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EFFECT OF ELECTRONIC PROCUREMENT ON THE PERFORMANCE OF SELECTED MANUFACTURING MEDIUM ENTERPRISES IN MAKURDI METROPOLIS OF BENUE STATE NIGERIA

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Abstract *This study examined the effect of electronic procurement on the performance of selected manufacturing medium enterprises in Makurdi metropolis of Benue state Nigeria. The specific objectives were to assess the effect of e-sourcing and ascertain the effect of e-ordering on the performance of manufacturing medium enterprises in Makurdi metropolis of Benue State. The study adopted a survey research approach, using questionnaire administration for data generation from 231 respondents of the selected manufacturing medium enterprises in Makurdi metropolis of Benue State. The data were analyzed using descriptive and inferential statistics. The t-test and p-values from regression analysis (statistical package for social science, version 25.0) was used for test of hypothesis. Findings showed that e-sourcing (t= 7.87, p= 0.012) and e-ordering (t= 6.08, p= 0.003) had significant/positive effect on the performance of selected manufacturing medium enterprises in Makurdi metropolis of Benue state Nigeria. The study concludes that e-procurement (e-sourcing, and e- ordering) can be considered an effective and viable available tool for manufacturing medium enterprises performance (in terms of operational efficiency and service delivery) as they have potentials for enhancing the performance of manufacturing medium enterprises through creating a competitive edge over their competitors by being able to adjust their business process to customer needs. The study recommends amongst others that management of manufacturing small and medium enterprises should fully embrace e- sourcing structure that projects a stronger e-procurement posture, as it will enhance regular interactions with suppliers and build relationship with suppliers to sustain supplies thereby increasing timely services delivery and cost effectiveness, and thereby promoting performance of the firm.*

1.0 INTRODUCTION

1.1 Background of the Study

Across the globe, strengthening organizations performance is a key strategy to achieve the goals of any organization in the quest to remain relevant. Performance has become a topical issue in today's business environment, so much so that organizations go to great lengths to appraise and

manage it. Integration of internet and business has been a common phenomenon over the years. Electronic procurement (e-procurement) is one of the emerging trends in procurement processes, and it represents an important achievement for organizations striving to triumph in healthy performance. Manufacturing Medium Enterprises (MEs) engagement of e-procurement has emerged as a key ingredient in their procurement function enabling them to enhance their procurement function. Currently, manufacturing MEs adopt a wide range of e-procurement so as to enhance their sourcing, informing, invoicing, payments, negotiation, purchasing as well as ordering processes as they cut on operational costs. Globally, the significance of e-procurement has increased with an overall volume of $11 trillion US dollars in 2020 which constitutes 12% of the global GDP. Approximately, 75% of the global e-procurement is dominated by US and western countries (Areguamen *et al.,* 2022; Alonge, 2023).

In Africa, e-procurement has proved to be one of the most effective tool used by MEs to bring good governance and to improve the procurement practices. While the level of adoption of several technologies is lower compared to that in Asia and Europe, it is worth noting that MEs in Africa are striving to utilize the available technologies to boost their procurement practices among other business functions. In Nigeria for instance, according to Udeh *et al.* (2023), manufacturing MEs have integrated e-procurement in order to maximize its benefits during the purchasing of goods and also services, in management of inventory as well as improving communication between the businesses and the suppliers and the consumers. This has helped to enhance the performance of the businesses. According to Mutunga (2020) as well as Hajir (2021), the e-procurement practices adopted by MEs in Nigeria included e-informing, e-notification, e-tendering, e-contract awarding, e-material management, e-supplier management, e-sourcing, e-ordering, e-purchasing and e-invoicing. These technologies have largely revolutionized the procurement operations and to boost the performance of the businesses. The adoption of electronic procurement, which assists in unifying the purchasing process all across the supply chain, shows a growing trend over the years.

Every business has a fundamental goal of achieving good performance and gaining high returns. Mutunga (2020) avers that a firm's performance is the actual output, a firm obtains, which is measured in relation to the set goals. Thus, value creation is the key purpose of business performance. According to Alege (2018), traditional procurement techniques provided little openness and less satisfaction in supplier agreements in the past. Improved transparency, a broader geographic reach, and faster transaction times, as well as better pricing, are all advantages of e-procurement. It entails utilizing electronic technologies to automate and streamline a company's procurement operations, hence increasing competitiveness, innovativeness, organizational readiness, customer service delivery, efficiency and transparency while lowering costs (Areguamen *et al.,* 2022; Masuku and Hlongwane, 2022).

Okoro *et al.* (2023) averred that in Nigeria, the MEs are increasingly adopting and utilizing e-procurement technologies to enhance the ordering, tendering, payments and sourcing processes. They further noted that the adoption of the strategies is inspired by the pressure they have to deliver quality goods and services on a timely basis. According to Boateng (2021), a large number of these enterprises have been having challenges meeting the customers' demands due to

delayed delivery of goods. Desmond (2022) posited that delayed supply of goods occurs due to lack of efficient and effective procurement systems which ultimately affect constant supply of goods to customers. This leads to customer dissatisfaction and poor business performance. The MEs therefore adopt various e- procurement technologies such as e-tendering to facilitate tendering processes, e-sourcing to determine appropriate suppliers, e-invoicing and e-payment to facilitate payments (Omimakinde, 2022; Oboloo, 2023).

Central Bank of Nigeria (CBN) statistical bulletin (2020) estimates suggest that MEs account for 48 % of national GDP, 96% of businesses and 84% of job opportunities. According to the ME Finance Forum, they are crucial for growth and job creation, accounting for nearly 86% of employment opportunities in developing countries (Belfitt, 2019). MEs are seen to reduce income concentration with a disproportionate impact on minority or poor populations (Adekoya, 2018). MEs account for the majority of businesses worldwide and are important contributors to job creation and global economic development (World Bank, 2020). The link between manufacturing MEs and e-procurement is very important because e-procurement as a result of globalization has been seen as the basis for achieving sustainable development, safety and inclusiveness (Alonge, 2023). In Nigeria, MEs account for 95% of total business, 65% of total employment and 65% of the country's GDP (National Bureau of Statistics, 2020). Although the contribution of MEs to the economy is enormous, they are however underrepresented in public procurement contract (Saastamoinen *et al.,* 2020) and still find it difficult to play a role by bidding and winning contracts within the public procurement sector. They represent about 90% of businesses and more than 50% of employment worldwide. Formal MEs contribute up to 40% of national income (GDP) in emerging economies (Omimakinde, 2022). Consequently, this study examined the effect of e-procurement on performance of manufacturing MEs in Makurdi metropolis which is the administrative headquarters of Benue State, Nigeria.

1.2 Statement of the Problem

The performance of manufacturing MEs gives a positive indication on economic growth and development because their contributions add up to national income. Nonetheless, the growth of manufacturing MEs relies on several factors of which procurement systems been utilized play an essential role. The current impact of economic down turns as well as pandemic have limited human interactions and hence, the procurement of goods and services. This explains why most manufacturing MEs have been woefully impacted by the global pandemic. It requires that a more smart and advanced method of procurement system is needed. Enhancing electronic procurement among manufacturing MEs implies that more enquiries are needed to make decisions and formulate helpful policies for optimal benefit of the e-procurement system in enhancing manufacturing MEs performance especially in Makurdi metropolis of Benue State.

Despite the crucial role manufacturing MEs play in Makurdi metropolis of Benue State, MEs face numerous challenges which have impacted on their performance with some closing down. Observations are that with increased use of electronic means of procurement by MEs in Makurdi metropolis, the expectations may be increased in performance in innovativeness, timely services delivery and efficiency. Where some are leveraging on the benefits offered by e-procurement practices, some are not. Falling short of these expectations, prompted this study to examine the

effect e-procurement practices on performance of manufacturing MEs in Makurdi metropolis of Benue State.

The influence of these e-procurement practices of e-sourcing and e-ordering amongst others; are yet showing mixed results in previous studies as to the influence they have induced in enhancing manufacturing MEs performance (example Ibem *et al.,*2020). Where some studies considered one dimension and were outside the study domain, such as Makhamara (2022) and Myovela *et al.* (2023), as such findings could not be generalized; others did not take same dependent variable of performance and not in the same sector, such as Okoro *et al.* (2023) and Alonge (2023, as such could not be generalized. The inconsistent results in previous studies have led to difficulties in understanding the influence of different factors that affect the usage of e-procurement towards performance in the manufacturing MEs in Benue State-Nigeria. To overcome the above-mentioned research gaps, this study examined the effect of e-procurement practices on the performance of manufacturing MEs in Benue State-Nigeria.

1.3 Objectives of the Study

The broad objective of this study is to examine the effect of c-procurement practices on performance of manufacturing SMEs in Makurdi metropolis of Benue State. The specific objectives are; to;

i. assess the effect of e-sourcing on the performance of manufacturing SMEs in Makurdi metropolis of Benue State.
ii. ascertain the effect of e-ordering on the performance of manufacturing SMEs in Makurdi metropolis of Benue State.

1.4 Hypotheses

The following null hypotheses are formulated to guide the research and are tested:

Ho_1: E-sourcing has no significant effect on the performance of manufacturing SMEs in Makurdi metropolis of Benue State.

H_{o2}: E-ordering has no significant effect on the performance of manufacturing SMEs in Makurdi metropolis of Benue State.

2.0 LITERATURE REVIEW

2.1 Concept of Electronic Procurement

Procurement is the term that is used to refer to the process or the act of sourcing or obtaining services or goods for an organization (Eyo *et al.,* 2023). It can also be said that procurement is the process of finding and agreeing to terms and acquiring goods and services or works from an external source, often via a tendering or competitive bidding process. Procurement refers to all activities involved in identifying, acquiring, and receiving goods, works, and services required by an organization (Kahukya, 2019).

Kang *et al.* (2015) defined e-procurement as using communication technology at various levels of buying goods and services. E-procurement involves sourcing (Hass *et al.,* 2013), bargaining with supplier (Yang and Lai, 2013), and research and development through the internet and other

electronic media (Shirzad and Bell, 2013). The e-procurement system evolved because of its potential to provide better information to enhance effective and efficient procurement management systems. Rotich and Okello (2015) defined e-procurement as the use of information technologies in the development of procurement processes that are responsive to environmental changes. According to Abdullahi *et al.* (2021), e-procurement refers to the use of internet based systems and technologies in individual or all stages of the procurement process. These technologies could be used in searching, sourcing, ordering, negotiating, and post-purchase review.

Neupane *et al.* (2014) associated e-procurement with the following functions; e-sourcing, e-noticing, e-tendering, e-awarding, e-contract, e-orders, e-invoicing and e-payment. Rashid (2018) divided these processes into pre-awarding phase (e-sourcing, e-noticing, e-tendering) and post awarding phase (e-awarding, e-contract, e-orders, e-invoicing and e-payment). Waithaka and Kimani (2021) defined e-procurement as the incorporation of services such as e-sharing, e-communication, e-submission, e-advertising, e-evaluation, e-contacting, e-payment, e-checking and e-monitoring. Amina *et al.* (2018) asserts that e-procurement as a practice has enhanced the competitive nature of procurement, has improved customer service offering and resulted in improved relationship with business partners, citing improved data accuracy, reduction in administration costs and time efficiency in service delivery.

E-Procurement is the modern form of procurement that utilizes advance technology, internet and networking systems (Bag *et al.,* 2020). The e-procurement system considers purchases that are made through online systems or over some digital network or platforms. Electronic procurement entails the deployment of ICT in every stage of the buying phase from identification of requirement through to payment and potentially to contract management (Saastamoinen *et al.,* 2020). Boateng (2021) posited that e-procurement excludes old applications like ordering with telephone but includes the use of internet, intranet and extranet applications in the purchasing process. Added, e-procurement includes the online purchasing of goods and service for the day-to-day operations of a business and authorizing the whole procedure with the underlying aim of reducing costs.

Thus this paper views e-procurement as the employment of internet-based systems for sourcing, contract negotiation, ordering, e-invoicing, accounts payable (AP) and accounts receivable (AR) processes, post-purchase review, and other functions within the procurement process.

2.2 Dimensions of e-procurement practices

Several studies have utilized several dimensions of procurement practices adopted in their studies, such as that of Alege (2018), Hajir (2021), Desmond (2022), Udeh *et al.* (2023); that made use of e-sourcing, e-tendering, e-negotiation, e-informing, e-ordering, e-payment, etc. For this study, the following dimensions of e-sourcing and e-ordering are utilized; as has been seen to be particular to MEs manufacturing firms operations in Benue State, and as well have reflected in most studies linking MEs and or manufacturing.

i. E-sourcing

This is the process of employing internet technology to find potential providers with the goal of lowering search expenses (Madzimure *et al.,* 2020). E-sourcing is the initial phase of e-procurement, coinciding with requirement definition and sourcing. Singh and Chan (2022) averred that it involves pre-qualifying potential suppliers based on the procuring company's requirements to shortlist vendors for the evaluation stage. E-sourcing, Hajir (2021) posit, is the process of finding new suppliers through the internet that match the specific spend category. E-sourcing is the process of using the internet to make decisions and establish strategies about where and how services or goods should be bought (Desmond, 2022). E sourcing software provides efficiency and other benefits, including better vendor selection, collaboration, and visibility into this element of e-procurement and business spending.

E-Sourcing also known as electronic sourcing, leverages web-based systems to gather and compare information from various suppliers, aiding buyers in selecting a preferred provider (Siddiqui *et al.,* 2022). E-Sourcing relies on online platforms for seamless data collection and supplier comparison (Masudin, 2021). The process involves assessing and comparing information about multiple suppliers to inform procurement decisions (Zwingina *et al.,* 2023).

ii. E-Ordering

E-ordering, according to Alege (2018), describes the process of creating and approving purchasing requisitions. That means placing purchase orders but also receiving services and products that were ordered. All this is done through IT-based software systems which smoothen the supply chain management performance. Oteki *et al.* (2018) views E-ordering as web-based ERP is the process of creating and approving purchasing requisitions, placing purchase orders as well as receiving goods and services ordered, by using a software system based on Internet technology. In the case of e-ordering the goods and services ordered are indirect goods and services (i.e., non-product related goods and services). This process ensures that human error is eliminated and also streamlines the entire order cycle, making it more effective and less time consuming, (Mutangili, 2014).

Jean (2018) posited that E-ordering is the process of creating and approving purchasing requisition, placing purchase orders as well as receiving goods and services ordered, by using a software system based on internet technology which greatly improves the supply chain performance. In the case of e-ordering, the goods and services ordered are indirect goods and services i.e., non-product related goods and services. The supporting software system an ordering catalogue system is usually used (Chepkwony and Lagat, 2016).

2.3 Concept of Performance

Hajir (2021) views performance as the extent to which an organization's products and services meet the expectations of its customers. It indicates the potential of the supply chain to provide products and services to the customer (Vitorino and Moori, 2020). The performance concepts and ME performance requirements are changing as a result of the ongoing changes that MEs are experiencing within organizations today (Asamoah *et al.,* 2021). MEs require high-performing individuals alongside technologies to meet their objectives, deliver the products and services in

which they specialize, and, ultimately, gain a competitive advantage (Marei *et al.,* 2021). Zwingina *et al.* (2023) averred that the main aim of engaging in business is to consistently outperform competitors and deliver sustainable products, give superior values to shareholders or returns to the owners while satisfying other stakeholders.

Organizational performance is a concept that tests a company's market position and its ability to meet the needs of its stakeholders (Lo *et al.,* 2015). Organizational performance illustrates how an organization uses tangible and intangible tools to accomplish its goals (Wheelen and Hunger, 2012), as well as the culmination of an organization's working process and activities. Performance is the effectiveness and efficiency of an organization's internal processes and operations in achieving its strategic goals. It comprises a variety of metrics, such as those that deal with quality, cost management, productivity, and customer satisfaction (Faheem and Siddiqui, 2020). Being ability to manufacture goods or render services quickly, innovatively, superbly, and affordably is known as exceptional operational performance (Odesola and Aderemi, 2022). Operational performance is the sum-total of entity's routine process and activities that range from financial and non-financial (Faheem and Siddiqui, 2020). According to Mbah *et al.* (2019), such operational performance is measured through organizations' framework that gives balanced view of performance under four perspectives; financial accumulation, increased number of customers, expansion of a firm and its internal processes.

Performance is a distinct most significant factor for measuring the success of a firm's operations (Ehiedu *et al.,* 2022). This is reflected in the firm's capability to effectually craft and enact tactics that actualize laid down goals and objectives of the firm (Ogomegbunam, 2023). Tomal and Jones (2015) also viewed firm performance as a firm's actual outcome matched against the firms expected outcome. These definitions imply that performance measures how well a firm is doing in terms of achieving target objectives, satisfying customers, rendering quality services delivery, and so on.

2.4 Measures of Performance

Because of the complex nature of measuring a firm's performance, several scholars such as Green *et al.* (2012); Ehiedu *et al.* (2022); Ehiedu and Brume-Ezewu, (2022) have postulated different phases of assessing performance. For instance, Green *et al.* (2012) outlined two distinct aspects to include evaluating the operational performance and the business performance. While operational performance evaluates a firm's capacity to produce and distribute goods to customers, the business performance is concerned with the firms marketing activities and finance (Green *et al.,* 2012). Ehiedu *et al.* (2022), have postulated different phases of assessing performance such as cost effectiveness, innovativeness, customer services delivery, organizational readiness, competitive advantage, etc. This study, tows the line of non-financial measure of Ehiedu *et al.* (2022), which are operational efficiency and services delivery; and are discussed below.

i. Operational Efficiency

This refers to the capability of an organization to deliver products or services to its customers in the most cost-effective manner possible while still ensuring the high quality of its products,

service and support (Ahmad *et al.,* 2019). Operational efficiency looks at an organization's capabilities and performance. It also looks at an organization's ability to minimize waste of inputs and maximize resource utilization so as to deliver quality, cheaper products and services to their customers. It is a useful measure utilized in managing the available resources. Mbah *et al.* (2019) viewed operational efficiency as the capability of a service sector to deliver products or services to its customers in the most cost-effective manner possible while still ensuring the high quality of its products, service and support. Efficiency refers to lower procurement costs and fewer unauthorized purchases, decreased fulfillment time, and an improved backward integration to office systems (Mestry and Bodalina, 2015).

ii. Service Delivery

According to Olise and Ojiaku (2018), service delivery refers to the fulfillment of customer's orders efficiently, effectively and at the minimum cost. It involves meeting customers' expectations with regard to order fulfillment through shorter lead times, consistent and on time delivery, complete orders, quicker response to customer requirements and ability to meet unique and special requests of the customers (Nwulu and Nwokah, 2019). In many cases, increasing customer service levels involves adding personnel and increasing overall expenditures. Unfortunately, these additional expenses can erode profitability. One proven method for increasing customer service without incurring additional long-term expenses is the implementation of an effective supply chain (Hasana and Cross, 2020).

2.5 Theoretical Framework

This study is anchored also on the Resource Based View Theory

2.5.1 Resource based view theory

The resource based theory proposed by Penrose (1959), argue that simultaneously valuable, rare, inimitable and non-substitutable resources can be a source of superior performance and may enable the firm to achieve sustained competitive advantage. The RBV theory indicates that firms' superiority, comparativeness, and advantage in the market environment is determined by the available resources of the company. The theory specifically determines firms' ability and capacity to utilize company resources to achieve desirable results (Barney, 1991). The Resource Based-View theory of the firm is therefore a suitable approach to understanding the competitive dynamics whereby resources are intangible and tangible assets linked to the firm in a semi-permanent way, including: technological, human and physical assets.

However, having resources alone is not sufficient; therefore, RBV theory adds a category of capabilities which result from complex patterns of interactions and coordination between resources (Wong and Karia, 2010). RBV maintains that resources and capabilities are often synergistic in nature and can be more valuable when combined. RBV proposes that firms have different resource endowment and that the manner in which they require, develop, maintain, bundle and apply those leads to the development of competitive advantage and superior performance over time. RBV tenets prescribe that resources and capabilities, for instance bundle of resources need to be valuable, rare, inimitable and organizationally utilizable, for example a firm has complementary resources to leverage and maximize capabilities to drive sustainable

competitive advantage. In general, RBV theory indicates that exploiting a firm's non-imitable resources enables a firm to create long-lasting competitive capabilities and to generate a competitive advantage (Paulraj, 2011).

RBVT rest on some assumptions: Organizations are assumed to be comprised of internal and external coalitions which emerge from social exchanges that are formed to influence and control behavior (Deng, 1989). The environment is assumed to contain scarce and valued resources essential to organizational survival. As such, the environment poses the problem of organizations facing uncertainty in resource acquisition. Organizations are assumed to work toward two related objectives: acquiring control over resources that minimize their dependence on other organizations and control over resources that maximize the dependence of other organizations on themselves. Attaining either objective is thought to affect the exchange between organizations, thereby affecting an organization's power (Sternberg and Lubart, 1991). The acquisition of the e-procurement technologies which are resources enhances the competitive advantage of the organization over its competitors.

2.6 Reviews of Related Empirical Studies

Hajir (2021) study examined the effect of e-tendering, e-sourcing and e-payments on the operational performance of retail supermarkets within Nairobi City County. Administered questionnaires and interview guide were used to collect primary data from the procurement managers from the 94 registered retail supermarkets within Nairobi County. The study noted that 66.5% of the changes in the operational performance of retail supermarkets were as a result of e-procurement practices. The research concluded that electronic procurement practices have a significant impact on retail supermarkets performance. The study found out that adoption of e-payment, e-tendering and e-sourcing practices were significant predictors of operational performance of the supermarkets.

Mutunga (2020) investigated the influence of e-procurement on performance of Small and Medium Enterprises within City County of Nairobi, Kenya. In this study specific objectives entailed examining influence of e-sourcing, e-tendering, e-payment and e-invoicing on the performance of Small and Medium Enterprises in City County of Nairobi. The study found that e-tendering has no significant influence on the Small and Medium Enterprises performance within Nairobi, Kenya. However, e- sourcing has a significant influence on performance of Small and Medium Enterprises in KenyaNairobi. In addition, e-invoicing has a significant impact on Small and Medium Enterprises performance within Nairobi, Kenya. Further, e-payment has a significant influence on Small and Medium Enterprises performance in Nairobi, Kenya.

Mafini *et al.* (2020) investigated the nexus between e-procurement, supplier integration and supply chain performance among small businesses in Gauteng province, South Africa. The study investigated the impact of e-design, e-negotiation, e-sourcing, e-informing and e-evaluation on supplier integration. However, e-sourcing, e-evaluation and e-informing were noted to have an insignificant impact on supplier relations. Supplier relations were found to positively influence SME operations, thereby showing that e-design and e-negotiation have a positive relationship with SME performance.

Munyao and Moronge (2018) carried out a census survey involving Kenyan universities with the aim of determining the impact of adopting e-procurement practices on the efficiency of

procurement within public universities. The study revealed that e-procurement practices of e-tendering, e-sourcing and e-ordering significantly improved procurement performance, while e-payments has positive but insignificant impacts on the procurement process. E-notices, e-selection, e-mailing and e-evaluation were the main e-tendering practices adopted. E-awarding was noted to have an insignificant impact on public procurement performance.

Chepkwony and Lagat (2016) examined the effect of E-ordering and E-informing on supply chain performance. Findings showed that e-ordering and e-informing had a positive and significant effect on supply chain performance. The study concludes that e-ordering and e-informing which are elements of e- procurement dimensions increases supply chain performance.

3.0 METHODOLOGY

This study adopted the survey research design approach. The population of this study comprised of 231 staff of manufacturing firms in Makurdi who are directly involved in procurement activities and are conversant with the procurement practices in their organization; thus comprising of those in procurement, ICT, accounts and stores; alongside the management staff. Since the population is of a manageable size, hence all were used in this study (census method). The sample size for the study comprises of the entire population of 231 respondents, hence the census sampling method was adopted

The data for this study were collected through questionnaire administration. Validity and reliability were done before the actual study. Primary data served as the major source of data collection for this study.

The model employed for this study is multiple regression model which involves the independent variable (electronic procurement practices), and the dependent variable (firm performance). Therefore, the model specification to test the formulated hypotheses is as follows:

The model for this research is given as

FP = f (EP) = (ES, EO).....(1)

Where

FP = Firm Performance

EP = E-Procurement Practices

ES - E-Sourcing

EO = E-Ordering

The regression model, thus is given as

FP = x + B_1ES + B_2 EO + e .....(2)

Where

x = Intercept of the regression

B_1-B_2 = parameter estimates

e = error term

A priori expectations are: $B_1 > 0$, $B_2 > 0$, it is expected that the analysis based on the model in question will help to test hypothesis Ho_1 to Ho_2, answer the two research question for this study and achieve the two objectives.

4.0 RESULTS AND DISCUSSION

Two hundred and thirty-one (231) copies of questionnaire were distributed to respondents in the selected manufacturing firms chosen for this study, out of which two hundred and seventeen (217) were successfully filled and returned.

The result retrieved from the respondents demography as well as on the research variables including, e-sourcing, e-ordering, and firm performance were presented using frequency counts and percentages.

Table 1: Model Summary

Model	R	R Square	Adj R Sqaure	Std. Error of Estimate	Durbin-Watson
1	.897	.805	.800	.8810	2.03

a. Predictors: (Constant), ES, EO
b. Dependent Variable: Performance

Source: Researcher's Computation from SPSS 25 Output, 2024

The coefficient of determination (R^2) shows that, electronic procurement practices contributed 80.5 % variation in performance while the remaining 19.5 % is accounted by other factors outside the model. This implies that electronic procurement practices of e-sourcing and e-ordering are significant in explaining the variation in the dependent variable (performance of manufacturing medium enterprises).

Table 2: Regression Coefficient Result

Model	Beta	T	Sig
1 (Constant)	1.090	12.07	.000
e-sourcing	.834	7.87	.012
e-ordering	.815	6.08	.003

Dependent variable: Performance

Source: SPSS regression print out (version 25,0 for windows output), 2024

Table 3: Analysis of Variance (ANOVA)

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	104.102	2	52.051	23.00	.000[b]
Residual	107.070	215	.498		
Total	211.172	217			

a. Dependent Variable: Performance
b. Predictors: (Constant), ES, EO

Source: Researcher's Computation from SPSS 25 Output, 2024

The F-statistics of regression model showed that the result is significant, as indicated by a value of the statistic, 23.00 and it is significant at the 5.0 percent level.

Hypotheses Testing and Discussion of Findings
Hypothesis one:

Ho_1; E-sourcing has no significant effect on performance of manufacturing medium enterprises in Makurdi-Benue State.

The analysis of research question one was to examine the effect of e-sourcing on performance of manufacturing medium enterprises in Makurdi. From table 1, the (R^2) statistic was 0 .805. Taking into the record the contribution of the explanatory variable in firm performance, from table 2, the beta value for e-sourcing was 0.834. The beta value apparently indicated that the predictor variable of e-sourcing had a positive effect on firm performance (t-computed 7.87 > t-critical 1.960, p=0.012 < .05). Therefore, the null hypothesis was rejected.

The findings of this investigation agree with Hajir (2021), Mutunga (2020), Mafini et al. (2020), amongst others; who all avers that E-sourcing as a process helps in finding new suppliers through the internet that match the specific spend category, and using the internet to make decisions and establish strategies about where and how services or goods should be bought. They additionally noted that E sourcing software provides efficiency and other benefits, including better vendor selection, collaboration, and visibility into this element of e-procurement and business spending.

Therefore this study concludes that there is a positive/significant effect of e-sourcing on performance of manufacturing medium enterprises in Makurdi.

Hypothesis Two
Ho_2: E-ordering has no significant effect on performance of manufacturing medium enterprises in Makurdi-Benue State

The analysis of research question two was to determine the effect of e-ordering on performance of manufacturing medium enterprises in Makurdi. From table 14, the (R^2) statistic was 0 .805. Taking into the record the contribution of the explanatory variable in firm performance, from table 15, the beta value for e-ordering was 0.815. The beta value apparently indicated that the predictor variable of e-ordering had a positive effect on firm performance (t-computed 7.87 > t-critical 1.960, p=0.03 < .05). Therefore, the null hypothesis was rejected.

The findings of this investigation also agree with Munyao and Moronge (2018), Chepkwony and Lagat (2016) amongst others; who all avers that by deploying an Electronic Purchase Order Requisition system, in concert with an Accounts Payable automation solution, internal control over expenses, payables, disbursements, and suppliers can be enhanced. Going electronic allows for a much more efficient payable process by eliminating many of the manual tasks generally associated with purchase order requisition. They further argued that this process flow reduces

operational costs, improves process efficiency, delivers greater centralized control over purchasing and may increase negotiating power with suppliers through order consolidation.

Therefore this study concludes that there is a positive/significant effect of e-ordering on the performance of manufacturing medium enterprises in Makurdi.

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

This section presents the summary, conclusion, recommendations, limitations of the study and suggestion for further studies.

5.1 Summary

The summary of the findings are presented according to the four objectives and research hypothesis of the study as follows:

i. E-sourcing has significant/positive effect on the performance of manufacturing medium enterprises in Makurdi (Beta = .834, t = 7.87, P =.012).
ii. E-ordering has significant/positive effect on the performance of manufacturing medium enterprises in Makurdi (Beta = .815, t = 6.08, P =.003).

5.2 Conclusion

The study concludes that e-procurement (e-sourcing, and e- ordering) can be considered an effective and viable available tool for manufacturing medium enterprises performance (in terms of operational efficiency and service delivery) as they have potentials for enhancing the performance of manufacturing medium enterprises through creating a competitive edge over their competitors by being able to adjust their business process to customer needs.

5.3 Recommendations

Sequel to the findings and conclusions above, the following recommendations are made:

i. Management of manufacturing small and medium enterprises should fully embrace e- sourcing structure that projects a stronger e-procurement posture, as it will enhance regular interactions with suppliers and build relationship with suppliers to sustain supplies thereby increasing timely services delivery and cost effectiveness, and thereby promoting performance of the firm.

ii. Management of manufacturing small and medium enterprises should focus on developing, creating and enhancing, e-ordering, as this will help improve interaction and confidence building thereby helping to reduce cost and increasing efficiency which is beneficial to ME's

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