

# **E-Procurement Management Practices and Procurement Performance of Public hospitals in Lagos state, Nigeria: The Mediating Role of Supply Chain Performance**

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## **Abstract**

The study investigated the mediating influence of supply chain performance on the association of e-procurement management practices and procurement performance of Public hospitals in Lagos state. The study employed descriptive research design. Primary data were gathered through administration of questionnaire. In selecting ample size, multi-stage sampling technique was adopted for the study. First stage used a census survey to select 5 public hospitals comprising Federal Medical Center, Specialist Hospitals and University Teaching Hospitals in Lagos state. The second stage involved the selection of respondents from the units such as: account, internal audit, store, ICT, procurement office, supply chain Mangers, general administration, pharmacy and procurement committee chair in each of the 5 hospitals purposively selected for this study totaling 50 respondents. Data obtained were analysed using inferential statistics. The findings showed that supply chain performance mediated the relationship between e-procurement management practices and procurement performance of the selected hospitals in Lagos state.

**Keywords:** Supply chain performance, e-Procurement management, Procurement Performance.

## **Introduction**

Considering trading across borders in the modern times, activities conducted within supply chain have become complex and sophisticated. In a situation like this, it is no longer fashionable for businesses to achieve competitive advantage by relying on traditional elements of supply chain. Electric procurement popularly known as e-procurement is an enabler in supply chain management which electronically enhances the purchases of an organization in such a way that buyers and suppliers are integrated through relevant information technology systems (Kalakota & Robimson, 2014). Electric procurement is the application of web-based platforms designed to undertake individual or organizational procurement processes including but not limited to sourcing, negotiation, ordering, receipt, payment and post-purchase review in the supply chain of a going concern (Ibem, Aduwo, Tunji-Olayemi, Ayo-vaughan & Uwakonye 2016).

The Nigerian Public Procurement Act 2007 as amended in 2019 provided for the institution of e-procurement model through the deployment of information communication technology in order to curtail personal interface in the procurement system in accordance with global best practices (PPA, 2019). The Act covers all procurement of goods and services undertaken by Federal Ministries and Agencies including hospitals and other health institutions in Nigeria (PPA, 2019). In addition, some state Governments in the southwestern Nigeria such as Lagos state, had disclosed through her Public Procurement Agency that it would commence the implementation of e-tendering, e-publishing/notification, e-bidding and e-award modules of the procurement solution with effect from September 2019. The Lagos state Public Procurement Agency further stated that the deployment of the four e-solution modules would commence with three pilot ministries- health, education and works and infrastructure. Since commencement of e-procurement within three pilot ministries in Lagos much has not been done by scholars to provide information about the development, hence this study.

## **Statement of Problem**

Literature have shown that effective procurement use would increase performance of supply chain and scholars have actually provided sufficient evidence in this regard. but empirical evidence had been limited on how e-procurement practices relationship with procurement performance could be mediated by supply chain performance. Limited available studies (Othman, Yusuff, Ismail & Hussin, 2018; Chirchir,2018; Pattanayak & Punyatoya, 2020; Muhammad & Danish, 2020) had shown that supply chain variables partially mediate the association of e-procurement use and procurement performance of firms. This is suggesting that those studies considered the relationship between e-procurement, supply chain management and procurement focusing on the mediating role of supply chain management. In Nigeria, literature had indicated that effective procurement use would increase performance of supply chain but empirical evidence had been limited on how e-procurement practices relationship with procurement performance could be mediated by supply chain performance. This study therefore, investigated the mediating influence of supply chain performance on the association of e-procurement management practices and procurement performance of Nigerian hospitals since empirical studies had been inadequate; hence this study.

## **Statement of Problem**

In the health sector, procurement is an essential segment of drugs supply and other medical related items and this has been identified to be critical to health care procurement performance. Procurement operations associated with pharmaceutical products in the health sector had been identified to be capable of washing down the quality of service for patients. Evidence in literature has equally said that the reason for high costs and low service quality in healthcare systems globally is the difficulty faced in procurement management. Meanwhile, foreign empirical studies (Njoki, 2018; Omani, Moronge & Magenbe, 2019; Nyasetia, 2019; Mugena & Hakizimana, 2020; Siwandeti, Sanga & Panga, 2021 and Masundi, et al., 2021; Maagi & Nwakalobo, 2023) and Nigerian studies (Chikwe et al., 2016; Oba et al., 2017; Oguntona, 2017; Araguamen, 2017; Aduwo et al., 2017; Zadawa et al., 2017; Akubuko et al., 2019; Shwarka, 2019) Mobayo & Makinde 2020; Mustapha & Ibrahim, 2021) conducted in countries other than Nigeria had established electronic procurement's effect on procurement performance of firms including hospitals

Whereas, studies (Othman et al., 2018; Chirchir,2018; Pattanayak & Punyatoya, 2020; Muhammad & Danish, 2020) have shown that supply chain variables partially mediate the association of e-procurement use and procurement performance of firms. However, the extent of the mediating effect of supply chain management on the relationship between procurement management and organizational performance has not been given adequate attention in Nigeria; hence this study

## **Hypothesis of the study**

- i. e-procurement management practices have no significant relationship with procurement performance of public hospitals in Lagos state, Nigeria.
- ii. Supply chain management has no mediating effect on the relationship between e-procurement management practices and procurement performance of selected public hospitals in Lagos state, Nigeria
- iii. Supply chain performance has no significant relationship with procurement performance
- iv. e-procurement management practices have no significant relationship with supply chain performance

## **Literature Review**

### **Supply Chain Management**

Supply chain management was described as art and science of enhancing harmonious relationships among the trading partners involved in supply and distributions channels by incorporating all methods and efficiently integrate the supply side participants of an organization's value chain with the mutual objective of delivering products and services to the right customer in the right quantity, to the right location, at the right time and optimal cost (Vakharia, 2002; Quesada et al., 2010) supply chain success largely relies on information sharing from one organization to another (Devaraj et al, 2012). Meanwhile, e-procurement process that demands frequent transactions on a long-term basis through negotiated contracts with selected suppliers in order to achieve efficiencies must be availed with the flow of accurate information (Devaraj et al., 2012).

Studies by Juha and Pentti's (2008) observed that procurement influenced the accessibility, cost, quality of materials and additionally responsiveness and adaptability of firms in addressing client needs and desires. Studies have also revealed the significance and role of the procurement function to business operations performance (Gonzalez-Benito, 2007; Ogden et al., 2007). The importance of the procurement function or the Purchasing and Supply Management (PSM) function in firms is not limited to a particular industry, sector or entity (Saranga and Moser, 2009; Van Weele, 2008). In the healthcare sector for instance, the procurement function plays a critical role in quality health care delivery and as argued by Aronsson et al., (2011), healthcare institutions could enhance their performance, be more competitive and more efficient when they effectively adopt and implement the procurement function.

### **2.1.6 Procurement Performance**

Performance of Procurement represents achievement of procurement objectives (Baily, 1998). Procurement performance indicator of an organization according to literature is the degree procurement management strengthens its value addition in purchases (Musau, 2015). Meanwhile, costs used to be the traditional measure of procurement performance however, current measures require paying attention to other variables (Public Procurement Oversight Authority (PPOA), 2009). Measures of Procurement performance in modern organizations, include: quality, flexibility, technology, delivery, inventory, supplier relations, risk and customer satisfaction (Shalle *et al.*, 2014).

Studies in the literature have come up with series of measures for procurement performance such as: improved labor cost, time management, increased accuracy, transparency and integrity (Dean & Lang, 2018); acceleration of time for processing goods and services, eliminating administrative mistakes and costs, enhanced buyer productivity, reducing prices via product standardization and construction of purchasing power, information management, increased commercial correlation with supplier, improved monetary and decreased maverick purchases (Jensen et al., 2018).

### **Electric Procurement**

Electronic procurement is described as the product of digital era (Agesin, 2001). The evolution of internet significantly contributes a far-reaching effect on organizations' purchasing management across the globe (Toyasaki, Wakolbinger, & Kettinger, 2013; Iben, Aduwo, Tunji-Olayemi, Ayo-vaughan & Uwakonye, 2016). Traditional procurement processes were gradually being replaced by Electronic Procurement so that efficiency could be improved in the course of getting input of product and services at low cost (Ong, 2000). Although, electronic procurement surfaced in the '90s following the arrival of internet and became popular consequent upon the competition between Ariba and Commerce Companies whose business specialty was to support electronic procurement aimed at maintaining repairing and operating (*MRO*) products (Segev, Gabauer & Faber, 2000). Various scholars in the literature argue that the procurement process used to be manually done where procurement officers previously relied on telephones and paper to perform their tasks before e-procurement emerged around 1990s as an application in supply management.

Following the advent of electronic procurement, the traditional methods of procurement process underwent a transition and reengineering (kabega, Kule & Mbera, 2016; Wagner, 2014). With the support of 'buy-side solutions', according to Tanner, Wolfle, Schubert and Quade (2008) large firms began to work out its customized electronic multi-sellers and customer self-service platforms because the advent of digital-based procurement request aggravated a shift from a centrally-managed procurement system to a desk top one that gave rise to adoption of electronic procurement by an organization demanding for a product. Essentially, Procurement Management has become more strategic and important to the extent that it is now a daily routine for every organization (kabega, Kule & Mbera, 2016; Norese, Novello, & Salassa, 2015; Wagner, 2014).

Consequently, e-procurement system gained wider acceptance because of its capability to enrich a better information towards enhancing effectively and efficiently managed- procurement systems and add value to decision making regarding cost and strategy that could be accessed electronically (Hass, Bichler, & Guler, 2013; Sakulte & Manager, 2013). Electronic-procurement also provides information about products' sourcing (Hass, Bichler & Guler 2013), negotiating power with suppliers (Yang & Lai, 2013), research and development supported by internet and other electronic media (Shirzad & Bell, 2013). Significantly, electronic-procurement consists of many components including online ordering, bidding, reverse auctions

and automated procurement devices as pointed by Baily (2008) and Koorn *et al.* (2001).

### **Theoretical Review**

Several theories related to Electric Procurement and supply chain management had been discussed in the literature. However, for the purpose of this study, system Theory would be used for this study. Von Bertalanfy (1969) was the first to develop the general systems theory in the field of biology. Bertalanfy (1969) was a biologist who studied the general body system and discovered considering the level of interrelationship among components of a system it was above the ordinary addition of individual parts. General System Theory was further extended by theorists such as into arena of management (Rudolf, 2011). Miller (1978) one of the pioneers of General System Theory into the field of Management posited that in many instances, non-imaginary world systems were receptive and interactive and influenced by external environment.

System as a concept allows it to receive inputs from the environment and releases output into the environment done through four basic principles. The four principles of general system theory according to Rudolf (2011) are: how complex a system is, level of its adaptability to the environment, resources requirement to support the system, and systems grow in proportion to resources allocated to it. Supply chains encompasses systems of sequencing flow of good, product or services directly or indirectly fulfill consumers' order (Chopra & Meindl 2004, Chopra and Meindl (2012).

It could be argued that the donation of the general systems theory to supply chain management could be explained from the angle of input-output relationship. Therefore, this theory is appropriate because the concepts of supply chain explained by it include management information systems, sourcing and procurement systems, logistics systems, order and customer service systems, improved relations to gain competitive advantage and could be considered to form the theoretical foundation of this study.

### **Empirical Review**

The impact of communication on business performance was examined by Almajali, Mansour, Masa'deh, and Maqableh (2016) using electronic supply chain as a mediating factor. 250 Jordanian manufacturing enterprises were given questionnaires, which were utilized to collect primary data for the study. The study's sample consisted of executive managers working in the chosen companies' information technology division. For data analysis, the structural equation modeling (SEM) method was chosen. According to the findings, there was a bad relationship between the performance of the surveyed organizations and communication. Performance, meanwhile, had a beneficial impact on electronic supply chain management, trust, and communication. The study also found that the use of electronic supply chain management had a mediating influence on the already-observed relationship between communication and manufacturing efficiency, but not on the relationship in Jordan between trust and performance.

By evaluating the mediating impact of supply chain practices on the link between supply chain strategy and supply chain performance, Othman, Yusuff, Ismail, and Hussin (2018) investigated supply chain practices in automobile industry of Malaysia. The study used a survey methodology, and data were collected by having 65 respondents from Malaysian automobile component manufacturing companies complete a questionnaire. According to the study, supply chain practices moderated the direct association between supply chain strategy and performance. The research also indicated that the relationship between supply chain strategy and performance was fully mediated by supply chain practices.

. The role of supply chain management techniques as a mediator in the association of e-procurement adoption and supply chain performance in Kenyan manufacturing enterprises was examined by Chirchir (2018). The study's foundations included the resource-based theory, the technology-organization-environment framework, and the diffusion of innovation theory. With a population of 4200 respondents from 12 manufacturing companies and suppliers, the research design was explanatory. A purposive and proportional sample of 365 respondents, including employees, managers, and suppliers, was taken. Data were gathered using a questionnaire and a scheduled interview schedule. The effect of e-procurement adoption on supply chain performance was examined with the use of structural equation modeling to ascertain the mediating role that supply chain management techniques play. Research found use of e-procurement had substantial partial mediation effect on supply chain performance through information exchange, partnership, and integration mediators.



Pattanayak and Punyatoya (2020) examined the influence of e-procurement and supply chain technology internalization (SCTI) on supply chain integration among construction firms. The study used survey research design and selected 214 project officers who had previous knowledge in supply chain management. Data were collected through administration of questionnaire while structural equation modeling was used to analyse it. The results indicated that electronic procurement and supply chain integration positively influenced supply chain performance. It equally revealed that the effects of e-procurement together with supply chain technology internalization on supply chain performance were found to be mediated by supply chain integration in the construction industry.

Muhammad and Danish (2020) conducted a study on the impact of electronic procurement on performance of supply chain. Four major practices of electronic procurement including design, sourcing, negotiation, and evaluation were examined. Data were collected from respondents whose tasks were connected with supply chain management through questionnaire administration. Questionnaire used for the study was adopted from Chang, Tsai, & Hsu, 2013. Confirmatory Factor analysis together with Structural Equation Modeling were employed to analyse data. The study showed that e-design and e-evaluation had significant impact on supply chain performance.

## Methodology

### Measurement of variables

This study has three variables: independent, dependent and the mediating variables. The independent variable of this study which is e-Procurement Management had been conceptualized using eight dimensions of digital procurement to include: e-Sourcing, e-Tendering, e-Ordering, e-Payment, e-Cataloging, e-Awarding, e-Informing, e-Invoicing. (Gunasekaran, 2010; Muinde & Shale, 2014; Almajali, Mansour, Masa & Maqableh, 2016; Masheti, 2016; Chikwe, Dapper & Obi, 2016; Masheti, 2016; Araguamen, 2017; Oba, Ayoola, Ademola & Obadeji. 2017; Njoki, 2018). The dependent variable is procurement performance measured by Efficiency of Procurement, Competitiveness in Procurement and Quality of services delivered. This is in line with the work of Mutangli (2019); Eskandarin (2016; Jensen *et al.* (2018).

In the case of the mediating variable which is supply chain performance, it was measured by three proxies such as: information sharing, partnership relationship and integrated supply chain). These constructs were taken from Chirchir (2018); Almajali, Mansour, Masa'dah and Maqableh (2016); Othman, Yusuff, Ismail and Hussain (2018). The three important variables of the study were operationalized in a structural equation modeling (SEM) to examine their relationship.

### 3.8 Models Specification

The functional relationship between e-Procurement and procurement performance is given:

$$PP = \beta_0 + \beta_1 \text{e-SOURC} + \beta_2 \text{e-TENDR} + \beta_3 \text{e-ORDER} + \beta_4 \text{e-PAYMT} + \beta_5 \text{e-CATLG} + \beta_6 \text{e-AWARD} + \beta_7 \text{e-INFOM} + \beta_8 \text{e-IVOIC} + \varepsilon \quad (3.5)$$

With the introduction of the proxies of perceived supply chain performance as a mediating variable in line with the work of ChirChir (2018); Othman, Yusuff, Ismail and Hussin (2018), the model was mathematically stated as:

$$PP = \beta_0 + \beta_1 \text{e-SOURC} + \beta_2 \text{e-TENDR} + \beta_3 \text{e-ORDER} + \beta_4 \text{e-PAYMT} + \beta_5 \text{e-CATLG} + \beta_6 \text{e-AWARD} + \beta_7 \text{e-INFOM} + \beta_8 \text{e-IVOIC} + \beta_9 \text{INFSR} + \beta_{10} \text{PATNRELT} + \beta_{11} \text{SUPCHINT} + \varepsilon \quad (3.6)$$

#### *Apriori expectation*

$$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8, \beta_9, \beta_{10}, \beta_{11}, \beta_{12} > 0$$

where PP = Procurement Performance, e-SOURC = e-Sourcing, e-TENDR = e-Tendering, e-ORDER = e-Ordering, e-PAYMT = e- Payment, e-CATLG = e-Catalog, e-AWARD = e-Awarding, e-INFOM = e-Informing, e-IVOIC = e-Invoicing, INFSR = Information Sharing, PATNRELT = Partner Relation, SUPCHINT = Supply Chain Integration,  $\beta_0$  = Constant representing the amount the dependent variable would be when all the independent variables were 0,  $\beta_1 - \beta_8$  = are the regression coefficients, representing the amount the dependent variable (Procurement Performance) changes when the independent variable (e-Procurement) changes by 1; and  $\varepsilon$  = the error term indicating other e-Procurement variables

## Data Analysis and Interpretation

## The mediating effect of supply chain performance on the relationship between e-procurement management practices and procurement performance of public hospitals in the Lagos state, Nigeria

In order to determine the mediating influence supply chain performance had on the association e-Procurement management had with procurement efforts, direct and indirect effect of the mediator (supply chain performance) were examined. These were with a view to addressing the hypothesis of the study.

### Direct effect e-procurement management practices had on procurement of government hospitals in Lagos state, Nigeria using Structural Equation Modeling

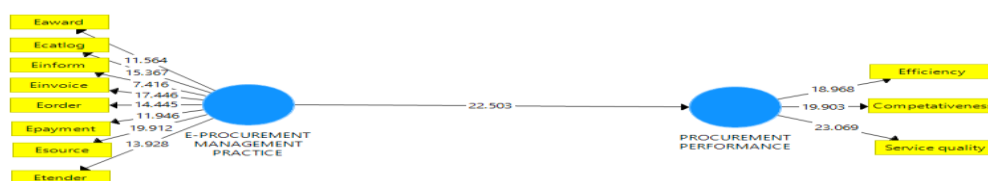
Partial Least Square Structural Equation Modelling (PLS-SEM) technique SmartPLS version 3.0 algorithm was deployed to analyse the data collated in respect of the hypothesis of this study. However, in performing the investigation, a widely well-known two-step method by Mutangili (2019) was tailed. This entails evaluating the model's psychometric properties and investigating the hypothesized structural model. Also, the analytical rationality of the study model was examined using the PLS to predict functionality in SmartPLS-SEM. This was carried out to examine the constructs in the study model to envisage the result using an out-of-sample study (Najafi-Tavani et al., 2018). This procedure of creating out-of-sample expectedness followed Waithaka and Kimani (2021) recommendation.

The study therefore recommended loud out cross justification using hold-out samples and then generating k-fold cross-validated prediction errors and error summary statistics. In assessing the hypothesized relationship between the constructs as depicted in the structural model in Figures 1 and 2, the beta ( $\beta$ ) coefficients alongside related t-values obtained from bootstrapping using 5,000 subsamples and effect sizes (f) were examined as recommended by Hair et al., (2019), and presented in Tables 1 and 2

The SEM results in Table 1 and Figure 1 explain the model and results of the direct effect of E-procurement management on Procurement of the public hospitals in Lagos state, Nigeria. From the results, it disclosed that E-Procurement Management Practices (E-PMP) had a significant positive relationship with procurement performance (PRPF) of the Selected government hospitals in Lagos state, Nigeria. This was disclosed by Path Coefficients of the model ( $\beta = .141$ , t-test = 22.502,  $P < 0.05$ ) and corroborated by the coefficient of determination ( $R^2$ ) = 0.679. According to Henseler et al. (2016), an  $R^2$  value greater than 0.35 should be considered as large and the  $R^2$  value in this study was considered as large. Therefore, the direct effect of Independent Variable (e-Procurement Management Practices) on dependent variable (procurement Performance) was significant.

Thus, the first condition of mediation by Brown and Kenny (1986) requesting that the direct effect between independent variable and dependent variable should be significant is met. The study consequently rejected the hypothesis of the study which hypothesized that e-procurement management practices had no association significant with procurement performance of public hospitals in Lagos state, Nigeria. This validates the studies of Araguamen (2017), Oba, Ayoola, Ademola & Obadeji (2017) who posited that e-procurement management practices significantly affected procurement performance of organizations including hospitals. These findings imply that deploying e-procurement modules by Lagos state in their public hospitals had brought improvement in their procurement performance. This could be attributed to the argument that e-procurement management practices would not only enhance efficient procurement but also competitiveness in procurement of firms.

**Fig. 1 The Direct effect of e-procurement Management Practices on Procurement Performance of Public Hospitals in the South-Western Nigeria**



Source: Field Survey, 2025

## Supply Chain Performance (Mediator) Direct and Indirect effect on the association between e-Procurement Management Practices and Procurement Performance of Public Hospitals in Lagos state, Nigeria using Structural Equation Model

The study revealed that the overall effect of e-procurement management practices on procurement performance after introducing a mediator into the model showed that its indirect effect was not zero (0) as it mediated its effect from  $\beta = 0.141$  at  $P < 0.05$  to  $\beta = 0.123$  significant at  $P < 0.05$  and validate the test of statistical significance of t value put at 3.374. This was concurred by coefficient of determination ( $R^2$ ) equal to 0.661. This satisfied the conditions postulated by Kenny and Baron (1986) and therefore, mediation has occurred. The second hypothesis was rejected.

Results of this study were in agreement with the studies of Pattanayak and Punyativa (2020) Chirchir (2018); Munyao and Moronge (2018) who postulated mediating effect of supply chain performance on the relationship between e-procurement management practices and procurement performance of organizations including hospitals. These findings imply that sharing information, partnership relationship and supply chain integration in the deployment of e-procurement modules would lead to enhanced improvement in procurement performance of public hospitals in Lagos state, Nigeria in terms of efficient procurement, competitive procurement and improved quality of service delivered.

## Inferential Results of Direct and Indirect association between e-Procurement Management Practices and Procurement Performance with supply chain performance as a Mediation using Structural Equation Model

**Table 1**

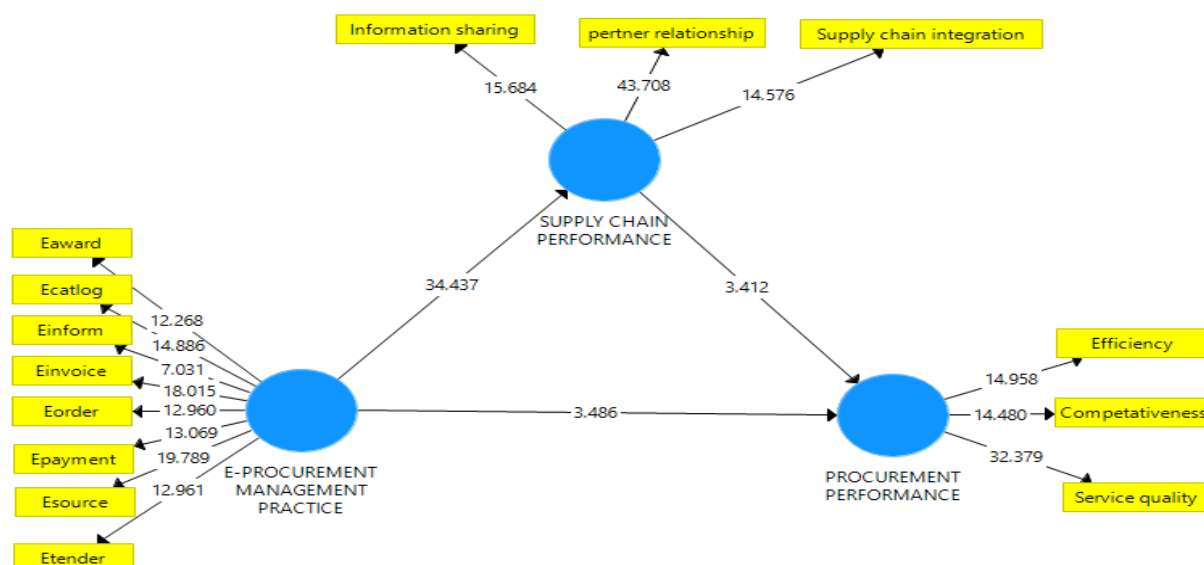
Table: Model fit indices: SRMR= 0.134; NFI = 0.831; d-ULS =4.167

Constructs	Beta	f-value	P-value 2-sided	T-test	R <sup>2</sup>	Decision
E promgtprac and supchperf	0.025	2.636	0.000	34.437	0.725	Accept
suppchainperf and proper	0.121	0.10	0.001	3.424	0.660	Accept
Epromgtpra suppchperf properf	0.123	0.160	0.000	3.374	0.661	Accept

Source: Field Survey, 2025

Note: E-promgtprac = E-procurement management practices, Supp chain perf = supply chain performance, Properf = procurement performance

**Fig. 2: Direct and Indirect effect of supply chain performance on the relationship between e-procurement management practices and Procurement performance of Public Hospitals in the southwestern Nigeria**



Source: Field Survey, 2025

## References

1. Alsaad, A.K. (2015). Predicting Intention to adopt B2b Electronic Commerce in Jordan: The Moderating role of Trust and Dependency. Published Ph.D Dissertations, Universiti Utara, Malaysia
2. Aronsson, H., Abrahamsson, M., & Spens, K (2011). Developing Lean and Agile health care supply chains: Supply Chain Management. *An International Journal*, 16 (3).
3. Cagliano, R., Caniato, F., & Spina, G. (2005). E-business Strategy – How Companies are shaping their Supply Chain through the Internet. *International Journal of Operations*
4. Chang, H. H., Tsai, Y. C., & Hsu, C. H. (2013). E-procurement and supply chain performance, *Supply Chain Management. An International Journal*, 18(1), 34–51.
5. Chegugu, N.R., & Yusuf, K. (2017). Effect of Electronic Procurement Practices on Organizational Performance in Public hospitals in the County Government of Uasin Gishu, Kenya. *International Academic Journal of Procurement and Supply Chain Management*, 2(3), 16-32.
6. Kabanda, S., Pitso, N., & Kapepo, M. L. (2019). The role of institutions pressures in the adoption of E-Procurement in public Institutions in Developing Countries: The case of Lesotho. *The African Journal of Information System*, 11(3), 232-249.
7. Njoki, G.N. (2018). Influence of Competitive Procurement Practices on Service Delivery in Public Hospitals in Nakuru Kenya (A survey of Public Hospitals in Nakuru County). A published M.Sc Thesis, Jomo Kenyatta University of Agriculture and Technology.
8. Omoregbe. O. & Ossifo, S. J. (2020). Employee Perception of the Electronic Procurement System (eps) and Rate of Adoption of EPS by the Federal Public Hospitals in Edo state of Nigeria Based on the Diffusion of Innovation Theory. *Open University of Sri Lanka Journal*, 15(2), 97-120
9. Ondigi, K., & Muturi, W. (2015). Factors affecting Public Health Institutions in Kenya. A case study of KISII Teaching and Referral Hospital, Kenya. *International Journal of Economics, Commerce and Management*, 3(11), 863-872.
10. Shwarka, M.S. (2019). Impact of the Nigerian Procurement Reform on Planning Practices of Construction Practitioners. *FUTY Journal of the Environment*, 13(2), 14-29.