages of 25-31, 34(16.4%) were between the ages of 32-38, 75 (36.2%) were between the ages of 39-45 while 62(30%) were above 46 years old. It is not surprising that the majority of the respondents were between ages 39 and above given that most of the respondents are factory owners.

Table 6: Marital Status of Respondents

	Categories	Response Rate	
		Frequency	Percentage
Status of Respondents	Single	25	12.1
	Married	171	82.6
	Divorced	11	5.3
	Total	207	100.0

Source: Field Survey, 2018

Table 6 shows the marital status of the respondents. Majority of the respondents 171(82.6%) are married, 25 (12.1%) are single while only 11 (5.3%) are divorced. The result showed that most of the respondents are mature, since most of the respondents are owners/managers. Young people (single) are mostly fresh graduates who may not have enough funds to own factories, this may account for the large number of married persons among the respondents.

Table 7: Educational Qualifications of the Respondents

	Categories	Response Rate	
		Frequency	Percentage
Highest Academic Qualification	FSLC	12	5.8
	O'LEVEL/WAEC	41	19.8
	NCE/DIPLOMA	61	29.5
	B.Sc/HND	78	37.7
	M.Sc and Above	15	7.2
	Total	207	100.0

Source: Field Survey, 2018

Educational qualifications of the respondents are important in a study of this nature because the ability to supply correct answers to the questionnaire items depends, to a large extent, on the literacy level of the respondents. Fortunately, from Table 7, the respondents seem to be highly balanced educationally. The Table shows that the number of respondents with B.Sc/HND is the highest with 78 respondents constituting 37.7%, followed by NCE/DIPLOMA 61 (29.5%). O'LEVEL/WAEC has 41 (19.8%), M.Sc and Above has 15 (7.8%) respondents while FSLC has the lowest number 15 (7.2%) of respondents. The result is a reflection that most people that own bakeries are not illiterates. Majority of the respondents have more than O'level as their highest qualification.

Table 8: Years of Experience of the Respondents

	Category	Response Rate	
		Frequency	Percentage
Years of Experience	Below 3yrs	14	6.8
	3-7yrs	33	15.9
	8-12yrs	105	50.7
	Above 12yrs	55	26.6
	Total	207	100.0

Source: Field Survey, 2018

Table 8 shows the number of years that the respondents have put in the industry. Experience is important to the study because people that are new in the industry may likely not provide the right answers to questions posed in the questionnaire. The Table shows that respondents that have spent between 8-12 years in the industry are highest in number with 105 respondents constituting 50.7% of the entire respondents followed by

people that have spent above 12 years 55 (26.6). Respondents that have spent 3-7 years are 33(15.9%), while respondents that have spent below 3 years in the industry are only 14, constituting 6.8%. The Table shows that most of the respondents have reasonable experience in the industry. This may be beneficial to the study as they may be in a good position to respond appropriately to questionnaire items.

Table 9: Summary of Response rates on Strategic Supplier Partnership items SSP01-SSP06

Categories	Frequency	Percentage
To a very great extent	354	28.502
To a great extent	73	5.878
To a moderate extent	287	23.108
To a small extent	527	42.432
Not at all	1	0.0805
Total	6x207=1,242	100

Field Survey, 2018

Table 9 above shows the responses of all the respondents on items measuring the level of strategic supplier partnership that is practiced in the industry. The Table shows that 28.502% of the respondents agree that to a very great extent, strategic supplier partnership is practiced, 5.878% agrees to a great extent, 23.108% agrees to a moderate extent, 42.432% agrees to a small extent while only 0.0805 says not at all.

From the Table, the practice of strategic supplier partnership seems low in the industry going by the responses. The combination of responses on great extent category only

shows a total of 34.38% while that of moderate and small extent constitute 65.54%. This might not be healthy for the firms as there are expected benefits from this partnership based on studies.

Table 10: Summary of Response rates on Customer Relationship Management items CR01-CR05

Categories	Frequency	Percentage
To a very great extent	504	48.696
To a great extent	20	1.932
To a moderate extent	168	16.232
To a small extent	342	33.043
Not at all	1	0.097
Total	5x207=1,035	100

Field Survey, 2018

Table 10 shows the responses on customer relationship management in the bakery firms in South-East. From the Table, to a very great extent has the highest percentage of 48.696%, followed at a distance by to a small extent with 33.043%, to a moderate extent constitute 16.232%, to a great extent constitute 1.932% while none says not at all.

The responses show that customer relationship management practices is relatively high in the industry. Majority of the respondents fall into to a very great extent and moderate extent categories with 64.928%. This might be healthy for the industry, since it is obvious that customers are actually the bedrock of any business.

Table 11: Summary of Response rates on Level of Information Sharing items LIS01-LIS06

Categories	Frequency	Percentage
To a very great extent	371	29.871
To a great extent	65	5.233
To a moderate extent	361	29.066
To a small extent	451	36.312
Not at all	0	0.0
Total	6x207=1,242	100

Field Survey, 2018

Table 11 shows the responses on the level of information sharing in the bakery industry in South-East, Nigeria. From the Table, it seems information sharing in the industry is not high enough. The respondents who said that information sharing is to a small extent from their responses to six items measuring level of information sharing constitute 36.312%, to a moderate extent 29.066%, to a very great extent 28.871%, to a great extent 5.233% while none said not at all. The responses suggest that there is moderate level of information sharing between members of supply chain in the industry.

Table 12: Summary of Response rates on Level of Information Quality items LIQ03-LIQ05

Categories	Frequency	Percentage
To a very great extent	138	21.063
To a great extent	34	5.024
To a moderate extent	171	30.531
To a small extent	278	42.995
Not at all	0	0
Total	3x207=621	100

Field Survey, 2018.

Table 12 shows the responses on the level of quality of information being shared between firms in the supply chain. The responses were in line with the related items in Table 11. Since there was moderate level of information sharing, it is expected that the quality of sharing might not be very high. Thus, the responses shows that 42.995% of the respondents says to a small extent, 30.531% to a moderate extent, 21.063% to a very great extent, 5.024% to a great extent while none says not at all. This suggests that the quality of information sharing is relatively low.

Table 13: Summary of Response rates on Level of Supply Chain Integration-Supplier Integration, items SI01-SI04

Categories	Frequency	Percentage
To a very great extent	146	17.633
To a great extent	89	10.749
To a moderate extent	310	37.440
To a small extent	283	34.179
Not at all	0	0
Total	4x207=828	100

Field Survey, 2018

Table 13 shows the responses to the questions that sought to measure the level of integration that is obtainable between the bakery firms in South-East, Nigeria and their suppliers. The responses show that 37.440% of the respondents say to a moderate extent, 34.179% says to a small extent, 17.633% says to a very great extent, 10.749% says to a great extent, while none says not at all. The responses suggest a moderate level of integration between bakery firms and their suppliers.

Table 14: Summary of Response rates on Level of Supply Chain Integration-Customer Integration; items CI01-CI04

Categories	Frequency	Percentage
To a very great extent	325	39.251
To a great extent	33	3.986
To a moderate extent	123	14.855
To a small extent	347	41.908
Not at all	0	0
Total	4x207=828	100

Field Survey, 2018

Table 14 shows the summary of responses to items that sought to measure the level of integration between bakery firms in South-East, Nigeria and their customers. The responses show that 41.908% of the respondents say to a small extent, 39.251% says to a very great extent, 14.855% says to a moderate extent, 3.986% says to a great extent, while none says not at all. The responses suggest that moderate level of customer integration exists among the bakeries studied.

Table 15: Summary of Response rates on Level of Supply Chain Integration-Internal Integration; items INT01-INT02

Categories	Frequency	Percentage
To a very great extent	119	28.744
To a great extent	12	2.899
To a moderate extent	92	22.222
To a small extent	191	46.135
Not at all	0	0
Total	2x207=414	100

Field Survey, 2018

Table 15 shows the summary of the responses on the items that sought to measure the level of internal integration that is obtainable in the bakery firms in South-East Nigeria. The Table shows that respondents that say to a small extent have the highest percentage, with 46.135%, followed by to a very great extent with 28.744%, to a moderate extent with 22.222%, to a great extent with 2.899%, while none says not at all. The responses suggest a low level of internal integration in the industry.

Table 16: Summary of Response rates on Competitive Advantage- Cost/Price; items PC01-PCQ02

Categories	Frequency	Percentage
To a very great extent	80	19.324
To a great extent	18	4.348
To a moderate extent	145	35.024
To a small extent	167	40.338
Not at all	4	0.966
Total	2x207=414	100

Field Survey, 2018

Table 16 shows the summary of the responses on the ability of the firms to compete based on prices or their ability to produce at a lower cost compared to the industry average. The Table shows relatively low cost savings from responses in this regard. 40.338% of the respondents say that they are able to offer better prices to a small extent, followed by 35.024% of the respondents who said to a moderate extent. 19.324% of the respondents said to a very great extent, 4.348% says to a great extent while 0.966% of the respondents say not at all. The responses suggest that some of the firms are able to achieve some level of cost advantage.

Table 17: Summary of Response rates on Competitive Advantage-Quality; items-QL01-QL04.

Categories	Frequency	Percentage
To a very great extent	194	23.420
To a great extent	50	6.039
To a moderate extent	264	31.884
To a small extent	318	38.406
Not at all	2	0.242
Total	4x207=828	100

Field Survey, 2018

Table 17 shows the responses of the respondents on their ability to compete based on quality. Mixed responses were obtained as 38.406% says to a small extent, 31.884% says to a moderate extent, 23.420% says to a very great extent, 6.039% says to a great extent while 0.242% says not at all. The Table suggest that competing based quality is obtainable in the industry, albeit, to a moderate extent.

Table 18: Summary of Response rates on Competitive Advantage- Delivery Dependability; items-DD01-DD03.

Categories	Frequency	Percentage
To a very great extent	150	24.155
To a great extent	36	5.797
To a moderate extent	196	31.562
To a small extent	236	38.003
Not at all	3	0.483
Total	3x207=621	100

Field Survey, 2018

The summary of responses to items DD01-DD03 which sought to measure the level of dependability in the delivery system of the Bakery firms in South-East Nigeria was presented in Table 18. The respondents who say to a small extent have the highest percentage (38.003%), followed closely by those who say to a moderate extent (31.562%), to a very great extent (24.155%), to a great extent (5.797%) and not at all (0.483%). The responses suggest that the firms relatively do not deliver on schedule.

Table 19: Summary of Response rates on Competitive Advantage- Time to Market (items-TM03-TM04).

Categories	Frequency	Percentage
To a very great extent	55	13.285
To a great extent	44	10.628
To a moderate extent	170	41.063
To a small extent	142	34.300
Not at all	3	0.725
Total	2x207=414	100

Field Survey, 2018

The summary of responses that sought to measure the firms' ability to bring new products to the market in timely manner is presented in Table 19. Respondents who say to a moderate extent have the highest percentage (41.063%), followed by those who say to a small extent 34.300%, those who say to a very great extent constitute 13.285%, to a great extent 10.628% and not at all 0.725%. Their responses also suggest some of the firms are able to bring new products to the market in a timely manner.

Table 20: Summary of Response rates on Competitive Advantage-Product Innovation (items-PI01-PI03).

Categories	Frequency	Percentage
To a very great extent	146	23.510
To a great extent	33	5.314
To a moderate extent	184	29.630
To a small extent	257	41.385
Not at all	1	0.161
Total	3x207=621	100

Field Survey, 2018

Table 20 shows the responses of the respondents as it relates to their firms' ability to come up with innovative products. From the responses, to a small extent has the highest percentage (41.385%), followed by to a moderate extent (29.630%). To a very great extent has 23.510%, to a great extent, 5.314% and not at all 0.161%. From the responses, there is evidence to support that some of the firms are innovative.

4.2 Hypotheses Testing

To be able to make some inferential statements, hypotheses stated in chapter one, section 1.5 of this work were tested. All the hypotheses were tested using Person Product Moment Correlations.

4.2.1 Hypothesis I

H_{01}: There is no significant positive relationship between strategic supplier partnership and cost of production of bakery firms in South-East Nigeria.

H_{A1}: There is a significant positive relationship between strategic supplier partnership and cost of production of bakery firms in South-East Nigeria.

Table 21: Correlations between Strategic Supplier Partnership and Cost of Production

		Strategic Supplier Partnership	Cost/Price
Strategic Supplier Partnership	Pearson Correlation	1	.191**
	Sig. (2-tailed)		.006
	N	207	207
Cost of Production	Pearson Correlation	.191**	1
	Sig. (2-tailed)	.006	
	N	207	207

Source: SPSS ver 23.0, Correlation is significant at the 0.05 level (2-tailed).

Table 21 shows the correlation between Strategic Supplier Partnership and Cost of Production of the Bakery firms in South-East, Nigeria. The Table shows that there is significant positive relationship between Strategic Supplier Partnership and Cost of Production ($P < 0.007$, $r = 0.191$). (see appendix iv) We rejected the null hypothesis and accepted the alternate which states that there is a significant positive relationship between strategic supplier partnership and cost of production of bakery firms in South-East, Nigeria. Since the correlation is positive, it could be interpreted to mean that increase in

Strategic Supplier Partnership could lead to reduction in cost of production which is seen as a positive development

4.2.2 Hypothesis II

H_{02}: Customer relationship management has no significant positive relationship with delivery dependability of bakery firms in South-East, Nigeria.

H_{A2}: Customer relationship management has a significant positive relationship with delivery dependability of bakery firms in South-East, Nigeria.

Table 22: Correlations between Customer Relationship Management and Delivery Dependability

		Customer Relationship Management	Delivery Dependability
Customer Relationship Management	Pearson Correlation	1	.353**
	Sig. (2-tailed)		.000
	N	207	207
Delivery Dependability	Pearson Correlation	.353**	1
	Sig. (2-tailed)	.000	
	N	207	207

Source: SPSS ver 23.0, Correlation is significant at the 0.05 level (2-tailed).

Table 22 shows the correlation between customer relationship management and delivery dependability of Bakery firms in South-East, Nigeria. From the analysis, there is a significant positive relationship between Customer Relationship Management and Delivery Dependability of Bakery firms in South-East Nigeria ($P < 001$, $r = 0.353$), (see appendix iv). We therefore, rejected the null hypothesis and accepted the alternate which

states that customer relationship management has a significant positive relationship with delivery dependability of bakery firms in South-East Nigeria. The correlation analysis result suggests that increase in customer relationship management could increase the delivery dependability of Bakery firms in South-East, Nigeria.

4.2.3 Hypothesis III

H_{03}: There is no significant positive relationship between information sharing and quality of bread produced by bakery firms in South-East, Nigeria.

H_{A3}: There is a significant positive relationship between information sharing and quality of bread produced by bakery firms in South-East, Nigeria.

Table 23: Correlations between Level of Information Sharing and Quality of Bread Produced by bakery firms in South-East, Nigeria.

		Level of Information Sharing	Quality of Bread
Level of Information Sharing	Pearson Correlation	1	.386**
	Sig. (2-tailed)		.000
	N	207	207
Quality of Bread	Pearson Correlation	.386**	1
	Sig. (2-tailed)	.000	
	N	207	207

Source: SPSS ver 23.0, Correlation is significant at the 0.05 level (2-tailed).

Table 23 shows the correlation between level of information sharing and quality of bread produced. A moderate positive relationship is observed from the analysis between level of information sharing and quality of bread produced by the bakery firms. The correlation

is also significant at 0.05 level (P < 0.001, r = 386), (see appendix iv). Therefore, we rejected the null hypothesis and accepted the alternate which states that there is a significant positive relationship between information sharing and quality of bread produced by bakery firms in South-East, Nigeria. The result could be interpreted to mean that quality of bread produced by bakery firms in South-East, Nigeria could be enhanced if firms in supply chain in the industry could share relevant information.

4.2.4 Hypothesis IV

H_{04}: Quality of information sharing has no significant positive relationship with time to market of bakery firms in South-East, Nigeria.

H_{A4}: Quality of information sharing has a significant positive relationship with time to market of bakery firms in South-East, Nigeria.

Table 24: Correlations between Quality of Information Sharing and Time to Market of bakery firms in South-East, Nigeria.

		Quality of Information Sharing	Time to Market
Quality of Information Sharing	Pearson Correlation	1	.245**
	Sig. (2-tailed)		.000
	N	207	207
Time To Market	Pearson Correlation	.245**	1
	Sig. (2-tailed)	.000	
	N	207	207

Source: SPSS ver 23.0, Correlation is significant at the 0.05 level (2-tailed).

Table 24 shows the correlation between quality of information sharing and time to market. The analysis shows a significant positive relationship between quality of information sharing and time to market ($P < 0.001$, $r = 0.245$), (see appendix iv). Since the correlation is positive and significant, we rejected the null hypothesis and accepted the alternate which states that quality of information sharing has a significant positive relationship with time to market of bakery firms in South-East, Nigeria. This could be interpreted to mean that quality of information sharing could help the Bakery firms to offer new products to the market faster.

4.2.5 Hypothesis V

H_{O5}: There is no significant positive relationship between supply chain integration and product innovation of bakery firms in South-East, Nigeria.

H_{A5}: There is a significant positive relationship between supply chain integration and product innovation of bakery firms in South-East, Nigeria.

Table 25: Multiple Correlation Analysis between External, Customer, Internal Integration and Product Innovation.

Constructs	P-Value	Product Innovation	Supplier Integration	Customer Integration	Internal Integration
1. Product Innovation		1			
2. Supplier Integration	.000	.328*	1		
3. Customer Integration	.000	.259*	.346**	1	
4. Internal Integration	.299	.065	.190**	.336**	1

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

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

Source: SPSS, ver. 23.0

Multiple correlation analysis was performed in testing hypothesis five, the correlation result indicate that there is a significant positive relationship between supplier integration and product innovation ($r = 0.328$, $P < 0.001$), a significant positive relationship was also observed between customer integration and product innovation ($r = 0.259$, $P < 0.001$). The relationship between internal integration and product innovation in statistically insignificant ($r = 0.65$, $P > 0.05$), (see appendix iv). We hereby reject the null hypothesis and alternate which states that there is a significant positive relationship between supply chain integration and product innovation of bakery firms in South-East, Nigeria was accepted.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Discussion of Findings

The study was carried out to determine the extent of relationship that exists between supply chain management and competitive advantage of bakery firms in South-East Nigeria. Strategic supplier partnership, customer relationship management, level of information sharing, quality of information sharing and supply chain integration were used as dimensions of supply chain management while price/cost, quality, delivery dependability, time to market and product innovation were proxies of competitive advantage. Five objectives and five hypotheses were formulated to guide the study in line with the aforementioned dimensions.

A descriptive survey design was adopted, this seems most appropriate because of the need to access information regarding intangible resources and capabilities within the firms. A sample of 241 respondents was drawn from a population of 667 bakery firms in South-East, Nigeria that are member of Master Bakers Association. Thus, a structured questionnaire containing 5 demographic questions and 50 questions measuring supply chain management and competitive advantage was designed. Likert scale questions were used ranging from ‘to a very great extent-5, to a great extent-4, to a moderate extent-3, to a small extent-2 and not at all- 1’.

To validate the instrument, factor analysis was employed and through the factor loading, 44 scale items were extracted from the 50 initial items designed to measure supply chain

management and competitive advantage, thereby establishing the validity of the instrument. Cronbach Alpha was also employed to determine the reliability of the instrument, this yielded alpha coefficient of 0.892 of the entire instrument, showing that the instrument is highly reliable.

Out of 241 copies of questionnaire distributed through simple random sampling, 20 copies constituting 8.299 per cent were not returned, 221 copies were returned out of which 207 were correctly filled constituting 85.89 per cent. All the analyses were, therefore, based on the 207 copies of questionnaire that were considered appropriate.

5.1.1 Discussion on Demographic Data

The presentation in Table 6 shows that 116 respondents or 56% of those who responded in the questionnaire were female while 91 persons or 44% were male. This shows that the industry is not exclusive for any gender. Having a balanced gender in the industry might have additional advantage of a better decision.

The age ranges of respondents were presented in Table 5. The Table shows that the age ranges between 39-45 has the highest percentage of 36.2, followed by ages above 46 which was 30%. Respondents between the ages of 32-38 constitutes 16.4%, ages between 25-31 constitutes 15.9% while ages between 18-24 constitutes only 1.4%. From the Table, it shows that the respondents are truly of age. Since the study made use of people in management cadre in the industry, it is also a pointer that the right people responded to the questionnaire.

From Table 6, it was observed that 82.6% of the respondents are married, 12.1% are single while 5.3% are divorced, thus, corroborating information in Table 5. The respondents seem mature and as such would have provided the right answers to the questionnaire items.

Table 7 shows that the respondents are balanced academically. From the Table, respondents that have B.Sc/HND has the highest percentage (37.7%), followed by NCE/DIPLOMA (29.5%). People with O'level/WAEC constitutes 19.8%, M.Sc and above and FSLC have 7.8% and 7.2% respectively.

One of the most relevant information for the study is the years of experience of the respondents. The number of years put in by the respondents is expected to impact positively on the accuracy of responses they provide in the questionnaire. Fortunately, majority of the respondents have spent above 8 years which seem enough to have understood the industry and its workings. Table 10 shows that 50.7% of the respondents have spent 8-12 years in the industry, 26.6% have spent above 12 years in the industry, those who have spent 3-7 years constitute 15.9% while those who have spent below 3 years in the industry constitute 6.8%. Looking at the statistics, the respondents seem to have enough experience that is perhaps enough to assess both their own operations, the industry and the market.

5.1.2 Extent of Relationship Between Strategic Supplier Partnership and Cost of production Among the Bakery Firms in South-East, Nigeria.

The summary of the responses on items SSP01-SSP06 that were meant to measure the level of strategic supplier partnership practices in the industry is presented in Table 9. It shows that 42.432% says to a small extent, 28.502% of the respondents says to a very great extent, 23.108% of the respondents says to a moderate extent, 5.878% says to a great extent while only 0.0805% says not at all.

From the responses, one can conclude that strategic supplier partnership is a norm rather than exception in the industry because majority of the respondents (99.9%) agree that they establish strategic partnership with their suppliers to some extent.

In a similar manner, responses regarding the ability to produce at a cost lower than the average in the industry are presented in Table 16. The responses shows that 40.338% says to a small extent, 35.024% says to a moderate extent, 19.324% and 4.347% says to a very great extent and to a great extent respectively. Only 0.966% says not at all. The summary shows that 99% of the respondents agree that they produce at a cost lower than the industrial average to an extent. The responses show that most of the bakery firms are actually conscious of their cost of production. For them to be able to produce at a cost lower than the average in the industry shows that they make effort to reduce their cost of production.

In summary, 99.9% of the respondents agree that they establish strategic partnership with their suppliers to a certain extent, 99% of the respondents also say they offer prices relatively lower than the industry average as a result of their ability to produce at a reduced cost. Thus, comparatively, the two responses suggest a linear relationship (high strategic supplier partnership and highly reduced cost/price).

The result from the test of hypothesis one corroborates the result obtained from the above statistics. Pearson Product Moment Correlation coefficient indicates a significant positive relationship between strategic supplier partnership and cost of production in the industry ($P < 0.007$, $r = 0.191$). Even though the coefficient of determination is relatively small (r^2 0.036), which shows that only 3.6% variance in cost of production is explained by strategic supplier partnership, any engagement or practice that reduces cost of production is highly required given the observed high cost of production in the industry.

The result showed that the first objective of this study which seeks to determine the extent of relationship that exist between strategic supplier partnership and cost of production of bakery firms in the South-East, Nigeria was achieved. The extent of relationship is small ($r = 0.191$), but statistically significant and positive. Based on the result, we rejected the null hypothesis and accepted the alternate which states that there is a significant positive relationship between strategic supplier partnership and cost of production of bakery firms in South-East, Nigeria.

The result is in line with the findings of Agus & Hassan (2008), Sukati et al (2011), Ideet & Wanyoike (2014), Shiraz & Ramezani (2014), Zeinab et al. (2014), Mbutha & Rotich (2014), Chaghooshi et al. (2015), Owuer et al (2015), Zekic & Samarzija (2017). These studies conducted in different countries and industries (as presented in chapter two section 2.3 of this work) affirmed that strategic suppler partnership has positive relationship or positive impact on organizational competitive advantage (cost/price). Roushdy et al (2015) pointed out that strategic supplier partnership leads to reduction in cost of production; none of the studies reviewed observed negative relationship.

5.1.3 Extent of Relationship Between Customer Relationship Management and Bakery Firms' Delivery Dependability

The summary of the responses to items CR01-CR05 which sought to measure the level of customer relationship management in the industry is presented in Table 10. The summary shows that respondents who said to a very great extent constitutes 48.696% which is the highest, followed by to a small extent with 33.043%, to a moderate extent constitutes 16.232%, to a great extent 1.932% while not at all is 0.097%. In all, 99.9% (overwhelming majority) of the respondents agree that customer relationship management is practiced in their firms.

Similarly, responses to items DD01-DD03 which measures the delivery dependability of the bakery firms is presented in Table 18. It shows that respondents who said to a small extent has the highest percentage (38.003%), followed by to a moderate extent (31.562). To a very great extent is 24.155%, to a great extent has 5.797% while not at all is

0.483%. thus, overwhelming majority of the respondents (99.95%) are of the view that their delivery are dependable to an extent.

Comparatively, 99.9% of the respondents agrees that they practice customer relationship management to a certain extent in their bakery firms, while 99.95% also agrees that their delivery is dependable. This suggests a linear relationship.

The result of hypothesis two test presented in Table 22 is in line with the descriptive statistics presented above. It shows a significant positive relationship between the two variables ($P < 0.001$, $r = 0.353$). The coefficient of determination ($r^2 = 0.125$) shows that customer relationship management accounts for 12.5% of total variance in delivery dependability of the bakery firms. Based on the result obtained from the hypothesis test, we rejected the null hypothesis and accepted the alternate which states that customer relationship management has a significant positive relationship with delivery dependability of bakery firms in South-East, Nigeria.

Therefore, the second objective which seeks to examine the extent of relationship that exists between customer relationship management and bakery firms' delivery dependability in South-East, Nigeria was achieved. The extent of relationship is moderate ($r = 0.353$) and positive.

The result is in line with the findings of Battor & Battor (2010), Alipour & Mohammed (2011), Somuyiwa et al. (2013), Shiraz & Ramezeni (2014), Zeinab et al. (2014) who

observed a significant positive relationship between customer relationship management and competitive advantage (Delivery Dependability).

5.1.4 Extent of Relationship that exists Between Information Sharing and Quality of Bread Produced by Bakery Firms in South-East, Nigeria.

The responses to items LIS01-LIS06 which sought to measure the level of information sharing among supply chain members is presented in Table 11. The summary shows that 36.312% says to a small extent, 29.871% says to a very great extent, 29.066% says to a moderate extent and 5.233% says to a great extent, none says not at all. This shows that all the respondents (100%) agree to an extent that information relating to their operations is shared between the supply chain members.

In respect to quality, the responses to items QL01-QL04 which measures the ability of the bakery firms to compete based on quality is presented in Table 17, the result shows that 38.406% of the respondents agrees to a small extent, 31.884% to a moderate extent, 23.420 to a very great extent, 6.039% to a great extent and 0.242% says not at all. In other words, 99.76% of the respondents agrees that they are able to compete based on quality to some extent.

From the summary, 100% of the respondents agree that information is shared to an extent and 99.96% agree that they are able to offer qualitative products that enhance their ability to compete. The result also suggests a linear relationship.

The observed result is corroborated by the test of hypothesis three. The result shows a significant positive relationship between information sharing and quality of bread produced by the bakery firms ($P < 0.001$, $r = 0.386$). The coefficient of determination ($r^2 = 0.149$) shows that 14.9% of variation in quality could be explained by information sharing in the industry. Based on the result, we rejected the null hypothesis and accepted the alternate which states that there is a significant positive relationship between information sharing and quality of bread produced by bakery firms in South-East, Nigeria.

The result shows that the third objective of the study which seeks to ascertain the extent of relationship that exists between information sharing and quality of bread produced by bakery firms in South-East, Nigeria was achieved. The extent of relationship is also moderate ($r = 0.386$) and positive.

Findings from the analysis are in line with the findings of Zeinab et al. (2011), Mbuthia & Rotich (2014) and Sukati et al. (2011). Sukati et al. (2011) specifically said that information sharing is the most important factor in the quest to achieve competitive advantage through supply chain management. Miguel & Brito (2011) also observe that information sharing has positive relationship with quality.

However, the result is not in line with the findings of Rasheed et al. (2010) who observed negative relationship between information sharing and operational performance (quality). Zekic & Samarzija (2017) found no significant positive relationship even though it was

tagged information technology in their study. However, they used multiple regression analysis while correlation was used in this study and their study was conducted in wood industry while this study is carried out in food industry. These may account for the differences in findings.

5.1.5 Extent of Relationship that Exists Between Information Quality and Time to Market of Bakery Firms in South-East, Nigeria.

The summary of items LIQ03-LIQ05 which sought to measure the quality of information being shared among the supply chain members is presented in Table 12. It shows that 42.998% of the respondents says to a small extent, followed by 30.531% which says to a moderate extent, 21.063% says to a very great extent, 5.024% says to a great extent while none says not at all. From the responses, 100% of the respondents are of the view that information being shared among the supply chain members is qualitative.

Similarly, Table 19 shows the responses on the time to market of the bakery firms' measure with items TM03-TM04. The summary shows that to a moderate extent has the highest percentage (41.063%), followed by to a small extent (13.285%). To a very great extent constitutes 13.285%, to a great extent 10.628% while not at all is 0.725%. In all, 99.28% of the respondents agree that they are able to bring new products to the market in a timely manner to an extent.

From the result, 100% and 99.28% of the respondents agree that quality information is shared among the supply chain members and that they are able to bring new product to the market in a timely manner, the responses also suggests a linear relationship.

The result of the test of hypothesis four presented in Table 24 corroborates the above result. From the test, a significant positive relationship was observed ($P < 0.001$, $r = 0.245$). However, the coefficient of determination ($r^2 = 0.06$) shows that only 6% of variance in time-to-market is explained by quality of information shared. Based on the above results we rejected the null hypothesis accepted the alternate which states that quality of information sharing has a significant positive relationship with time to market of bakery firms in South-East, Nigeria.

The result shows that the fourth objective of the study which seeks to investigate the extent of relationship that exists between information quality and time to market of bakery firms in South-East, Nigeria was achieved. From the result, the extent of relationship is small ($r = 0.245$), but statistically significant and positive.

The findings are in line with that of Shiraz & Ramezani (2014), Zeinab et al (2014), Marinagi et al. (2015), Li et al. (2006) who found positive relationships between information quality and competitive advantage (Time to Market).

5.1.6 Extent of Relationship Between Supply Chain Integration and Product Innovation among Bakery Firms in South-East, Nigeria.

Supply chain integration was measured as a multi-dimensional construct. The second order variables were supplier integration, customer integration and internal integration. Level of supplier integration was measured with items SI01-SI04. The summary is presented in Table 13, it shows that 100% of the respondents agree that they have some level of integration with their suppliers. Secondly, customer integration was measured with items CI01-CI04, the summary is presented in Table 14, it also shows that 100% of the respondents agree that they are integrated with their customers. Similarly, responses regarding internal integration which is measured with items INT01-INT02 is presented in Table 15, the summary also shows that 100% of the respondents agree that their firms are integrated internally. In all, 100% of the respondents agree that supply chain integration is a practice in their firms.

Table 20 shows the responses in respect to product innovation. The Table shows that 41.215% of the respondents says to a small extent, 30.749% says to a moderate extent, 23.127% says to a very great extent, 4.651% says to a great extent, and 0.258% says not at all. In summary, 99.74% of the respondents agrees that they are able to come up with innovative products to a certain extent.

From the summary, 100% of the respondents agree that supply chain integration is a practice in their firms, 99.74% of the respondents also agree that they are able to bring

innovative product to the market, thus, a linear relationship is suggested from the responses.

The result of the test of hypothesis five presented in Table 25 corroborates the above result. From the test, a significant positive relationship was observed, The analysis shows that supplier integration is positively related to product innovation ($P < 0.001$ $r = 0.328$,), customer integration is also positively related to product innovation ($P < 0.001$ $r = 0.259$,). Internal integration showed no relationship and its P-value is statistically insignificant ($P > 0.05$ $r = 0.065$,). This may not be unconnected with the way some of the firms are run, many of the bakery firms are small scale in nature and many seems to lack clear boundary between departments. Thus, we rejected the null hypothesis and accepted the alternate which states that there is a significant positive relationship between supply chain integration and product innovation of bakery firms in South-East, Nigeria.

The results shows that objective five which seeks to determine the extent of relationship that exists between supply chain integration and product innovation of bakery firms in the South-East, Nigeria was achieved. The extent of relationship observed between the two variables may be regarded as moderate for supplier integration, small for customer integration and no significant relationship with internal integration ($r = 0.328$, $r = 0.259$, $r = 0.065$).

The result is in line with the findings of Chi et al (2013), Hatani et al. (2013), Kumar et al. (2017). The study is at variance with that of Flynn et al (2010) who found no

relationship between supply chain integration and new product development (product innovation). They also noted that internal integration is very important as the benefit of integration cannot be realized without effective internal integration. In this study, internal integration is non-significant and has no significant positive relationship with product innovation.

The study in general shows that there is a significant positive relationship between supply chain management and competitive advantage. Majority of studies tend to operationalize the variables and at the end of analysis report their findings without reference to the individual or second order variables. From our analysis, our findings are in line with that of Li et al (2006), who concluded that supply chain management has direct impact on organizational competitive advantage. Koh et al (2007), Miguel and Brito (2011), Bratic (2011), Sumiyiwa et al (2013), Karime and Rafiee (2014) and so on, found positive relationship between supply chain management and competitive advantage in their studies. Thus, this study affirms that supply chain management is positively related to competitive advantage of bakery firms in South-East, Nigeria.

CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

6.1 Summary of Findings

The major objective of this study is to determine the extent of relationship that exists between supply chain management and competitive advantage of bakery firms in South-East, Nigeria. It was a survey research, thus descriptive survey design was adopted. Data was generated through questionnaire which was used for analysis and testing of formulated hypotheses.

All the hypotheses were tested using Pearson Product Moment Correlation. The following findings were made:

a. Bakery firms in South-East, Nigeria have strategic partnership with their suppliers to a moderate extent. The test of hypothesis one showed that significant positive relationship exists between strategic supplier partnership and cost of production ($P < 0.007$, $r = 0.191$). In other words, the stronger the strategic partnership, the higher the magnitude of reduction in cost of production.

b. The study also revealed that customer relationship management is a norm in the industry. The test of hypothesis two also showed a significant positive relationship between customer relationship management and delivery dependability ($P < 0.001$, $r =0.0353$). Thus the closer the bakery firms are to their customers, the more dependable their delivery will likely be.

c. It was also found that there is a moderate level of information sharing among supply chain members in the industry. All the respondents affirmed the practice. The test of hypothesis three shows that significant positive relationship exists between information sharing and quality of bread produced by bakery firms in South-East, Nigeria ($P < 0.001$, $r = 0.386$). Thus, the more information is shared among the supply chain members, the more improvement in quality of their products.

d. The study found that information being shared among the supply chain members is qualitative to an extent. This conclusion was reached because all the respondents (100%) affirmed this, albeit, to some extent. The test of hypothesis four shows that a significant positive relationship exist between quality of information sharing and time to market ($P < 0.001$, $r = 0.245$). Therefore, it was found that the more qualitative the information shared among the supply chain members, in terms of accuracy, timeliness and so on, the faster the firms are likely to be able to bring new products to the market.

e. There is also evidence to support the existence of supply chain integration in the bakery firms in South-East, Nigeria. All the respondents (100%) affirm that there are suppliers, customers and internal integration in their firms to some extents. The test of hypothesis five using multiple correlation shows that a positive relationship exists between supply chain integration and product innovation. The observed relationships were mainly between supplier integration and product innovation ($P < 0.001$, $r = 0.328$), and customer integration and product innovation ($P < 0.001$, $r = 0.259$). The result shows that level of product innovation in the bakery firms can increase with increase in level of

supply chain integration. Thus, findings therefore show that the more integrated especially with suppliers and customers, the more innovative the bakery firms could be product wise.

6.2 Conclusion

In view of the above findings, the study concludes that a significant positive relationship exists between supply chain management and competitive advantage of bakery firms in South-East, Nigeria. Hence, to be competitive in the industry, firms have to be proactive. Having a strategic partnership with suppliers will always give a bakery firm an edge in terms of getting supplies at a cheaper rate.

Secondly, no business can achieve its objectives without its customers. Because customer preferences change; that may account for the reason some bakery firms closed down while new ones are being established. This implies that the new ones come with products different from what the old ones are offering, and when this happens, majority of the customers tend to forego the old products and invariably the firms and take their businesses to the new firms. Therefore, a good customer relationship management helps bakery firms to understand exactly what the customers want, how they feel about the firm and its product(s) and the possible adjustment required to retain their loyalty.

Similarly, when there is strong partnership and strong relationship, trust is established which enhances free flow of information. The ability of bakery firms to have the right type/kind of information at the right time is also important if they must be competitive.

The study also concludes that the implementation of supply chain activities/practices is still very low among the bakeries in South-East Nigeria and this is affecting their competitiveness negatively. The conclusion is in line with resource based theory adopted in the study. Because of the low implementation, firm specific resources and knowledge that ought to give the bakery firms advantage in the market have not been fully developed.

6.3 Recommendations

The following recommendations are put forth based on the findings of the study:

1. There is need for enhanced strategic partnership between the bakery firms in South-East, Nigeria and their suppliers. This will further lead to reduction in cost of production and thus improve their competitive advantage.

2. More attention needs to be paid in maintaining existing customers by the bakery firms. This can be achieved by periodic evaluation of their level of satisfaction and taking into considerations their suggestions for product improvement. Since most of the bakery firms in South-East, Nigeria depend on distributors, there is need to constantly evaluate both their perception about the firms and their products and their level of satisfaction in general.

3. Information is power is a popular saying, having the right information at the right time is very vital. Bakery firms in South-East, Nigeria need to improve on the trust level in their supply chain through strong collaboration. This will enable supply chain members release qualitative information at the right time.

4. The study also recommends improvement in supply chain integration. Even though some of the firms are small to the extent that there is no clear boundary between departments, some that have different departments need to be well integrated internally to enhance process and information flow. Integration with suppliers and customers is improvement from partnership and relationship management and therefore highly recommended as this could improve product innovation.

5. Some of the Bakery firms in South-East, Nigeria Should consider merger. This will enable them pull resources and expertise together in order to have a better market share as well as economies of scale and thus, achieve some level of competitive advantage

6.4 Contributions to Knowledge

The study made the following contributions to knowledge

a. That bakery firms in South-East, Nigeria could achieve sustainable competitive advantage if they can religiously implement supply chain management practices in their firms.

b. That competitive advantage in South-East, Nigeria bakery industry could be achieved through internal resources that are firm specific, and not necessarily input factors which anyone can acquire given the availability of monetary resources

6.5 Suggestion for Further Studies

This study considered supply chain management and competitive advantage of bakery firms in South-East, Nigeria. Further studies are needed to cover other parts of the country so as to have better understanding of the two variables as it concerns the industry in Nigeria. Secondly , the concept of supply chain management is very wide, more studies are needed to assess other dimensions such as agile supply chain, just-in-time,

return management, inventory management and so on, which may also be of interest in the Bakery Industry. Further studies could also consider barriers to effective supply chain implementation in the industry with a view to proffering solutions to mitigate them.

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