

Evaluating Effective and Efficient Supply Chain management and its Impact on the Value of a Firm

William Akoto Oppong

Department of Procurement, Business University of Costa Rica

School of Finance & Financial Management

Email: waoppong@gmail.com

Abstract

Firms struggle for efficiency and effectiveness. Strategies involving supply chain between actors and integration of activity chains are reliant of factors that firms do not have direct ownership and control over. This has implications for strategizing, setting the goals and measuring performance. Efficiency and effectiveness are often used to describe performance. From a resource dependence perspective efficiency is defined as an internal standard of performance and effectiveness as an external standard of fit to various demands. In supply chains efficiency improvements are e.g. Just-in Time production while effectiveness is achieved through customer orientation and innovation. The major objective of the study is to evaluate the effective and efficient supply chain management and its impact on the value of a firm. Specific objectives were: to examine the nature of supply chain at Coca cola Company Limited, to ascertain the impact of effectiveness and efficiency on Coca Cola Company Limited, and to identify the challenges in implementing effective and efficient supply chain management. The study revealed that, reliable and valid instrument to measure the extent of collaboration that incorporates information sharing, decision synchronization, and incentive alignment. The item stated can be tailored to the specific relationship to gauge the levels of supply practices and used to identify the gaps that need to be eliminated. The study therefore recommended that, , coca cola should give prominence to supply chain by investing in supply chain, identifying supply chain partners, developing better supply chain strategy and management methods since its contributes greatly to all their activates.

Keywords: Procurement Effectiveness, Efficient Supply Chain management, Value for Management

1.0 INTRODUCTION

Efficiency is a cost-related advantage and effectiveness is an advantage of customer responsiveness within supply chain management research. This means that efficiency improvements are achieved through Just-in-Time production and logistic supplier nets while effectiveness are achieved through customer orientation (Möller and Törrönen 2003). Value is defined as perception of monetary as well as non-monetary outcome where value creation is a set of direct and indirect relationship functions (Walter et al. 2001). Möller and Törrönen (2003) discussed supplier efficiency and effectiveness based on Walter et al (2001) value functions. Supplier efficiency is seen as a direct influence on value while supplier effectiveness and network effects are seen as an indirect influence on value in relationships. In these functions are efficiency and effectiveness related to the supplier, i.e. one organization. In this paper we will argue that efficiency and effectiveness are related to the outcome of value creation processes involving several organizations. Håkansson and Prenekert (2004) distinguish value as exchange value and use value: The business terrain in which firms operate has witnessed tremendous change in the past in terms material sourcing, customer satisfaction, inventory management and overall profitability. The level of globalization, which entails that many organizations find themselves operating in a highly competitive international market and the use of highly advanced strategy and technologies have challenged the very basic principles and ideologies of business management and marketing Management. To compete in a global environment, therefore, organizations have had to change in order to sustain growth and break new frontiers. As a result, most industries have transformed completely from manual processes to complicated, automated and computerized technologies and strategies (Minoli, 2005).

Firms have to keep abreast of their supply chain cost component and its relationship with their profitability because to a reasonable extent, their continued growth wholly depends on these factors. SCM integrates functions with primary responsibility of linking major business functions and processes within and across companies into a cohesive and high performing business model. It includes all the logistics management activities noted above, as well as manufacturing operations. It drives coordination of processes and activities within and across marketing sales, product design, and finance and information technology. Supply chain management is a major issue in many industries as firms realize the importance of creating an integrated relationship with their suppliers and consumers. Managing the supply chain has become a way of improving competitiveness by reducing uncertainty of material handling and enhancing customer service. SCM is a cross-functional approach that includes managing the movement of raw materials into an organization, certain aspects of the internal processing of materials into finished goods, and the movement of finished goods out of the organization and toward the end consumer. As organizations strive to focus on core competencies and becoming more flexible, they reduce their ownership of raw materials sources and distribution

channels. These functions are increasingly being outsourced to other firms that can perform the activities better or more cost effectively. The effect is to increase the number of organizations involved in satisfying customer demand, while reducing managerial control of daily logistics operations. Less control and more supply chain partners led to the creation of the concept of supply chain management. The purpose of supply chain management is to improve trust and collaboration among supply chain partners, thus improving inventory visibility and the velocity of inventory movement.

Research problem is paramount to every research. However, the research problems includes; non efficient and effective supply chain, poor supply chain network, poor performance and communication management. The most supply chain management literature illuminate that “the more integration, the better the performance of the supply chain” (Bagchi et al., 2005). SCM concept is defined as “integration of business processes” (Cooper et al., 1997). According to Lee (2000) efficient supply chain does not only reduce costs, but it also worth full for the company, and all its shareholders. The ideal condition is that the whole process across the supply chain is designed, managed and unified as a unit. Prior to this, this study sought to assess the extent of effective supply chain on achieving competitive advantage.

2.0 LITERATURE REVIEW

Effective and efficient supply chain management now have become a very valuable and important way to remain competitive in the market and to improve the organizational performance. It plays a very important role in staying competitive because the competition among the organizations is effected by the SCM. In early 1990 as the competition got intensity due to the global markets to deliver a product or service at a right place and at the right time. Due globalization now organizations are realizing that to be competitive in global and local market they should have to do the work is to get better the efficiencies inside the organization to improve the entire supply chain also more effective and efficient then your competitor. The organizations have to understand the concepts and the practices of SC management for the intention of achieving competitiveness and for increasing profits (Childhouse and Towill, 2003; Moberg, Cutler, Gross, and Speh, 2002; Power, Sohal, and Rahman, 2001; Tan, Lyman, and wisner, Supply Chain management: a strategic perspective, 2002). SCM has been defined for the purpose of realizing the strategic character of the coordination among the trading partner and also describe the operations. The main reason of the Supply Chain management is progress in the routine operations of the individual organizations and to get better the performance of all steps involved in supply chain.

2.1 Organizational Effectiveness

Organizational effectiveness is defined as an external standard “of how well an organization is meeting the demands of the various groups and organizations that are concerned with its activities” (Pfeffer and Salancik 1978) which approximately is a construct “for doing the right things” or having validity of outcome (Hines et al. 2000). A conceptualization of effectiveness as use value is interesting to highlight that how well as well as demands in the above definition is vague. Håkansson and Prenekert (2004) seem to refer use value to evaluation of the network’s utilization of resources. In resource dependence perspective is effectiveness seen as an independent measure for evaluating organizations. Meeting demands of various evaluators means that conflicting as well as compatible demands are prevalent. Pfeffer and Salancik (2003) foresaw conflict when one stakeholder’s demand constraints other stakeholder’s demand, which is the case for the supply chain actors. Conflict but also co-operation gives “lessons learnt” in one exchange process that is leveraged in other exchange processes. The evaluators we are concerned with are customers; customers seen in the producing/using activity system as well as in the networking activity system. Suppliers are effective if they deliver what is asked for, no matter if they are bound to fill their warehouses to manage, i.e. if they manage the task inefficiently. In supply chain management research is effectiveness equalized with supply chains’ flexibility and agility to customer demand. Ineffective supply chains are loosely integrated with poor management of existing interdependencies.

Effectiveness is by definition a qualitative measure set by evaluator. Möller and Törrönen (2003) argue that effectiveness “refers to an actor’s ability to invent and produce solutions that provide more value to markets (customers) than existing offers “This definition seems to equalize effectiveness to entrepreneurial activity as the ability to invent new solutions with added value is emphasized. In a supply chain context seems this definition to be counterproductive as it is based on an assumption that relationships are compared to competitors offers rather than evaluated in relation to customer’s and their customers’ demand. In practice is the evaluator, who is interdependent with the supplier, influenced by the relationship, by the supply chain and by the network. Effectiveness is created in a relationship in a process of attention to different interdependencies, i.e. the evaluator is influenced in its evaluation. We would propose that effectiveness, as a use value in a supply chain, is a combination of indirect benefits gained through the supplier and the supplier network (Walter et al. 2001). Ineffectiveness is an experienced misfit of resources

in a resource pattern. This means that existing problems might be overlooked and that a relationship is evaluated as effective as long as there is potential of the exchange system to fulfill demands. It means also that effectiveness is goal oriented on a strategic level (Liljegren 1988). The effectiveness is a co-created measure that is changed due to an increase in demand or a strategic change rather than regularly in short-term intervals. In these occurrences buyers evaluate the fit between supplier capability and buyers' need.

2.2 Organizational Efficiency

Organizational efficiency is defined as an internal standard of performance (Pfeffer and Salancik 1978) and is approximately a construct "for doing the things right". From a resource dependence perspective efficiency is an independent measure for evaluating organizational productivity: Efficiency seen in this formula is a good measure of a closed system's output, such as an organization from a machine-bureaucratic perspective when produced output is the same as profit. However, making evaluations of activity systems, as supply chains, rather than organizations is more complex as boundaries is flux (Hoek 1998). Håkansson and Prenkert (2004) conceptualized efficiency based on a dyadic system's exchange value. Exchange value is evaluated by the two actors regarding the activity system's utilization of resources. A supply chain is an activity system, i.e. an exchange system of producing/using activities as well as a networking activity system. If we elaborate that one firm use its resources to 100 %, it seems to be efficient. However, in a producing/using activity system, as a supply chain, this might be inefficient due to expensive inventory costs. Efficiency is thus a quantitative as well as a qualitative evaluation in a supply chain as goals have to be negotiated.

Efficiency is seen as a "value free" quantifiable measure – highly valued as a rationale for activities such as improvement programs or as a base for rewards. This is problematic for social systems (Pfeffer and Salancik 1978) as efficiency is two dimensional (input and output) and social systems usually have several dimensions in their output. An example of this is the interdependencies within as well as among supply chains that cause efficiency in one supply chain and inefficiency in overlapping supply chains (Dubois et al. 2003). This means that efficiency within a supply-chain system is difficult to optimize due to limited knowledge of interdependencies within the supply chain as well as towards other supply chains. This is evident in the ramp-up phase of Volvo's S80 model. Despite a trade-off where Volvo's suppliers balanced between efficiency (through scale) and unique solutions they contributed to the supply chain efficiency (Corswant et al. 2004). This implies that the supply chain is a specific activity system, where the efficiency goal is compound and negotiated along the chain. This is seen in findings from Volvo Car Corporation evaluation of their suppliers (Fredriksson and Gadde 2003). The efficiency is therein described as a compound evaluation of quality, delivery, cost, and overall capability that is not only planned and reviewed in the relationship but also a measure of the relationship. The efficiency of the producing/using system is influenced by serial interdependencies through relationships. Efficiency is thus evaluated of several parties within the exchange system and negotiated interdependencies determine efficiency goals.

Two variables are left to elaborate on from the formula of efficiency: Resources utilized and losses. These variables capture lots of efficiency goals targeted in JIT, Kaizen and lean production. Volvo Car Corporation uses a JIT-production, which is mirrored in their use of efficiency evaluation. Utilization of scarce resources has cost implications but also implications regarding capability to innovate (Fredriksson and Gadde 2003). This implies that losses in an evaluation of one firm or one relationship are efficiency to the supply chain. Efficiency thereby means exploitation of interdependencies, reliability and control of resources. This means that efficiency is neither value-free nor easily quantifiable measure. Thus, the supply chain efficiency as an internal standard of performance differs from the organizational efficiency as the activity system's boundaries shifts. Activities are also a problematic unit of analysis as they are interdependent and changes influence dynamically several outcomes. And finally the meaning of efficiency is ambiguous as very high resource utilization is not necessarily perceived as efficiency.

2.3 Concept of Supply Chain Management

The term "Supply Chain Management" was revealed in the late 1980s, and then it was exposed to all in 1990s. Before of that time „Supply Chain Management" was used as different terms like- "logistics" and "operations management" in the business fields. (Hugos, 2006). Once up on a time, supply chain management was considered just like a concept. Implementation of this concept was very difficult as there were some necessary components in the total chain to connect with each other. The focal part of the barrier to full supply chain management was the cost of communication and coordination among the many independent suppliers in each supply chain. An entire supply chain covers the area from the creation of raw materials to the delivery of the finished consumer goods. So, many supply chains are involved in the entire supply chain of a product up to the ultimate delivery stage. This is why; it was difficult to link up actively all the supply chain points. But day by day companies are being interested to implement the supply chain concept in their business for three environmental changes (Fredendall, L.D. and Hill, E., 2000).

First, development of the communication technology has made easier the process to communicate between members of the supply chain. Second, new management models have been developed that are being used by the supply chain members to simplify the coordination of tasks. Third, for the development of highly trained work-force, it has become easier to assume the responsibility, make decisions quickly and take required actions to coordinate the supply chain. These three changes are encouraging the companies to take the challenges in the competitive market through the utilization of supply chain management concept. "A supply chain consists of all stages involved, directly or indirectly, in fulfilling a customer request. The supply chain not only includes the manufacturer and suppliers, but also transporters, warehouses, retailers, and customers themselves..." (Chopra S., and Meindl P., 2003) "Supply chain management is the coordination of production, inventory, location, and transportation among the participants in a supply chain to achieve the best mix of responsiveness and efficiency for the market being served." (Hugos, M., 2006) "A supply chain is a network of facilities and distribution options that performs the functions of procurement of materials, transformation of these materials into intermediate and finished products, and the distribution of these finished products to customers." (Ganeshan R., and Harrison T.P., 1995). Supply chain management requires considering the organizational structure and identifying all the entities involved in manufacturing and shipping a product or service and connecting all of them with each other so that they can work efficiently as a team. This task involves gathering the customers, suppliers, shippers and more recently competitors into a supply network for the most proper utilization of time and resources.

According to Zuckerman, A., (2000), there are several key functions that make up the supply chain. All functions have their own cycle times and all of them are tend to achieve the cost containment. - Purchasing of raw materials and components is the first and crucial step for the cost containment. Then the manufacturing process. - Warehousing and shipping phase of the supply chain which is called as distribution or commonly called logistics-often „third-party logistics“ as much of this work is now outsourced to independent contractors. - Then the transport and delivery stage of the goods and services, both the finished product to customers and retail outlets as well as shipment of materials required to both support a company and manufacture a product.

2.4 Actors and the Structure of Supply Chain

In a usual structure, a supply chain is an arrangement of a company and the suppliers and customers of that company. This basic group of participants forms a simple supply chain. Extended supply chains involve three additional types of participants. First there is the supplier's supplier or the ultimate supplier at the beginning of an extended supply chain. Then there is the customer's customer or ultimate customer at the end of an extended supply chain. Finally there is a whole category of companies who are service providers to other companies in the supply chain. These are companies who supply services in logistics, finance, marketing, and information technology (Hugos, M., 2006). According to Hugos, M., (2006), in a certain supply chain there is some combination of companies who perform different functions. There are companies who are producers, distributors or wholesalers, retailers, and companies or individuals who are the customers, the final consumers of a product. To support these companies there are other companies who are service providers.

Producers: Producers or manufacturers are the organizations who are responsible for making a product. This includes the companies that are producers of raw materials and companies that are producers of finished goods. Producers of finished goods use the raw materials and subassemblies made by other producers to create their products.

Distributors: Distributors take inventory in bulk from producers and deliver a bundle of related product lines to customers. Distributors are also known as wholesalers. Usually they sell to other businesses and they sell products in larger quantities than an individual consumer would usually buy. Distributors buffer the producers from fluctuations in product demand by stocking inventory and doing much of the sales work to find and service customers. For the customer, distributors meet up the time and place utility. They deliver products when and where the customer wants them. A distributor is typically takes the ownership of significant inventories of products that they buy from producers and sell to consumers. In addition to product promotion and sales, distributor performs some other functions like-inventory management, warehouse operations, and product transportation as well as customer support and post-sales service. Without taking the ownership, a distributor as an organization brokers a product between the producer and the customer. This kind of distributor performs mainly the functions of product promotion and sales. As the needs of customers evolve and the range of available products changes in both of the cases, the distributor as an agent continually tracks customer needs and matches them with products that are available.

Retailers: Retailer preserves the inventory and sells it to the general public in smaller quantities. This organization also closely monitors and analyzes the preferences and demands of the customers that it sells to. It advertises to its customers and often uses some combination of price, product selection, service and convenience as the primary draw to attract customers for the products it sells. Discount department stores attract customers using price and wide product selection. Customers or consumers are any organization that purchases and uses a product. A

customer organization may purchase a product in order to incorporate it into another product that they in turn sell to other customers. Or a customer may be the final end user of a product who buys the product in order to consume it.

Service providers: These are the organizations that provide services to producers, distributors, retailers and customers. Service providers develop special expertise and skills that focus on a particular activity needed by a supply chain. For this cause, they are able to perform these services more effectively and at a better price than producers, distributors, retailers, or consumers could do on their own. Some common service providers in any supply chain are providers of transportation services and warehousing services. These are trucking companies and public warehouse companies and they are known as logistics providers.

Financial service providers deliver services such as making loans, doing credit analysis, and collecting on past due invoices. These are banks, credit rating companies, and collection agencies. Some service providers deliver market research and advertising, while others provide product design, engineering services, legal services, and management advice. Other service providers offer information technology and data collection services. All these service providers are integrated to a greater or lesser degree into the ongoing operations of the producers, distributors, retailers and consumers in the supply chain. Supply chains are composed of repeating sets of participants that fall into one or more of these categories. Over time the needs of the supply chain as a whole remain fairly stable. In some supply chains, there are few service providers because the other participants perform these services on their own. In other supply chains very efficient providers of specialized services have evolved and the other participants outsource work to these service providers instead of doing it themselves.

2.5 Drivers of Supply Chain

Effective supply chain consists of some drivers. Each driver has the ability to directly affect the supply chain and enable certain capabilities. Companies in any supply chain must make decisions individually and collectively regarding their actions in the area of these drivers. Hugos, M., 2006 has described these drivers in the following way

Production: What products does the market want? How much of which products should be produced and by when? This activity includes the creation of master production schedules that take into account plant capacities, workload balancing, quality control, and equipment maintenance.

Inventory: What inventory should be stocked at each stage in a supply chain? How much inventory should be held as raw materials, semi-finished, or finished goods? The primary purpose of inventory is to act as a buffer against uncertainty in the supply chain. However, holding inventory can be expensive, so what are the optimal inventory levels and reorder points?

Location: Where should facilities for production and inventory storage be located? Where are the most cost efficient locations for production and for storage of inventory? Should existing facilities be used or new ones built? Once these decisions are made they determine the possible paths available for product to flow through for delivery to the final consumer.

Transportation: How should inventory be moved from one supply chain location to another? Air freight and truck delivery are generally fast and reliable but they are expensive. Shipping by sea or rail is much less expensive but usually involves longer transit times and more uncertainty. This uncertainty must be compensated for by stocking higher levels of inventory. When is it better to use which mode of transportation?

Information: How much data should be collected and how much information should be shared? Timely and accurate information holds the promise of better coordination and better decision making. With good information, people can make effective decisions about what to produce and how much, about where to locate inventory and how best to transport it. The sum of these decisions will define the capabilities and effectiveness of a company's supply chain.

2.6 Importance of Supply Chain Management

Organizations increasingly find that they must rely on effective supply chain, or networks, to compete in the global market and networked economy. During the past decades (1990-2000), globalization, outsourcing and information technology have enabled many organizations, such as Coca Cola successfully operate solid collaborative supply networks in which each specialized business partner focuses on only a few key strategic activities (Somuyiwa et al., 2011). This inter-organizational supply network can be acknowledged as a new form of organization. However, with the complicated interactions among the players, the network structure fits neither "market nor hierarchy" categories (Powell, 1990). It is not clear what kind of performance impacts different supply network structures could have no firms, and little is known about the coordination conditions and trade-offs that may exist among the players. From a systems perspective, a complex network structure can be decomposed into individual component firms (Zhang and Dilts, 2004). Traditionally, companies in a supply chain network concentrate on the inputs and outputs of the

processes, with little concern for the internal management working of other individual players. Therefore, the choice of an internal management control structure is known to impact local firm performance.

In the 21st Century, changes in the business environment have contributed to the development of supply chain networks. First, as an outcome of globalization and the proliferation of multinational companies, Joint venture, strategic alliances and business partnerships, significant success factors were identified, complementing earlier “Just-In-Time”, “Lean manufacturing” and “Agile Manufacturing” practices. Secondly, technological changes, particularly the dramatic fall in information communication costs, which are significant component of transaction costs, have led to changes in coordination among the members of the supply chain network (Cox, 2004)

3.0 METHODOLOGY

For the purposes of achieving the objectives of the study. Some of the adopted techniques used include questionnaires, personal interviews and other informal means like the internet and among others. Methodology according to the “business dictionary” simply refers to the process used to collect information and data for the purpose of making business decision. For the purposes of achieving the objectives of the study, the researcher used a case study of Coca Cola Company limited, in which various sources data was used to gather information.

3.1 Research Design

The research design helped the researcher to acquire a comprehensive information concerning the quality assurance and it’s regarding issues. This design shows the analysis of the variables pertaining to the subject under study.

3.2 Sources of Data

For the purposes of achieving the objectives of the study, the researcher used both the primary and the secondary sources of data

3.2.1 Primary Data

According to Booth et.al. 2008, primary data is that data collected firsthand from respective sources such as: observations, experiments, questionnaire, and interviews. With reference to objectives of the study, the researcher used questionnaires and interview to solicit information from the respondents of Coca-Cola limited.

3.2.2 Secondary Data

Secondary data consists of pre-existing data which have been used before on projects other than the current study. Secondary data includes textbooks, published journals, public statistics and personal documents. This is less time consuming and cheaper than primary research.

3.3 Population and Sampling Size

According to Thaister (2013), Population is defined as the complete set of individuals, objects or scores that a researcher is interested in studying. The target population of Coca cola Company limited is sixty (60) personnel, out of which a sample size of twenty(20) was generated from the various department, which the study will target. On the other hand, according to Roberts et al., (2012), a sample is a subset of units or cases randomly selected from the population. From the population of 60 personnel, a simple random sampling was be used to draw a percentage representing 20 respondents from the target population

3.4 Data Collection Method

The researcher used the required data collection tool which was primarily subjected and aligned to the design and objective of the study which is descriptive in nature. There are various methods through which information and data could be gathered and solicited, e.g, questionnaires, interviews, observations and experimentation. As part of the research analysis, the researcher deployed the use of questionnaires to help gather information regarding the research topic. Both open and closed ended questionnaires were used to solicit information from the target employees and personnel of the surveyed companies. Open ended questionnaire required the targeted personnel to provide their own answer to questions whereas the closed ended questions which were well structured required the respondent to select their answers from among a list provided.

3.5 Qualitative and Quantitative Research

Quantitative research, known as 'number-crunching', uses techniques that apply more to numerical data, where researchers develop variables or concepts which can be measured, and transform them into specific data-collection techniques (Grix, 2004). Neuman (2000) believed that the techniques can produce precise numerical information that can be regarded as the empirical representation of the abstract concepts. Qualitative research is characterized by the use of methods that try to investigate inherent traits of the objects of inquiry and that tend to be more interpretative in nature (Grix, 2004). The strengths of qualitative research are rooted primarily in its inductive approach, its focus on specific phenomena or people, and its emphasis on words rather than numbers (Maxwell, 2006).

Understanding the meaning, for participants in the study, of the events, situations, and actions they are involved with. Understanding the particular context within which the participants behave, and the impact that it has on their behavior. Identifying unexpected phenomena and influences, and establishing new grounded theories about the latter. Understanding the process by which events and actions take place and Developing causal explanations.

3.6 Research Analysis Method

With reference to the research data and methods, both qualitative and quantitative approach was used. The qualitative data procedure requires the use of statement and grammatical expressions to achieve vital information, such as the interviews and observations, while the quantitative research also requires the use of statistics and mathematical deductions in analyzing data, for the example, the use of questionnaire and how the responses was presented in a form of tables, bar charts and pie charts for easy.

4.0 DATA ANALYSIS

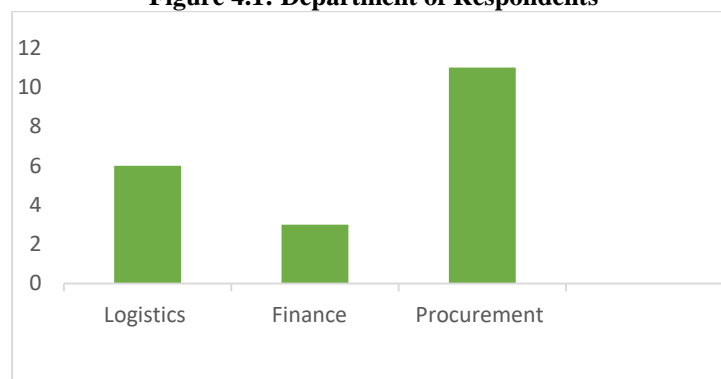
This chapter presents results of the primary data collected and analyzed from the case study. Twenty (20) questionnaires were administered to twenty (20) staffs and management coca cola bottling company limited. Twenty questionnaires were obtained representing a response rate of hundred percent (100%) due to the sample been twenty (20). Analysis of data obtained are represented in the following tables and charts below:

Table 4.1: Department of Respondents

Department	Frequency	Percentage %
Logistics	6	30
Finance	3	15
Procurement	11	55
Total	20	100

Source: Author's own fieldwork, 2018

Figure 4.1: Department of Respondents



In relation to figure 4.1, it is ostensible that, 6 respondents representing 30% were from logistics department, 3 respondents representing 15% were from finance and 11 respondents representing 55% were from procurement.

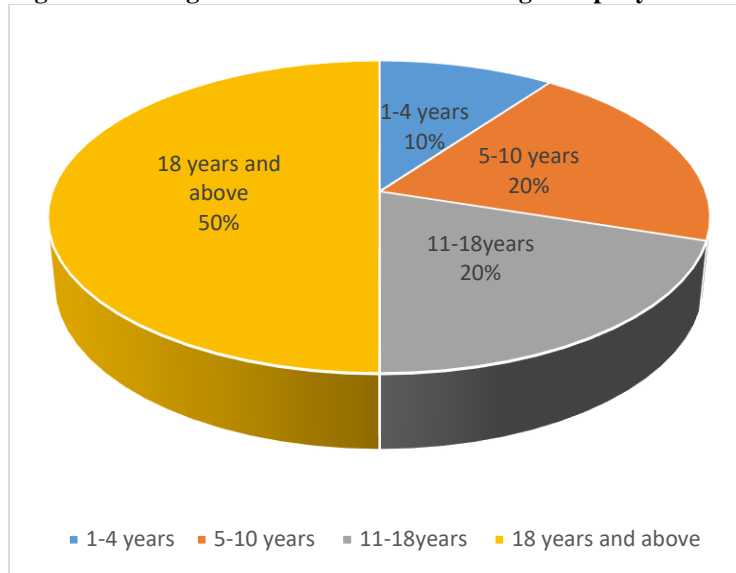
Table 4.2: Length of with Coca Cola Bottling Company Limited

Length of work	Frequency	Percentage%
1-4 years	2	10

5-10 years	4	20
11-18years	4	20
18 years and above	10	50
Total	20	100

Source: Author's own fieldwork, 2018

Figure 4.2: Length of with Coca Cola Bottling Company Limited



Source: Author's own fieldwork, 2018

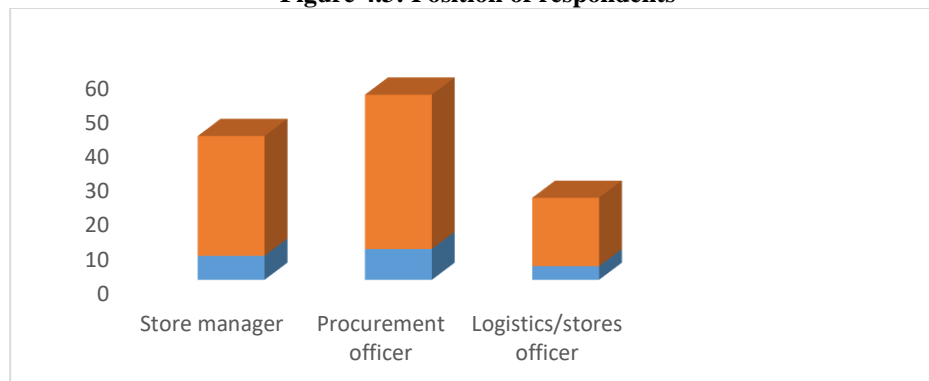
Figure 4.2 indicated that, 2 respondents representing 10% have worked with coca cola between 1 to 4 years, 4 respondents representing 20% have working experience of between 5 to 10 years, 4 respondents representing 20% also have working experience of between 11 to 18 years whilst 10 respondents representing 50% among others have 18 years and above working experience with coca cola.

Table 4.3: Position of Respondents

Position	Frequency	Percentage%
Store manager	7	35
Procurement officer	9	45
Logistics/stores officer	4	20
Total	20	100

Source: Author's own fieldwork, 2018

Figure 4.3: Position of respondents



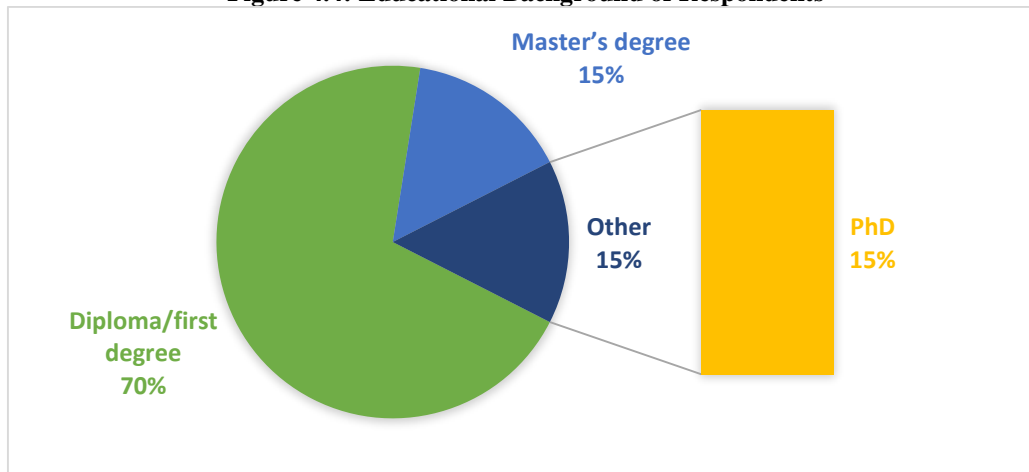
Germane to the above figure, 4 respondents representing 20% are logistics /stores officers, 9 respondents representing 45% are procurement officers and 7 respondents representing 35% are stores managers. It could be said that, the number of the procurement officers surpasses other department such as stores and logistics.

Table 4.4: Educational Background of Respondents

Educational background	Frequency	Percentage%
Diploma/first degree	14	70
Master's degree	3	15
Professional	-	-
PhD	3	15
Total	20	100

Source: Author's own fieldwork, 2018

Figure 4.4: Educational Background of Respondents



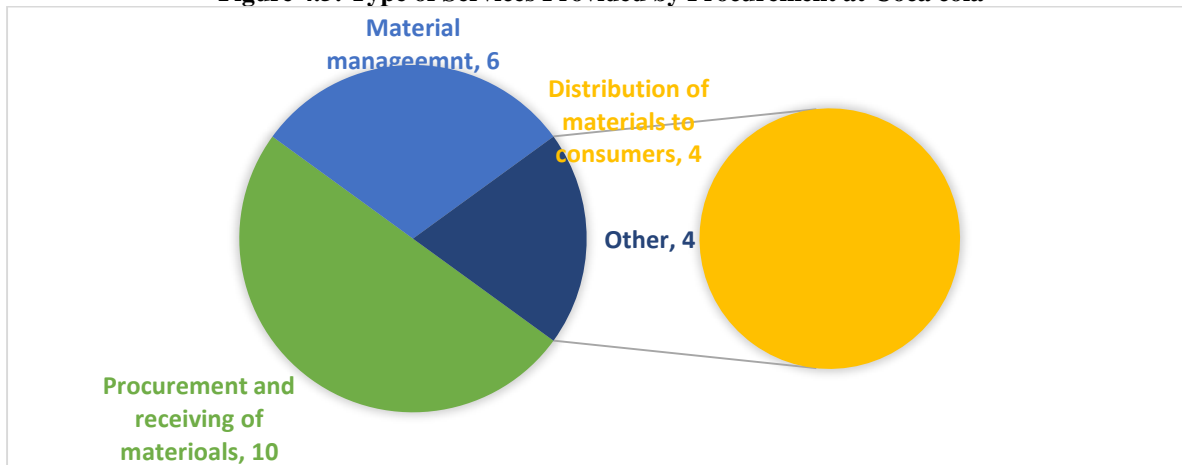
From figure 4.4, it is evident that, 14 respondents representing 70% have as their qualification, diploma/degree, 3 respondents representing 15% have master degree and 3 respondents representing 15 % also have PhD.

Table 4.5: Type of Services Provided by Procurement at Coca cola

Respondents	Frequency	Percentage%
Procurement of and receiving of materials	10	50
Material management	6	30
Distribution of materials to consumer	4	20
Total	20	100

Source: Author's own fieldwork, 2108

Figure 4.5: Type of Services Provided by Procurement at Coca cola



Source: Author's own fieldwork, 2018

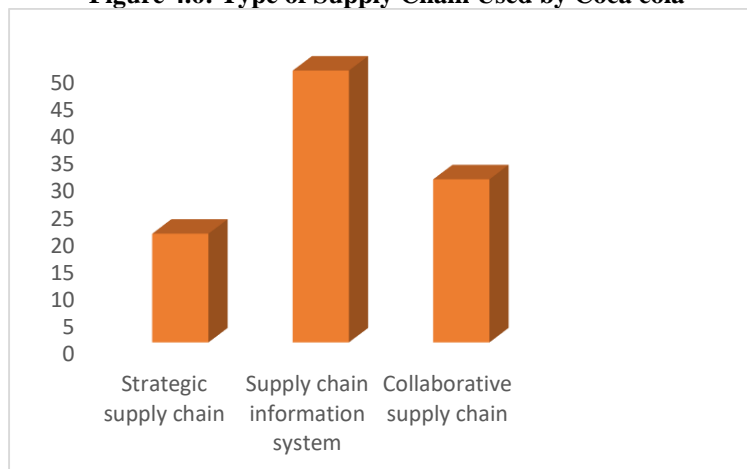
According to figure 4.5. 10 respondents representing 50% urged that the procurement under coca cola executes the task of procuring and receiving of materials, 6 respondents representing 30% are of the view that, they manage materials whilst 4 respondents representing 20% said that they execute the task of distributing materials to customers.

Table 4.6: Type of Supply Chain Used by Coca cola

Respondents	Frequency	Percentage %
Strategic supply chain	4	20
Supply chain information system	10	50
Collaborative supply chain	6	30
Total	20	100

Source: Author's own fieldwork, 2018

Figure 4.6: Type of Supply Chain Used by Coca cola



Source: Author's own fieldwork, 2018

In proportion with figure 4.6, the above types of supply chain collaborations practiced at coca cola are, strategic supply chain, collaborative and supply chain management information sharing. 4 respondents representing 20% said coca cola uses strategic supply chain, 10 respondents representing 50% are of the view that coca cola uses

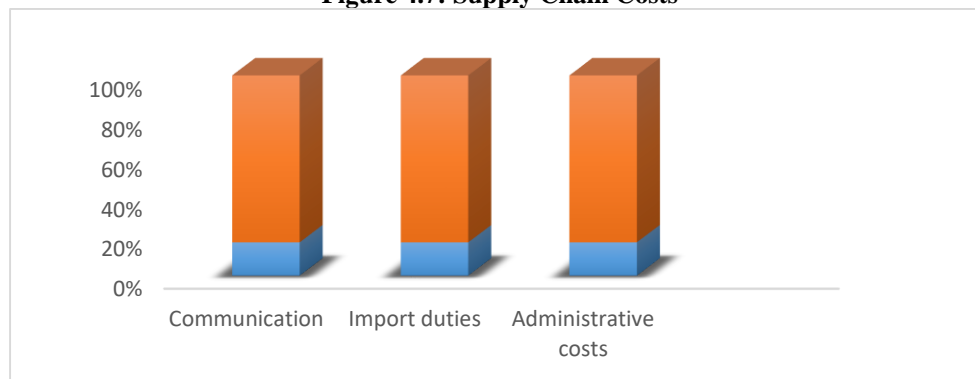
supply chain management information sharing and 6 respondents representing 30% urged that, coca cola uses collaborative supply chain.

Table 4.7: Supply Chain Costs

Respondents	frequency	Percentage%
Communication cost	3	15
Import duties	4	20
Administration cost	13	65
Total	20	100

Source: Author's own fieldwork, 2018

Figure 4.7: Supply Chain Costs



Source: Author's own fieldwork, 2018

From figure 4.7 it can be said that, 3 respondents representing 15% are of the view that the company incurs communication cost in implementing supply chain, 4 respondents representing 20% believed that the company incurs importation cost whilst 13 respondents representing 65% instigated the company incurs administration cost in implementing or practicing supply chain.

Table 4.8: Impact of Supply Chain

Impacts	Strongly disagree	Disagree	Not sure	Agree	Strongly agree	Total	%
In time delivery	2(10%)	2(10%)	1(5%)	5(25%)	10(50%)	20	100
Cost effective	0(0%)	1(5%)	5(25%)	10(50%)	4(20%)	20	100
Timely communication	0(0%)	0(0%)	0(0%)	8(40%)	12(60%)	20	100
Profit maximization	0(0%)	0(0%)	3(15%)	12(60%)	5(25%)	20	100
Waste reduction	0(0%)	0(0%)	3(15%)	14(70%)	3(15%)	20	100
Increase market share	0(0%)	0(0%)	3(15%)	3(15%)	14(70%)	20	100

Source: Author's own fieldwork, 2018

Germane to table 4.9, impacts of effective supply chain. Thus, 2 respondents representing 10% strongly disagreed that effective supply chain results to in time delivery, 2 respondents representing 10% disagreed, 1 respondent representing 5% is not sure, 5 respondents representing 25% agreed whilst 10 respondents representing 50% strongly agreed to the fact that effective supply chain results to in time delivery. Taking into account Cost effective as part of effective supply chain 1 respondent representing 5% disagreed, 5 respondents representing 25% are ambivalent, 10 respondents representing 50% concurred, and 4 respondents representing 20% were in strongly agreement of the statement. Timely communication, 8 respondents representing 40% agreed that timely communication brings about effective supply chain, whilst a gigantic 12 respondents representing 69% strongly concurred to the above statement. Profit maximization, 3 respondents representing 15% were not sure whether

effective supply chain maximizes profit, 12 respondents representing 60% agreed to the fact the effective supply chain collaboration maximizes profit and 5 respondents representing 25% strongly concurred.

Again, Waste reduction as a results of effective supply chain collaboration, 3 respondents representing 15% are ambivalent, 14 respondents representing 70 % were in agreement whilst 3 respondents representing 15% strongly agreed. In addition, increased market share as a result of effective supply chain collaboration. 3 respondents representing 15% are ambivalent of the statement, 3 respondents representing 15% also agreed that effective supply chain collaboration increases market share, whilst gigantic 14 respondents representing 70% strongly agreed.

Table 4.9: Challenges of Supply Chain

Challenges	Strongly disagree	Disagree	Not sure	Agree	Strongly agree	Total	%
Difficult implementation of supply chain collaboration	2(10%)	2(10%)	1(5%)	5(25%)	10(50%)	20	100
Failure to identify effective partners for collaboration	0(0%)	1(5%)	5(25%)	10(50%)	4(20%)	20	100
Lack of responsiveness and flexibility in procurement	0(0%)	0(0 %)	(0%)	8(40%)	12(60%)	20	
Real time information sharing	0 (0%)	0(0%)	3(15))	12(60%)	5(25%)	20	100
Lack of integrated strategy	0(0%)	0(0%)	3(15%)	14(70%)	3(15%)	20	100

Source; Author's own fieldwork, 2018

Effective supply chain is pivotal to all organizations as it contributes highly to the achievement or organizational objective. Whence, identifying weaknesses or factors that will cheapen the organization from achieving its strategic goal, finding remedies or putting in place measures is preminent. Germane to table 4.9, it ostensible that, difficulty in implementation of supply chain collaboration is a challenge. Thus, 2 respondents representing 10% strongly disagreed to the above challenge, 2 respondents representing 10% disagreed, 1 respondent representing 5% are not sure, 5 respondents representing 25% agreed whilst 10 respondents representing 50% strongly agreed to the fact that the above challenge contributes to ineffective supply chain.

Taking into account failure to identify effective partners for collaboration, 1 respondent representing 5% disagreed to the \challenge, 5 respondents representing 25% are ambivalent about the challenge, 10 respondents representing 50% concurred, and 4respondents representing 20% were in strongly agreement of the statement that the challenge cheapens supply chain collaboration.

Lack of responsiveness and flexibility in procurement as another challenge, 8 respondents representing 40% agreed to the challenge, whilst a gigantic 12 respondents representing 69% strongly concurred to the above challenge. Real time information sharing, 3 respondents representing 15% were not sure of the challenge, 12 respondents represent 60% agreed to the fact the challenges embroils supply chain collaboration and 5 respondents representing 25% strongly concurred. Tofo, lack of integrated strategy as another challenge, 3 respondents representing 15% are ambivalent as to if the challenge shrinks supply chain collaboration, 14 respondents representing 70 % were in agreement whilst 3 respondents representing 15% strongly agreed.

5.0 CONCLUSION

This chapter comprises a summary of the findings from the study, the general conclusions drawn by the researchers and recommendations made by the researcher.

5.1 Summary of Findings

First, the study has developed a reliable and valid instrument to measure the extent of collaboration that incorporates information sharing, decision synchronization, and incentive alignment. The item statements can be tailored to the specific relationship to gauge the levels of supply practices and used to identify the gaps that need to be eliminated.

Second, the study showed that there is a significant correlation between collaboration and operational performance. It suggested that the chain members build supply efforts to seek opportunities to improve overall performance.

Third, the study also showed that supply significantly affect competitive advantage and organizational performance. It is advised that chain members should develop a dialogue to carefully discuss initiatives for improving the practice, which makes the greater contribution to better performance.

5.2 Conclusion of the Study

Supply chain has been widely discussed, and a wealth of concepts is at hand. Large-scale projects like the Efficient Consumer Response (ECR) in the fast moving consumer goods sector, for example, or Vendor Managed Inventory (VMI) and Collaborative Planning, Forecasting and Replenishment (CPFR) initiatives more generally provide a rich continuum of strategies for collaborating amongst supply chain partners. In our research, we looked at implementations across Accra brewery limited, and our findings show that the slow progress to date may be due to a lack of common understanding of these concepts, and the difficulty of integrating external supply with internal production and inventory control.

In this paper, we discuss their dynamic behavior and key characteristics. We draw upon case studies from both successful and less successful implementations to illustrate what companies need to do to fully benefit from their collaborative efforts, given their particular circumstances. We conclude that, the effectiveness of supply chain relies upon two factors: the level to which it integrates internal and external operations, and the level to which the efforts are aligned to the supply chain settings in terms of the geographical dispersion, the demand pattern, and the product characteristics.

5.3 Recommendations of the Study

In general the researcher deems it necessary to make the following recommendations as resolutions to the challenges identified in during the course of the study. Firstly, coca cola should give prominence to supply chain by investing in supply chain, identifying supply chain partners, developing better supply chain strategy and management methods since its contributes greatly to all their activates. Again, the researcher recommended that series of workshops and seminars should be organized for both procurement officers especially new ones who have little knowledge in practical procurement and potential contractors so that they will have more insight into what goes into the supply chain. Howbeit, coca cola should get powerful systems to reduce the tendencies of committing human errors, work faster to enhance progress and to become technologically inclined.

List of References

- [1] Cooper, M.C, Ellram, L.M, (1993, 2001). Characterictics of supply chain management and the implications for purchasing and logistics strategy. International journal of logistics management.
- [2] Kalpakjian ,serupe (2001). Manufacturing engineering and technology; pearson Ed. New Delhi India.
- [3] Lysons, and Fammington (2006). Purchasing and supply chain management. 7th Edu. Pearson Education limited England pg 84-118
- [4] Republic of Kenya (2007).Kenya vision 2030; National planning strategy
- [5] Republic of Kenya (2000). Economic survey central Bureau of statistics Ministry of finance and planning, Nairobi Kenya.Republic of Kenya (1996). Economic survey central bureau of statistics, Ministry of finance and planning, Nairobi, Kenya.Singh,
- [6] Nauna (Aug 1995). Introduction to computer integrated design and management systems. New Dehli, India
- [7] Vrijhoef, L. Koskela (2000). European journal of purchasing & supply management 6 pp. 169-178.
- [8]Vrijhoef, R, Koskele. I (2000), European journal of purchasing and supply management.