



Supplier Development Practices and Supply Chain Performance of County Governments in Kenya

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Abstract

Many organizations have realized the significant role suppliers play in determining organizational performance. This study sought to examine the influence of supplier development practices on supply chain performance of County Governments in Kenya. This study employed a descriptive survey research design targeting 112 procurement staff. The study utilized both stratified and simple random techniques. For data collection close ended questionnaires was used. For data analysis descriptive and inferential statistics were used. Descriptive statistics used were mean and standard deviation and Inferential statistics used Pearson correlations and simple linear regression. The study found that supplier development practices had a positive and significant effect on supply chain performance of County Governments in Kenya. The findings extends our knowledge on supplier development practices that can enhance performance. The study recommends for County Governments to develop suppliers through training, supplier financing and innovation so as to enhance performance of supply chain.

Keywords: Supplier Development Practices, Supply Chain Performance

1. Introduction

The Supply chain management success is solemnly pegged on sound supplier relationship which leads to effective performance for companies. A competitive enterprise requires information sharing, trust in task execution, a developed supplier and above all an all-round workforce. In the long run this leads to customer satisfaction based on the profits that emanates from a healthy supplier relationship (Simatupang & Sridharan, 2012). Supplier development refers to any efforts made through owner organization improving performance as well as working conditions of those providing goods and services. It is the energy put in place by a company to improve performance standards of suppliers (Ochieng, 2014). Purchasing firms view suppliers as a valuable resource (Changalima, Ismail & Mchopa, 2021). According to McKeivitt and Davis (2014) there is adequate evidence in literature to support the call for a study to be conducted in public procurement on supplier development practices. According to Wagner (2010) supplier development deals with poor supplier performance and also enhances the long-term capability of the supply base.

The key objective of supplier development is to make the suppliers have adequate requirements to see the firm grow. Studies have measured supplier development practices using various aspects such as collaboration (Rajput & Bakar, 2012; Yan & Dooley, 2014), evaluation (Lubale & Kioko, 2016), training (Wanzala & Moronge, 2018), communication (Rajput & Bakar, 2012; Obal & Lancioni, 2013) supplier incentives (Oromo & Mwangangi, 2017), innovativeness (Onyango, 2020), supplier financial support and supplier audit (Ndanusa & Daniel, 2020). The study focused on supplier training, supplier financing and innovation. Supplier training as an aspect of supplier development increases the skills of the supplier to see them perform their tasks with ease. Supplier financing entails providing financial support suppliers experiencing financial difficulties to enable them meet their financial obligations. Supplier innovation entails fostering innovation amongst the suppliers.

Supplier development practices improves performance (Ochieng, 2014; Kraus, 2012) and ensures optimal resource utilization (Talluri et al., 2010). Further according to Wagner (2016) it improves supplier performance and capability and also improves the buyer-supplier relationships (Changalima et al., 2021a) Supplier development makes a firm to gain a highly competitive advantage as well poised set of suppliers makes things to flow with ease and minimizes cases of supplier inefficiencies (Ochieng, 2014). A knowledgeable supplier as well as buyer makes the supplier relationship a success (Cousins & Spekman, 2013).

A study by Moore (2010) in Japan found that automotive industries' supplier development practices affected procurement performance. The study found that seminars and training courses led to supplier development which was

the key attribute to entire performance. Lategan, (2010) noted that supplier information or awareness stimulated performance in the European and North American for a notable period. The focus on supplier developments enhanced supply chain performance in firms. In North American a number of manufacturing firms have adopted supplier development management in execution of their duties (Nasra, 2014).

African states have not been left behind in supplier development management practice studies which are directly linked to supply chain performance for instance studies done in Tanzanian public sector (Changalima, Mchopa & Ismail, 2022) and in South African SME's (Van der Westhuizen & Ntshingila, 2020).

The Kenyan system of governance has the national government and county governments. The study bases its argument on the devolved systems that undertake one on one procurement activities. Supply of goods and services have been in existence in Counties in Kenya with either dissatisfaction or satisfaction among suppliers and buyers. The counties were founded in 2013 after the Kenyan eight provinces were subdivided into 47 counties. In Kenya, the Public Procurement and Disposal Act 2015 governs both the county and National governments operations and how they spend public money. The study was done in Homabay, Migori and Kisumu which are counties in the Nyanza region.

In Kenya the procurement Act guides the supplier relationship however there is still poor relations with suppliers coupled with opportunistic tendencies and distrust leading to loss of revenue (PPRA, 2020). The PPRA report, (2020) reveals ghost projects, supplier malpractices and fictitious activities in public procurement thus probing the need to develop suppliers in order to reduce supplier related procurement issues. Njagi and Kinoti (2018) contended that County governments had lost a large amount of money in procurement processes due to conflict of interest, poorly kept records, inadequate transparency and also accountability, inefficiencies with regards to transactions, delays in delivery as well as collusion with the suppliers which negatively impacted on procurement performance.

According to Oromo and Mwangangi (2017) in regards to developing countries, empirical evidence on the link between supplier development and procurement performance in the public sector is limited. The studies done have revealed conflicting findings as others indicate a positive and significant effect (Changalima, Mchopa & Ismail, 2022; Ndanusa & Daniel, 2020; Mwangi & Muli, 2022) while a study by Wagner (2016) revealed a negative but significant effect. Some studies concluded that supplier development had an insignificant influence on performance (Carr & Kaynak, 2007; Onyango, 2020). Moreover Blonska *et al.* (2013) contended that supplier development may at times not lead to relationship benefits and could even be harmful. Additionally the studies have been done in different sectors and contexts thus necessitating the current study on the influence of supplier development practices on supply chain performance of County Governments in Kenya.

2. Literature Review

2.1 Theoretical Review

This study was anchored on the supply chain constraint theory which was the idea of Goldratt (1986). The theory views manageable systems as being limited in the achievement of its goals due to a number of constraints. There is always a constraint and this theory utilizes a focusing process in order to identify the constraints and subsequently restructure the rest of the firm around it. A constraint is a let down on achieving better performance (Moore & Scheinkopf, 1998). Its tenets are based on how to enhance performance of a firm. Developing a supplier would definitely improve performance of the firm. It is believed that the skills attained by the supplier would spur supply chain performance of a firm. It is therefore believed that performance of County government relies on procurement sector more so supplier relationship management and specifically supplier development practice. The elements of supplier development such as training would make performance a reality. Furthermore supplier financing and supplier innovation makes performance a reality.

2.2 Empirical Review

Kadir, Tam and Hassan (2011) conducted a case study in the automotive industry of Malaysia on supplier learning patterns and established that supplier development programs supported the improvement of supplier's capabilities usually with the assistance of a buyer. The study also found that Supplier development was dependent on the supplier's interest and how they explored themselves to increase their individual capabilities.

Ling and Ling (2012) conducted an extensive study on the effect of supplier development on supply chain performance of the public healthcare sector. The theoretical underpinning was based on contingency and stakeholder theories as on methodology closed ended questions were used yielding data that was analyzed by both inferential and descriptive statistics. The findings indicated that supply chain performance was positively and significantly influenced by supplier development.

Krause (2012) carried out a survey study on the effect of developing a supplier on the overall firm procurement performance. The study found that supplier development practice yielded positive and significant results for both product and service industries though for the product industry the effect was greater than in the service industry.

A study by Wagner (2016) on the influence of supplier relationship management practice in Britain's public sector found that supplier trust, supplier differentiation, supplier and supplier review influenced performance however, supplier development had a negative but significant influence on supply chain performance.

Manojkumar and Ravi (2018) affirmed that supplier development activities influenced performance outcomes such as supplier performance improvement, buyer’s competitive advantage improvement and buyer-supplier relationship improvement.

A study done in the Tanzanian public sector by Changalima, Mchopa and Ismail (2022) found that procurement performance was influenced by supplier development. Using descriptive survey research design, Ndanusa and Daniel (2020) conducted a study in Nigerian manufacturing firms on the effect Supplier Development had on Operational Performance. Supplier development had supplier technical support, supplier involvement, supplier audit and supplier certification as its indicators. Findings revealed that supplier technical support significantly influenced competitive advantage, early supplier involvement significantly influenced cost efficiency, supplier audit significantly influenced operational efficiency and supplier certification also significantly influenced customer service delivery. A study conducted in South African small and medium enterprises (SME’s) established that supplier development determines business performance of small and medium enterprises (Van der Westhuizen & Ntshingila, 2020).

Studies done in Kenya by Ochieng (2014), Kemunto, (2014), Musyoki and Ngugi (2017) and Mwesigwa and Nondi (2018) on the effect of supplier development on performance of banking sector, manufacturing firms, pharmaceutical entities and the World Food Programme respectively confirmed that supplier development influenced performance. Lubale and Kioko (2016) confirmed that supplier development which had supplier evaluation, supplier incentives and supplier partnership as its measures positively and significantly affected organizational performance of Kenya Power Company. Similarly a study by Wanzala and Moronge (2018) found that supplier development as measured using Benchmarking, Product development, training and Quality improvement influenced performance of supply chain. A study by Mwangi and Muli (2022) done in the Food and Beverage Manufacturing Firms confirmed that supplier development influenced performance however the study focused on the combined effect of supplier relationship management of which supplier development was one of the practices. On the contrary a study by Onyango (2020) on the effect supply chain collaboration, supplier development and supply selection and evaluation had on Kenyan alcoholic beverage companies supply chain performance found that supplier development measured in terms of innovativeness, responsiveness and sustainability had no effect on performance.

From the foregoing empirical review it can be noted that several studies have been done on supplier development practices and performance however the studies were done in different context and sectors. Further there are inconsistencies in the findings. Baron and Kenny (1986) have explained the need for more research to be done In case the variables of interest have inconsistencies or contradictions. Thus the study was hypothesized as;

H₀: Supplier development practices does not significantly influence supply chain performance of County Governments in Kenya

2.3 Conceptual Framework

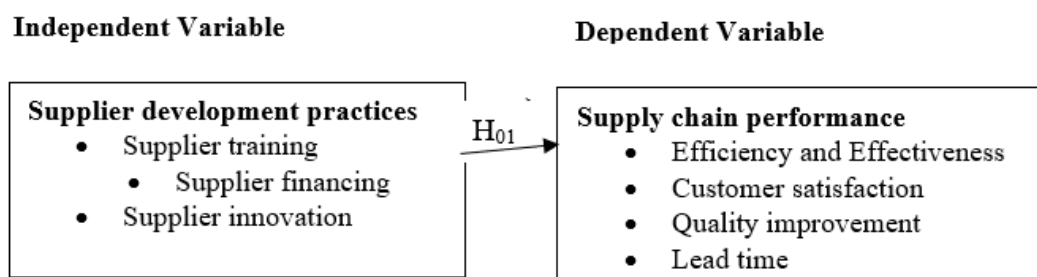


Figure 1: Conceptual framework

A conceptual framework reviews the relationship between study variables (Mugenda & Mugenda, 2013). The independent and dependent are discussed based on how they are measured and operationalized. The independent variable in the study was supplier development practices assessed through supplier training, supplier financing and supplier innovation. The dependent variable was supply chain performance based on efficiency and effectiveness, quality improvement, customer satisfaction and lead time.

3. Materials and Methods

3.1. Materials

This study employed a descriptive survey research design, targeting 112 procurement staff of the County Governments in Nyanza Region, Kenya which constituted Migori, Kisumu and Homabay County governments. The study sampled population by stratified and simple random techniques. In attaining the sample size Yamane Taro formula was employed and the sample size was 88.

3.2. Methods

For data collection close ended questionnaires were used. A pilot study was done in Kakamega County where nine (9) procurement staff members were selected. For Validity content validity was employed where the questionnaire was discussed with one of the procurement managers in the county and also with study supervisors. For data analysis descriptive statistics and inferential statistics were used. Descriptive employed mean and standard deviation. Inferential statistics used were Pearson correlations and simple linear regression. Results were presented in form of tables. The following regression model applied:

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where;

Y = Dependent Variable (Supply Chain Performance)

X₁ Supplier development practices

β₀ = the constant

β₁ = the regression coefficient

ε = Error term

4. Results and Discussion

4.1 Response Rate

From the eighty-eight (88) respondents, seventy-six (76) responded thus giving a response rate of 86.4% which is deemed desirable. A response rate above 50% is deemed as acceptable, whilst above 75% is perceived as being very good (Fincham, 2008).

4.2 Results on Reliability, Mean, standard deviation and correlation of the study

Table 1: Results on Reliability, Mean, standard deviation and correlation

Variable	Reliability	M	SD	Correlation	
				SDP	SCP
Supplier development practices	0.803	3.742	1.07	1	
Supply chain performance	0.837	3.65	0.89	0.601** 0.001 76	1 76

Note: M=mean SD=standard deviation, **. Correlation is significant at the 0.01 level (2-tailed).

Source: Research Data (2023)

Reliability Results

The reliability results revealed that supplier development practices and supply chain performance had a cronbach alpha of 0.803 and 0.837 respectively thus being above 0.7 as recommended (Pallant, 2005).

Descriptive Analysis Results

In accordance with results the results in Table 1 most of the respondents were in agreement to the statements on supplier development practices (M=3.74, SD=1.07). This suggests that the county governments engage in supplier development practices such as supplier training, financing and innovation. Further, a majority of the respondents agreed to the statements on supply chain performance (M=3.65, SD=0.89.).

Correlation Analysis Results

The results indicated that supplier development practices were positively and significantly correlated with supply chain performance (R= 0.601, p<0.01). The findings on correlation are consistent with those of Onyango (2020) who established a correlation between supplier development and performance (r=0.547).

4.3 Simple Linear Regression Results on Supplier Development practices and supply chain performance

Table 2: Simple Linear Regression on Supplier Development practices and supplier chain performance.

Model Summary

Model	R	R ²	Adjusted R ²	Std. Error	Statistics Change				
					R ² Change	F Change 1	df	df2	Sig. Change
1	0.60	0.414	0.406	0.549314	0.414	52.32	1	74	0.000
a. Predictors: (Constant), Supplier Development practices									
ANOVA ^a									
Model	Squares Sum		Df	Square Mean		F	Sig.		
1	Regression	15.790	1	15.790		52.329	0.000 ^b		
	Residual	22.329	74	0.302					
	Total	38.119	75						
a. Dependent Variable: Supply Chain Performance									
b. Predictors: (Constant), Supplier Development practices									
Coefficients ^a									
Model	Coefficients Unstandardized B		Std. Error	Coefficients Standardized Beta		T	Sig.		
1	(Const)	0.803	0.366			2.192	0.031		
	Supplier Development practices	0.765	0.200	0.601		7.234	0.000		
a. Supply Chain Performance									

Source: Research data (2023)

Having regard to the model summary, supplier development practice accounted for 41.4% (R² = 0.414) variations in supply chain performance. The ANOVA table indicated that supplier development practice is good predictor of supply chain performance as it was significant at 99% confidence level (F=52.329, P=0.000).

Further in relation to the coefficient table supplier development practice influenced supply chain performance. Thus, the null hypothesis that Ho: Supplier development practices has no significant effect on the supply chain performance of Kenyan Selected County Governments in Nyanza Region was rejected. As such, the substitution of the model $Y = \beta_0 + \beta_1X_1 + \epsilon$ therefore becomes $Y = 0.803 + 0.765X_1 + \epsilon$

Factors being held constant, a unit increase on Supplier development practice leads to an increase on performance of Supply Chain by 76.5%. Thus supplier development practices has a positive and significant influence on supply chain performance. The study agreed with that of Krause (2012) who confirmed supplier development practices to be of positive and significant effect on performance of both product and service sectors. This further agrees with Ochieng (2014) who affirmed that supplier development had a significant and positive effect on supply chain performance. It disagrees with Wagner (2016) who found supplier development practices had a negative though significant effect on supply chain performance. Onyango (2020) established that supplier development had no effect on performance of supply chain.

5. Conclusion

The study concludes that supplier development practices has significant and positive effect on performance of supply chain in county governments in Kenya. This study contributes to the existing literature on supply chain management and provides practical insights for County governments to capitalize on supplier development practices such as supplier training, supplier financing and supplier innovation in order to enhance performance of supply chain. Policy makers (public procurement regulatory authority) should develop and ensure implementation of policies on supplier development so as to enhance supply chain performance in public organizations.

The current study was based on the effect of supplier development practices on performance of supply chain of selected devolved units in the Counties of Kisumu, Homabay and Migori which were part of the former Nyanza region in Kenya. There is need for the study to be replicated in other regions in Kenya. Further, studies may be done on the effect of other supplier development practices such as supplier involvement, supplier evaluation and feedback, supplier certification, supplier audit, supplier rewards and recognition/incentives.

References

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual,

- strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. <https://doi.org/10.1037//0022-3514.51.6.1173>
- Blonska, A., Storey, C., Rozemeijer, F., Wetzels, M., & de Ruyter, K. (2013). Decomposing the effect of supplier development on relationship benefits: The role of relational capital. *Industrial Marketing Management*, 42(8), 1295–1306. <https://doi.org/10.1016/j.indmar man.2013.06.007>
- Carr, A. S., & Kaynak, H. (2007). Communication methods, information sharing, supplier development and performance: An empirical study of their relationships. *International Journal of Operations and Production Management*, 27(4), 346–370. <https://doi.org/10.1108/01443570710736958>
- Changalima, I. A., Ismail, I. J., & Mchopa, A. D. (2021). A review of the forms, rationale, and challenges of supplier development in public procurement: Lessons for public buyers in Tanzania. *Future Business Journal*, 7(1), 1–10. <https://doi.org/10.1186/s43093-021-00108-2>
- Changalima, I.A., Mchopa, A. D. & Ismail, I. J. (2022) Supplier development and public procurement performance: Does contract management difficulty matter?, *Cogent Business & Management*, 9:1, 2108224, DOI: 10.1080/23311975.2022.2108224
- Cousins, P. & Speckman, J., (2013). Review of Logistics and Supply Chain Relationship Literature and Suggested Research Agenda. *International Journal of Physical Distribution & Logistics Management*, 41(2), 16-31.
- Fincham, J. E. (2008). Response rates and responsiveness for surveys, standards. *Journal. American journal of pharmaceutical education*, 72(2).
- Goldratt, L. E., (1986). The Stakeholder Theory of the Corporation: Concepts, Evidence, and Implications. *Academy of Management*, 4(23) 65-91.
- Kadir, A.K., Tam, O., K. & Hassan, A. (2011). Patterns of Supplier Learning: Case Studies in the Malaysian Automotive Industry, *Asian Academy of Management Journal*, 16(1), 1-20.
- Kemunto, M., (2014). Supplier Financial Analysis: By the Numbers. Institute for Supply Management. *International Journal of Management Science*, 3(2), 13-17.
- Krause, D. R., (2012). Supplier Development Practices: Product-and Service Based Industry Comparisons. *Journal of Supply Chain Management*, 38(4), 80-96.
- Lategau, D. M., (2010). Developing and Implementing Supply Chain Partnerships., *The International Journal of Logistics Management*, 7(1), 1-17.
- Ling, L.Y., & Ling, C. T., (2012). The Effect of Supplier Development Practice on the Public Healthcare Organizational Performance. *International Journal of Business and Social Science*, 3(16), 457-470.
- Lubale, G.W. & Kioko, M. (2016). Effects of supplier development on organizational performance at Kenya Power and Lighting Company Limited. *The Strategic Journal of Business & Change Management*. Vol. 3, Iss. 4 (59), pp 1115-1143. www.strategicjournals.com
- Manojkumar, V. D. & Ravi, K. (2018). Effect of supplier development activities on performance outcomes: An empirical study. Benchmarking: *An International Journal* Vol. 25 No. 2, 2018 pp. 489-516 .DOI 10.1108/BIJ-07-2016-0107
- McKevitt, D. M., & Davis, P. (2014). Supplier development and public procurement: Allies, coaches and bedfellows. *International Journal of Public Sector Management*, 27(7), 550–563. <https://doi.org/10.1108/IJPSM-03-2014-0041>
- Moore, J. & Scheinchoff L., (1998). The Control of Grey Systems. *Syst. Contr Lett Journal*, 1(5), 288- 294.
- Mugenda, O.M., & Mugenda A.G. (2013). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: Acts Press. [42]
- Musyoki, K. B., & Ngugi, E. (2017). Effects of supplier development practices on performance of pharmaceutical suppliers for hospitals in Nairobi City County. *International Journal of Supply Chain Management*, 2(1), 32-56.
- Mwangi, F.W. & Muli, S. (2022). Influence of Supplier Relationship Management on the Performance of Food and Beverage Manufacturing Firms in Kenya: A Survey of Kiambu County. *International Journal of Business and Social Research*. 12(03) 13-30 DOI: <https://doi.org/10.18533/ijbsr.v12i02.1439>

- Mwesigwa, F. M., & Nondi, R. (2018). Effects of supplier development on procurement performance of World Food Programme. *The Strategic Journal of Business and Change Management*, 5 (2), 1184, 1205.
- Nasra, B. H., (2014). *Procurement Performance and Operational Efficiency in Telecommunication Industry in Kenya*. Nairobi, Kenya: University of Nairobi Press.
- Ndanusa, H.S. & Daniel, C.O. (2020). Effect of Supplier Development on Operational Performance of Manufacturing Firms in Nigeria. *International Journal of Managerial Studies and Research (IJMSR)* 8(6)13-25 <http://dx.doi.org/10.20431/2349-0349.0806002>
- Njagi, C. K., & Kinoti, J. (2018). Determinants of electronic procurement implementation in county governments in Kenya. *The Strategic Journal of Business & Change Management*, 5(1), 14 – 27.
- Obal, M., & Lancioni, R. A. (2013). Maximizing buyer–supplier relationships in the Digital Era: Concept and research agenda”, *Industrial Marketing Management*, 42, 851–85.
- Ochieng, V., (2014). Role of Supplier Development in Effectiveness of Procurement Function: A Case of National Cereal and Produce Board. *International Research Journal of Business and Management*, 7(4), 123-134.
- Onyango, R. O. (2020). Effect of supplier relationship management on supply chain performance of the alcoholic beverage companies in Kenya (Master of Business Administration Project, KCA University, Kenya).
- Oromo, F. A. O., & Mwangangi, P. (2017). Effect of supplier development on procurement performance in public sector in Kenya: A case of Kenya Electricity Generating Company Limited (Kengen). *International Journal of Supply Chain Management*, 2(2), 42–59
- Pallant, J. (2005). SPSS survival manual. A step by step guide to data analysis using spss for windows. Retrieved from www.allenandunwin.com/spss.htm.
- PPRA, (2020). *Procurement Performance Based approaches in Kenya (1, 2, 3)*. *JSW*, 7(12), 2779-2786.
- Rajput, A., & Bakar, A. (2012). Elements, benefits and issues of supplier development contextualizing multiple industries. *International Journal of Basic and Applied Scientific Research*, 11(2), 11186-11195.
- Simatupang, B & Sridharau., B. (2012). A Case Study of Supplier Selection for Lean Supply by Using a Mathematical Model, *Logistics Information Management*, 16(6), 451 –459.
- van der Westhuizen, J., & Ntshingila, L. (2020). The effect of supplier selection, supplier development and information sharing on SME's business performance in sedibeng. *International Journal of Economics and Finance Studies*, 12(2), 153–167. <https://doi.org/10.34109/ijefs.202012203>
- Wagner, K (2016). Supply chain management and its impact on purchasing. *Journal of Supply Chain Management*, 36(4), 33–42.
- Wagner, S. (2010). Indirect and direct supplier development: Performance implications of individual and combined effects. *IEEE Transactions on Engineering Management*, 57(4), 536-546
- Wanzala, D. T., & Moronge, M. (2018). Influence of supplier management practices on supply chain performance in County Governments of Kenya: A case of Busia County. *Strategic Journal of Business and Change Management*, 5(4), 1573-1586
- Yan, T., & Dooley, K. (2014). Buyer-supplier collaboration quality in new product development projects. *Journal of Supply Chain Management*, 50(2), 59-83