ROLE OF SUPPLY CHAIN INTEGRATION ON SUPPLY CHAIN PERFORMANCE IN KENYAN STATE CORPORATIONS

Maureen Muthoni Njagi
Masters Student, Jomo Kenyatta University of Agriculture and Technology, Kenya

Prof. Martin Ogutu
Lecturer, University of Nairobi, Kenya

ABSTRACT

This research project set out to determine the impact of supply chain integration on supply chain performance in State Corporations in Kenya. It was motivated by the scarcity of studies on impact of supply chain integration on supply chain performance in State Corporations in Kenya. The research project was limited to State Corporations whose functions are strategic in nature as per the reclassification by the Presidential Task force on Parastatal Reforms of October 2013. A census study was conducted and questionnaires were used to obtain data in a bid to answer the following research questions; to what extent does integration of the internal operations in the supply chain affect supply chain performance in State Corporations in Kenya? To what extent does integration of the supplier in the supply chain affect supply chain performance in State Corporations in Kenya? To what extent does integration of the customer into the supply chain affect supply chain performance in State Corporations in Kenya? A total of 15 corporations were surveyed yielding a response rate of 78.9%. The study revealed that state corporations had achieved an above average level of integration in internal integration of operations, external integration with suppliers and external integration with suppliers at 57.6%, 54.8% and 59.4 % respectively. The findings also revealed a positive correlation in supply chain integration and supply chain performance.

Key Words: Supply Chain, Integration, Performance, Corporations

INTRODUCTION

According to the supply chain council the supply chain (S.C) encompasses every effort involved in producing and delivering the final product from the supplier’s supplier to the customer’s customer. It is the network of organizations that are involved through upstream and downstream linkages, in different processes and activities that produce value in form of products and services in the hands of the final consumer(K & Farrington, 2006).Managing the supply chain is then referred to as Supply Chain Management (SCM). At the operational level, this brings together functions that are as old as commerce itself seeking goods, buying them, storing them and distributing them. At the strategic level, SCM is a relatively new and rapidly expanding discipline that is transforming the way that manufacturing and non-manufacturing operations meet the needs of their customers(T, 1996). Supply chain performance is defined as the entire chain's ability to meet end-customer needs through product availability and responsive, on-time delivery (Ndambuki, 2013). Efficiency and effectiveness have been used as key indicators for measuring supply chain performance (Beamon, 1999). Two well-known indicators are cost-containment and performance reliability constructs(Lee, Kwon, & Severance, 2007). Cost-containment indicator includes such activities as cost in and outbound activities, warehousing costs, and inventory-holding cost, and increasing asset turnover. Reliability indicator addresses
such areas as order fulfillment rate, inventory turns, safety stocks; inventory obsolesces, and number of product warranty claims.

Integration in this context refers to the extent to which various supply chain activities and processes work together in as seamless a manner as possible. More precisely supply chain integration may be defined as aligning and coordinating the resources, decisions, methods, business processes and employees of the different stakeholders in the supply chain to improve their ability to work together in a continuous improvement process (Chalmeta & Grangel, 2003). According to Celtrino, Supply chain integration has also been defined as the use of technology to underpin the coordination of these business functions using a common platform to provide a way to connect the disparate systems at each business and the transactional workflow required to move raw materials to saleable products and the data interchange between each supplier in the process. Integrating the supply chain was not truly practical before the advent of Internet and new information and communication technologies (Frolich & Westbrook, 2002). Other means, such as telephone and facsimile machines, failed to provide true, real-time access to the information (Frolich & Westbrook, 2002). The integrated supply chain actually became practical with the advent of enterprise systems which organize and integrate the flow of materials, information, and finances from each part of supply chain network (Dehning, Vernon, & Zmud, 2007).

Global Perspective on Supply Chain Integration and Supply Chain Performance

There is a growing body of literature that focuses on the importance of the integrated supply chain strategy (Kim, 2006a). This strategy creates value for a firm’s customers and draws suppliers and customers into the value creation process (Tan, Kannan, & Handfield, 1998). The integrated supply chain has been recognized as the key factor for remaining competitive in the marketplace (Birou & Fawcett, 1998). Theoretically it has been well-known that supply chain integration creates strategic advantages. However, there has been a lack of research to actually measure such total integration and link it to performance metrics in real-world supply chain strategy situations (Pagh & Cooper, 1998). For example, it has been argued that a well-connected business process improves supply chain management (SCM) performance through lowering cost, shortening delivery time, providing appropriate feedback, maintaining low inventory levels, and improving reliability (Davis, 1993). The work of Frohlich and Westbrook (2001) based on a survey of 322 global manufacturers strongly supported the hypothesis that the companies with the greatest arcs of supplier and customer integration will have the largest rates of performance improvement. This is significant given the centrality of integration in SCM philosophy.
Kenyan Perspective on Supply Chain Integration and Supply Chain Performance

(Wanjiku, 2013) in a study of the effect of supply chain integration on supply chain performance concluded that, most banks embraced business integration over ten years ago and this has assisted them to enhance the performance of their supply chain. These findings are of significant value addition, with regards to evaluation of the same in State Corporations in Kenya. However, she restricted her research on the Banking sector in Kenya. Similarly, Ndambuki (2013) concluded that integration of supply chain in Humanitarian Non-Governmental Organizations (NGOs) has proven to be critical success factors for the organizations supply chains and performance. His study highlighted that information sharing, faster decision making, supplier relationship management and efficiency in a supply chain influence the humanitarian organizations performance.

STATEMENT OF THE PROBLEM

In the current climate of global supply chain competition, integration is regarded as a prerequisite for winning performance (Lee H., 2000). It is claimed as being synonymous with supply chain management excellence (Christopher M., 2005). To remain competitive in the strong pressures of the global competition, organizations are constantly in search of new ways to improve the performance of their supply chain in order to reduce costs, to improve quality and to increase productivity. Collaboration and information exchange between partners then becomes essential within any supply chain. The growing importance of supply chain integration makes it a pertinent area for further research. A study by Sweeney 2012 concluded that there is significant evidence that the effective implementation of integrated SCM has the potential to generate significant improvements in the performance of firms. The work of Frohlich and Westbrook (2001) based on a survey of 322 global manufacturers strongly supported the hypothesis that the companies with the greatest arcs of supplier and customer integration will have the largest rates of performance improvement. Generally, research in supply chain integration and performance have focused on the commercial supply chain, this research seeks to study supply chain integration and performance in public noncommercial supply chains by establishing the role of supply chain integration on supply chain performance in state corporations in Kenya.

GENERAL OBJECTIVE

The general objective of the study is to establish the role of supply chain integration on supply chain performance in State Corporations in Kenya.
SPECIFIC OBJECTIVES

1. To establish the extent to which integration of internal operations of the supply chain affects supply chain performance in State Corporations in Kenya.
2. To identify the extent to which integration of the supplier in the supply chain affects supply chain performance in State Corporations in Kenya.
3. To identify the extent to which integration of the customer into the supply chain affects supply chain performance in State Corporations in Kenya.

LITERATURE REVIEW

Resource Dependence Theory

Resource dependence theory (RDT) centers on how firms in the supply chain become reliant on others for much needed inputs such as goods and materials, and how firms can manage such relationships (Pfeffer & Salancik, 2003). Resource dependence theory assumes that variation in uncertainty deriving from the organizational environment is responsible for both internal power distribution between organizational entities and external power distribution between market participants (Hillman, Withers, & Collins, 2009). External power, in addition, is influenced by dependency relations that exist as consequence of a lack of autonomy. Both uncertainty and dependence derive from the assumed constraint that any organization faces; they cannot exist without purchases of resources from external sources and these are not dependable (Heide, 1994). The asymmetric interdependence that exists in these inter-firm relationships is critical to reduce environmental uncertainty for some firms. As supply chain members work together closely, they often become more dependent on each other. Thus, resource dependence theory has high value in supply chain integration and performance management. In the traditional supply un-integrated supply chain each member tries to avoid becoming overly dependent on other members for fear of exploitation.

This theory is based on the premise that organizations are dependent on external resources and therefore seek to manage them to ensure success in the supply chain and also control autonomy minimizing dependence. It calls for supply chains to be wary of resource dependency as it may have grave consequences where one member of the chain takes advantage to abuse another and squeeze their margins. However it is impossible for an organization to be entirely self-reliant and therefore resource dependence is inevitable. As supply chain partners seek to build mutual forbearance and trust perhaps resource-sharing structures should be enacted to mitigate resource dependencies and abuse of dependent partner.
Agency Theory

The agency theory posits the relationship between the two parties identified as principle and agent, where the term principal is used to describe the party that delegates the tasks or duties to an agent who, typically, possesses specialized knowledge and skills (Hendry, 2002). The agency theory attempts to address the problem of lack of goal congruence between the principal and the agent resulting from the potential opportunistic, self-seeking behavior of the agent which is presumed to be in conflict with the utility maximization -oriented interests of the principal (Hendry, 2002). The problem is often characterized by: differences in attitudes towards risk; divergence in decision-making preferences; bounded rationality; an information asymmetry (Rutledge & Karim, 1999). Problems arise in these relationships because agents often behave in ways that benefit them, not principals.

Supply chains are composed of relations involving one firm delegating authority to another. As a result, conflicts of interest often arise within traditional supply chains. Participants must choose between courses of action that benefit their firm versus those that benefit the chain as a whole. Most managers in this situation will select the former option because their primary loyalty lies with their home firm. High performing supply chains recognize and account for this tension. High performing supply chains leverage tools such as reward structures and cultural competitiveness to ensure alignment among participants’ interests. This removes the temptation to take advantage of other supply chain members. Members of these supply chains also recognize that the sequential nature of supply chains dictates that they are agents in some links and principals in others. Thus, opportunism in one’s role as an agent can be punished by other firms in the chain. This theory is however one directional focusing on the agent’s likelihood to put self-interest above the interest of the principal. However the relationship spans both ways and it is important to also give consideration to the fact that the principal may put self-interest ahead of the agent best interest. The theory is also based on the assumption that human nature is primarily self-serving however several mutually beneficial relationships based on trust do exist in high performing supply chains.

CONCEPTUAL FRAMEWORK

The conceptual framework for this study was developed from the individual effects model by (Closs & Savitskie, 2003) which presented the unique influence of internal and external supply chain integration on the success of an organization. The dependent variable for this research is supply chain performance while the independent variables are internal integration, integration of suppliers and integration of customers in the supply chain. Many studies confirm that the higher the level of integration the higher the operational and business performance of the firm (Gimenez & Ventura, Logistics-production, logistics-marketing and external integration: Their impact on
The ultimate goal is the seamless supply chain wherein all players ‘think and act as one’ (Mason-Jones & Towill, 1998). The conceptual framework is captured in figure 1.

**Supply Chain Performance**

Supply chain performance is defined as the entire chain's ability to meet end-customer needs through product availability and responsive, on-time delivery (Ndambuki, 2013). Efficiency and effectiveness have been used as key indicators for measuring supply chain performance (Holmberg, 2000). Two well-known indicators of efficiency and effectiveness are cost-containment and performance reliability constructs (Lee, Kwon, & Severance, 2007). Cost-containment indicator includes such activities as cost in and outbound activities, warehousing costs, inventory-holding cost and increasing asset turnover. Reliability indicator addresses such areas as order fulfillment rate, inventory turns, safety stocks, inventory obsolesces, quality and number of product warranty claims. Improving supply chain performance is a continuous process that requires both an analytical performance measurement system, and a mechanism to initiate steps for realizing key performance indicator (KPI) goals. The mechanism to achieve KPI goals can be referred to as "KPI accomplishment", which connects planning, execution, and incorporates steps for realization of performance goals into routine daily work (Cai, Xiangdong, & Zhihui, 2008).

**Supply Chain Integration**

Supply chain integration was originally focused on achieving reduced set up times and greater responsiveness to changes in product mix, volume and agility; then extended into wider business context. The concept of commercial S.C captures how an organization can synthesize new productive capabilities from the expertise of its members, through knowledge and skill
development, promoting innovative thinking, emphasizing management, and providing appropriate physical facilities (J, Christopher, & Towill, 2000). However, according to Christopher & Towill (2000), commercial S.C transcends flexibility as it is a business wide capability that embraces organizational structures, information systems, logistics processes and overall mind-sets. All departments within a supply chain network need to be integrated to achieve an impact beyond the individual unit. On-going integration - both upstream and downstream - is achieved through building appropriate information technology platforms/systems, leading to virtual integration of all players (Christopher & Towill, 2000). The commercial supply chains aim for low cost operation and high efficiency to realize higher profits while maintaining customers’ taste and preferences. Supply chain integration has been recognized as an enabler of competitive capability by both practitioners and scholars (Tarn, David, & Beaumont, 2002). Due to advances in information and communication technologies, electronic supply chain management has made it possible for companies to use their supply chain network as a competitive weapon (Barlow & Feng, 2007). Today, defect-free products at your doorstep reliably, faster and without damage are not part of competitive advantage over your competitors; it is a necessity to even stay in the game. With this, tighter coordination with suppliers and distributors is now needed (Mentzer, et al., 2001). It is a significant paradigm shift that companies today compete as supply chains instead of one on one. According to (Lee W., 2005), we are in the era of supply chain competition; in other words, competition today is based on supply chain versus supply chain rather than business versus business.

**Internal Integration and Supply Chain Performance**

Internal supply chain refers to the chain of activities within a company that concludes with providing a product to the customer. This process involves multiple functions within companies’ sales, production, and distribution. It is obvious that these functions need to be integrated in order to provide good customer service. A well-integrated internal supply chain should result in excellent customer service and company performance. Internal integration has been defined as the quality of the state of collaboration that exists among departments that are required to achieve unity of effort by the demands of the environment (Ellinger, Daugherty, & Keller, 2000). This definition refers to integration as internal to the firm. Much of the SCM and logistics research has examined internal inter-functional integration, focusing on the interaction and collaboration between different departments (Ellinger, Daugherty, & Keller, 2000).

A firm in which the divisions or departments are not integrated and where each has its own information system independent of others is considered an un-integrated company (Simchi-Levi, Kaminsky, & Simchi-Levi, 2003). In these firms, the flow of information is slow, systems are highly inefficient, and the same information is sometimes stored in different departments. A firm may become internally integrated by connecting and integrating different information systems in the departments into a single point and giving members from the different departments’ access to
all data from that single point (Simchi-Levi, Kaminsky, & Simchi-Levi, 2003). Internal integration is present when specialized functions or departments of an organization are interdependent and when operations and procedures occur that allow for, and require cooperation. It eliminates traditional silo functions and emphasizes better coordination between function areas. It reflects the fact that at least two (or more) complementary functions of a company act as a whole although they are not integrated into a single unit. Certain literature characterizes inter-functional integration as an interaction/communication activity. (Bowersox, David, & Theodore, 1999)

**External Integration with Suppliers and Supply Chain Performance**

External integration is often mentioned as a key driver to enable long-term competitiveness of the supply chain as a whole (Cao & Zhang, 2011). For this reason, linkages with suppliers aimed at coordinating upward information and downward material flows along the supply chain is viewed as a crucial issue in effective supply chain management (Danese, Romano, & Formentini, 2013). Internal integration has been posited as a precondition for external integration. This means that the efficiency of external integration is better seen after successful application of internal integration. The integration of a firm with its suppliers is the result of a strategic collaboration between them. This is the result of a mutual and ongoing relationship that involves a high level of trust, commitment over time, long-term contracts, joint conflict resolution, and the sharing of risks and rewards (Vickery, Jayaram, Droge, & Calantone, 2003). Both sides work together to increase product quality and decrease costs, which leads to sharing benefits. The larger firms usually make reliable agreements with smaller companies, which are thus able to function as main suppliers (Stroeken, 2000).

These relationships are strengthened and facilitated by different enterprise systems such as Electronic Data Interchange (EDI), Enterprise Resource Planning (ERP), and Product Data Interchange (PDI). This is the second level of supply chain integration. These partnering decreases inventory and improve the efficiency of their communications by having accurate information about materials in near real time (Simchi-Levi, Kaminsky, & Simchi-Levi, 2003). It also may enhance firms ‘competition capabilities (Vickery, Jayaram, Droge, & Calantone, 2003) and deter new entrants (Stroeken, 2000). Effective external integration with suppliers may enable organizations to reduce supply-side risks (Tang, 2006; Swink et al., 2007; Lin and Zhou, 2011). This is through the alignment of business processes, information sharing, and joint planning between suppliers and customers (Ragatz et al., 2002; Flynn et al., 2010). Owing to the collaborative approach to establish mutual understanding, it improves the understanding of customers’ needs. The sharing of timely market and operational information further enables suppliers to anticipate and respond to changing customer needs and therefore improve delivery performance (Stank et al., 1999; Zailani and Rajagopal, 2005). Without sharing of accurate information, flows of materials and information may not be coordinated and bullwhip effect may
arise, leading to poor inventory management. Closer supplier-customer collaboration helps to achieve task coordination and resolve conflicts. Better coordination and alignment of objectives help to reduce waste and redundancy of efforts in managing supply chain activities (Swinket al., 2007). Furthermore, integration with customers and suppliers also helps to develop problem solving routines (Flynn and Flynn, 1999; Narasimhan and Jayaram, 1998) which enable joint efforts in cost reduction and product development. Such joint efforts are essential for achieving time-based performance as well as product quality and innovation (Stank et al., 1999; Scanellet al., 2000; Ettlie and Reza, 1992; Rosenzweig et al., 2003).

**Integration with Customers and Supply Chain Performance**

Intense global competition and escalating customer expectations have compelled supply chains to continuously reevaluate their business process in an effort to remain integrated with their customers. Customer integration is a central component of supply chain integration process that contributes to a business’s ability to compete—developed by coordinating the SC with their critical customers (Bowersox et al., 1999). Customer integration has been established to be an enabler for the effective continuation of a business process and its overall growth. The firm’s strategic ability to identify the needs of its customers and the extent of its commitment to meet those needs determines the level of its relationship to the customers (Powell, 1995). Closer customer relationships enable firms to become more responsive to their customers’ needs and preferences (Stroeken 2000). In addition, strong relationships with customers can be used to enhance operational effectiveness, cost efficiency, and deter new entrants (Vickery et al. 2003). Integration of the firm with its customers makes it highly knowledgeable about their customers by integrating their front ends with their customers (Simchi-Levi et al. 2003).

**RESEARCH METHODOLOGY**

**Research Design**

The study employed descriptive survey design. The study was a census type. The survey data collection was undertaken by asking the target representative population structured and predetermined questions.

**Population**

The population of study comprises State Corporations whose functions are strategic in nature as per the reclassification by the Presidential Task force on Parastatal Reforms of October 2013.
Sample and Sampling Technique

The study employed a census approach to collect data from the respondents hence no sampling techniques was used. The approach involved gathering information from every member of the target population.

Instruments

A semi-structured questionnaire was used to collect primary data from respondents and was designed to address the various research objectives. The questionnaire employed a five-point Likert scale to determine the extent to which supply chain integration affects supply chain performance. This allowed respondents to extensively respond to topic under study.

Data Collection Procedure

The study used primary data that was collected by use of questionnaire. The researcher targeted managers from supply chain units in the population, in their absence the deputy manager or any other senior manager who actively engaged in making supply chain decisions for the corporation responded to the questionnaire. The questionnaire was administered via email and drop-off to the respective Officers and collected at an agreed time and place by the researcher.

Pilot Test

The questionnaire was pre-tested with three independent respondents who did not form part of the targeted population. This is to ensure that the questions in the instrument are stated clearly and have the same meaning to all the respondents. According to Mugenda (2003) the respondents on which the questionnaire will be pretested, will not be part of the target population of the study. The information obtained during the pre-testing of the research instrument will be used to revise and improve on the questionnaire.

Reliability

The test retest period was a day and was done on the respondents that did the pilot test. The measurements of the test and retest were correlated using the Pearson r. A correlation of at least .70 was considered satisfactory.
Validity

The questionnaire was submitted to five supply chain professionals who did not form part of the sample to determine whether the questions were clear, understandable, and in a logical order this is known as face validity. The same five supply chain professionals were asked to criticize the content of the questionnaire, checked for content validity.

Data Processing and Analysis

The data collected was reviewed for completeness and accuracy upon completion of the data collection process. Thereafter, the data was sorted and coded, then entered into the Statistical Package for Social Sciences (SPSS). With the aid of SPSS version 18 software, the researcher performed correlation analysis on the primary data to establish the relationship between the variables. The results of analyzed data were presented using tables and charts with a brief description thereafter.

RESEARCH RESULTS AND DISCUSSION

Internal Integration of Supply Chain and Supply Chain performance

The first objective of the study sought to establish the extent to which integration of the internal operations of the supply chain affects supply chain performance in state corporations in Kenya. The following is a discussion of the findings. The study revealed that state corporations were most internally integrated in terms of sharing the same vision for the organization, interacting with each other through meetings, phone or email, being accessible to each other and sharing of ideas, information and resources with mean scores of 5.00, 4.20, 4.13 and 3.67 respectively. All respondents reported that they shared the same vision for the organization and this is the starting point of any form of integration. 84% of the organizations reported that the interacted regularly with each other through meeting phone and email while 82 % reported that members of the organization were easily accessible to each other.

Internal integration has often been defined as the state of collaboration that exists between departments. The state corporations were sharing ideas, information and resources. These findings are consistent with (Vickery et al., 2003) who stated that internal integration decentralizes decision making thus accelerating the decision making process and increasing cooperation and collaboration between teams in different departments. Through centralizing information to enable sharing state corporations are able to do business more efficiently thus improving performance. This is supported by findings that revealed that performance was most greatly affected by interacting with each other through meetings, phone or email and being accessible to each other and sharing of ideas, information and resources with mean scores of 4.20
and 4.13 respectively. These findings are consistent with Bowersox et al. 1999 and Griffin, Hauser 1996 who held that a large number of meetings and information flows between functional departments contributes to more successful integration. The results indicate that internal integration and performance were strongly positively correlated with correlation of r= 1.00. This correlation was significant as the significance level was less than p<0.01. This means that positive changes in integration result in positive improvements in performance. These findings reveal that by establishing joint objectives state corporations in Kenya have moved away from the traditional silo departments and have embraced coordination between functional areas thus improving supply chain integration. Overall internal integration of the supply chain in state corporations stood 57.4%, this shows that integration has been achieved in more than half of the aspects of internal integration and this will continue to have a positive impact on supply chain performance.

External Integration with Suppliers and Supply Chain Performance

The second objective of the study sought to establish the extent to which external integration of the supply chain with suppliers affects supply chain performance in state corporations in Kenya. The following is a discussion of the findings. The study revealed that state corporations were most externally integrated with their suppliers in the following aspects; interacting with suppliers through the internet, placing orders to suppliers through the internet and having strategic suppliers for all products and services with mean scores of 3.73, 3.60 and 3.53 respectively. These findings show that state corporations have embraced the improvements and advancements in technology and now use internet to communicate with the suppliers and also place orders. This improves supply chain performance by increasing efficiency in doing business as well as lowering costs. By using the internet state corporations and their suppliers are able to communicate and exchange information in real time. The sharing of timely market and operational information further enables suppliers to anticipate and respond to changing customer needs thus improving supply chain performance. This is consistent with Stank et al., (1999) findings. The results also indicated that external integration with suppliers and performance were strongly positively correlated with correlation of r= .989. This correlation was significant as the significance level was less than p<0.01. This means that positive changes in external integration with suppliers result in positive improvements in performance.

The findings also revealed that state corporations have strategic suppliers for key supplies. This is consistent with Stroeken (2000) findings, which held that larger firms usually make reliable agreements with smaller firms that function as main suppliers thus improving efficiency and effectiveness of the supply chain. The results are also consistent with Graham et al.,(1994) findings which established that supplier partnership improves the quality of supplier operations and improves the quality of supplies resulting in overall better product quality.
External Integration with Customers and Supply Chain Performance

The third objective of the study sought to establish the extent to which external integration of the supply chain with customers affects supply chain performance in state corporations in Kenya. The following is a discussion of the findings. The results revealed that state corporations are most externally integrated with customers in the following aspects; interacting with customers through the internet, enabling customers to place orders through the internet and making use of customer information in demand management with mean scores of 4.00, 3.40 and 3.07 respectively. State corporations have taken advantage of improvements in technology and are now communicating with customers through the internet and enabling them to place their orders through the internet. Using this real time communication state corporations have built closer customer relationships that enable them to become more responsive to customer needs and preferences thus improving supply chain performance. This is consistent with Vickery et al., (2003) which established that strong relationships with customers can be used to enhance operational effectiveness, cost efficiency and deter new entrants. The findings also revealed that state corporations were using customer information in the demand management process. Use of this information reduces system uncertainty and in turn lowers costs. Proper use of customer information in the demand management process allows greater inventory cost savings thus improving overall performance of the supply chain. The findings also revealed that the extent of external integration with the customer was significant with state corporations having integrated in more than half the aspects of customer integration at a mean of 2.97. There was a positive correlation in external integration with the customer and supply chain performance.

CONCLUSION

Today’s business competition is moving from among organizations to between supply chains partners and organizations are increasingly adopting supply chain integration, in the hope for generating S.C responsiveness and competitive advantage of the firm. Research findings showed that all the state corporations are practicing various aspects of supply chain integration. The findings indicate that supply chain integration is an effective way of competing, and the implementation of supply chain integration does have a strong impact on supply chain performance and competitive advantage of the firm. The integration of supply chain has proven to be a critical success factor for a company’s supply chain and performance. When strategy and practice are properly combined, the supply chain and firm performances will improve. The results highlight that internal integration of the supply chain together with external integration of the supply chain with its suppliers and customers positively influence supply chain performance. Information sharing was found to affect supply chain performance and therefore managers should improve information sharing effectively, so that supply chain responsiveness can be increased and generates higher performance.
Building long term relationship with suppliers enhances the ability of the supply chain to eliminate waste and improve the leanness of their own operations and thus helps in improving the supply chain performance. The support of the appropriate practice (strategic supplier partnership) helps in executing lean supply chain and is expected to lead to cost efficiencies along the supply chain. This means that the support form strategic supplier partnership facilitates and allows lean production concepts to be more fully applied.

**RECOMMENDATIONS**

Firstly, the study established that all the state corporations have integrated their supply chains to some extent but it is recommended that the corporations should build and continuously improve their employee skills and capacity in facing the changing competitive environment. The implementation of supply chain integration requires enhanced skills to utilize the shared information from its partners in order to work collaboratively with many different functions within a company and with their supply chain partners. Secondly, the study established that the state corporations supply chain performance is influenced by supplier relationship and it is recommended that the organizations should continually seek effective deployment of information technology into their supply chain activities with suppliers and their internal operations. The effective use of information technology can greatly increase coordination of activities within the supply chain partner. The advancement in such as the internet allows each supply chain member to increase integration with relatively low cost. Information technology would also facilitate companies to share more information with their partners.

**REFERENCES**


