# FACTORS AFFECTING SUCCESSFUL IMPLEMENTATION OF BUYER - SUPPLIER RELATIONS ON PROCUREMENT PERFORMANCE AMONG LOGISTICS SERVICE PROVIDERS IN KENYA: A CASE OF DHL EXEL KENYA

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## ABSTRACT

Buyer - Supplier Relations Management is becoming increasingly relevant to organizations in modern times. The main objective of Buyer-Supplier Relations is to make the sourcing process between businesses and their suppliers more effective and streamlined.. The purpose of this study was to investigate factors affecting successful implementation of buyer-supplier relations on procurement performance in the Logistics Industry. The study was guided by the following specific objectives: To assess effect of information technology on procurement performance, to establish the effect of supplier relationship model on procurement performance, to determine the effect of Supplier development on procurement performance, to determine the effect of Organization Structure on procurement performance. The research design used for this study was a descriptive design. The study adopted quantitative and qualitative research methods, and used both secondary data from literature review as well as primary data in the form of questionnaires. The study adhered to appropriate research procedures and consent was sought before administering the questionnaires. The target respondents for this study comprised of firms senior, functional and first line managers with direct or in-direct involvement or responsibilities within buying firm. A sample size of 83 respondents was obtained using the Yamane formula. The study used stratified sampling method in identifying respondent at each level within the firm. The collected data was edited, coded and entered for analysis using statistical package for analysis (SPSS) version 17. The responses obtained from the questionnaire were analyzed in detail. The data was presented in the form of frequency tables, pie charts graphs bar graphs. In particular data was analyzed using inferential statistics, by use of correlation and multiple linear regressions models to determine the relationship between dependent and independent variables. Multiple regression analysis was used to identify the dimensions of buyer-supplier relationships that make the greatest relative contribution to the explanation of procurement performance construct. The research finding reveals that all the variables of the study had a positive linear correlation with procurement performance. All the variables were found to be statistically significant with p-values of less than 0.05. The study recommended the organization should continually strive to overcome the procurement challenges through proper procurement governance that assist to track the benefits derived from buyer – supplier relationship management. More up-to date Information Technology systems should be adopted to address the increasing globalization and enhance levels of competitive advantage.


***Key Words:*** *Buyer - Supplier Relations Management, procurement performance and logistics*

## INTRODUCTION

Suppliers sit at the heart of almost every organization’s activities and processes. A report published in 2013 by outsourcing firm Proxima was significant. The research analyzed financial data for 1,954 organizations for the financial years 2009, 2010 and 2011. On average, 69.9% of those firms' revenues were spent with suppliers, against only 12.5% on

staff costs. The Transport and logistics industry had the third highest proportion of spend with suppliers at 76.7% in 2011. A research conducted by MIT Sloan School of Management demonstrates that companies with world –class supplier relationship have 20% higher margins than their competitors. Firms can realize significant cost saving by reducing external spending which account for 60 or even 70 percent of the budget of many firms. In terms of the positive side of supplier contribution, Suppliers can play a central role in driving revenues (top-line) as well as being critical to the bottom line (Sachin & Ron, 2009). A study conducted by Siemens in 2006 showed that the majority of the enterprises noted a 10-25% process costs reduction and a 5-10% material costs reduction through the implementation and application of Buyer - Supplier Relationship Management solution. Suppliers can also provide innovation, ideas and access to new markets and technology and increased capabilities (Svensson, 2006; Schieleet al., 2011).

According to a market research conducted by Gartner in 2006 and Aberdeen Group in 2009, Buyer - Supplier Relationship Management is in constant growth, most of the market researches in this area shows a growth rate greater than 10% per year between the main vendors, who can be divided into two distinct classes the ERP vendors, who offer their Supplier Relationship Management (SRM) system as a module of their product portfolio, which has as the main advantage of high integration capacity with the other modules of the same vendor for reducing cost and cycle time (Chen & Kam, 2004; Paurajet al., 2008). The second category is the best-of-breed providers, who are specialists on SRM systems or part of the system i.e. E-Procurement, e-Sourcing, Supplier Enablement, who offer their products to the market as an alternative to the ERP providers or concentrates their efforts in niche markets (Ritter et al, 2004).

Hoffmann et al., (2012) note that implementation of Buyer Supplier Relationship Management remains that biggest issue, having been recognized by procurement practitioners and widely reported by researchers as a major source of project failure. Expense Management Solutions conducted a survey in 2011 on "Strategic Vendor Management," in which procurement practitioners cited losing an average of 20% to 30% of the value of their outsourcing contracts because of inconsistent or ineffective buyer-supplier relations management. Studies conducted in Europe and North America by Aberdeen group in 2012 reported in the survey on "Leading Outsourcing Indicators," over forty percent of respondents felt they lost between 10% and 25% of the value of their outsourced contracts as a result of poorly managed buyer - supplier relationships. Twenty-one percent felt that they lost more than 25% of the contract value. The bottom line was that organizations allow the leak away of millions or even tens of millions of dollars when they fail to exercise competent Buyer- Supplier Relationship in Procurement Management.

According to Park et al., (2010) a well-designed supplier relationship management (SRM) system can support professional purchasing and increase conformity and a systematic way of purchasing. Therefore, in order to support the great variety of product and services purchasing processes and to integrate different business partners in a network (Lamming et al., 2008). Appropriate implementation of buyer - supplier relationship management aims at diffusing supplier information, minimizing transaction costs, creating value through internal

capabilities and external resources, and reducing risks of dependency and stewardship over supplier relationships (Sutton-Brady, 2006; Powers & Reagan, 2007; Medlin & Tornroos, 2011). According to Jordi (2010) implementation of strategies in the supply chain will make the precious firm-supplier relationship difficult to copy by competitors. Competitive capabilities are built upon both structural aspects including technologies or processes and infrastructural aspects involving management or people.

Continuous investment in SRM has been seen as one of the criteria of world class logistic service provider practices. Buyer –Supplier relationship Management is absolutely crucial for survival of logistics operations as it impacts both organizational and operational performance. (Luiet al., 2013). An increased reliance on external supply partners to manage a larger portion of product/service content and growing number of business processes has only increased the need for companies to improve their ability to track, measure, and analyze supplier relations on company's performance (Jean et al., 2010; Hussain & Ranabhat (2013). These factors make Buyer-Supplier a vital business strategy for controlling costs, managing risks, and driving continuous improvement across the extended supply chain.

Unfortunately, in many developing countries, Kenya inclusive, companies do not give considerable attention to buyer-supplier relationship management (Gichuru, 2012). There is strong evidence that most enterprises in Kenya have insufficient infrastructure and inconsistent strategies for managing buyer – supplier relations. Enterprises that established standard metrics and procedures for measuring buyer - supplier relations were able to improve procurement performance by 26.6%, on average, since the program's inception (Veludoet al., 2006; Williamson 2009). Most often, these improvements came in the areas of quality, on-time delivery, price, total cost, contract compliance, lead times, and overall responsiveness (Krapfelet al., 2009). These improvements manifested themselves in direct hard dollar savings to the enterprise as well as enhancements in responsiveness and service to end customers (Casson, 2013). It is on the basis of such less integrated buyer – supplier relations that this study sought to examine, if organizations in developing countries, Kenya inclusive, have successfully embraced and implemented relationships in downstream and upstream supply chain, yet they have been known for promoting bulk purchasing, customers retention and upstream visibility whose concepts are key in enhancing organizational performance (Muriithi, 2012).

## The Logistics Service Providers in Kenya

According to the Kenya Economic Survey 2011 Transport and Logistics has a direct effect on each and every sector of the economy as well as a great potential on promoting economic growth in Kenya. It is one of the leading sectors contributing to the Gross Domestic Product (GDP) in Kenya. It represents a significant part of the economy between 5 and 10% of the GDP (GoK, 2012). In Kenya it is estimated that about 5 million jobs are involved in logistics. Logistics service providers (LSP) are facilitators that help an organization to provide timely delivery of the raw material, semi-finished and finished goods, whether externally or internally, using different modes of transportation such as sea, land or air. Logistics service

providers in Kenya fall under the transport industry and it consist of 27 registered players (Appendix II).

Bryson et al. (2006) propose that logistics is an integral part of any organization and an effective logistics system can ensure efficient achievement of business goals of the organization. The LSP may be characterized as the company that conceives and implements logistics solutions for its customers, adding value to their products at all stages of the supply chain. The LSP industry is growing essentially due to the combined effect of the evolution of the global production and distribution systems and the trend to more outsourcing.(PWC 2012). The total logistics flows either operated by the manufacturer or by a LSP has been growing due to the globalization of production and distributions that have resulted in higher transportation flows. Second, may be a more determinant factor is the increase of outsourcing. Indeed, logistics outsourcing has been observed as a global phenomenon as reported by Littler et al., (2005) and Monczka et al., (2010) in the US, Lamming et al., (2004) in Europe, Quintenset et al., (2006) in Australia, and Park et al., (2010) in Asia.

Logistics in Kenya is therefore very much about operators struggling against various procedural and physical impediments to move goods. To survive the competition in the industry a critical link in the logistical chain and the major channel for importation of raw materials, semi-finished and finished goods for all sectors, the operational performance has a direct impact on the competiveness of the economy of Kenya (PWC, 2012). This therefore make logistics industry together with supply chain management comply with the needs of current trend in the industry, they need complete support system and one of the system is the Supplier relationship management (Rendon, 2005). Effective SRM system is one of the crucial elements in making smooth operations in logistics industry these companies have great responsibility to minimize the supply chain risks, since they have the necessary expertise to perform delivery activities and usually have experience in management of logistic partnerships.(Paliwoda, 2011).Besides worrying about the logistics primary activities of transport and storage, and as the business environment and global competitive pressures increase, LSPs are becoming more integrated with their customers. This is therefore being achieved through creation of partnerships and strategic alliances with complementary service providers who are enhancing the overall value propositions on offer (Wilson, 2005; Wymer & Regan, 2005).

## STATEMENT OF THE PROBLEM

According to Caglio & Ditillo (2012) despite a thorough and deliberate supplier selection process, approximately one-third of the projects in organizations encounter difficulties due to the suppliers. Some of the challenges of late delivery of goods and services, delivery of sub-standard goods and services and also several complaints from suppliers made to the wrong personnel within the organization. Suppliers have also expressed frustration with the organization's procurement process. Hussain & Ranabhat (2013) propose that when faced with poorly performing suppliers, firms may choose to resource the product or service to an alternative supplier. The result is that the firm will have a pool of many suppliers not performing adequately in areas of quality, delivery, cost reductions, contract adherence and

technology advancements, legal and regulatory requirements all key aspects that ensure customer satisfaction (Burt et al., 2004; Jean et al., 2010; Chenet al., 2012).

Several past empirical studies revealed that implementing buyer supplier relationship management has often not been as successful or as straightforward as had been expected and many firms are still struggling with implementation (Choi and Wu, 2009; Cheung et al., 2011; Chen et al., 2012). In the process of adopting SRM, procurement are confronted with various problems that arise during the implementation process as many firms learn by doing (Gaddeet al., 2010). Within the body of SRM research, several studies have been undertaken to identify critical success factors for implementation. As a result of this research, many factors have been found to have a significant impact on the success or failure of Buyer – Supplier relations, and on its potential to improve the procurement performance (Ford et al., 2011).

## LITERATURE REVIEW

The IMP group has also consistently promoted consideration of a range of different relationships (Cousin & Spekman, 2003; Cox, 2004; Fordet al., 2007; Bensaou, 2008). Ramsay (2006) offers a direct critique of the widespread cooperation consensus. Finally, empirical evidence has emerged suggesting that some practitioners are less than enthusiastic about the supposed benefits of buyer-supplier cooperation (Devarajet al., 2007). Empirical evidence indicates that firms can indeed obtain competitive advantage by managing supplier relations (Molm, 2004; Chen et al., 2012). The fact that the agreement is not universal and research has revealed the difficulties of generating consensus around an idea within an individual organisation (Kilger & Wagner, 2008), and shown that consensus formation is negatively correlated with both the size (Muriithi, 2012) and diversity (Rwoti, 2005) of the group involved. Wilson (2009) adds lengthened decision-making horizons, improved information flow, strategic quality plans and tolerance of some competitive variability.

Gichuru (2004) list of characteristics of partnership success includes: commitment, coordination, trust, communication quality, participation, and joint problem solving. Choi et al. (2008) studied buyer-supplier relationships at Toyota. Their key success factors include: high levels of trust, two-way information sharing, direct assistance, long-term contracts, formal evaluation of supplier performance, and involvement in new product development. Canezet al, (2004) identified the following success factors for long-term participative partnerships between companies: improved communication, clarification of needs and expectations, elimination of problems and concerns, consistent performance, and creation of competitive advantage. Jean (2010) looked at buyer and supplier perceptions of partnership success. Her article, based on a Center for Advanced Purchasing Studies focus study, identified the following key characteristics: two-way information sharing, top management support, shared goals, early communication of changes to suppliers, supplier adds distinctive value, total quality management initiative, and JIT initiatives. Ellram also noted certain factors present in failed partnerships. These included poor communication, lack of top management support, and lack of trust, lack of total quality commitment by supplier, poor up-front planning, lack of strategic direction for the partnership, and lack of shared goals.

As noted by Murithi (2012) a number of empirical studies on Buyer-Supplier Relationship have been mostly conducted in the Europe and America that have explored their importance. The literature on supplier alliances also provides empirical evidence of their benefits in terms of cycle time and new product development time (Monczka et al., 2010), delivery performance, flexibility, and product availability and customer satisfaction (Littler et al., 2005). It is also alluded to the potential of alliances with regard to reductions in transaction costs (Liu et al., 2013) and improvements in access to technology (Powers, 2007) and technology transfer (Trent and Monczka 2003).

According to Stanley &Gregory (2009) value creation in an organization increasingly occurs in networks and in cooperation with other organizations. Supply Chain partners have been acknowledged by the academic world. Brennan and Wilson (2012) assess buyer-supplier relationship management in their constructs that determine the effectiveness of procurement performance. These constructs are made up of aspects that have to be met in different ways in order to achieve higher maturity levels in buyer-supplier relationship management, these constructs will be summarized from the work of Caniels & Gelderman (2005). Value creation is generally managed by the buying company with contracts which determine the rights and responsibilities of the parties. Hedaa & Tornroos (2007) has noted that for many of the world's most successful firms, the very things that make them great were neither developed nor owned in-house, they have been achieved through collaborative relationships. According to Hoffmann et al. (2012) success/failure variables literature has largely used survey methodology in order to identify the main factors. This considerable body of research re-emphasizes the variables identified in the value proposition that can be created from managing successful and lasting supplier relationship (Hedaa & Tornroons, 2007; Hsu & Perreria, 2008).

According to Christopher (2005) competitive advantage can be gained by firms if collaboration relationships are nurtured which therefore leads to improvement quality, reduce cost, access to new technologies, reduced risk and achievement of high performance thus ensuring improved customer satisfaction. A close strategic buyer-supplier relationship a considerable amount of value is created through actions that are not directly determined by the contract provides a basis for better understanding and explaining this type of value creation. According to Hsu & Pereira (2008) the parties in social exchange create value and exchange value with each other, this type of value creation is voluntary and it is based on perceived attractiveness and on expectations of future rewards.

## CONCEPTUAL FRAMEWORK

The framework was developed to link together independent and dependent variables that seek to explain the outcome. In the context of examining the relationship between these variables assists the researcher to understand the form that the study would take in reference to the methodology and translate it into practice (Cohen & Roussel, 2005). The conceptual framework consists of Information Technology (IT) Supplier Relationship Models, Supplier Development, Organisation Structure as independent variables and Procurement performance as dependent variable.

## RESEARCH METHODOLOGY

The study adopted descriptive research design. The target population was DHL Exel Kenya.

## RESEARCH RESULTS

The study found that information technology systems, supplier relationship models, supplier development and organizational structure are the factors affecting successful implementation of supplier relations on procurement performance among logistic service providers in Kenya. A majority of the respondents (64.7%) agree that successful adoption of buyer - supplier relations in procurement management. An additional (33.5%) of the respondents agree that there is partial adoption of Buyer –Supplier Relations in Procurement. However (1.8%) disagree that buyer-supplier relations has been adopted at DHL Exel Kenya.

### Information Technology

Majority of the respondents (80.9%) agreed that there was effective technology infrastructure, a further 89.1% agree that there security of information and transaction shared between buyers and supplier. However (40.9%) of respondents disagree that use of technology to automate tasks and realize enhanced value. 59.1% of respondents disagree that a single shared database was in place for SRM related activities. A majority of respondents (68.1%) disagree that sufficient information on supplier performance is available to the respondents on product/service quality, cost, reliability, delivery time and inventory. Information Technology Systems yielded a correlation coefficient of 0.3565 which was found to be significant at the 5% significance level (p value=0.00 which is less that 0.05). This reveals a strong positive correlation between Information Technology Systems and Procurement performance. This means that information technology does affect procurement performance to a great extent. Security of information and transactions is regarded highly in the organization, though information on products/service quality, cost is not easily accessible and available at DHL Exel Kenya.

### Buyer - Supplier relationship Model

Majority of the respondents (87.9%) agreed existing relationships influence the supplier selection process, additionally (72.7%) of the respondents were of the opinion that the company priorities long-term relationship. Majority of the respondents (90.9%) are of the opinion strategic supplier are delivering strategic value to the organization. Slightly half of the respondents (54.5 %,) are of the opinion that supplier are sharing their cost structure and time records with buyers. A majority of respondents (63%) are of the opinion that suppliers are truly accountable for performance in areas that drive the most value for the organization. A majority of the respondents (90.7%) concur that the organization has put in place formal SRM plans and efforts to develop supplier to meet the capacity and capability of the organization. This relationship yielded a correlation coefficient of 0.4724 which was found to be significant at the 0.5% significance level (p value=0.0001 which is less that 0.05). This reveals a strong positive correlation between Buyer-Supplier Relationship Models and Procurement performance. This then means that buyer supplier relations though having a positive effect on procurement performance. The respondents were of the opinion that

supplier do not share their cost structures and delivery time records with buyers, and that supplier are not truly accountable for performance in areas that drive the most vale for the organization

### Supplier Development

Majority of the respondents (86.4%) agreed that supplier performance measurements are in place, additionally (81.8%) of the respondents agreed that the measurement system in place document the partnership mutual benefits. Majority of the respondents (90.9%) are of the opinion that education and training was available to enable development of the supplier's capabilities. Majority of respondents (68.2%) agreed that supplier suggest design change of products and services. Over half of the respondents (59.1%) agreed that the company was willing to share it supply chain resources with its supplier. Majority of the respondents (81.8%) agreed that the company conducts periodical meeting with supplier to address their view and problems. This relationship yielded a correlation coefficient of 0.3984 which was found to be significant at the 0.5% significance level (p value=0.0002 which is less that 0.05). This reveals a strong positive correlation between Supplier Development and Procurement performance. This then means though supplier development has positive effect on procurement performance. The respondents were of the opinion that supplier suppliers need to suggest design change of products in order to reduce cost and cycle time to the organization through early supplier involvement in product development. The company should also share and provide incentives to boost their supplier development efforts.

### Organization Structure

Majority of the respondents (90.9.9%) agreed clearly defined set of process, policies and tools that governor management of suppliers, additionally, (75.5%) of respondents agreed that roles and responsibilities of various aspects of SRM are clearly defined and staff that interface with suppliers possess the necessary skills to manage suppliers effectively. A majority of respondents (84.1%) agreed that extensive training was given to new buyers regarding the Code of Ethic, Additionally (70%) of the respondents agree that policy and changes in regulations affect negotiation position towards suppliers. Majority of the respondents (84.5%) agreed that the supplier selection criterion is known to al buyers. Additional (76%) of the respondents agree that Top Management support for implementation and continuous innovation was in place. This relationship yielded a correlation coefficient of 0.2979 which was found to be significant at the 5% significance level (p value=0.0002 which is less that 0.05). This reveals a strong positive correlation between Organization Structure and Procurement performance. This then means that buyer supplier relations though having a positive effect on procurement performance. The respondents were of the opinion that supplier do not share their cost structures and delivery time records with buyers, and that supplier are not truly accountable for performance in areas that drive the most vale for the organization.

## Inferential Analysis for Buyer-Supplier Relations on Procurement Performance

### Correlation Analysis

Correlation is a term that refers to the relationship between two variables. A strong or high correlation means that two or more variables have a strong relationship with each other while a weak or low, correlation means that the variables are hardly related. The value of -1.00 represents a perfect negative correlation while a value of +1.00 represents a perfect positive correlation. A value of 0.00 means that there is no relationship between variables being tested (Leedy and Orodho, 2003). This analysis assumes that the two variables being analyzed are measured on at least interval scales. The coefficient is calculated by taking the covariance of the two variables and dividing it by the product of their standard deviations. In this study Pearson correlation is carried out to determine how the research variables related to each other. Pearson's correlation reflects the degree of linear relationships between two variables. It ranges from+1 to -1. A correlation of +1 means there is a perfect positive linear relationship between variables (Babbie, 2005).

### Correlation analysis for Information Technology services

A correlation analysis for the information technology services was to find out how information technology correlated with procurement performance. Table 1 shows that the Pearson correlation coefficient was 0.3564. This indicates that information technology system has a positive correlation with procurement performance (p-values = 0.000). These findings indicate that there was a positive linear relationship between information technology system and procurement performance. This is in agreement with the literature review where Cohen et al.,(2005) emphasizes that IT systems is positively correlated with improved overall performance as integrated systems ensure visibility within the supply chain.

**Table 1: Correlation analysis for Information Technology services**

| | | Procurement Performance | Information Technology Services |
|---|---|---|---|
| Procurement performance | Pearson Correlation | 1 | 0.3565 |
| | Sig. (2-tailed) | 0.000 | 62 |
| | N | 62 | |
| Information Technology services | Pearson Correlation | 0.3565 | 1 |
| | Sig. (2-tailed) | 0.000 | |
| | N | 62 | 62 |

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

**Correlation analysis for Buyer-Supplier Relationship Models**

A correlation analysis for the Buyer-supplier relationship models was to find out how supplier relationship models correlated with procurement performance. Table 2 shows that the Pearson correlation coefficient was 0.4724a clear indication that supplier relationship models had a positive correlation with procurement performance (p-values =0.0001). These findings indicate that there is a strong linear relationship between supplier relationship models and procurement performance. Research studies conducted by Paulrajet al., (2008) suggested that buyers should not only consider price-based criteria, but should consider more about performance criteria, such as quality and delivery for the relationship between buyer and supplier. Stanley (2009) observed a tendency that buyers shift from an arm length relationship (a number of competing suppliers) to closer collaborative relationship. In order to move forward collaborative relationship, require trust, commitment and willingness to share risks in long-term cooperation.

**Table 2: Correlation analysis for Buyer - Supplier Relationship Models**

| | | **Procurement Performance** | **Supplier Relationship Models** |
|---|---|---|---|
| Procurement performance | Pearson Correlation | 1 | 0.4724 |
| | Sig. (2-tailed) | 0.0001 | |
| | N | 62 | 62 |
| Buyer - Supplier Relationship Models | Pearson Correlation | 0.4724 | |
| | Sig. (2-tailed) | 0.0001 | |
| | N | 62 | 62 |

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

**Correlation analysis for Supplier Development**

A correlation analysis for the supplier development with procurement performance in Table 3 shows that the Pearson correlation coefficient was 0.3984. This is an indication that supplier development has a positive correlation with procurement performance (p-values = 0.0002). These findings indicate that there is a strong linear relationship between supplier development and procurement performance. Previous research addressed that organizations are increasing invoice in supplier development programs to improve the supplier performance and building competitive advantage (Bensaou, 2008).

**Table 3: Correlation analysis for Supplier Development**

| | | Procurement Performance | Supplier Development |
|---|---|---|---|
| procurement performance | Pearson Correlation | 1 | 0.3984 |
| | Sig. (2-tailed) | 0.0002 | 62 |
| | N | 62 | |
| Supplier Development | Pearson Correlation | 0.3984 | |
| | Sig. (2-tailed) | 0.0002 | |
| | N | 62 | 62 |

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

**Correlation analysis for Organization Structure**

A correlation analysis for the organization structure was to find out how organization structure correlated with procurement performance. Table 4 shows that the Pearson correlation coefficient was 0.2979. This is a clear in indication that organization Structure had a weak positive correlation with procurement performance (p-values =0.0002). The significance of organization structure verses procurement performance as indicated in table 4. These findings indicate that there is a strong linear relationship between organization structure and procurement strategy as shown in table 4.12. The general conclusions are that organizations must fit structure and processes if the strategy wants to produce positive results (Shannon, 2005). The relationship between structure and performance, however, is more tenuous and is mediated by many other organizational constructs.

**Table 4: Correlation analysis for Organization Structure**

| | | Procurement Performance | Organization Structure |
|---|---|---|---|
| Procurement performance | Pearson Correlation | 1 | 0.2979 |
| | Sig. (2-tailed) | 0.0002 | |
| | N | 62 | 62 |
| Organization Structure | Pearson Correlation | 0.2979 | |
| | Sig. (2-tailed) | 0.0002 | |
| | N | 62 | 62 |

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

**Coefficient of Determination**

Adjusted $R^2$ which is termed as the coefficient of determination tells us how information technology systems, supplier relationship models, supplier development and organizational structure. According to the findings in the table above, the value of adjusted $R^2$ is 0.664. This implied that there was a variation of 66.4% of procurement performance with information technology systems, supplier relationship models, supplier development and organizational structure at a confidence level of 95%. R is the correlation coefficient which showed that there was a strong correlation between the study variable as shown by the correlation coefficient of 0.839. The unexplained variance due to other variables not in the model and purely chance factors is only 33.6%.

**Table 5: Model Summary for Buyer –Supplier Relations on Procurement Performance**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .839[a] | .704 | .664 | .19758 |

**Analysis of Variance (ANOVA)**

According to Mugenda & Mugenda (2003), ANOVA is a data analysis procedure that is used to determine whether there are significant differences between two or more groups or samples at a selected probability level. `An independent variable is said to be a significant predictor of the dependent variable if the absolute t-value of the regression coefficient associated with that independent variable is greater than the absolute critical t-value. The regression analysis also yields an F-statistic where if the calculated F-value is greater than the critical or tabled F-value, the prediction will be rejected.

**Table 6: ANOVA for Buyer Supplier Relations on Procurement Performance**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 3.744 | 4 | 0.372 | 11.59 | .023 |
| | Residual | 39.091 | 39 | 0.129 | | |
| | Total | 42.835 | 43 | | | |

From the ANOVA statistics above the processed data which is the population parameters, had a significance level of 2.3 % which showed that the data was ideal for making conclusions on the population's parameter as the value of significance (p-value) was less than 5%. The calculated was greater than the critical value (11.59 >2.61) an indication that Information Technology systems, Supplier Relationship Models, Supplier Development and Organization Structure significantly influence procurement performance. ANOVA assumes that the data are normally distributed.

**Multiple Regressions**

**Table 7: Multiple Regressions for Buyer -Supplier Relations on Procurement performance**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .146 | .172 | | 1.847 | .023 |
| | Information Technology Systems | .337 | .082 | .132 | 1.739 | .007 |
| | Supplier Relationship Models | .243 | .082 | .254 | 7.835 | .010 |
| | Supplier development | .141 | .083 | .113 | 2.806 | .041 |
| | Organization Structure | .167 | .063 | .189 | 2.583 | .029 |

**$Ys = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$** become:

$$Ys= 0.146+0.337X_1+0.243X_2+0.141X_3+ 0.167X_4+ \varepsilon$$

Where: Y is the dependent variable (procurement performance), $X_1$ is the Information technology systems, $X_2$ is Supplier relationship models, $X_3$ is supplier development, $X_4$ is the organization structure.

According to the regression equation established, taking all factors into account (information technology systems, supplier relationship models, and supplier development and organization structure) as constant at zero, the procurement performance will be 0.146. The data findings analyzed also shows that taking all other independent variables at zero, a unit increase in information technology systems will lead to a 0.337 increase in the procurement performance; a unit increase in Buyer- supplier relationship models will lead to a 0.243 increase in the procurement performance; a unit increase in supplier development will lead to a 0.141 increase in procurement performance and a unit increase in organization will lead to a 0.167 increase in procurement performance. At 5% level of significance and 95% level of confidence; information technology systems showed a 0.07 level of significant; supplier relationship models showed a 0.010 level of significant; organizational structure showed a 0.029 level of significant and supplier development showed a 0.041 level of significant. This therefore shows that information technology systems is the most significant factor influencing procurement performance among the four studied factors, followed by supplier relationship models, organizational structure and supplier development in that order. This infers that information technology systems contribute more to the procurement performance in logistic companies in Kenya.

## CONCLUSIONS

The results provide support for the theory that buyer- supplier relations can help improve the procurement performance. This conclusion is based on the fact that each of the main partnership dimensions in the theoretical framework had a significant and positive

relationship with procurement performance. The results also showed that when considered together the variables in the framework significantly account for 66.4% of the variation in procurement performance. The study was also able to establish that all variables of the study were statistically significant. Majority of the items were found to be statistically significant (p values < 0.05). Buyer – Supplier Relationship Models had the highest coefficients (0.4724), followed by Supplier Development (0.3984), followed by Information System (0.3565) and finally Organization structure (0.2979). Therefore it is concluded that from this research that while all four constructs in the framework are significant indicators of performance it is the more intangible aspect of buyer-supplier relationships that are more reliable indicators of performance. The study contributes to the Resource based theory as it provides empirical evidence of the performance implication of buyer-supplier relations on procurement performance which have been cited by several scholars (Paurajet et al., (2008). The four variables therefore demand attention as they provide an interactive platform for improved procurement performance through buyer--supplier relations. It provides the setting for knowledge sharing and innovations which leads to cost and time saving. Buyer- Supplier Relationship Management needs to be implemented as a continuous process up-front and through-out project lifecycle. It has been shown that the positive impact of supplier relations increase commitment level and performance effectiveness.

## RECOMMENDATIONS

According to Trent (2003) integrated operations through collaborative arrangements enable rapid response to market place changes agility, improving supply chain performance because the company abilities are not influences not only by internal activities but also by suppliers and other partners.

### Organization Structure

Reducing Procurement challenges through proper procurement governance is a major challenge for most organizations. Lack of proper procurement governance is partly the result of escalation of high project costs. Organizations must develop Contract Management Manual, buyer-supplier relationship Management and record keeping Manuals and train staff on them. These manuals can help procurement practitioners with their daily contract and relationship management and record keeping of procurement activities.

### Supplier Development

The study also recommended that organizations should be increasingly involved in supplier development programs to improve their supplier performance and build competitive advantage (Bensaou, 2008). Encouragement of development of co-operative collaborative attitude, the code of practice will help ensure that benefits to supplier increase and that they do not receive an unfair portion of the costs associated with exchange. Early supplier development to proactively improve quality of critical items could be made through; increased communication; utilizing more detailed measurements of quality such as charting techniques and consequently set more aggressive targets to pressure the supplier to improve their process capability; or practically help the supplier to improve their process capability

which of course requires a higher degree of interdependence between buyer and supplier an incentive programs.

### Information Technology Systems

Development of e-procurement to enhance and reduce cost of procurement. Though majority of the respondents agreed that practice of information exchange was good, information exchange need to emphasized using more modern IT based practices such as EDI, Vendor Managed Inventory among others to support procurement activities in the organization. A shared platform needs to be stressed to enable the sharing of vital information.

### Top management support for Implementation of Procurement Strategy

Buyer – Supplier Relationship Management implementation should not be viewed as a one-off process; the management should inculcate a practice of regular review briefing with suppliers and reference making of the strategic benefit throughout its lifespan. It would be prudent to include an audit to assess the capacity of the staff to implement the strategy and give recommendations. The basis of doing this lies on the principle of "First who, then what" that is it is important to have the right people on the bus, then the problem of managing and directing them largely goes away".

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