

ROLE OF STRATEGIC SUPPLIER RELATIONSHIP MANAGEMENT ON SUPPLY CHAIN PERFORMANCE IN DEVOLVED SYSTEM OF GOVERNMENT IN KENYA: A CASE OF MURANG'A COUNTY GOVERNMENT

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Abstract: Supplier relationship management is gaining momentum globally due to immense competition in the corporate world as well as county governments. Supplier Relationship Management (SRM) is the development and maintenance of strategic relationships with vital suppliers and encourages enterprises into thinking critically about the supply chain and supply chain transparency. Supplier Relationship Management (SRM) plays a pivotal role in reduction of costs and increased efficiency in the supply chain function. Supplier relationship management is the business process that provides the structure for how relationships with suppliers are developed and maintained. Supplier relationship management has become a critical business process as a result of: competitive pressures; the need to consider sustainability and risk; the need to achieve cost efficiency in order to be cost competitive; and the need to develop closer relationships with key suppliers who can provide the expertise necessary to develop innovative new products and successfully bring them to market. Significant benefits are possible from better managing relationships with key suppliers. It has been shown that integration of operations with suppliers can improve firm performance. An additional benefit of cross functional, collaborative relationships with key suppliers is the ability to co-create value. This study aimed to research on the role of strategic supplier relationship management on supply chain performance in devolved system of government in Kenya.

Keywords: Supply chain performance, Organization policies, Quality management, Supplier strategic Alliances and Information communication technology adoption.

1. INTRODUCTION

Background of the Study:

Supply chain management represents a new way of managing business and relationships with other members of supply chain Lambert and Cooper (2000). The rapid globalization of economies and increased competition in the market place has pressurized organization to reinvent their strategies when it comes to doing business. Currently the trend is focused towards supplier relationship management. In Kenya, the devolved units are not an exception and like other public sector departments supplier relationship management is being used to combat increased competition. Traditional organization

had an adversarial, arms length relationship approach to their suppliers hence leaving minimum benefit. Monczka et al (2010) stated that the adversarial model was not ideal. In the recent organization are shifting to a more collaborative approach due to the immense contribution of suppliers towards organization achieving supply chain performances in terms of the expertise, knowledge and ability of sharing risks. According to They & Briggs (1994) organizations have recognized their ability to become world class competitors based on establishing high levels of trusts and cooperation among the suppliers.

In today's economies, many organizations acquire a bulk of their merchandise value from their supply chain. According to Cox (2004), procured supplies account for 60% of the total cost of merchandises sold. Corporations have recognized the need of guiding their relationships with suppliers to gain supply chain performance. Companies are bound reduce costs and enhance customer responsiveness as well as optimize resource utilization in such relationships. Organizations would depend on deeply securing and preserving strategic relationships in procurement of strategic materials, it is critical that few trusted vendors supply them (Lascelles & Dale, 1989).

Supplier Relationship Management (SRM) permits the growth and preservation of strategic relationships with important suppliers and empowers organizations to assume a fresh way of thought about the supply chain and its transparency. Suppliers and their customer pursue to work collectively in close collaboration for Long-term mutual advantage, rather than looking for the highest short-term advantage in each transaction (Shin, Collier & Wilson, 2000). In the past trust and commitment in these relationships was lacking unlike today (Johnston, McCutcheon, Stuart & Kerwood 2004)

Theories grounding this study are Resource Dependency Theory (RDT), Social Exchange Theory (SET) and Theory of Dual Economies (TDE). SET endeavors to study inter-organizational interactions from the binary perspective, directed on the social structure of the relationship rather than the transaction (Homans, 1958). SET postulates that any social interactions is molded by the use of cost-benefit analysis and the assessment of alternatives, therefore, parties would continue in a relationship as long as there is added value (Cropanzano & Mitchell, 2005). The Resource Dependency Theory (RDT) theorizes that not any sole firm has all the means and utilities needed to function effectively. Then organizations have to go into give-and-take relationships with other organizations. Theory of Dual Economies hypothesizes that the twin economy would help big organizations survive in world of doubt and instability through changing most of the assembly and transferring certain risks to the minor organization. A new buyer- supplier relationships has been prompted because small suppliers want to come out of the periphery (Berger & Piore, 1980)

Supplier relationship management is a pro active approach focusing more on overall relationship between suppliers and organization rather than focusing on specific contracts. The objective is to develop trust and align together objectives of both the organization and supplier. In today's world organizations have learnt that doing business jointly with their key suppliers would empower their key suppliers would empower their ability to quickly respond to demand changes ,focus on core activities only hence result in best practices. Organizations adopt supplier relationship management practices with the aim of maximizing the value of their interaction with their key suppliers. Supplier's relationship management deal with the attributes of supply chain management where all points of business relationship occur between organization & their suppliers. According to Liker & Cho: (2004) SRM entails the business structure and processes that organizations use when communicating with supplies and gives the necessary capabilities when dealing with different types of direct supplies. Organizations have to focus on key suppliers to maximize on the value of their interactions in terms of cost reductions & product quality management.

SRM is a all-inclusive approach to dealing with organization's relations with its suppliers (Harland, Knight, Lamming & Walker 2005). SRM is the procurement strategy for designing of strategic and operational procurement processes as well as the arrangement of the supplier management (Appelfeller & Buchholz, 2005). SRM classifies and engrosses the right stakeholders to yield ownership of the relationship, drive active communication and bring into line strategic objectives.

Firms and their suppliers with different business practices and terminology come together into a working relationship through SRM (McLachlin & Larson, 2011). According to Zimmermann, Rajal, Buchholz, Plinval & Geissmann (2015) Strategies such as Supplier segmentation, SRM governance, supplier performance management, and supplier development are used to manage supplier relations. Supplier segmentation involves categorizing suppliers based on a definite set of standards in order to recognize the significant suppliers with which to participate in SRM (Chopra and

Meindl 2013). Launching operative SRM governance is paramount to unravel SRM value, specifically for strategic suppliers (Lysons and Farrington 2006). Performance management encompasses the setup and uninterrupted pursuance of operational measures, which are communally agreed with suppliers (Carter, P. L., Monczka, R. M., & Mosconi, T., 2005). Supplier development characteristically is the involvement of two entities in jointly planning and outlining long term initiatives, such as penetrating market, joint ventures or strategic alliances (Lysons and Farrington 2006)

Supplier Relationship Management plays an important role in the procurement function because suppliers can disturb the price, quality, delivery reliability and accessibility of its products (Sonmez, 2006). The consequence here is that a well-organized SRM should be actively in place for the prosperous procurement.

Devolved system of government in Kenya was adopted upon promulgation of the constitution of Kenya 2010. Devolution is a form of decentralization which has been adopted by most global governments. Implementation of the devolved system of government has resulted to creation of 47 units of devolution which has led to subsequent transfer of functions, resources and responsibilities from the national government to county governments. To facilitate growth of the devolved units the national government has transferred the required funds as provided under article 203(2) of the C.O.K. In the devolved unit, Public Finance Management legal and Institutional frame work have been established with the spirit of strengthening devolution and ensure service to all citizens is achieved. Public Finance Management addresses the pillars of public finance, public private partnership & public procurement chapter 12 of C.O.K. 2010 article 202 outlines that revenue raised nationally be shared equitably among the national government and devolved units thus parliament has enacted (P.F.M Act 2012) to provide for effective management of finances in the 2 tiers of government. Public Private Partnership are regulated by (P P DA2005) (P.P.P Act 2013), (P.P.P Act2014) the (P.F.M Act 2012). The acts provide for the participation of the public sector through concessions and other contractual means. The acts enable government to tap into the expertise experience, quality management, capital commercial risk sharing by the private sector.

While Public Private Partnership ought to promote development there have been challenges these includes citizens inability to pay for services rendered political interference and inadequate knowledge by citizens and inadequate legislation. Public procurement in devolved unit & National Government is regulated by the (Public Procurement and Disposal Act 2005) Public Procurement and Disposal (County government) regulation 2015. In addition Public Procurement Disposal (preference and reservation) regulation 2011 requires that 30% of all public entities procurement budget be reserved for marginalized groups including persons with disability women to youth.

The experience so far is that public procurement has experienced challenges of corruption nepotism, no value for money while at the same time people with disability women and marginalized groups are not empowered to exploit opportunities created by the Public Procurement & Disposal (preference and reservation) regulation 2011

Statement of the Problem:

Devolved system of government is a new concept adopted by Kenya. It was adopted as a mean to improve service delivery and efficient use of public resources. The National Government has shifted some of its functions that include health service, water, agriculture, county public works & services and disaster management among other functions.

National government has devolved funds to the devolved units to enable them successfully fulfill their mandate as stipulated in the adopted C.O.K 2010. In respect to public procurement, Devolved Units have established strong and independent supply chain units due to its strategic importance in enabling Devolved Units fulfill their mandate. Rlaph & Thomas (2014) suggested that firms whose supply chain are just not achieving their potential to add value for their clients therefore financially underperform other firms who have made the transformation from supply chain to value chain.

Strategic Supplier Relationship Management and its implication to supply chain performance in the devolved units is an interesting study as it is a new system of government in the Kenyan context. A closer look at the Devolved Units shows they have a number of challenges in terms of lack of supplier performance measurement tools to rate and assess suppliers. Krause et al (1998) suggested that organization should have formal supplier performance measurement, i.e a supplier rating system in place to formally assess suppliers cost quality service delivery, technology and environmental performance.

Concerns have also been raised about inability of organizations to maintain strategic alliances in their supply chain units and to a large extent devolved units are not exceptions. According to Wisner, Tan and Leong (2009) business owners are starting to realize that strategic supplier alliances, if successful, can result in better market penetration, access to new technology and knowledge and higher returns on investments than those competitors who do not have such alliances. Public procurement system in the devolved unit is guided by a convoluted legal and procedural framework inherited from the national government that neglects to address issues of supplier relationship management to achieve a win-win approach for the benefit of the organization.

A number of scholars have studied supplier Relationship Management and procurement performance. Mettler and Rohner (2009) established that hospitals, which exchanged supplier information within their procurement departments, enhanced creation of SRM. Early supplier involvement in product specification could enhance the negotiating power of the hospital's procurement department. Hospitals with ICT-supported procurement had justifiable reduction in costs. Wachira (2013) established that trust, communication, risk assessment and management as well as strategic supplier partnership were the fundamental supplier relationship features and had a helpful relationship on procurement performance.

Kamau (2013) reviewed key relationship models in supplier management and concluded that trust, communication, commitment, cooperation and mutual goals are key ingredients in successful relationship, which in turn affect performance positively. Ratemo (2011) in his study concluded that it was evident that suppliers failed to preserve proper records, long cycle times and increased costs in procurement. The enterprise failed to maintain good relationships with their suppliers leading to poor procurement performance. The first-hand findings of the above studies did not consider other industries for example: Devolved units. Literature reviewed on supplier relationships management focused either on the causal features of relationships or how they impact performance. Coordination, collaboration, commitment, communication, trust, flexibility and dependence are traits widely considered essential to fulfilling interactions.

The studies carried out, none was on SRM strategies and their impact on procurement performance.

Studies previously carried out have looked at Supplier Relationship Management strategies and their impact on procurement practices. None was on impact on role of supplier relationship management on supply chain performance therefore the purpose of this study is to find out the role of SRM strategies and their impact on supply chain performance in devolved unit.

Objectives:

General Objective:

To determine the role strategic supplier relationship management on supply chain performance in units of governance in Kenya.

Specific Objectives:

- i. To determine how organizational policy affect supplier relationship management in devolved units of governance in Kenya.
- ii. To establish how quality management affect supplier relationship management in devolved units of governance in Kenya.
- iii. To find out how strategic alliances affect supplier relationship management in devolved units of governance in Kenya..
- iv. To assess how ICT Integration affect supplier relationship management in devolved units of governance in Kenya.

Research Questions:

- i. To what extent do organizational policies affect supplier relationship management in devolved units of governance in Kenya?
- ii. How does quality management affect supplier relationship management in devolved units of governance in Kenya?
- iii. To what extent do strategic alliances affect supplier relationship management in devolved units of governance in Kenya?
- iv. Does ICT Integration affect supplier relationship management in devolved units of governance in Kenya?

2. LITERATURE REVIEW

Literature review gives an overview and synthesis of previous studies. This section contains theories which have been reviewed, conceptual framework, empirical reviews and research gap.

Conceptual Framework:

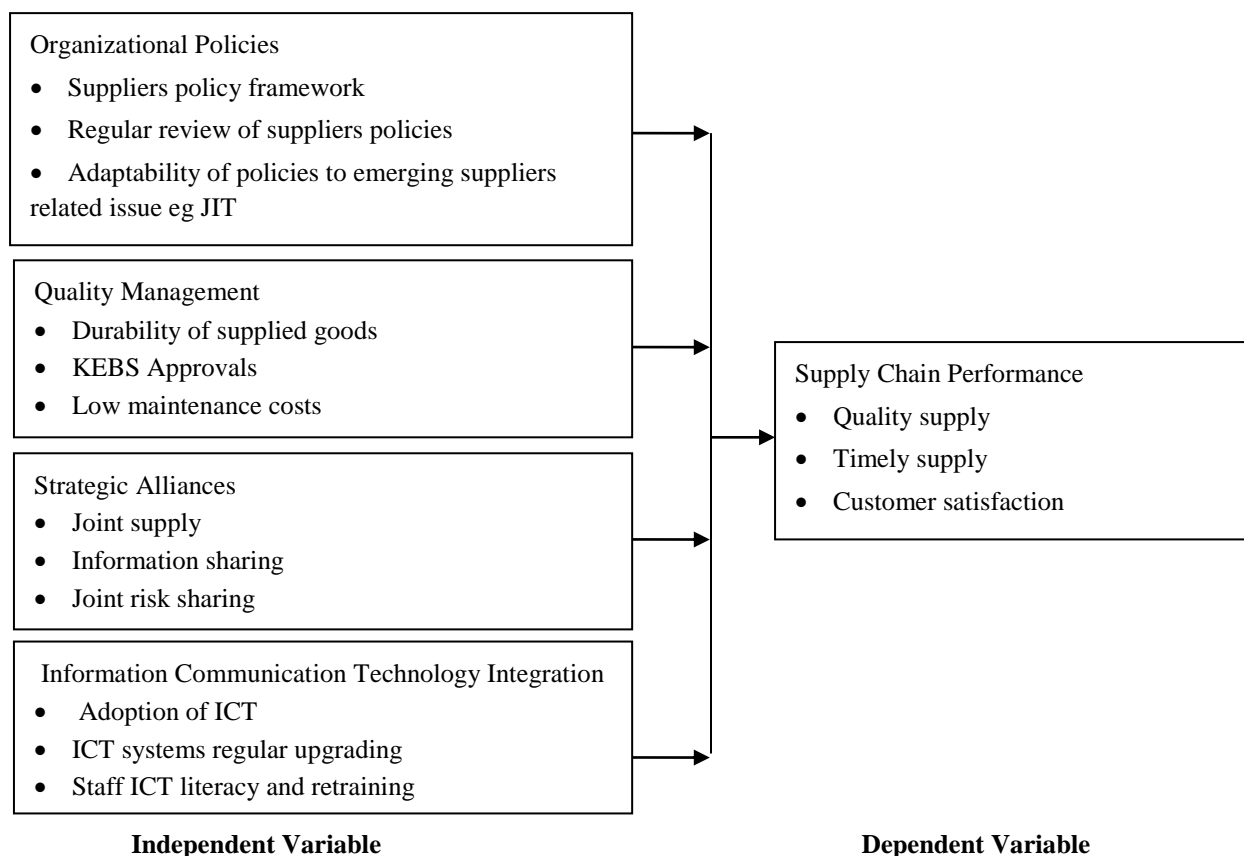


Figure 2.1: Conceptual Framework

Organizational Policies

The strategic level measures influence the top level management decisions, very often reflecting investigation of broad based policies, corporate financial plans, competitiveness and level of adherence to organizational goals. The tactical level deals with resource allocation and measuring performance against targets to be met in order to achieve results specified at the strategic level. Measurement of performance at this level provides valuable feedback on mid-level management decisions. Operational level measurements and metrics require accurate data and assess the results of decisions of low level managers. Supervisors and workers are to set operational objectives that, if met, would lead to the achievement of tactical objectives.

Lisa (2010) describes SCM as a collection of seven principles of SCM consisting of customer segmentation, customized logistics, demand planning, customization, strategic sourcing, supply chain strategy, and supply chain performance measurement. Inherent in both process-based definitions is the need for the internal and external players of the supply chain to coordinate to ensure that supply chain operations (demand planning, logistics, and supply management) address specific customer requirements. The supply focus is synonymous with rationalization and streamlining of the supply base, and integration of suppliers into product development and manufacturing activities. Managing the supply chain implies reducing and streamlining the supplier base to facilitate managing supplier relationships (John 2012), developing strategic alliances with suppliers (Mason 1996), working with suppliers to ensure that expectations are met, and involving suppliers early in the product development process to take advantage of their capabilities and expertise (Raymond 2008).

Quality Management:

Customer focus is the core principle and idea of TQM because quality effort comes of customer's needs and ends with customer's acceptance. In supply chain circumstance, customer includes not only the end user but also many in-between users, such as suppliers, manufacturers, sellers, etc. However, more than half of the quality problems in supply chain are resulted by specifications because of the inadequate communications between the members of supply chain. In many cases, the procurement specifications released by buyers are equivocal while suppliers dare not to argue against buyers on the specifications in the bidding process. Therefore, the core enterprise must pay attention to the needs and expectation of end users, and all the members of supply chain must pay attention to the needs and expectation of their backward users. The needs and expectation of end users should be deployed layer upon layer in the whole supply chain system. The end users would satisfy if all the member of supply chain can satisfy the needs of their backward users. Moreover, the operation efficiency of supply chain system can be improved through the satisfaction level of the end users. In supply chain quality management, some traditional tools of TQM are also effective. For example, we can use Quality Function Deployment (QFD) to identify the distinct and potential needs and preferences of users, use Fishbone Chart to investigate the factors affecting the satisfaction level of users and then use Pareto Chart to find out the key factors.

The effective of quality management depend on the effective of leadership because quality effort can get actual effect only with the recognition and support of the leadership. In supply chain circumstance, the core enterprise play as the leadership since it establishes the development strategy and operation targets of supply chain affect the actual efficiency and effectiveness of the quality effort of all the other members. Therefore, the core enterprise must act as leadership to consider adequately the needs and expectation of the other members, establish a clear, realizable and coincident holistic target, and then lead and inspire the other members to strive jointly for the target. At the same time, the core enterprise should foster more leaders of TQM in each layer of supply chain and make them take their responsibility zealously.

The focus of modern quality view is the process quality management but not the product itself of traditional quality view. It is the requirement of the quality management system of ISO9004:2000 and the essential difference of modern and traditional quality view. In each step of supply chain, there are many correlative processes, such as procurement, logistics, production, inventory, selling, service, etc. These processes have their own independent objectives and programs. There are usually conflicts among the objectives and programs. Therefore, the processes and their mutual effects should be identified and managed to ensure the harmonious operation of supply chain. Then, all the processes, especially the key processes, can realize high quality, i.e. small variation, small waste, and more increment, through the continuous improvement and total quality control in all the nodes of supply chain system.

The application of system approach in quality management is to view the quality management system as a big and holistic system, identify and manage the sub-systems respectively. Then, the coordinated effect and mutual promotion among the sub-systems would make the whole effect greater than the sum of the improvement of each sub-system and improve the validity and efficiency of the realization of final targets. In supply chain circumstance, enterprise should confirm the mutual dependence relationship among the processes in supply chain system, break the boundary among supply chain members, construct and integrate the processes in supply chain system. Then, many well operation sub-systems can be constructed to collocate the resources rationally among the sub-systems. Finally, the whole supply chain system, including supply, transport, production, distribution, inventory, etc., can realize the target and policy of quality through the optimal operation mode.

Continual improvement is one of the focuses of modern quality research and practice. Enterprise must improve the quality of product and service continually and reduce the cost to make customer satisfactory. In supply chain circumstance, the pressure of continual improvement is more and more pressing because the market competition is more and more hard. Not only the core enterprise but also the other members, such as suppliers, sellers, and logistics providers, must improve their product and service respectively so as to construct the continual improvement of products and services all over the supply chain process. Then, the continual, stable and harmonious ability of quality assurance can be established. Furthermore, the core enterprise and other members must find the ways and practices improving performance in or out of supply chain through benchmarking to make the continual improvement speed fast than the one of rivals. However, it is ironical that one of the most important reasons in the predicament of Xerox, which initiated benchmarking practices, was exactly its slow reaction with the fast changing environment.

The sufficient and adequate data and information is the foundation of making right and effective decisions. Up to now, many enterprises have begun to collect and deal with all kinds of data and information by utilizing many advanced information technology, e.g., EDI, MRPC, ERP, POS, Intranet/Extranet/Internet, so as to provide foundation for making effective decision. In supply chain circumstance, enterprise should collect data and information of not only itself but also the other members of supply chain to record and analyze the current operation situation of each member. Therefore, the potential problems in any step of supply chain can be found duly according to the results of data analysis. Then, the corresponding correct and timely decision can be made to avoid or rectify the problem.

Supplier Alliances:

Thatte (2007) stated that supplier partnership as the long-term relationship between the organization and its supplier. Gunasegaram et al (2001) asserted that a supplier partnership emphasizes long-term relationship between trading partners and promote mutual planning an problem solving efforts. Supplier partnership between organizations promote shared benefits and ongoing collaboration in key strategic areas like technology, products, and market (Yoshino and Rangan, 1995; Thatte, 2007). Strategic partnerships with suppliers lead to organization working closely and effectively with a few suppliers rather than many supplier that have been selected on the basis of cost efficient. Many advantage of consisting supplier early in the product-design process are that suppliers can offer cost effective design alternative, assist in selecting better components and technologies, and aid in designing assessment (Tan et al, 2002; Thatte, 2007).

Lambert (2001) defines a partnership as "a tailored business relationship based on mutual trust, openness, shared risk and shared rewards that results in business performance greater than would be achieved by two firms working together in the absence of partnership. Hill (1995) and Sheard (1996) cites that the best strategy for winning and retaining business is for buyers and suppliers to collaborate i.e. work together. Lajara and Lillo (2004) highlights that the practice consists of selecting the "best" suppliers working closely with them and entering into long term relationships based on mutual needs and trust. Sheard (1996) further comments that essentially, the concept means using the resources of a supplier to the maximum benefit possible. Weitz and Bradford (1999) supports the partnership approach arguing that it looks at a supplier as an extension of the buying organization specifically an extension of the purchaser's research capabilities, storage, potentials, financial backing and manufacturing and quality control needs.

This trend was also observed by Hunt and Morgan (1995) who noticed a tendency among customers to move from an arm's length relationship towards closer collaborative arrangements. Horvath (2001) proposed that Collaboration through intelligent e-business networks would provide the competitive edge to all the participants in a value chain to prevail and grow. It is found that collaborative partnerships can be achieved both via trust and through electronically mediated exchange. Myhr and Spekman (2005) investigated how supply-chain partners can achieve collaboration under varying circumstances (transactional types) by developing trust-based social foundations and by utilizing electronically mediated exchange. Results also indicated that electronically mediated exchange more readily enhances collaboration in exchange relationships involving standardized products, while trust plays a larger role when customized products are being exchanged. However, Bensaou (2000) suggests a hybrid of the competitive model and a partnership model as another supplier relationship strategy.

ICT Integration:

ICT is a critical enabler of effective supply chain management (Kenneth, 2012). As businesses continue to migrate to the electronic platform, opportunities keep coming up, while the use of internet is deepening the curiosity in the use of IT (Wu, 2010). ICT provides an upper hand for a number of service organizations e.g. big retailers, transportation firms like DHL and airline companies (Prajogo, 2012). In SCM, time and opportunities are very important. Accurate and timely information gives the organization an increased level of service which results in lower costs and time taken to deliver service (Bottani, 2008).

ICT has also enabled faster and easier collaboration of Supply Chain participants hence supporting easy customer interaction. Achieving high performance requires; good ICT infrastructure supported by good ICT management practice (Mwani & Muganda, 2012) Companies can develop Web-based sites or intranets for sharing information about new products, delays or changes. ICT enables individuals concerned to be inter-linked thereby, staying updated, which proves very efficient. If conditions are altered, resulting in increased inventory levels, then changes can be adopted to scale down manufacturing. This however doesn't seem to be the case in many firms since there is often a mismatch between the digital and the physical inventories (Stingl, 2011). This creates inaccuracy which affects performance of the firm.

Supply Chain Performance:

Supply chain performance is the examination of effectiveness and efficiency of the results of procurement actions. The achievement of a agreed task is measured against predetermined standards such as; cost, speed, flexibility, accuracy, completeness, quality of purchases, and profile supplier (Jones and Oliver 2006). Indeed, supply chain performance is progressively becoming an imperative factor in delivering efficient operations within prosperous companies (Chase, Jacobs, and Aquilano (2008). According to Jones and Oliver (2006) various supply chain performance measures such as; quality measures, price performance measures, cost performance measures, time related measures, quality management (technology) measures, environment and safety measures, asset management measures, administration measures, client fulfillment measures, supplier performance measures and strategic performance measures brings supply chain performance in performance of organization.

Firms without appropriate supply chain performance measures in their processes, procedures, and plans, experience inferior performance, higher client dissatisfaction and employee turnover (Amaratunga & Baldry 2002). The efficacy of the supply chain performance measures describes how well the objectives of procurement are realized (Arun and Linet2005). Organizations must improve its supply chain performance relationship in order to reduce costs, avoid supply delays and improve overall procurement performance. To manage supplier chain performance organizations can employ a variety of strategies such as, Supplier segmentation, SRM governance, supplier performance management, and supplier development (Zimmermann, et al 2015; Chopra and Meindl 2013; Lysons and Farrington 2006).

3. RESEARCH METHODOLOGY

The researcher assumed descriptive survey research design, both quantitative and qualitative approaches to determine role of strategic supplier relationship management on supply chain performance in systems of government in Kenya. Donald and Pamela (2006) define survey research as the collection of representative sample data from a larger population, then using the sample to infer characteristics of the population. This research design was considered appropriate, as it is reasonable when the population is small and variable hence the researcher was able to cover all the elements of the population. Therefore, the survey is considered more effective and cost-effective

Population refers to an entire group of persons or elements that have at least one thing in common. Population also refers to the larger group from which a sample is taken (Orodho,2003). The target population of interest in this study consisted of staff members at county government of murang'a and precisely procurement department, supply chain, finance, ICT and stores department. The target population is 500 members of staff.

The main instrument for data collection were structured questionnaires that allowed for uniformity of responses to questions. Questionnaires gave the researcher comprehensive data on a wide range of factors. Both open- ended and closed-ended items were used. Questionnaires allowed for greater uniformity in the way questions were asked, and ensure greater compatibility in the responses. A likert scale was used for the closed ended questions. The intent of the likert scale is that the statement represents different aspects of the same attitude (Brace, 2004). The likert scale enhanced the production of highly accurate results during analysis.

Data was checked for completeness, accuracy, errors in responses, omissions and other inconsistencies. The data was then coded using numerals in order to put them in limited numbers of categories. The data was analyzed using SPSS. Data was then be classified, tabulated and summarized using descriptive measures: percentages, mean, standard deviation, and frequency distribution Tables while Tables would be used for presentation of the findings. Pearson correlation analysis was employed to know the relationship between variables.

4. RESEARCH FINDINGS AND DISCUSSION**Effects of Organization Policies on Supply Chain Performance of Devolved Units in Kenya:**

Using a five-point likert scale, the study sought to know respondents' level of agreement on various statements relating to organization policies in relation to supply chain performance of devolved units in Kenya. Descriptive statistics such as frequency, percentage, mean and standard deviation were jointly used to summarize the responses as presented in Table 4.5 below. The highest rated item on organization policies is that county governments regularly reviews supplier policy

frame work with a (mean of 3.55, std.deviation 1.31). This means that county governments hardly bothers to review their supply policy frameworks hence majority of respondents response were skewed towards disagreement. The least rated item is that county governments partners with suppliers to address limitations noted in supply policy framework with a (mean of 1.65, std. deviation 0.73).

Organization policy and supply chain performance

Organization Policies	N	Minimum	Maximum	Mean	Std. Deviation
County is effective due to supplier policy framework	80	1.00	5.00	2.3625	1.31442
county government regularly reviews suppliers policy framework	80	1.00	5.00	3.5500	1.31110
suppliers policies framework are adaptable to changes	80	1.00	5.00	1.8000	.84793
county government partners with suppliers	80	1.00	4.00	1.6500	.73087
county tender committee is guided by supplier policy framework	80	1.00	5.00	3.3750	1.08354
county suppliers policies framework have ensured accountability and transparency in tender awarding	80	1.00	5.00	3.4875	1.29257
Valid N (listwise)	80				

Effects of quality management on supply chain performance of devolved units in Kenya.

Using a five-point likert scale, the study sought to know respondents' level of agreement on various statements relating to quality management in relation to supply chain performance of devolved units in Kenya. Descriptive statistics such as frequency, percentage, mean and standard deviation were jointly used to summarize the responses as presented in Table 4.6 below. The highest rated item on quality management is that county governments awards tenders to suppliers base on quality of goods rather than price with a (mean of 3.75, std.deviation 1.21) while the least rated item is that county governments gets high quality goods from supplier's with a (mean of 1.91, std. deviation 0.83).

Quality Management and supply chain performance

	N	Minimum	Maximum	Mean	Std. Deviation
County gets high quality goods from suppliers	80	1.00	4.00	1.9125	.82973
all goods supplied are kebs approved	80	1.00	5.00	3.1875	1.06846
County incurs very little if any repair and maintenance cost of goods supplied	80	1.00	5.00	3.6125	1.10801
County awards tenders to suppliers based on quality of goods rather than price	80	1.00	5.00	3.7500	1.21697
County rejects or sends back goods supplied if they do not meet expected standards	80	1.00	5.00	3.5625	1.17832
County have blacklisted rogue suppliers to avoid doing business with them in future	80	1.00	5.00	3.6375	1.18261
Valid N (listwise)	80				

Effects of supplier strategic alliances on supply chain performance of devolved units in Kenya.

The best rated item on effects of supplier strategic alliances on supply chain performance was that county government encourages supplier strategic alliances among youth and women in awarding tenders with (mean = 3.69, SD = 1.40) while the least rated item was the issue that county government encourages suppliers strategic alliances in supply of expensive equipment's with (mean = 2.23, SD = 0.98) as indicated in Table 4.7. This meant that majority of respondents were in agreement with the statements.

Supplier Strategic Alliances and supply chain performance

	N	Minimum	Maximum	Mean	Std. Deviation
County encourages joint supplies of equipments	80	1.00	24.00	3.0000	2.51577
county regularly holds suppliers seminars in order to nurture information sharing among its suppliers	80	1.00	5.00	3.5375	1.17940
County encourages supplier strategic alliances in supply of expensive equipments for joint risk sharing	80	1.00	5.00	2.2250	.96751
County considers strategic alliances among the youth and women in awarding of tenders	80	1.00	5.00	3.6875	1.40157
suppliers strategic alliances have raised suppliers bargain power in county	80	1.00	5.00	2.2500	.92092
Valid N (listwise)	80				

Effects of information communication technology on supply chain performance of devolved units in Kenya.

The third objective of the study sought to find out the effect of information communication technology on supply chain performance of devolved units in Kenya. Study respondents were asked to indicate on a five – point Likert scale their level of agreement on several statements describing ICT on supply chain performance. The best rated item was the issue that with (mean = 4.84, SD = 0.379) while the least rated item was the issue that supplier strategic alliances have strengthened capacity building of devolved units research and development department (mean = 3.57, SD = 0.86).

ICT Integration and supply chain performance

	N	Minimum	Maximum	Mean	Std. Deviation
county has adopted ict in all its procurement operations	80	1.00	3.00	1.8250	.74247
county regularly upgrades its ict systems to promote accuracy and transparency in all its operations with suppliers	80	1.00	5.00	3.2000	1.21593
County staff are ict literate for effective service delivery	80	1.00	5.00	2.2000	1.07209
county encourages suppliers to apply for advertised tenders online	80	1.00	5.00	3.6375	1.16101
county ict systems are regularly audited to ensure it gives added advantage in service delivery	80	1.00	5.00	3.4125	1.28963
county have operational ict back up system in case of unexpected system failure	80	1.00	5.00	2.3750	1.10665
Valid N (listwise)	80				

Effective supply chain performance of devolved units:

Several parameters were used to measure effective supply performance in this study. The researcher sought to find out the relationship between strategic options and supply chain performance. To achieve this, the respondents were requested to indicate on a five – point likert scale their level of agreement on several statements describing the relationship. Result of the study showed that using strategic options (organization policies, quality management, supplier strategic alliances and ICT Integration) have enabled devolved units to continuously make profit

Parameters for Effective Supply Chain Performance

	N	Minimum	Maximum	Mean	Std. Deviation
county gets quality supply of goods	80	1.00	4.00	1.8625	.67023
county enjoys timely supply of goods from its suppliers	80	1.00	5.00	3.1500	.99492
county enjoys healthy relationship with its suppliers	80	1.00	5.00	3.0500	.88447
county enjoys public support due to its open and transparency operations courtesy of ict systems	80	1.00	5.00	3.8250	1.09977
county is well ranked as one of best performing county in country since beginning of devolution	80	1.00	5.00	4.0250	1.27264
county enjoys minimal repair and maintenance cost due to quality and durable materials and services offered	80	1.00	5.00	2.2000	1.04821
Valid N (listwise)	80				

Effect of Independent Variables on Dependent Variable:

The initial effort to examine the relationships proposed by the research model involved conducting multiple regression analysis. Multiple regression analysis is used to analyze the relationship between a single dependent variable and several predictor variables (Hair et al, 2006). The researcher used linear regression analysis to test the four null hypotheses. Linear regression is an approach to modeling the relationship between a scale of variable Y or more variables denoted as X. The F-test was used further to determine the validity of the model while R squared was used as a measure of the model goodness of fit. The regression coefficient summary was then used to explain the nature of the relationship between the dependent and independent variables

Joint Regression Model:

Multiple regression analysis was used to determine whether independent variables, Organization policies (X_1), quality management (X_2), Supplier strategic alliances (X_3) and ICT Integration (X_4) simultaneously affect the dependent variable (Y) which is Supply chain performance of devolved units in Kenya. The coefficient of determination (R-squared) of 0.58 shows that 58 % of supply chain performance of devolved units can be explained by organization policies, quality management, supplier strategic alliances and ICT Integration.

The adjusted R of 0.557 indicates that organization policies, quality management, supplier strategic alliances and ICT Integration in exclusion of the constant variable explained the change in supply chain performance by 55.7%, the remaining percentage can be explained by other factors not included in the model. An R of 0.761 shows that there is a positive correlation between organization policies, quality management, supplier strategic alliances and ICT Integration and supply chain performance in devolved units in Kenya. These results are shown in Table below.

Joint Regression Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.761 ^a	.580	.557	.38493

a. Predictors: (Constant), ICT, Supplier Strategic Alliances, Quality Management, Organization Policies

The analysis of variance (ANOVA) as shown in Table 4.14b tests the significance of the model at 5% level of significance. The value of P = 0.000 means that the null hypothesis is rejected and the alternative hypothesis is taken to hold as p value is less than 0.05. This implies that organization policies (X_1), quality management (X_2), supplier strategic alliances (X_3) and ICT Integration (X_4) are significant predictors at explaining the supply chain performance and that the model is significantly fit at 5% level of significance.

Joint Regression Model ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	15.331	4	3.833	25.866	.000 ^b
1	Residual	11.113	75	.148		
	Total	26.444	79			

a. Dependent Variable: Supply Chain Performance

b. Predictors: (Constant), ICT, Supplier Strategic Alliances, Quality Management, Organization Policies

Further, the four predictor variables were found to be significant; organization policies X_1 ($\beta = 0.344$, $t = 2.992$, P-value<0.005), quality management X_2 ($\beta = 0.273$, $t = 3.294$, P-value<0.005), supplier strategic alliances X_3 ($\beta = 0.05$, $t = 0.745$, P-value<0.005) and ICT Integration X_4 ($\beta = -0.203$, $t = -2.15$, p-value = 0.005).

Based on standardized Beta coefficient. We can depict that in the joint model X_2 ($B_2 = 0.337$) has the greatest influence, followed by X_1 ($B_1 = 0.311$), X_4 ($B_4 = 0.206$) and X_3 ($B_3 = 0.065$). The combined model is $Y = 0.484 + 0.344X_1 + 0.273X_2 + 0.05X_3 + 0.203X_4 + e$.

Joint Regression Model Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.484	.258		1.877	.064
1					
Organization Policies	.344	.115	.311	2.992	.004
Quality Management	.273	.083	.337	3.294	.002
Supplier Strategic Alliances	.050	.067	.065	.745	.458
ICT	.203	.094	.206	2.150	.035

a. Dependent Variable: Supply Chain Performance

5. DISCUSSION OF THE JOINT MODEL

The overall objective of this study was to determine the effect of strategic supplier relationship management issues; it will improve supply chain performance of devolved units in Kenya. The expectations were that if devolved units chooses to implement these options namely organization policies, quality management, supplier strategic alliances and ICT Integration, it would achieve supply chain performance. The result of regression analysis showed that organization policies, quality management, supplier strategic alliances and ICT Integration combined had significant positive relationship with supply chain performance of devolved units in Kenya, X_1 ($\beta = 0.344$, $t = 2.992$, $P\text{-value} < 0.005$), X_2 ($\beta = 0.273$, $t = 3.294$, $P\text{-value} < 0.005$), X_3 ($\beta = 0.05$, $t = 0.745$, $P\text{-value} < 0.005$) and X_4 ($\beta = -0.203$, $t = -2.15$, $p\text{-value} = 0.005$), as shown in Table 4.14c.

The findings supports argument of supply chain performance is progressively becoming an imperative factor in delivering efficient operations within prosperous companies (Chase, Jacobs, and Aquilano (2008). According to Jones and Oliver (2006) various supply chain performance measures such as; quality measures, price performance measures, cost performance measures, time related measures, quality management (technology) measures, environment and safety measures, asset management measures, administration measures, client fulfillment measures, supplier performance measures and strategic performance measures brings supply chain performance in performance of organization.

Firms without appropriate supply chain performance measures in their processes, procedures, and plans, experience inferior performance, higher client dissatisfaction and employee turnover (Amaratunga & Baldry 2002). The efficacy of the supply chain performance measures describes how well the objectives of procurement are realized (Arun and Linet 2005). Organizations must improve its supply chain performance relationship in order to reduce costs, avoid supply delays and improve overall procurement performance. To manage supplier chain performance organizations can employ a variety of strategies such as, Supplier segmentation, SRM governance, supplier performance management, and supplier development (Zimmermann, et al 2015; Chopra and Meindl 2013; Lysons and Farrington 2006

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