

## Supplier Development and Procurement Performance of Steel Manufacturing Firms in Nairobi City County, Kenya

Kevin Gudda

PhD. Candidate: School of Business & Economics; Business Management Department,  
Maasai Mara University, Kenya  
Corresponding Author's Email: guddakevin@gmail.com

Dr. Pauline Jeruto Keitany, (PhD)

School of Business & Economics, University of Kabianga, Kenya

Dr. Maurice Ombok, (PhD)

School of Business & Economics; Economics Department, Maasai Mara University, Kenya

To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v13-i9/17874> DOI:10.6007/IJARBSS/v13-i9/17874

**Published Date:** 14 September 2023

### Abstract

**Purpose:** This study examined the effect of supplier development on procurement performance of steel manufacturing firms within Nairobi City County, Kenya.

**Methodology:** Mixed method research design was adopted. A census with a population of 360 employees within the 10 steel firms was conducted. Questionnaires were used to collect primary data. SPSS V.26.0 and SmartPLS 4.0 programs were used to analyze the data and test for both direct and joint effects of the variables.

**Results:** Results showed that supplier selection ( $\beta=0.50$ ,  $t=8.309$ ,  $p<0.05$ ), supplier partnership ( $\beta=0.136$ ,  $t=2.872$ ,  $p<0.05$ ), and supplier evaluation ( $\beta=0.127$ ,  $t=2.884$ ,  $p<0.05$ ) have a positive significant effect on the procurement performance. Supplier training ( $\beta= -0.086$ ,  $t=1.683$ ,  $p>0.05$ ) had an insignificant effect on procurement performance therefore its implications for refining procurement strategies warrant further exploration.

**Unique contribution to policy, theory and practice:** This study enriches both policy and practice by illuminating key strategies that steel manufacturing firms in Nairobi City County, Kenya can adopt to enhance their procurement performance. The implications are far-reaching, offering practitioners valuable insights into the pivotal role of supplier selection, collaborative partnerships, and robust evaluation mechanisms. Moreover, the study opens avenues for further exploration, encouraging deeper research into the nuanced dynamics of supplier training and its potential to contribute to procurement optimization.

**Keywords:** Supplier Selection, Supplier Evaluation, Supplier Training, Supplier Partnership, Procurement Performance, Supplier Development

### **Introduction**

Supplier development is any effort by a procuring entity to enhance the performance and capabilities of its suppliers (Kinyua, 2017). This can be realized by collaborating with suppliers to increase their capabilities. The buyer organization and suppliers collaborate to expand the supplier's capabilities in either the following areas: delivery lead time, cost, technological advancement, quality, safety, environmental responsibility, financial viability, and managerial capability (Glock et al., 2017). However, supplier faces a number of challenges that inhibit the achievement of the desired goals. These may include lack of supplier commitment, inadequate financial resources, lack of technical capability, and resistance to change, among other factors (Changalima et al., 2021).

According to Hanlin & Hanlin (2012), to tackle these obstacles, the buyer organization should employ a range of strategies, which include identifying, evaluating, and choosing suppliers to reduce the supplier base. Additionally, they should select key suppliers to be considered for process and product development enhancements and investments, while also fostering advanced buyer-supplier collaborative relationships.

### **Problem Statement**

According to Ngechi (2017), the Kenyan steel industry forms 13% of the country's manufacturing sector, which significantly impacts GDP growth. This was illustrated in the Kenya Association of Manufacturers (KAM) (2018) report, which contends that steel industries are the backbone of economic activities due to the demand for steel products. According to Kamer (2022); KPMG (2020), steel manufacturing companies' production capacity in Kenya has declined to 42 percent in the last two years.

The 2019 Kenyan economic survey indicates that the country spent Shs. 97.7 billion on the import of iron ore and steel and exported finished steel and iron products valued at only Shs. 16.3 billion (Kariuki, 2019). The researcher contends that these inefficiencies could be due to ineffective supplier development strategies. Several studies have been conducted on how selected supplier development strategies impact the overall firm performance of manufacturers in Kenya (Waluke, 2018; Mwale, 2018; Kivite, 2015). Despite these researchers contributing significant knowledge on the concept, the fundamental question as to whether supplier development translates into a competitive advantage for steel manufacturers in improving their procurement performance remains pending. This gave the impetus to undertake an empirical study to determine the effect of supplier development on procurement performance of steel manufacturing firms in Nairobi City County, Kenya.

### **Objective of the Study**

The general objective of the study was to investigate the effects of supplier development on the procurement performance of steel manufacturing firms in Nairobi City County, Kenya.

### **Hypotheses of the Study**

H<sub>01</sub>: Supplier selection has no significant effect on the procurement performance of steel manufacturing firms in Nairobi City County, Kenya.

H<sub>02</sub>: Supplier partnership has no significant effect on the procurement performance of steel manufacturing firms in Nairobi City County, Kenya.

H<sub>03</sub>: Supplier training has no significant effect on the procurement performance of steel manufacturing firms in Nairobi City County, Kenya.

H<sub>04</sub>: Supplier evaluation has no significant effect on the procurement performance of steel manufacturing firms in Nairobi City County, Kenya.

**Literature Review**

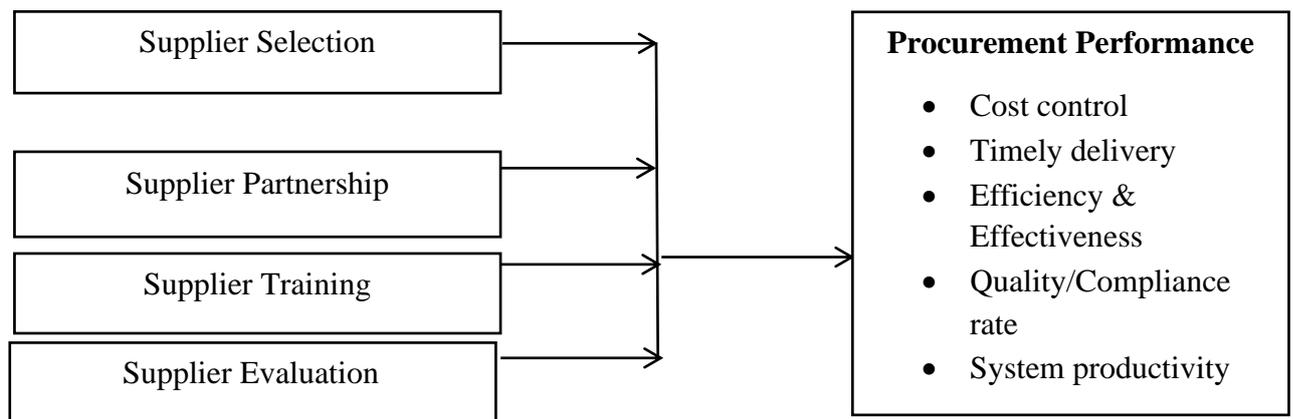
**Resource-Based View Theory**

According to Olukundun (2014), Resource-based view (RBV) theory is a managerial concept employed to identify the strategic resources that a company can leverage to gain a sustainable competitive edge over other firms in the same industry. According to Deming (2020), the theory was originally proposed by Birger Wernerfelt in the paper “The Resource-Based View of the Firm,” the theory was later refined and developed by Jay Barney in the paper “Firm Resources and Sustained Competitive advantage” in 1991.

RBV is the main theory of this study covering all the supplier development strategies investigated namely; supplier selection, supplier partnership, supplier training, supplier evaluation, and supplier integration.

**Conceptual Framework**

The purpose of using a conceptual framework is to give a clear image of the correlation between the variables of the study. Supplier development was the independent variable and procurement performance being the dependent variable.



**Independent Variable**

**Dependent Variable**

Fig 1: Conceptual Framework

Source: Researcher, 2023

**Empirical Review**

**Supplier Selection**

According to Taherdoost & Brard (2019), supplier selection is a procedure through which suppliers undergo inspection, assessment, and finally selected to become part of the organization’s supply chain players. The selection process encompasses a myriad of activities used to appraise the capabilities of suppliers and select them to configure the procuring entities’ chain for long-term competitive advantage (Kariuki et al., 2018). According to Rodriguez (2019) the choice of suppliers can affect the quality, pricing, availability of an organization’s products, and delivery reliability. Selection of suppliers is characteristically viewed to play an important role in organizational performance.

### **Supplier Partnership**

Supplier partnership is the relationship commitment over an extended time between the procuring firm and supplier to collaborate for the mutual benefit of both entities. It encompasses exchange of relevant information, acknowledgment of risks, rewarding the relationship, contractor training, and non-adversarial alliances with suppliers (Kwamboka, 2019). These undertakings positively impact the procuring entities' overall performance through improvement of supplier capabilities and performance. Partnering with suppliers has numerous benefits, which include an augmented procurement process due to sharing of ideas that improves operations (Sedyaningrum, Prasetya, & Mawardi, 2019).

### **Supplier Training**

Training is the process of enhancing a person's abilities, know-how, and comprehension for carrying out a specific task. Training of suppliers is intended to build the capacity and capabilities of suppliers to support growth and improve competitiveness (Kibwana & Kavale, 2019). According to Modi and Mabert (2017) supplier training on just-in-time delivery, quality improvement techniques, and other essential performance areas warrants that suppliers understand what is expected of them by the procuring firm. Additionally, supplier training ensures consistency, efficiency, and effectiveness which improve procurement performance.

### **Supplier Evaluation**

Evaluation of suppliers is a deliberate strategy or procedure designed to determine the importance of or the impact made by the supplier in meeting the expectations of the buying organization. It may similarly be significant in determining the importance of the supplier to the firm's supply base structure (Baily et al., 2014). One of the fundamental objectives of supplier evaluation is to monitor and measure the performance of the suppliers to ensure continuous performance improvement, minimize costs as well as reduce risks. Yun (2018) discusses 5 key criteria for supplier evaluation. These are long-term relationship, supplier quality commitment, financial stability, total quality performance and supplier competence.

### **Procurement Performance**

According to Hussein (2014) Procurement performance is a metric used to gauge the procurement function's ability to achieve its objectives and goals while minimizing costs. Procurement performance can be reviewed in two major facets; efficiency and effectiveness. According to Nawi & Halipah (2017), effectiveness focusses on the level to which the outlined objectives and goals are being met. Procurement effectiveness denotes the interrelationship between the planned and actual performance. Procurement efficiency on the other hand refers to the relationship between planned and available resources aimed at achieving established objectives and associated activities, encompassing actual and projected costs.

## **Methodology**

### **Design and Data Collection**

A mixed-method research design was adopted in this study. A census was conducted since the desired data analysis technique of partial least squares grounded structural equation model necessitates a sample size greater than 100 respondents (Byrne, 2010). Both primary and secondary data were collected during the study. A questionnaire was used to collect the

primary data whereas published sources such as industry reports and journals were used to collect secondary data.

### Population and Sample

The focus of the study was at the organization level with the unit of analysis being the steel manufacturing firms in Nairobi City County, Kenya. Focus was on 10 firms picked from the Kenya (2021) list of steel manufacturing firms. All 360 employees drawn from procurement, finance, warehousing and stores, dispatch & logistics as well as sales departments formed the unit of observation.

### Data Analysis

Data analysis was conducted by the aid of statistical package for social science (SPSS V26.0) to for descriptive statistics. SmartPLS 4.0 was used to measure the latent variables using a set of indicators that were selected using results from factor analysis.

### Results and Discussions4.1 Response Rate

The researcher issued 360 questionnaires of which 288 were returned. Explanations given included complicated organizational policies and coldshouldering by respondents to fill the dropped questionnaires.

Table 1

*Response Rate*

<b>Response</b>	<b>Frequency</b>	<b>Percent</b>
Returned	288	80%
Unreturned	72	20%
<b>Total</b>	<b>360</b>	<b>100%</b>

Source: Researcher, 2023

### Factor Analysis

Factor Analysis (FA) was utilized to explore how the variables are interconnected in relation to their shared underlying dimensions. According to Bollen (1989); Mueller & Hancock (2015), Factor Analysis, as a theory-based sub-method of Structural Equation Modeling (SEM), enables the evaluation of the degree to which observed data align with theoretically established constructs.

To extract factors, the Principal Component Analysis (PCA) method was employed and the correlation matrix adopted as input. According to Hair et al., (2010), the number of factors extracted is decided by identifying factors whose Eigen values are greater than 0.5. The results of a varimax with Kaiser Normalization of the solution are shown in Tables, 2, 3, 4 and 5. When loadings less than 0.5 were excluded, the analysis yielded factor solutions with a simple structure (factor loadings => 0.5).

**Factor Analysis of Supplier Selection Indicators**

Table 2

*Rotated Component Matrix for Supplier Selection*

	<b>Rotated Component Matrix<sup>a</sup></b>			
	<b>Component</b>			
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Company supplier selection is competitive and fair	.263	-.033	-.078	.686
Company supplier selection process exhibits honesty and accountability	.717	-.120	.335	.037
Procured products meets the necessary quality specifications	.634	.511	.024	-.051
Procured products have little to no defects	.612	.410	.086	.165
Litigation and performance history of suppliers is critical during selection	.042	.769	.178	.254
Selection criteria prefers those with shorter lead times	-.047	.863	.061	-.135
Supplier quality commitment is taken into consideration during selection	.012	.070	.844	.075
Company selects suppliers who have invested in IT	.045	.134	.785	-.024
Selection criteria prefers those with history of high performance and positive market reputation	-.728	.173	.337	.047
Selection criteria prefers those with lowest total cost of ownership	-.220	.107	.139	.816

**Source: Researcher, 2023****Key:**

Kaiser Meyer-Olkin (KMO)=0.479;

Rotation Method=Varimax with Kaiser Normalization;

Total Explained Variance=66.375%;

Approx. Chi-Square=454.399(0.000);

Bartlett's Test=( $\chi^2=454.399$ , df= 45, P<0.001);

\*Rotation converged in 5 iterations.

**The selected components were renamed as:**

Factor 1: Accountability and Product Quality.

Factor 2: Supplier Reputation.

Factor 3: Supplier performance and technology capability.

Factor 4: Product Pricing.

**Factor Analysis of Supplier Partnership Indicators**

Table 3

*Rotated Component Matrix for Supplier Partnership*

<b>Rotated Component Matrix<sup>a</sup></b>		
	<b>Component</b>	
	<b>1</b>	<b>2</b>
There is high level of commitment between our company and our suppliers	.737	.132
The company maintains long term relationships with its suppliers	.030	.755
Our firm undertakes joint ventures with suppliers in research and development	-.236	.690
The company shares business knowledge and exchanges information with suppliers	-.046	-.461
The company and its suppliers keep share information about changes	.713	-.373
Key suppliers are included in goal setting activities and planning	.849	-.002
Information exchanged with suppliers is complete, timely, accurate and adequate	.763	-.375
The company provides technical training to its suppliers operational staff	.727	.070

**Source: Researcher, 2023****Key**

Kaiser Meyer-Olkin (KMO)= 0.759;

Rotation Method = Varimax with Kaiser Normalization;

Total Explained Variance = 56.287%;

Approx. Chi-Square =469.693(0.000);

Bartlett's Test = ( $\chi^2=469.693$ , df= 28, P<0.001);

\*Rotation converged in 3 iterations

**The selected components were renamed as**

Factor 1: Information sharing and collaboration.

Factor 2: Joint ventures and incentives.

**Factor Analysis of Supplier Training Indicators**

Table 4

*Rotated Component for Supplier Training*

<b>Rotated Component Matrix<sup>a</sup></b>				
	<b>Component</b>			
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
The company offers training to its key suppliers	.748	.203	.129	.186
The company continuously trains employees involved in procurement	-.158	.705	.239	-.164
The company encourages individual learning	.270	.195	.691	-.088
Suppliers are taken through quality requirement trainings	.127	-.097	.068	.793
Suppliers are educated on the requirements of the company	.204	.542	-.286	.126
The company organizes seminars and conferences to train procurement staff	-.091	-.158	.691	.145
The company assists its suppliers in acquiring certification from agencies	-.078	.443	-.107	.525
Training suppliers has enhanced flexibility in operations	.708	-.236	.052	-.012
The trained staff in the supply chain department are promoted and awarded	.411	.041	-.132	-.348

Source: Researcher, 2023

**Key:** Kaiser Meyer-Olkin (KMO)=0.506;

Rotation Method=Varimax with Kaiser Normalization;

Total Explained Variance=53.726%;

Approx. Chi-Square=51.379(0.000);

Bartlett's Test=( $\chi^2=51.379$ , df= 36, P<0.001);

\*Rotation converged in 14 iterations

**The selected components were renamed as**

Factor 1: Supplier assisted training.

Factor 2: On-job training.

Factor 3: Seminars and conferences.

Factor 4: Quality management training.

**Factor Analysis of Supplier Evaluation Indicators**

Table 5

*Rotated Component Matrix for Supplier Evaluation*

<b>Rotated Component Matrix<sup>a</sup></b>				
	<b>Component</b>			
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Supplier performance is measured in terms of delivery lead time, quality and costs.	-.074	.724	.154	-.015
The supplier evaluation process is guided by the ability of the supplier to meet company objectives	.012	.767	-.235	.049
The procurement personnel understand the objectives of our supplier evaluation system	.217	.213	-.712	-.181
Supplier finances are considered during the evaluation process as a measure to improve procurement performance	.762	.040	-.023	.192
The supplier identification criteria ensures that only those suppliers with a strong financial standing are selected	.170	.144	.224	.772
The company evaluation criteria includes suppliers that meet ISO standards	.185	.066	.532	-.041
The company communicates supplier evaluation results to the suppliers	.247	.239	.420	-.579
The company sets and communicates challenging performance goals to suppliers	.761	-.115	.104	-.139

Source: Researcher, 2023

**Key:** Kaiser Meyer-Olkin (KMO)=0.470;

Rotation Method=Varimax with Kaiser Normalization;

Total Explained Variance=59.042%;

Approx. Chi-Square=47.691(0.000);

Bartlett's Test=( $\chi^2=47.691$ , df= 28, P<0.001);

\*Rotation converged in 7 iterations

**The selected components were renamed as**

Factor 1: Financial stability and competence.

Factor 2: Supplier quality performance.

Factor 3: Supplier sustainable practices.

Factor 4: Supplier financial capacity.

## Factor Analysis of Procurement Performance Indicators

Table 6

*Rotated Component Matrix for Procurement Performance*

<b>Rotated Component Matrix<sup>a</sup></b>			
	<b>Component</b>		
	<b>1</b>	<b>2</b>	<b>3</b>
Conducting training for our suppliers has minimized our product costs	.585	-.041	.046
Training programs for suppliers has enhanced our product quality	.693	.119	-.089
Training our suppliers has increased the promptness at which products are delivered once ordered	.721	.057	.214
Selection criteria of suppliers has enabled the company to enhance transparency hence reduction in corruption related costs	.458	.216	.421
Supplier selection standards has significantly minimized failure costs	.034	.770	-.113
Information sharing with suppliers has led to reduced return of our products by customers due to defects	.031	.729	.261
Management of supplier relationships has led to continuous on-time delivery	.343	.502	.140
Supplier development practices in our company have led to efficiency effectiveness in procurement	-.386	.456	.334
Information sharing with suppliers has led to improved product quality	-.069	.008	.830
Better communication to suppliers has lowered product costs and enhanced operational flexibility	.228	.167	.688

Source: Researcher, 2023

**Key:** Kaiser Meyer-Olkin (KMO)=0.653;

Rotation Method=Varimax with Kaiser Normalization;

Total Explained Variance=51.601%;

Approx. Chi-Square=275.412(0.000);

Bartlett's Test=( $\chi^2=275.412$ , df= 45, P<0.001);

\*Rotation converged in 4 iterations

**The selected components were renamed as:**

Factor 1: **Product quality and compliance.**

Factor 2: **Product cost and defect rate.**

Factor 3: **Compliance rate.**

**Structural Equation Model Analysis**

In order to answer the research hypothesis, the study fitted two sets of partial least squares structural equation models to assist in determining how the latent variables influence the performance of procurement. The results of the fitted model were as illustrated in Fig. 2.

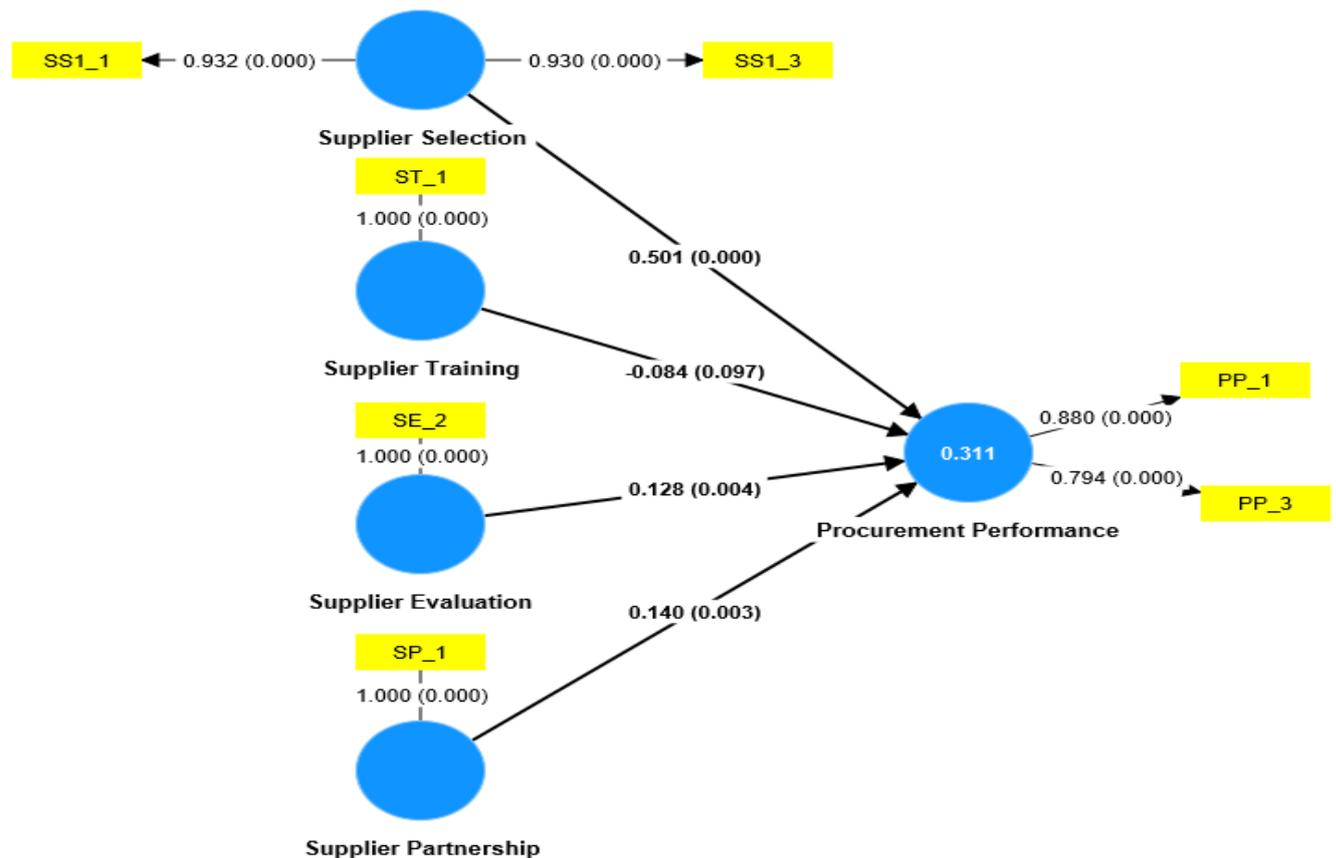


Figure 2: PLS-SEM Path Model Showing the Relationship between Supplier Development and Procurement Performance.

### Model Diagnostics

The study diagnosed the model to assess if it was indeed a valid SEM model. The study looked into indicator reliability, internal consistency reliability, convergent validity, discriminant validity of the model and Multi-collinearity. The results of the diagnostics were as discussed below;

### Indicator Reliability

Factor loadings also referred to as validity coefficients can be used to show how much of the observed variable score variance is valid (Schumacker & Lomax, 2016). Item validity in this study is shown by the factor loadings in Fig. 2. PLS-SEM model indicators are considered to be valid when the loading of the model is 0.7 and above. From the results presented in Table 8, all the indicator loadings were determined to be above 0.7, this shows that all the indicators were reliable in signifying the respective latent variables and is in agreement with Hulland, (1999) who stated that loadings of 0.4 is acceptable but 0.70 or higher are preferred for exploratory research. The indicator loadings for the latent variables are presented in Table 7.

Table 7

*Outer Loadings of Latent Constructs*

Latent Construct	Outer Loading
PP_1 <- Procurement Performance	0.881
PP_3 <- Procurement Performance	0.793
SE_2 <- Supplier Evaluation	1.000
SP_1 <- Supplier Partnership	1.000
SS1_1 <- Supplier Selection	0.927
SS1_3 <- Supplier Selection	0.936
ST_1 <- Supplier Training	1.000

Source: Researcher, 2023

**Internal Consistency Reliability**

The internal consistency reliability of the latent variables which were measured by more than 1 indicator (Supplier Selection and Procurement Performance) was measured by the composite reliability statistic. Composite reliability is estimated based on the factor loading analysis (Lerdpornkulrat et al., 2017). Composite reliability should be 0.7 or higher (Bagozzi & Yi, 1988; Tentama & Anindita, 2020). The results of construct validity and reliability are shown in Table 8.

Table 8

*Construct Reliability and Validity*

Latent Construct	Composite reliability (rho_c)
Procurement Performance	0.825
Supplier Selection	0.929

Source: Researcher, 2023

**Convergent Validity**

The recommended value to attain this validity needs to be equal to or larger than 0.5 (Bagozzi et al, 1988; Ahmad, 2016). Convergent validity of the latent variables which were measured by more than 1 indicator (Supplier Selection and Procurement Performance) was measured by Average Variance Extract (AVE) statistic. The results of the AVE statistic are shown in Table 9.

Table 9

*AVE Statistic for Latent Variables*

Latent Construct	Average Variance Extracted (AVE)
Procurement Performance	0.703
Supplier Selection	0.868

Source: Researcher, 2023

**Discriminant Validity**

Discriminant validity of the latent variables was measured using the Fornell and Larcker (1981) criterion which suggests that discriminant validity can be established by comparing the square root of the Average Variance Extracted (AVE) in each latent variable with the correlation values among the latent variables. When the square root of AVE is greater than the other

correlation values, discriminant validity is supported. The results were as illustrated in Table 10;

Table 10  
*Discriminant Validity*

	<b>Procurement Performance</b>	<b>Supplier Evaluation</b>	<b>Supplier Partnership</b>	<b>Supplier Selection</b>	<b>Supplier Training</b>
<b>Procurement Performance</b>	<b>0.838</b>				
<b>Supplier Evaluation</b>	0.097	<b>1.000</b>			
<b>Supplier Partnership</b>	0.235	-0.011	<b>1.000</b>		
<b>Supplier Selection</b>	0.512	-0.050	0.138	<b>0.931</b>	
<b>Supplier Training</b>	-0.112	0.054	-0.328	0.022	<b>1.000</b>

Source: Researcher, 2023

The results in Table 10 show that the square root value of the diagonal AVE is greater than other correlation coefficient values in the matrix. Detected by heterotrait–monotrait analysis, shows that all values are less than 0.9, indicating good discriminant validity (Henseler et al, 2015).

### Multi-collinearity

The model assumes that there was no multi—collinearity between the latent variables in the model. To measure this assumption, the study looked into the Variance Inflation Factor (VIF) for the independent variables. The results were as illustrated in Table 11.

Table 11  
*Variance Inflation Factor*

<b>Independent Latent Variables</b>	<b>TOL</b>	<b>VIF</b>
Supplier Evaluation	0.993996	1.006
Supplier Partnership	0.87055	1.148
Supplier Selection	0.97289	1.028
Supplier Training	0.88496	1.130

Source: Researcher, 2023

As a rule of thumb, we need to have a VIF of 5 or lower (i.e., Tolerance level of 0.2 or higher) to avoid the collinearity problem (Hair et al., 2011). Therefore, the results in Table 11 illustrate that all the VIF statistics for the independent latent variables were less than 5; the results show that there is no multi-collinearity between the independent variables.

Given that the model satisfied all the reliability and validity assumptions, the structural equation model (SEM) adopted was a valid model and conclusions made from the model were considered to be valid.

### Hypothesis Testing

Using the PLS-SEM model in Fig. 2, the study tested for the effects of the supplier development on procurement performance. The test of hypotheses results based on the Hotelling's t-test was as illustrated in Table 12.

Table 12

#### *Hypotheses Test Results*

Path Analysis	Path Coefficient ( $\beta$ )	T-Value	p-value	Hypothesis
SS $\rightarrow$ PP	0.500	8.309	0.000	Rejected
ST $\rightarrow$ PP	-0.086	1.683	0.093	Accepted
SE $\rightarrow$ PP	0.127	2.884	0.004	Rejected
SP $\rightarrow$ PP	0.136	2.872	0.004	Rejected

Source: Researcher, 2023

### Effect of Supplier Selection on Procurement Performance

The first hypothesis of the study was stated as;

**H01:** *supplier selection has no significant effect on the procurement performance of steel manufacturing firms in Nairobi City County, Kenya.*

The results indicate that there was sufficient evidence to reject the **H01** ( $\beta=0.50$ ,  $t=8.309$ ,  $p<0.05$ ). Therefore, it implies that supplier selection had a significant positive effect on procurement performance. These findings concur with Manyega and Okibo (2015) that supplier selection is critical in enhancing the procuring entities' capabilities, improving the quality of their product, and enhancing their performance. This implies that supplier selection is a strong indicator of procurement performance of steel manufacturing firms in Nairobi City County, Kenya.

### Effect of Supplier Partnership on Procurement Performance

The second hypothesis of the study was stated as;

**H02:** *supplier partnership has no significant effect on the procurement performance of steel manufacturing firms in Nairobi City County, Kenya.*

The results showed that there was sufficient evidence to reject **H02** ( $\beta=0.136$ ,  $t=2.872$ ,  $p<0.05$ ). The result meant that supplier partnership had a positive significant effect on procurement performance of steel manufacturing firms in Kenya. The finding underscores the positive and significant effect of supplier partnership on procurement performance and is consistent with previous studies including Mawardi et al., 2019 that primarily; information sharing has several effects on procurement performance including optimized processes that improve operations and procurement performance.

### Effect of Supplier Training on Procurement Performance

The third hypothesis of the study was stated as

**H03:** *supplier training has no significant effect on the procurement performance of steel manufacturing firms in Nairobi City County, Kenya.*

The results indicate that there is evidence to accept  $H_{03}$  ( $\beta = -0.086$ ,  $t = 1.683$ ,  $p > 0.05$ ). The findings imply that supplier training did not have any significant effect on procurement performance of steel manufacturing firms in Nairobi City County, Kenya. It therefore means that supplier training activities do not really improve the procurement performance of steel manufacturing firms in Nairobi City County, Kenya. This implies that investing resources in supplier training programs may not lead to measurable improvements in procurement outcomes for the steel manufacturing firms. These results are contrary to those of Nasiche et al (2020) who aver that there is a strong positive correlation between supplier assisted as well as quality management training and the performance of sugarcane processing firms.

### **Effect of Supplier Evaluation on Procurement Performance**

The fourth hypothesis stated that:

**H04;** *supplier partnership has no significant effect on the procurement performance of steel manufacturing firms in Nairobi City County, Kenya.*

The results showed that there was sufficient evidence to reject  $H_{04}$  ( $\beta = 0.127$ ,  $t = 2.884$ ,  $p < 0.05$ ). The findings imply that supplier evaluation had a positive significant effect on procurement performance of steel manufacturing firms in Nairobi City County, Kenya.

The finding is consistent with Ouko and Juma (2020); Yun (2018) and Mutai and Okello (2016) that supplier quality commitment, financial stability, and competence have a significant effect on procurement performance. Steel manufacturing firms therefore need to put in place proper evaluation metrics that align with their specific procurement goals and objectives.

### **Conclusions and Recommendations**

Based on the findings of the study, it can be inferred that steel manufacturing firms would have efficient and effective procurement functions if they adopt proper supplier development strategies.

Steel manufacturing firms need to highlight the importance of robust supplier selection processes, effective communication and collaboration with suppliers, and ongoing performance monitoring and risk management to enhance procurement performance.

It is important for steel manufacturing firms to understand the importance of supplier partnership in enhancing procurement performance particularly in terms of cost savings, quality improvement and supply chain resilience.

Supplier training in this case was found not to improve the procurement performance of steel manufacturing firms in Nairobi City County, Kenya. It would however be in the best interest of the steel manufacturing firms to embrace supplier training by reviewing some of the best supplier training practices from other sectors including methods and topics covered, as well as the duration and frequency of the trainings.

Since supplier evaluation influences procurement performance steel manufacturing firms in Nairobi City County, Kenya should invest in robust supplier evaluation processes to take into account various factors such as supplier quality, pricing, and customer service and delivery performance.

### **Implications of the Study**

The findings and conclusions of this study hold significant implications for the procurement practices and strategic considerations of steel manufacturing firms operating within Nairobi

City County, Kenya. The insights gleaned from the research shed light on key areas where these firms can enhance their procurement functions and overall operational efficiency. The study underscores the paramount importance of adopting robust supplier development strategies as a cornerstone of efficient and effective procurement functions. Steel manufacturing firms that proactively engage in supplier development are poised to benefit from improved procurement outcomes. By prioritizing aspects such as supplier selection, communication, collaboration, and performance monitoring, these firms can elevate their procurement performance and strengthen their competitive positioning in the market. While the immediate impact of supplier training on procurement performance was not statistically significant in the context of Nairobi City County, the study recommends that steel manufacturing firms consider a more comprehensive approach to supplier training. Drawing inspiration from successful supplier training practices across various sectors, these firms can refine their training programs by examining methodologies, topics covered, duration, and frequency. By doing so, they can potentially unlock the latent benefits of supplier training and contribute to long-term procurement excellence.

### References

- Ahmad, S. (2016) Assessing the Validity and Reliability of a Measurement Model in Structural Equation Modeling (SEM). *British Journal of Mathematics & Computer Science*
- Baily, P., Farmer, D., Jessop, D., & Jones, D. (2014). *Purchasing principles and management*. Harlow: Pearson Education Limited.
- Bagozzi, R. P., Yi, T. (1988). On the evaluation of structural equation models. *J. Acad. Mark. Sci.* 1988, 16, 74–94.
- Bollen, K. A. (1989). *Structural Equations with latent variables*. John Wiley & Sons. <https://doi.org/10.1002/9781118619179>
- Byrne, B. M. (2010). *Structural Equation Modeling with Amos: Basic Concepts, Applications, and Programming* (2nd ed.). New York: Taylor and Francis Group.
- Changalima, I. A., Ismail, s. J., & Mchopa, A. (2021). A review of the forms, rationale, and challenges of supplier development in public procurement: lessons for public buyers in Tanzania. *Future Business Journal*, 63(7), 1-10. doi:10.1186/s43093-021-00108-2
- Deming, E. (2020). *Resource Based View of the Firm*. Retrieved from <https://design4services.com/concepts/resource-based-view-of-the-firm/>
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics.
- Glock, C. H., Grosse, E., & Ries, J. (2017). Decision support models for supplier development: Systematic literature review and research agenda. *International Journal of Production Economics*, 193, 798-812. doi:10.1016/j.ijpe.2017.08.025
- Hair, J. F., Black, W. C., Babin, B. J., and Anderson, R. E. (2010) *Multivariate Data Analysis*. 7th Edition, Pearson, New York.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139-152.
- Hanlin, R., & Hanlin, C. (2012). The view from below: „lock-in“ and local procurement in the African gold mining sector. *Resources Policy*, 37(4), 468-474.
- Henseler, J.; Ringle, C.M.; Sarstedt, M. (2015) A new criterion for assessing discriminant validity in variance-based structural equation modeling. *J. Acad. Mark. Sci.*, 43, 115–135.

- Hulland, J. S. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic Management Journal*, 20(4), 195–204.
- Hussein, N. (2014). *Procurement Performance and Operational Efficiency in Telecommunication Industry in Kenya*. Master Thesis, University of Nairobi.
- Kariuki, J. (2019). Steel makers seek Sh 40bn payment from retailers. Retrieved from <https://www.businessdailyafrica.com/bd/markets/capital-markets/steel-makers-seek-sh40bn-payment-from-retailers-2248484>
- Kariuki, J. G., Makokha, E. N., & Namusonge, G. S. (2018). Influence of Supplier Selection on Procurement Performance in Technical Institutions in Trans-Nzoia County in Kenya. *International Journal of Recent Research in Social Sciences and Humanities (IJRSSH)*, 5(4), 11-22. Retrieved from <https://www.paperpublications.org/upload/book/Influence%20of%20Supplier-1239.pdf>
- Kibwana, E. D., & Kavale, S. (2019). Effects of Supplier Development on Procurement Performance of Kenya Ports Authority. *International Journal of Academics & Research*, 2(1). Retrieved from 10.32898/ibmj.01/2.1article16
- Kinyua, R. N. (2017). Supplier Development Strategies and Procurement Performance of County Government in Kenya. Nairobi, Kenya: Master Thesis, University of Nairobi.
- Kivite, J. (2015). *Supplier Development and Operational Performance of Manufacturing Firms in Nairobi City County*. Nairobi, Kenya: Master Thesis, University of Nairobi.
- Kwamboka, M. E. (2019). *Supplier Partnership and Customer Satisfaction. A Case Study of the Sarova Hotels*. Master Thesis, University of Nairobi. Retrieved from [http://erepository.uonbi.ac.ke/bitstream/handle/11295/109853/Maguto%20E%20K\\_Supplier%20Partnerships%20and%20Customer%20Satisfaction.%20A%20Case%20Study%20of%20the%20Sarova%20Hotels.pdf?sequence=1&isAllowed=y](http://erepository.uonbi.ac.ke/bitstream/handle/11295/109853/Maguto%20E%20K_Supplier%20Partnerships%20and%20Customer%20Satisfaction.%20A%20Case%20Study%20of%20the%20Sarova%20Hotels.pdf?sequence=1&isAllowed=y)
- Lerdpornkulrat, T., Poondej, C., & Koul, R. (2017). Construct Reliability and Validity of the Shortened Version of Information Seeking Behaviour Scale. *International Journal of Information and Communication Technology Education*, 13(2), 27-37
- Mwale, H. (2018). *Supply Chain Management Practices and Organizational Performance of Large Manufacturing Firms in Nairobi, Kenya*. Nairobi, Kenya: University of Nairobi.
- Nawi, M. N., & Halipah, I. (2017). Procurement performance and supplier management measurement issues: A case of Malaysian private company. *International Journal of Supply Chain Management*, 1-7.
- Manyega, V. B., & Okibo, W. (2015). Effects of Supplier Selection on Procurement Performance of Public Institutions; A Case Study of Kisii County, Kenya. *International Journal of Economics, Commerce and Management*, 9(3), 595-610. Retrieved from <http://ijecm.co.uk/wp-content/uploads/2015/09/3940.pdf>
- Modi, S. B., & Mabert, V. (2017). Supplier Development: Improving Supplier Performance Through Knowledge Transfer. *Journal of Operations Management*, 25(1), 42-64. doi:10.1016/j.jom.2006.02.001
- Mueller, R.O., & Hancock, G.R. (2015). Factor Analysis and Latent Structure Analysis: Confirmatory Factor Analysis.
- Mutai, J. k., & Okello, B. (2016). Effects of Supplier Evaluation on Procurement Performance of Public Universities in Kenya. *International Journal of Economics, Finance and Management Sciences*, 4(3), 1-98. doi:10.11648/j.ijefm.20160403.12

- Nasiche, F., Ngugi, K., Kiarie, D., & Odhiambo, R. (2020). Influence of Supplier Training on Performance of Sugarcane Enterprises in Kenya. *Global Journal of Management and Business*, 20(17), 1-14. Retrieved from <https://journalofbusiness.org/index.php/GJMBR/article/view/3285>
- Ouko, S., & Juma, D. (2020). Effect of Supplier Evaluation on Performance of the Procurement Function of Private Health Institutions in Kisumu County, Kenya. *Strategic Journal of Business & Change Management*, 7(2), 40-57.
- Olukundun, M. (2014). *The link between the resource-based theory and corporate politics* . Retrieved from <https://www.grin.com/document/286623>
- Rodriguez, D. (2019). *Four Basic Stages of Supplier Selection* . Retrieved from <https://precoro.com/blog/four-basic-stages-of-supplier-selection/>
- Schumacker, R. E., & Lomax, R. G. (2016). *A Beginner's Guide to Structural Equation Modeling* (4th ed ed.). New York, NY, USA: Routledge
- Sedyaningrum, M., Prasetya, A., & Mawardi, M. (2019). The Effect of Strategic Supplier Partnership on Supply Chain Integration, Supply Chain Performance and Farmers Performance. *Wacana*, 22(1), 1-9.
- Taherdoost, H., & Brard, A. (2019). Analyzing the Process of Supplier Selection Criteria and Methods. *Procedia Manufacturing*, 32(1), 1024-1034. doi:<https://doi.org/10.1016/j.promfg.2019.02.317>
- Tentama, F., & Anindita, W.D. (2020). Employability Scale: Construct Validity and Reliability. *International Journal of Scientific and Technology Research*, 9(4), 31-66-3170
- Waluke, S. (2018). *Effect of Supplier Development Management Practices on Organization Performance in Manufacturing Firms in Kenya*. Kitale, Kenya: Moi University.
- Yun, S. (2018). *5 Key Criteria for Supplier Evaluation in the Construction Sector*. Retrieved from <https://publication.sipmm.edu.sg/5-key-criteria-supplier-evaluation-construction-sector/>