



INFLUENCE OF SUPPLY CHAIN INTEGRATION ON ORGANIZATION PERFORMANCE IN WATER AND SANITATION COMPANIES IN WESTERN KENYA

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ABSTRACT

The purpose of this research was to determine the Influence of Supply Chain Integration on Organization Performance in Water and Sanitation Companies in Western Kenya (WSCWK). This study was grounded on Integrative Theory because it focuses on how Supply Chain integrates processes with organizational performance. The research design in this study was descriptive. The research population for this study was 112 employees of Water and Sanitation Companies in Western Kenya region. The multi-stage sampling technique was used for the study. A sample size of 36 respondents was targeted. Self-administered questionnaires were used to collect data because the research design was descriptive.. Descriptive statistics were used for data analysis. The composite mean for research objective one was 4.261 while the composite standard deviation was 0.518 which implied respondents indicated that information sharing influence organization performance to a great extent in WSCWK. The composite mean for research objective two was 4.55 while the composite standard deviation was 0.5414 which implied respondents indicated that coordination of supply chain operations influence organization performance in WSCWK to a very great extent. The composite mean for research objective three was 4.444 while the composite standard deviation was 0.524 which implied respondents indicated that user customer integration influence organization performance in WSCWK to a great extent. It was concluded that WSCWK should coordinate their supply chain operations and enhance user customer integration and share information because these significantly influenced organization performance in WSCWK. The researcher recommends that in order to improve Organization Performance in WSCWK, various aspects of Supply Chain integration needs to be aligned with other relevant channel members in order to improve service delivery.

Keywords: Supply chair integration, Information Sharing, user customer integration, Organizational Performance

INTRODUCTION

Understanding and practicing Supply Chain Management (SCM) has become an essential prerequisite for staying competitive in the global race and for enhancing profitability in Logistics (Morash and Clinton 1998). Supply Chain Integration has been widely adopted by companies with the aim of improving organization performance. In early 2000, major scholars advocated the creation of customer value through the supply chain integration in order to create closeness and operational excellence in supply chain firms (Donaldson, 2001).

Globally, Supply Chain Integration in East Asian companies emphasized on internal control primarily to reduce costs as a substitute for past labor cost advantages. As for the United State firms, the emphasis is

on operational integration of physical process between a company, its suppliers and customers. Similarly, Japanese companies placed greater emphasis on Supply Chain operational planning by focusing on organizational culture as the leverage means for attaining higher performance (Lysons and Farrington, 2006). The effects of Supply Chain Integration (SCI) on firm performance had received considerable attention from scholars and practitioners worldwide. Indeed SCI help firms respond to business challenges at the strategic, operational, and technological levels (Siekman, 2000). However, previous studies conducted in mature market economies indicates that SCI have a significant difference in political, social, and economic systems compared to emerging economies (Fawcett and Magnan, 2001). Among the emerging economies, China has increasingly become the manufacturing center of the world. This is because of the adoption and application of Supply Chain Integration in their firm operations. Also, most of the Chinese companies spans across multiple continents doing business because the level of Supply Integration is very effective (Madhavaram and Hunt (2008). Consequently, the performance of these firms is highly affected by the availability of timely information about the market (Li, 2007). However, as a country transforming from a planned economy to a market economy, China does not have sufficient formal institutions that support free markets. The findings of these studies may not be valid when applied to the context of emerging economies. Data analyzed from almost 2,000 firms in the USA, Australia, Japan, and Korea, researchers found that efficient Supply Chains exhibit operational excellence and collaborative closeness. Japanese and Korean firms integrate their Supply Chains based on operational excellence, while United States and Australian firms integrate their Supply Chains on the basis of collaborative closeness (Li, 2007).

In Germany, the Level of information sharing has been found to improve performance in Logistics companies in Germany. Shared information can vary from strategic to tactical in nature and from information about logistics activities to general market and customer information. By taking the data available and sharing it with other parties within the supply chain, information can be used as a source of competitive advantage (Cao, 2007). According to Siekman (2000), Supply Chain partners in Water and Sanitation Companies in Germany exchange information regularly and thus are able to work as a single entity to improve water supply. Supply Chain companies therefore, understands better the needs of the end user customer and hence respond to market changes in real time. The impact on the level of integration on company's competitive capability in South African companies in different industries found that, Supply Chain Integration leads to competitive capabilities. These capabilities affect the company's performance in relation to Supply Chain operational capability (Kim, 2009). While, in Uganda small and medium sized companies integrate to achieve competitive capabilities in relation with Supply Chain operations leading to improvement of the company performance. In Kenya, large and small companies in Kenya are mainly focusing on Supply Chain Integration in order to become competitive locally, nationally and globally (Ayuki, 2007).

Adoption of supply chain integration indicates that linkages within the Supply Chain firms, leads to improved performance, adoption of information technology systems, creation of strategic alliance among the Supply Chain Partners and enhanced customer relationship management (KAM, 2012). Supply Chain Integrations involve more companies in various sectors where company managers indicate that the number of collaborative relationships with third parties in the Supply Chain leads to an increased customer service (Frohlich and Westbrook, 2001). Broader range of activities in Water and Companies such as engineering services and product-design projects are on the rise and therefore Supply Chain Integration enables rapidly expanding and contracting product portfolios in Kenya to be monitored and managed (Lysons and Farrington, 2006). Coordination in Supply Chain enables firms to improve on the movement and the usage of inventories, which shortens lead time and reduces the bullwhip effect, thereby increasing the cash flow thus improving the business performance (Sanders, 2008). Also, coordination in Supply Chain Integration promotes the firms' resources, the type of skills required and the level of product knowledge across the supply chain (Lau *et al.*, 2010). This activity reduces development and time-related costs to (re)design new business processes, and improves profit margins in product development.

Committed relationship in Supply Chain is considered as a sustainable advantage to the firms because of the inherent barriers to competition. The growth of mass customization and personalized service is leading to an era in which relationship management with customers is becoming crucial for corporate survival.

Effective and efficient Supply Chain Management requires integrated business processes that go beyond purchasing and logistics activities. Supply Chain Integration (SCI) help in developing integrated supply chains that achieves the collaboration and communication capabilities of vertically integrated firms (hierarchies) while maintaining the flexibility and responsiveness capabilities of market-oriented governance structures. Madhavaram and Hunt (2008) indicated that the higher the degree of SCI led to cost reductions, improvements in inventory, customer service, new product development, information and material flows, and financial performance for the Local firm. Although urban water tariffs are high in Western Kenya regional standards (US\$0.46 per m³ on average in 2010) the level of cost recovery is low due to a high level of non-revenue water (average of 47%) and high costs. Costs are high due to the need to tap distant water sources for example Kakamega Town is supplied from a source located 80 km from the town and due to high levels of staffing 11 workers per 1000 connections or more than twice the sector benchmark). Investment in the sector increased fivefold from US\$55m in 2004–05 to almost US\$300m in 2008–09. 58% of this amount was financed by the government with its own resources, 31% by external donors and 11% was self-financed by utilities. However, there are doubts about the applicability of supply chain integration practices with particular reference to firm performance in developing countries such as Kenya (WSB, 2006). However, these studies examined how SCI affects the performance of an individual local firm. Studies on the performance of the supply chain as a whole is still scanty.

The revenue collection has been less by 30% of the total connections pay attributed to technical losses that occur through leakages and pipe bursts while commercial losses occur through inefficient, incorrect and false meter readings and billing. Moreover, outstanding debts remain high at 4.1Million in the 2005/2011 period despite adoption of supply chain Integration process (ROK, 2011). This has led to poor financial performance in the companies, loss of customers, high cost of operations and failure to improve efficiency in service delivery. There has been no study which has focused on the influence of supply chain integration on organizational performance. This study therefore seeks to fill this gap of knowledge by determining the influence of supply chain integration on organizational performance of water companies focusing on water and sanitation companies in Western Kenya. The problem this study seeks to address is poor financial performance and service delivery. The research objectives of this study were:

- i. To examine the extent to which information sharing influence organization performance
- ii. To determine the extent to which coordination of supply chain operations influence organization performance
- iii. To assess the extent to which user customer integration influence organization performance

Gaps that exist in past studies relating to the relationships between the research's independent variables and the dependent variable were examined and a summary of the findings indicated as described below. The potential benefits of integrating supply chains on performance have been reviewed. This potential, however, will be realized only if the connections and inter-relationships among different parts of the supply chain are recognized, and proper alignment is ensured between the design and execution of the company's competitive strategy (Simatupang, 2002). This study seeks to establish the influence of supply chain Integration on firm performance. Various studies have been carried out relating supply chain Integration and performance in developed countries. For instance, according to Lau (2010) operating an integrated supply chain requires continuous information flows, which in turn assist to achieve the best product flows influencing firm performance. Narasimhan and Das (2001) suggest that efficient SCM and purchasing practices may also have a significant effect on firm performance. Their study showed that sales, market share, and market position are influenced by not only advertising, competition level, product pricing and positioning, and degree of innovation in product lines, but also purchasing factors, thus emphasizing purchasing strategic impact on the firm. This means that the purpose and performance of a firm to fulfill various customer demands or to improve the efficiency of a firm itself can be different

depending on the characteristics and utilization focus of supply chain practice. However, studies focusing on the influence of supply chain integration on organization performance in Kenya remain scanty. This study seeks to fill the existing research gap by determining the influence of supply chain Integration practice on organization performance in water and sanitation companies in Western Kenya.

Theoretical Framework

The theories that were focused on which are related to Organization Performance and the Supply Chain Integration which include the Systems Theory, Collaborative Model, Contingency Theory and Integrative Theory of supply chain.

Systems Theory is the trans-disciplinary study of the abstract organization of phenomena, independent of their substance, type, or spatial or temporal scale of existence. It investigates both the principles common to all complex entities, and the (usually mathematical) models which can be used to describe them (Mele, 2009). Systems Theory emphasizes that real contractual systems are open to and interact with their environments and those they can acquire qualitatively new properties through emergence, resulting in continuing evolution (Mann, 2010). The theory aims to specify possible courses of reactions and actions, together with their risks, costs and benefits. The basic assumptions about organizations, their strategies, structures and processes can influence the behaviour towards work. **Collaboration Theory** consists of analytical frameworks for understanding the collaborative process and its outcomes derived through various forms of research and reflection (Handfield, 2000). This Theory focuses on group decision-making at a senior management level and involves supply chain management where a firm is expected to have a formalized supply chain Integration systems. The role of the management is to employ group dynamics and brainstorming approaches to involve managers in both strategy formulation and implementation phases (Handfield, 2000). The management plays the role of coordinator, encouraging and promoting differing ideas and acting as a consensus generator among various implementation groups.

Contingency Theory is a class of behavioral theory that claims that there is no best way to organize a corporation, to lead a company, or to make decisions. Instead, the optimal course of action is contingent (dependent) upon the internal and external situation. A contingent leader effectively applies his own style of leadership to the right situation (Jiang, 2002). The theory narrows the scope of inquiry to how information processing structures and contingent knowledge interact to influence organization performance. The theoretical construct avoids becoming confounded with the dozens of variables that could reasonably be included in a contingency approach for explaining the performance of work teams (Lysons and Farrington, 2006). In exploring contingency theory of organization performance human subjects contributes to full cycle organizational research and serves as a natural complement to related work undertaken in the field and computational settings. Therefore, organizations change from one fit to another over time through supply chain integration to improve on its performance in the market. The theory argues that the level of environmental turbulence and the strategic orientation of a firm have a direct positive impact on each dimension of supply chain integration (Cachon, 2009). The relationships between independent and dependent variables are expected to be moderated by the core production technology (Fornell and Larcker, 1993). The choices of environmental turbulence and strategic orientation as independent variables and process continuity as a moderating variable are based upon the following considerations. First, environmental turbulence or volatility is one of the most influential factors on a firm's integration of its production-distribution process. Environmental turbulence is referred to as changes in industry structure and competition (Cachon, 2009).

Recent technology developments and the removal of constraints to transportation and communication systems have notably enhanced globalization and thus the potential for increased environmental turbulence (Cachon, 2009). High turbulence makes both adaptations to competitor's actions and adjustment to business cycles difficult for the firm. Second, strategic orientation is conceptualized as relatively enduring in nature and reflects a general approach of a firm to its environment. Organization use strategy to adapt and/or change aspects of its environment for a more favorable alignment (Lesley, 2007). A firm's strategic orientation would have an impact on supply chain integration because strategic orientation comprises "a pattern in a stream of decisions that a) guides the organization's ongoing

alignment with its environment and b) shapes internal policies and procedures (Fabbe-Costes and Jahre, 2007). According to Lesley (2007), viewing supply chain integration as one form of organizational design and the decision to produce in-house or outsource should also be affected by the core production technology of a firm - the degree of process continuity. Bolumole (2003), identified three basic discrete forms of technology: unit or small batch technology, large-batch or mass-production technology, and continuous-processing technology, which have been variously elaborated in subsequent research. Classical constructs suggest that manufacturing and distribution variables are continuous, rather than fixed and constant. The familiar product/process continuum, the product life cycle (Akkermans and Dellaert, 2005), and the typology of logistics all suggest that operations/logistics activities involve a continuum of non-discrete variables. However, for descriptive clarity, as well as measurement in empirical studies, these variables are often categorized with generalized discrete markers.

Bolumole (2003), found a strong complementarity between logistics strategy and key business practices including operations and supply chain integration. Thus, it is expected that stabilized, high-volume line operations would permit purchasing and logistics efficiencies over longer periods, with the corresponding economies, but simultaneously reduced flexibility. Further, higher production volumes would facilitate efficiencies of blanket and system purchasing contracts, as well as the establishment of more structured electronic data interchange. Correspondingly, distribution techniques such as milk runs, shared deliveries, and kanbans facilitate these efficiencies; however, these purchasing and distribution efficiencies may systematize the process and reduce flexibility (Bolumole, 2003). The core production technology of a firm is expected to moderate the relationship between environmental turbulence and supply chain integration. Specifically, when a firm uses small-batch production technology, the product is custom-made and produced in small quantities, and the process is usually loosely coupled. For this reason, transaction cost economies associated with supply chain integration are more difficult to achieve, compared to those of a firm with a continuous process technology where distinct activities and stages are closely coupled (Allan and Peter, 2010).

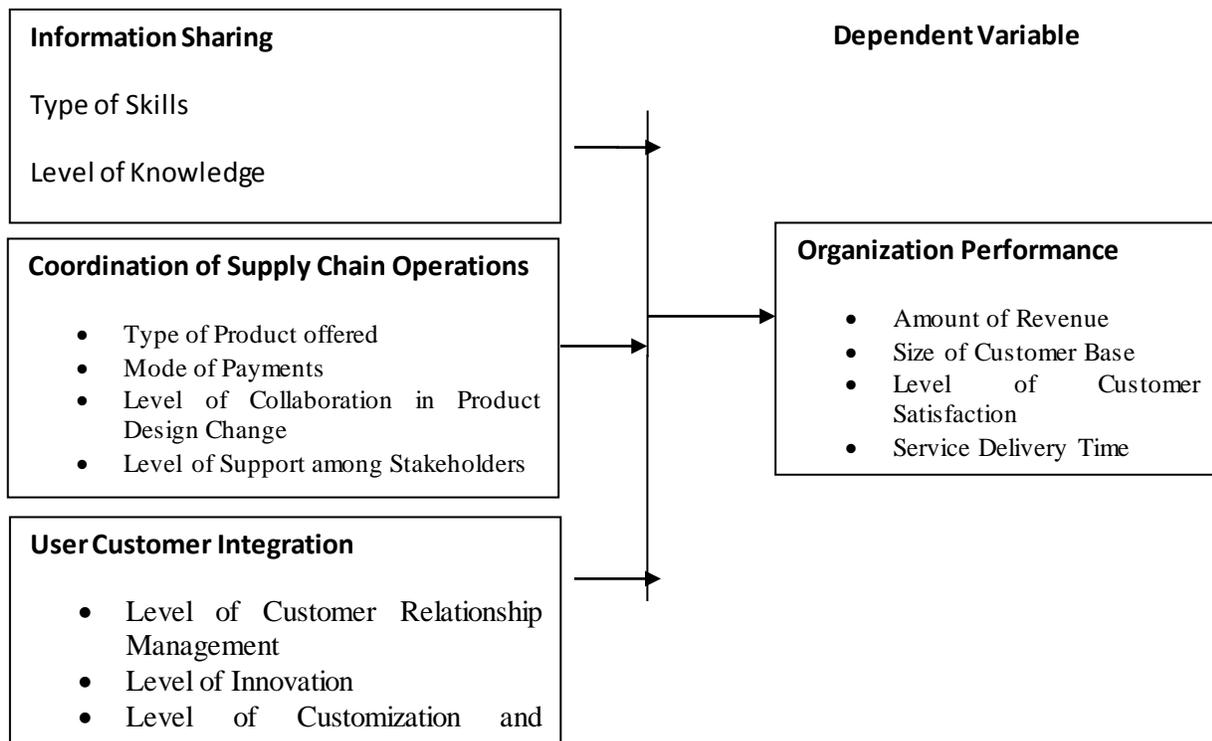
Moreover, high temperatures are required for several stages of production, so a single integrated plant can achieve cost savings by heating the steel once and performing several steps in the conversion process. Further Ayugi (2007) found that new information technology firms chose flexibility (a key characteristic of low process continuity production) as an enabler in turbulent environments. *Integrative theory* states that, given the same level of environmental turbulence, we would expect that firms with continuous-process technology (high process continuity) would engage in greater supply chain integration than those with small-batch process technology (low process continuity) (Christopher, 2004). A firm would integrate only to the extent to which organizational inflexibility and its associated risks, as well as increased bureaucratic costs, were offset by cost efficiencies derived from integration. Ultimately, such risk/cost analyses and decisions become a contingent tradeoff across all activities of the supply chain. Wynarczyk and Watson (2005) definition of manufacturing "focus" may be extended to other supply chain activities. As such, the benefits of economic specialization are juxtaposed against economies of overhead distribution; however, sequential activities may not be sufficiently similar to permit focus, and thus cannot be effectively managed by one group. Narasimhan and Das (2001) identify four costs (transport, inventory, materials and production) of the supply chain and four different strategies (direct ship and three consolidation approaches) to contingently address these costs. The "logistics loop" proposed by Miles and Snow (1998) further elaborates the supply chain's dimensionality and texture. One approach to supply chain management focuses toward low cost and high volumes of defined products/services, with ready inventory availability to achieve customer expectations. Alternatively, more dynamic markets constantly generate design and volume changes, adjust payment terms and credit needs, and manage prototype flows, all of which result in higher costs, lower volumes, customization, and more complex inventory control (Daewoo and Krishnan, 2001).

The Conceptual Framework

In this study, a conceptual framework was used to illustrate the relationship between the independent variables and the dependent variable. Figure 1 shows the conceptual framework.

The dependent variable in this research is organization performance. The indicators that were used to measure organization performance were: amount of revenue; size of customer satisfaction and service delivery time. The independent variables in the study were: the Information Sharing; the Coordination of Supply Chain Operations and the User Customer Integration. The indicators that were used to measure the Information Sharing were: type of skills; level of knowledge; mode of openness in communication and the problem solving skills. The indicators that were used to measure the Coordination of Supply Chain Operations were: type of product offered; mode of payments; level of collaboration in product design change and the level of support among stakeholders. The indicators that were used to measure the User Customer Integration were: level of customer relationship management; level of innovation and the level of customization and customer segmentation.

Independent Variables



RESEARCH DESIGN AND METHODOLOGY

In this study, descriptive research design was adopted due to quantitative approach of the study. Descriptive design is a process of collecting data in order to test hypothesis or to answer the questions of the current status of the subject under study. The descriptive research design helped in collecting quantitative data to determine the influence of Supply Chain Integration on Organization Performance in Water and Sanitation Companies in Western Kenya. The target population for this study was 112 employees. This includes the Operation Managers, Financial Managers, Procurement Officers and Human Resource officers in the 28 Water and Sanitation Companies in Western Kenya. The Western Kenya region has four counties: Bungoma, Busia, Kakamega and Vihiga Counties. This study employed multi-stage sampling technique to select a representative sample from the population. Multi-stage

sampling technique is used in situations in which a miniature of the population is selected by first selecting large aggregate units and then systematically selecting sub-units within the selected aggregates (Wright, 2001). In the first stage of the sampling technique, the population was subdivided into four strata where four counties were selected. In the second stage four companies from each county was selected purposely based on population size. In the third stage four departments were purposely selected from each Water and Sanitation Company in Western Kenya. In the fourth stage simple random sampling technique was used to pick respondents from the selected four departments in stage three. Mugenda *et al.*,(1999) suggest that one may use a sample size of at least 10% but for better, more representative results, a higher percentage is better. The sample size in this study was 36 respondents which presents 30% of the total population.

Table 1. Sampling Frame

Category of Respondents	Population of Respondents Targeted (N)	Number of Respondents Sampled (n)
Operation Managers	28	9
Financial Managers	28	9
Procurement Officers	28	9
Human Resource Officers	28	9
Total	112	36

Source: Author (2014)

Questionnaires were used to collect data in this study. Questionnaires allow the researcher to collect information from a large sample with diverse background (Kumar, 1996). The questionnaires were self-administered. Close-ended approach was used to construct the questionnaire questions. This is because respondents restricted themselves with apparent ease to the alternatives offered, and because it minimized the number of inadequate answers from respondents (Foddy, 1993). The responses were ranked using interval scale of measurement. This is because non-parametric statistical techniques were used to analyze data.

Borg *et al.*,(1983) guidelines about constructing questionnaires were applied; that is, attractive to the respondent, instructions in brief, clear and in bold type and questions organized in a logical sequence. The research instrument was tested for validity and reliability. The questionnaire consisted of three parts: the first part was the introduction for the researcher to establish rapport with the respondents. The second part contained demographic information for the respondents while the third part contained the information in which the respondents were to indicate their choice and the alternatives given. Leedy *et al.*, (2001) explain that reliability is the consistency with which a measuring instrument yields a certain result when the entity being measured has not changed. To enhance the reliability of the instrument, a pilot study was conducted in one Water and Sanitation company which was not included in the main study. A test-retest criterion was used in this study. The questionnaire was sent twice to the respondents who were not to be included in study sample and the time lapse was two weeks. The purpose of pre-testing the instrument was to ensure items in the instrument were stated clearly and have the same meaning to all respondents. Reliability coefficient was done using Cronbach's alpha which determines the internal consistency or average correlation of items in a survey instrument (Cronbach, 1951), was used. The results as returned by SPSS were as shown in Table 2.

Table 2. Reliability and Interrelation of Variables

Variables	Number of items	Cronbach's Alpha
Information sharing	10	0.721
Coordination of SCO	7	0.8892
User customer integration	5	0.8049
Composite Reliability		0.8327

Source: Author (2014)

According to Mugenda *et al.*, (1999), a coefficient of 0.8 or more shows that there is reliability. Kothari (2006) also added that low reliability is thought to occur when the alpha coefficient is below 0.60 and very high as it approaches 1. All the variables had alpha coefficients ranging between 0.721 and 0.8892 and hence a high reliability was concluded.

Leedy *et al.*, (2001) explain that the validity of a research instrument is the extent to which the instrument measures what it is supposed to measure. The study instrument for data collection was tested using face validity. Face validity tests the suitability of an instrument to return the expected results it was designed for. Sekaran (2009) observed that face validity was most accurate where thorough review of the instrument was guaranteed. Similarly, Kothari (2006) noted the need to have peer review of an instrument in order to render the instrument fit for data collection. The researcher discussed the instrument through a focus group which included two experts from the Water and Sanitation companies and the university supervisor to ensure that the questions covered the full range of the construct. The researcher requested for information from the staff in the selected departments: Operations; Finance; Procurement and Human Resource departments in Water and Sanitation companies in Western Kenya.

Measures of central tendencies and measures of dispersion were used in analyzing the data because the data in this study was in line with the research design. In this study mean and standard deviation were used. The mean is the average of a set of scores or measurements. Standard deviation is a measure of the extent to which scores in a distribution deviate from the mean. The mean and standard deviation provided the researcher with a good description on how members of a sample scored on a particular measure. The collected data was examined and checked for completeness and comprehensibility. The data was then summarized, coded and tabulated. Descriptive statistics were used to analyze the quantitative data obtained. Data presentation was done by the use of frequency tables. This was to ensure that the gathered information is clearly understood by describing what the respondents were saying.

RESULTS AND DISCUSSION

Information Sharing on Organization Performance

Research objective one in the study was to examine the extent to which information sharing influence organization performance. Ten items were used to seek information on this research objective as shown in Table 3.

Item one sought to establish whether information sharing in SCI influences company's financial performance. The mean for this item was 4.86 and the standard deviation was 0.87. This result indicates that the respondents to a great extent agreed that information sharing in SCI influences company's financial performance. Item two sought to establish the extent to which level of communication with the company stakeholders on research activities influence customer satisfaction. The mean for this item was 4.31 and the standard deviation was 0.37. This result indicates that the respondents to a great extent agreed that the level of communication with the company stakeholders on research activities influence customer satisfaction. Item three sought to establish the extent to which the production sections have transparent information on inventory status. The mean for this item was 4.64 and the standard deviation was 0.63. This result indicates that the respondents to a very great extent agreed that production sections have transparent information on inventory status. Item four sought to establish the extent to which SCI distortion is minimized through information sharing. The mean for this 4.43 and the standard deviation was 0.39. This result indicates that the respondents to a great extent agreed that SCI distortion is minimized through information sharing.

Table 3. Influence of Information Sharing on Organization Performance in Water and Sanitation Companies in Western Kenya

No	Items	No Extent (1)	Less Extent (2)	Neutral (3)	Great Extent (4)	Very Great Extent (5)	Mean Score	Standard Deviation
i	The extent to which information sharing in SCI influences company's financial performance	0%	0%	9.4%	15.6%	75.0%	4.86	0.87
ii	The extent to which level of communication with company stakeholders on research activities influence customer satisfaction	0%	0%	6.7%	43.6%	40.7%	4.31	0.37
iii	The extent to which the production sections have transparent information on inventory	0%	0%	12.6%	18.8%	68.8%	4.64	0.63
iv	The extent to which SCI distortion is minimized through information sharing	0%	0%	15.6%	21.9%	59.4%	4.43	0.39
v	The extent to which stakeholders have transparent information about each other's inventory status	0%	0%	15.6%	46.9%	37.5%	3.03	0.19
vi	The extent to which information in the SC and in business processes influence the size of customer base	0%	0%	3.1%	9.4%	87.5%	4.81	0.74
vii	The extent to which openness in communication with suppliers influence service delivery time	0%	0%	9.4%	21.1%	62.5%	4.49	0.45
viii	The extent to which the company and its suppliers' share production plans	0%	0%	46.9%	21.9%	31.1%	3.12	0.27
x	The extent to which channel alignment influence the amount of revenue collection	0%	0%	6.3%	40.6%	53.1%	4.01	0.36
ix	The extent to which the level of knowledge in SC influences customer satisfaction	0%	0%	0%	3.1	96.9	4.91	0.89
Composite Mean: 4.261		Composite Standard Deviation: 0.518						

Source: Author 2014

Item five sought to establish the extent to which stakeholders had transparent information about each other's inventory status. The mean for this item was 3.03 and the standard deviation was 0.19. This result

indicates that the respondents were neutral on whether stakeholders had transparent information about each other's inventory status. Item six sought to establish the extent to which information in the SCI and in business processes influence the size of customer base. The mean for this item was 4.81 and the standard deviation was 0.74. This result indicates that the respondents to a very great extent agreed that information in the SC and in business processes influence the size of customer base. Item seven sought to establish the extent to which openness in communication with suppliers influence service delivery time. The mean for this item was 4.49 and standard deviation was 0.45. This result indicates that the respondents to a very great extent agreed that openness in communication with suppliers influence service delivery time. Item eight sought to establish the extent to which the company and its suppliers' share production plans. The mean for this item was 3.12 and the standard deviation was 0.27. This result indicates that the respondents were neutral on whether the company and its suppliers' share production plans.

Item nine sought to establish the extent to which channel alignment influence the amount of revenue collection. The mean for this item was 4.01 and standard deviation was 0.36. This result indicates that the respondents to a great extent agreed that channel alignment influence the amount of revenue collection. Item ten sought to establish the extent to which the level of knowledge in SC influences customer satisfaction. The mean for this item was 4.91 and standard deviation was 0.89. This result indicates that the respondents to a very great extent agreed that the level of knowledge in SC influences customer satisfaction. The composite mean for this research objective was 4.261 and the composite standard deviation was 0.518 which indicated that the respondents to a great extent agreed that information sharing influence organization performance in Water and Sanitation Companies in Western Kenya.

These findings concurred with Wijnhoven (2001) who found that strategic utilization of information in SC is of the utmost importance in business process modeling and renovation which help firms to achieve the desired organization performance.

Coordination of Supply Chain Integration on Organization Performance

Research objective two of this study was to determine the extent to which coordination of Supply Chain operations influence organization performance. Seven items were used to seek information on this research objective as shown in Table 4

Item one sought to establish the extent to which coordination in product change increase customer base. The mean for this item was 4.68 and the standard deviation was 0.64. This result indicates that the respondents to a very great extent agreed that coordination in product change increase customer base. Item two sought to establish the extent to which mode of payment influence the company's revenue. The mean for this item was 4.81 and the standard deviation was 0.79. This result indicates that the respondents to a very great extent agreed that mode of payment influence the company's revenue. Item three sought to establish the extent to which level of coordination in product design change influence customer satisfaction. The mean for this item was 3.98 and standard deviation was 0.44. This result indicates that the respondents to a great extent agreed that level of coordination and in product design change influence customer satisfaction. Item four sought to establish the extent to which the type of product influences the company's customer base. The mean for this item was 4.33 and standard deviation was 0.41. This result indicates that the respondents to a great extent agreed that the type of product influences the company's customer base. Item five sought to establish the extent to which level of support among the stakeholders influence customer satisfaction. The mean for this item was 4.63 and standard deviation of 0.32. This result indicates that the respondents were neutral on whether the level of support among the stakeholders influences customer satisfaction. Item six sought to establish the extent to which coordination in SC operations influence customer satisfaction and firm revenues. The mean for this item was 4.78 and the standard deviation was 0.64. This result indicates that the respondents to a very great extent agreed that coordination in SC operations influence customer satisfaction and firm revenues. Item seven sought to establish the extent to which coordination in SC operations influence service delivery time. The mean for this item was 4.46 and standard deviation was 0.55. This result indicates that the respondents to a very great extent agreed that coordination in SC operations influence service delivery time. The composite mean for this research objective was 4.55 and the composite standard deviation was 0.5414 which

indicated that the respondents to a very great extent agreed that coordination of supply chain operations influence organization performance in Water and Sanitation companies in Western Kenya.

Table 4. Supply Chain Operation on Organization Performance in Water and Sanitation Companies in Western Kenya

No	Items	No Extent (1)	Less Extent (2)	Neutral (3)	Great Extent (4)	Very Great Extent (5)	Mean Score	Standard Deviation
i	The extent to which coordination in product change increase customer base	0%	0%	4.6%	10.8%	84.6%	4.86	0.64
ii	The extent to which mode of payment influence the company's revenue	0%	0%	9.2%	5.4%	85.4%	4.81	0.79
iii	The extent to which the level of coordination and in product design change influence customer satisfaction	5	8	25.4%	27.7%	33.8%	3.98	0.44
iv	The extent to which the type of product influence the company's customer base	0%	0%	3.8%	30%	66.2%	4.33	0.41
v	The extent to which the level of support among the stakeholders influence customer satisfaction	0%	0%	27.7%	11.5%	60.8%	4.63	0.32
vi	The extent to which coordination in SC operations influence customer satisfaction and firm revenues	0%	0%	17.7%	15.4%	66.9%	4.78	0.64
vii	The extent to which coordination in SC operations influence service delivery time	0%	0%	33.8%	15.8%	50.4%	4.46	0.55
Composite Mean: 4.55		Composite Standard Deviation: 0.5414						

Source: Author 2014

User Customer Integration on Organization Performance

Research objective three was to assess the extent to which user customer integration influence organization performance. Five items were used to seek information on this research objective as shown in Table 5

Item one sought to establish the extent to which the level of customer relationship management influence customer base. The mean for this item was 4.51 and standard deviation of 0.55. This result indicates that the respondents to a very great extent agreed that the level of customer relationship management influence customer base. Item two sought to establish the extent to which the level of innovation influences the company's revenue. The mean for this item was 4.09 and the standard deviation was 0.44.

This result indicates that the respondents to a great extent agreed that the level of innovation influences the company's revenue. Item three sought to establish the extent to which the level of user customer integration influences customer satisfaction. The mean for this item was 4.17 and standard deviation was 0.43. This result indicates that the respondents to a great extent agreed that user customer integration influences customer satisfaction. Item four sought to establish the extent to which the level of customization of products influences the size of the customer base. The mean for this item was 4.63 and standard deviation was 0.41. This result indicates that the respondents to a very great extent agreed that the level of customization of products influences the size of the customer base. Item five sought to establish the extent to which the level of customer segmentation influences the size of the customer base. The mean for this item was 4.82 and standard deviation of 0.79. This result indicates that the respondents to a very great extent agreed that the level of customer segmentation influences the size of the customer base. The composite mean for this research objective was 4.444 and the composite standard deviation was 0.524 which indicated that the respondents to a great extent agreed that user customer integration influence organization performance in water and sanitation companies in Western Kenya.

Table 5. User Customer Integration on Organization Performance in Water and Sanitation Companies in Western Kenya

No	Items	No Extent (1)	Less Extent (2)	Neutral (3)	Great Extent (4)	Very Great Extent (5)	Mean Score	Standard Deviation
i	The extent to which the level of customer relationship management influence customer base	0%	0%	9.2%	42.3%	48.5%	4.51	0.55
ii	The extent to which the level of innovation influence the company's revenue	0%	0%	10.8%	41.5%	47.7%	4.09	0.44
iii	The extent to which the level of the user customer integration influence customer satisfaction	0%	0%	0%	72.3%	27.7%	4.17	0.43
iv	The extent to which the level of customization of products influence the size of the customer base	0%	0%	0%	9.2%	90.8%	4.63	0.41
v	The extent to which the level of customer segmentation influence the size of the customer base	0%	0%	0%	26.9%	73.1%	4.82	0.79
Composite Mean: 4.444		Composite Standard Deviation: 0.524						

Source: Author 2014

SUMMARY OF THE FINDINGS

The summary of the findings were based on the study objectives. Research objective one was to examine the extent to which information sharing influence organization performance in Water and Sanitation Companies in Western Kenya (WSCWK). The composite mean for the item was 4.261 and a composite standard deviation was 0.518. The results indicated that information sharing influence organization performance in Water and Sanitation Companies in Western Kenya to a great extent. This objective was therefore accepted and it was concluded that information sharing influence organization performance in WSCWK. Research objective two was to determine the extent to which coordination of supply chain operations influence organization performance in Water and Sanitation Companies in Western Kenya. The composite mean was 4.55 and a composite standard deviation of 0.5414. This result indicated that coordination of supply chain operations influence organization performance in Water and Sanitation companies in Western Kenya to a very great extent. This objective was therefore accepted and it was concluded that coordination of supply chain operations influence organization performance in WSCWK. Research objective three was to assess the extent to which user customer integration influence organization performance in water and sanitation companies in Western Kenya. The composite mean was 4.444 and a composite standard deviation of 0.524. This result indicated that user customer integration influence organization performance in Water and Sanitation companies in Western Kenya to a very great extent. This objective was therefore accepted and it was concluded that user customer integration influence organization performance in WSCWK.

The findings indicate that information sharing significantly influences organization performance in WSCWK. It was therefore concluded that to improve organization performance in WSCWK in respect to amount of revenue collection, size of customer base, level of customer satisfaction and service delivery time there is need to enhance the information sharing in respect to type of skills, the level of knowledge, the mode of communication and the problem solving skills. The finding of the study also revealed that the coordination of supply chain operations significantly influences organization performance in WSCWK. It was therefore concluded that to improve organization performance at WSCWK in terms of the amount of revenue collection, size of customer base, the level of customer satisfaction and level of service delivery time, there is need to enhance the coordination of supply chain operations in respect to the type of product offered, mode of payments, level of collaboration in product design change and the level of support among the stakeholders. On research objective, the findings indicate that user customer integration significantly influences organization performance in WSCWK. It was therefore concluded that to improve organization performance in WSCWK in respect to amount of revenue collection, size of customer base, level of customer satisfaction and level of service delivery time, there is need to enhance user customer integration in respect to the level of customer relationship management, level of innovation and the level of customization and customer segmentation.

RECOMMENDATION

Based on the study research findings, the researcher recommends the following: In order to improve organization performance in Water and Sanitation Companies in Western Kenya, information sharing, coordination of supply chain operations and user customer integration need to be improved specifically, the problems encountered in the supply chain integration as well as the level of openness in communication. Supply chain integration also needs to be aligned with other channel members in WSCWK. Coordination of supply chain also needs to be improved through increasing the type of product offered, mode of payment used, level of collaboration in product design change and the level of support among the stakeholders. Measures to enhance the level of customer relationship management, level of innovation and the level of customization of customer needs as well and segmentation of markets are necessary to ensure user customer integration is achieved. To the government, regulations on policy and practice governing the adoption of supply chain integration in business can be introduced in a bid to improve the firm efficiency as well as coordination of effort to build long term relationships with stakeholders. In this regard, the government could introduce supply chain software in all government institutions so as to ease the procurement cycle and to enhance service delivery time.

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