

Procurement Management Practice and Organizational Performance: Roles of Information Technology Capability

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Abstract-- The effectiveness of ICT on procurement processes and firms performance could not be pushed aside. This was because ICT when integrated in procurement process helped in simplifying procurement procedures and aid complicated procurement processes, thus, enhancing performance of logistics businesses. This study examined the roles of ICT on the relationship between procurement and performance of organization using international logistics businesses in Nigeria as a case Study. In order to investigate the objective, the descriptive research design was used to gather data for the study through the distribution of online questionnaire for the selected International logistics businesses in Nigeria. Meanwhile, from the 226 copies of questionnaire sent to the logistics firms and their employees only 220 copies were returned. The descriptive statistics of mean and inferential statistics of Sobel test were used to analysis the data collected for the study. The result of the Sobel test revealed that ICT played a significant positive roles on the procurement process and performance of the selected firms. The study concluded that ICT enhanced the effectiveness of the procurement performance as well as that of the firm performance. The study recommended that the international logistics businesses in Nigeria should integrate ICT in all its activities.

Keyword-- ICT, Procurement, E-Procurement, Performance

I. INTRODUCTION

In an increasingly virtual economy, businesses depend upon Information and Communication Technology (ICT) to optimize their delivery functions. ICT allows corporations to automate procurement activities, enhance transparency, and fortify relationships throughout the supply chain (Azu et al., 2024). The integration of ICT tools—including e-procurement, organization aid planning (ERP), and decision-aid analytics—has shifted procurement from a transactional to a strategic function in cost creation (PwC, 2024). Globally, ICT functionality has emerged as a determinant of delivery performance and competitiveness, in particular in growing economies in which guide structures nevertheless prevail (OECD, 2025).

In a more and more digital economy, corporations rely on Information and Communication Technology (ICT) to optimize their supply functions. ICT lets companies automate procurement activities, enhance transparency, and strengthen relationships at some point of the supply chain (Azu et al., 2024). The integration of ICT tools—such as e-procurement, enterprise resource planning (ERP), and decision-support analytics—has shifted procurement from a transactional to a strategic characteristic in value creation (PwC, 2024). Globally, ICT capability has emerged as a determinant of supply performance and competitiveness, especially in developing economies where manual systems still prevail (OECD, 2025).

Several studies (Jing, 2024; Mwalukasa, 2024) have tested ICT adoption in procurement; few have empirically established the direct statistical hyperlink among ICT functionality and precise deliver feature consequences consisting of cycle-time reduction, supplier integration, and decision-making accuracy. Moreover, limited studies have contextualized those relationships in the realities of growing economies in which digital adulthood is uneven. This study contributes to ultimate that gap through offering modern data and current theoretical perspectives.

The objective of this study is to examine the mediating roles of ICT on procurement control and overall organisational performance in quoted production businesses in Nigeria. In doing this, the paper is divided into five parts, namely: introduction, literature review, methodology, discussion of results, conclusions and recommendations.

This study is important for both instructional and practical purposes. It presents empirical proof of the contribution of ICT to deliver characteristic efficiency, informing managers and policymakers about digital transformation priorities. Theoretically, it expands the Resource-Based View (RBV) through demonstrating how ICT assets generate operational advantage. Practically, it helps organisations' transition towards data-driven, transparent, and agile delivery chains (Economist Impact, 2025).

II. LITERATURE REVIEW

Conceptual Review

Meaning and Definition of ICT

ICT encompasses all technology used to address telecommunications, broadcast media, smart building-control structures, audiovisual processing, and transmission structures that allow records waft inside and among organizations. In deliver-chain contexts, ICT allows collaboration, method automation, and data analytics, transforming conventional procurement and logistics features into strategic assets (OECD, 2025).

The integration of ICT into supply chain management introduces tools such as e-procurement platforms, vendor-control structures, cloud-based ERPs, and blockchain for traceability. PwC (2024) reported that virtual procurement maturity among global corporations reached nearly 70 per cent, underscoring its growing centrality. In Nigeria, slow adoption is seen amongst production and telecommunications corporations, but the tempo stays sluggish because of infrastructural and human-capability constraints (Economist Impact, 2025).

ICT contributes to deliver-characteristic overall performance in a couple of ways:

- i. *Efficiency Gains:* automation of repetitive tasks reduces lead time and human error.
- ii. *Cost Optimization:* digital platforms enhance price transparency and supplier competition.
- iii. *Decision Accuracy:* data analytics enable predictive forecasting and strategic sourcing.
- iv. *Collaboration:* shared digital platforms connect suppliers, buyers, and logistics partners.

Empirical proof continually links ICT adoption to improved operational performance. For example, OECD (2025) determined that over eighty per cent of companies adopting virtual procurement structures achieved measurable financial savings and quicker order cycles. Similarly, the Economist Impact (2025) observed that companies leveraging virtual equipment are greater resilient to deliver disruptions and financial shocks.

Meaning of Procurement Management

Procurement Management, according to Procurement Tactics (2026) is defined as the end-to-end planning and control of how an organization sources and buys goods and services, emphasizing profitability, ethics, and balancing cost, quality, delivery reliability, and risk.

Oracle (2026) defined procurement management as the organizational oversight, optimization, and handling of the procurement process, including supplier evaluation, contract management, and risk mitigation to engineer long-term value. Furthermore, Focal Point (2026) defined procurement management as the systematic process by which organisations strategically acquire goods and services, covering planning, vendor selection, negotiation, and supplier relationship management. Procurement management is the process of purchasing or acquiring products, services, or results from outside the project team, including contract management and change control systems (PMI, 2026)

Chartered Institute of Procurement & Supply (CIPS) (202) defined Procurement management as the strategic function responsible for acquiring goods and services in a way that delivers value for money, ensures compliance, and supports organisational objectives. World Bank Procurement Framework (2024) defined Procurement management as the planning, conducting, and monitoring of procurement activities to ensure transparency, fairness, and efficiency in acquiring goods, works, and services. United Nations Procurement Manual (2024) defined Procurement management as the process of acquiring goods, services, and works while ensuring best value for money, fairness, integrity, and transparency.⁵

ISO 20400 (Sustainable Procurement Standard) defined Procurement management as the integration of sustainability considerations into procurement processes, ensuring that purchasing decisions support economic, social, and environmental goals.

Harvard Business Review(2026) defined Procurement management as the strategic coordination of sourcing and supplier relationships to reduce costs, manage risks, and foster innovation.

European Commission (Public Procurement Directive) (2026) defined Procurement management is the regulated process by which public authorities acquire goods, services, and works, ensuring competition, transparency, and equal treatment of suppliers. This study adopts the definition of procurement management as see by Harvard Business Review (2026) that defined procurement management as the strategic coordination of sourcing and supplier relationships to reduce costs, manage risks, and foster innovation.

Features of a good Procurement Management

Aliyu (2026) argued that good procurement management must come with the integration of the use of ICT that helps in simplifying the procurement management system. Olorunleke (2026) posited that good procurement management must possess the following attributes;

Value for Money

- Focuses on the *total cost of ownership* rather than just the lowest price.
- Balances cost, quality, and risk across the lifecycle of a purchase.

Transparency

- Clear, documented processes that can withstand audits.
- Open communication with suppliers to avoid favoritism or corruption.

Fair Competition

- Equal opportunity for suppliers to bid.
- Encourages innovation and competitive pricing.

Accountability

- Procurement decisions are traceable and defensible.
- Roles and responsibilities are clearly defined.

Integrity & Ethics

- Adherence to ethical standards in supplier selection and contract management.
- Avoids conflicts of interest and ensures compliance with laws.

Efficiency

- Streamlined workflows reduce delays and errors.
- Use of digital tools (e-procurement, ERP systems) to automate processes.

The Five Rights Principle

- Right Quality: Goods/services meet specifications.
- Right Quantity: Avoids shortages or excess inventory.
- Right Place: Delivered where needed.
- Right Time: Arrives when required, avoiding costly delays.
- Right Price: Competitive and fair cost. *(Some add a sixth: the Right Source, emphasizing supplier reliability.)*

Supplier Relationship Management

- Long-term partnerships foster trust, innovation, and reliability.

- Includes supplier evaluation, monitoring, and performance reviews.

Compliance Oversight

- Ensures adherence to organisational policies, industry standards, and government regulations.
- Reduces risks of fraud and legal disputes.

Risk Management

- Identifies and mitigates supply chain risks (e.g., inflation, logistics disruptions).
- Builds resilience through diversification and contingency planning.

Benefits of Procurement Management in an Organisation

Ojo (2024) posited that Procurement management brings significant benefits to organizations by ensuring efficiency, accountability, and strategic value creation. It is especially vital in today's competitive and inflation-driven environment. The benefits according to Ogunmoded (2026) are:

- Cost Savings

- Strategic sourcing reduces expenses by negotiating better deals and avoiding waste.
- Focuses on *value for money* rather than just the lowest price.

- Efficiency & Streamlined Processes

- Automates workflows through e-procurement systems.
- Reduces delays, duplication, and administrative errors.

- Quality Assurance

- Ensures suppliers meet standards, reducing defective or substandard inputs.
- Improves customer satisfaction and organizational reputation.

-Risk Management

- Identifies and mitigates supply chain risks (e.g., inflation, logistics disruptions).
- Builds resilience through supplier diversification and contingency planning.

Transparency & Accountability

- Clear documentation of procurement decisions prevents fraud and corruption.
- Strengthens compliance with laws and organizational policies.

Supplier Relationship Management

- Builds long-term partnerships that foster trust, innovation, and reliability.
- Encourages collaboration for better pricing and flexibility.

Competitive Advantage

- Access to innovative suppliers and technologies.
- Faster response to market changes compared to rivals.

Sustainability

- Integrates environmental and social responsibility into procurement decisions.
- Enhances corporate image and compliance with global standards.

Finally, Ashiru (2025) argued that Procurement management is not just about buying—it's about strategic oversight that balances cost, quality, and risk while fostering supplier relationships and ensuring compliance. For organisations in Nigeria and globally, adopting ICT-enabled procurement systems amplifies these benefits by making processes more transparent, efficient, and resilient.

How ICT Mediates Procurement Benefits into Organisational Performance

Ojo, Olorunleke and Ashiru (2026) posited that ICT played a vital role in improving the benefits of procurement to aid organizational performance. Among the roles are;

1. Cost Savings → ICT as Enabler

- *Benefit:* Procurement reduces costs through strategic sourcing.
- *ICT Role:* E-procurement platforms automate supplier comparison, tendering, and contract management.
- *Impact:* Organizations achieve real-time cost visibility, reducing leakages and improving profitability.

2. Efficiency → ICT as Accelerator

- *Benefit:* Streamlined procurement processes save time and reduce errors.
- *ICT Role:* ERP systems, cloud-based procurement, and automated workflows eliminate manual bottlenecks.
- *Impact:* Faster procurement cycles lead to higher productivity and operational agility.

3. Quality Assurance → ICT as Monitor

- *Benefit:* Ensures suppliers meet standards.

- *ICT Role:* Digital supplier evaluation tools track performance, certifications, and compliance.
- *Impact:* Organizations maintain consistent quality inputs, boosting customer satisfaction.

4. Risk Management → ICT as Predictor

- *Benefit:* Procurement anticipates supply chain risks.
- *ICT Role:* Analytics and AI forecast demand, monitor supplier reliability, and flag disruptions.
- *Impact:* Firms build resilient supply chains, minimizing downtime and losses.

5. Transparency & Accountability → ICT as Guardian

- *Benefit:* Clear documentation prevents fraud and corruption.
- *ICT Role:* Blockchain, audit trails, and e-procurement logs ensure tamper-proof records.
- *Impact:* Organizations gain trust and compliance credibility, especially in public procurement.

6. Supplier Relationship Management → ICT as Connector

- *Benefit:* Builds long-term partnerships.
- *ICT Role:* Supplier portals, CRM integration, and collaborative platforms enhance communication.
- *Impact:* Stronger supplier ties lead to innovation and flexibility.

7. Competitive Advantage → ICT as Differentiator

- *Benefit:* Faster response to market changes.
- *ICT Role:* Digital procurement enables agile sourcing and quick adaptation to global trends.
- *Impact:* Organizations outperform rivals with speed and innovation.

Challenges of Procurement Management in an Organisation

Ashiru (2026) argued that there are some challenges facing procurement management in an organization, but effective digitalization of procurement processes may help in overcoming of the challenges. The key challenges, according to the author, are;

1. Supplier Reliability

- Vendors may fail to deliver on time or provide substandard goods.
- Leads to production delays and reputational risks.

2. Market Volatility

- Inflation, currency fluctuations, and unstable supply chains increase costs.

- Particularly critical in Nigeria and other developing economies.

3. Compliance & Regulatory Issues

- Complex procurement laws and organisational policies can be difficult to follow.
- Non-compliance risks legal penalties and reputational damage.

4. Fraud & Corruption Risks

- Lack of transparency can lead to favoritism, inflated contracts, or kickbacks.
- Public procurement is especially vulnerable.

5. Technology Gaps

- Reliance on manual processes slows down procurement cycles.
- Errors and inefficiencies are common without digital systems.

6. Resistance to Change

- Staff may resist adopting ICT-driven procurement systems.
- Organisational culture can hinder modernization.

7. Global Risks

- Geopolitical tensions, trade restrictions, and logistics disruptions affect supply chains.
- Organizations dependent on imports are most exposed.

8. Data Management Issues

- Poor record-keeping makes it hard to track spending, supplier performance, and compliance.
- Limits strategic decision-making.

Conceptualize Organizational Performance

Organisational performance refers to how effectively an organisation achieves its goals, delivers value, and sustains growth. It is a multidimensional concept that measures both financial and non-financial outcomes (Ojo, 2026)

Aliyu (2026) defined Organizational performance as the ability of an organization to use resources efficiently, meet objectives, satisfy stakeholders, and adapt to changes in its environment. It is often measured through profitability, productivity, innovation, employee satisfaction, customer loyalty, and social responsibility.

Dimensions of Organizational Performance

1. Financial Performance

- Profitability, revenue growth, cost efficiency.
- Example: A manufacturing firm increasing profit margins through better procurement.

2. Operational Performance

- Efficiency of processes, supply chain reliability, quality of outputs.
- Example: Faster procurement cycles improving production timelines.

3. Customer/Market Performance

- Customer satisfaction, retention, and market share.
- Example: ICT-enabled procurement ensuring timely delivery of quality goods.

4. Employee/HR Performance

- Staff productivity, morale, and retention.
- Example: Transparent procurement reducing workplace conflicts.

5. Innovation & Learning

- Ability to adapt, innovate, and improve processes.
- Example: Using ICT tools to integrate sustainability into procurement.

6. Social & Environmental Responsibility

- Compliance with ethical standards, sustainability goals, and community impact

Mediating Effect of ICT on Procurement Management and Organizational Performance

Aliyu (2026) argued that there is a significant positive effect of ICT on the procurement management and performance of the organization. In supporting this evidence, Ojo and Olorunleke (2026) posited that ICT simplified the process of procurement by ensuring that both the supply and demand sides of the procurement processes are made translate, thus, ensuring accountability and probity in the process. As pointed out by Ashiru (2025) that ICT is needed in procurement process to eliminate corruption in the system and makes the system transparency, thus, helping the organization to save cost as well as adding more to profit. This according to Ashru (2025) increase the assurance that even in the procurement process the organization can benefit and enhance profitability.

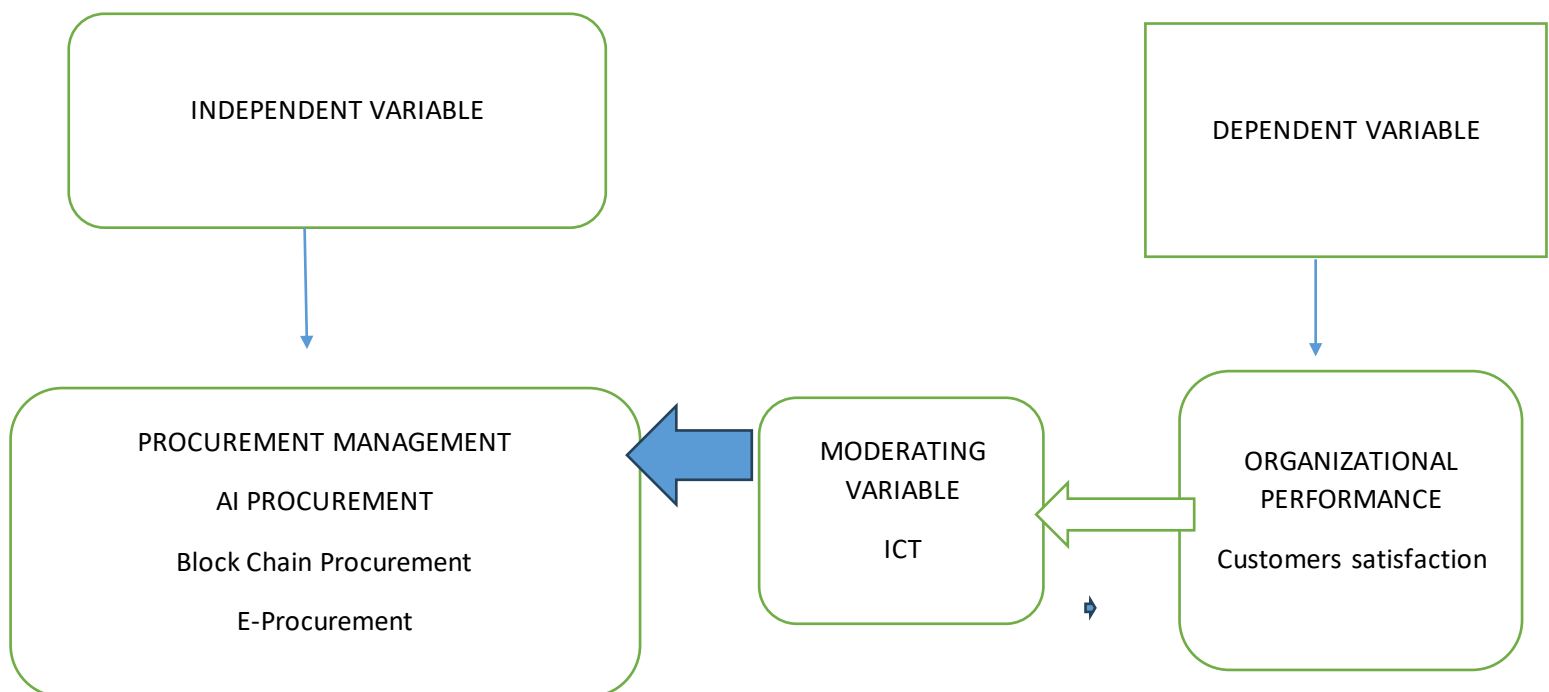
In addition, Ol(2026) argued that the integration of ICT in procurement may increase organizational performance. This according to the author is because ICT improves customers and supplier relationship, thus, helping the organization to meet its demand and satisfied its customers as at when due. This scenario adds meaningfully to organization goodwill, thus, helping to increase sales and revenues of the organization as well as profit. Customers as a matter of fact like to patronize organization products that aid in quick delivery of their goods. In particular organization to that integrates ICT with procurement processes usually gain upper hands in customers satisfaction.

This according to Adeigbe (2025) enhances high level of patronage from both old and attract new customers to the organization. The consequence of this was increase in sales revenue possibility increase in profit if cost is maintained within a certain limit. Ojo (2026); ashiru (2025) and Olorunleke (2024) all agreed that there is a significant positive effect of ICT on procurement management as well as performance of an organization.

Conceptual framework

The conceptual frame that guides the relationship among the variables of the study is illustrated in the figure below.

Figure I Showing the moderating effect of ICT on Procurement Management and Organizational Performance



Source: Researcher's Adapted, 2026

Theoretical framework

This study is hinged on the theory of planned behaviour. According to Ajzen, (1991) the dominant issue in the Theory of Planned Behaviour (TPB) is the person's purpose to execute a particular act that is improved the Theory of Planned Behaviour. The sturdier the purpose to involve in the act, thus the yield would result in more output as opposed to not achieving. TPB hunches that a person's aim is to act in a certain way guided by three aspects: determinants: boldness, individual norm, and apparent action mechanism.

The significance of the factors would vary across the various happenings (Ajzen&Fishbein, 1980)

The way a person acts portrays their negative and positive attributes in life. This is seen by their attributes on how they perform at work. The individual is subjected to adaptable behaviour's. At the very end the last factor is called the perceived behavior control. Thus TPB forecasts how one would act in their life as such they would be some level of conforming to certain aspects in life such as how one perceives issues and using them as a management function showing an element of professionalism.

An individual therefore should be courageous and also show that they are in control with how they act in life. The hypothesis is used in the acceptance of the acceptable behaviours that can be incorporated in the procurement systems of which is in line with the services that are provided

A number of researchers allude to the aspect of the TPB to be more focused on mental processing capabilities. The theory has been critiqued on that basis. Some academicians have also levelled accusations on the theory being self-vested as opposed to focusing on the needs of an individual. For instance a person with the right attitude might want to feed on beef but order another type of food when hungry.

In another perspective a person might abhor taking alcohol yet they have very little intent to drink. These persons will still have the opportunity of taking alcohol in order to seek approval of a certain group (Mai, 20156).

Theory of planned behaviour is thought to be relevant for this study since it focuses on individuals behaviour and explicit to use ICT respectively. In addition the TPB theory establishes the nexus between data and communication technology and the enactment of industrial firms in Kenya; hence it gives a theoretical background for this study.

III. METHODOLOGY

The study used a descriptive research design since the study intends to gather quantitative and qualitative data that describe the factors that describes the mediating roles of ICT on procurement management and organizational performance in Nigeria. The paper considered this design to be useful since it helped the gathering of reliable and accurate data that clearly described the mediating effect of ICT on procurement and organizational performance. The factors that affect procurement performance in manufacturing. The target population was the employees of Dangote sugar company Ltd drawn from the following departments, procurement and logistics, production, Finance, General administration, ICT and human resource. Based on records retrieved from the human resource department, the total target population was therefore 520 employees. More so, the purposefully sampling technique was used to select approximately 226 employees from a total population of 520. The sample size was determined scientifically through the aid of Yamane Taro formula (1964). The formula is defined as:

$$n = N / (1 + N(e^2)) \text{ ----- (1)}$$

Where, n= sample size

N= population size and e= level of significance.

applying the formula, the study sample size is given as;

$$n = \frac{520}{1 + 520(0.05)^2}$$

$$n = \frac{520}{1 + 1.3}$$

$$n = 226.09$$

That is, n is approximately = 226

The data collection instrument used was a questionnaire designed using the variables identified as important for meeting the objectives of the survey. A questionnaire is a printed self-report form designed to elicit information that can be obtained through the written responses of respondents (Adelakun, 2023) .A closed-ended questionnaire was administered to the respondents. The questionnaire was used since it was easy to administer and after obtaining data it was easy to analyze. Five (5) point Likert scale questionnaire was the main instrument of data collection for the study. After collection of data the researcher conducted data cleaning, which involved the identification of incomplete or inaccurate responses and correct to improve the quality of the responses. The data were coded and entered into the computer for analysis using the Statistical Package for Social Sciences (SPSS), version 24. The research yielded quantitative data.

In addition, in designing questions for the questionnaire the researcher carefully considered the relationship of the test item to be able to investigate the objective of the study. This shows that any test question not in consonance with the objective of the study will not be considered. More so, the validity of the test instrument was carried out by giving a draft copy of the questionnaire to a lecturer in the Department of Test and Measurement in Faculty of Education, Department of Curriculum Studies, Obafemi Awolowo University, Ile-Ife, Osun State. All necessary corrections made by the lecturer were incorporated in the final draft of the test instrument before the researcher went to the field. This confirmed that the test instrument was reliable. Moreover, the reliability of the test was confirmed with the aid of Cronbach coefficient which produced a very high coefficient of 0.93 for test items on ICT, 0.89 for procurement and 0.95 for organizational performance. The values further reaffirmed that the instrument was reliable. The study used both descriptive statistics of mean and standard deviation to meaningfully describe the data collected for the groups. The sobel test was used to test the null hypothesis of there was no mediating effect of ICT on procurement and organizational performance.

Meanwhile, from 226 copies of questionnaire distributed to the employee of the company only 220 copies of questionnaire were retrieved and used for the study.

IV. RESULTS AND DISCUSSION

Table I presented the result of the demographic distribution of respondents.

Table I Frequency Distribution of Respondents Demographical Characteristics

Variable	Frequency	% Percentage
Age in years		
Less than 30	80	36.36
30-40	120	54.54
41-50	15	6.82
51 and above	5	2.27
Marital Status		
Married	180	81.82
Single	20	9.09
Other	20	9.09
Department		
Procurement and Logistics	40	18.18
ICT	20	9.09
General Administrative	80	36.36
Plant and operations	60	27.27
Others	20	9.09
Highest Academic Qualification		
OND/NCE	40	18.18
HND/BSC	140	63.64
Master degree/PGD	28	12.73
Other	12	5.45

Source: Researcher's Fieldwork, 2026

Table I presented the result of the demographical variables. checking the result in the table, the frequency distribution of respondents by age showed that 36.36% of the respondents were less than 30 years of age while 54.54%, 6.82%, and 2.27% of the respondents were between 30-40 years of age, 41-50 years of age and 51 and above years of age respectively. This indicated that a sufficient number of the respondents were between 30-40 years of age, invariably any opinion generated from this category of respondents might influence the outcome of the study. More so, the frequency distribution of respondents by marital status showed that 81.82% of the respondents had married while 9.09% and 9.09 % of the respondent were single and other such as widowed, divorced and single parent respectively. This indicated that an adequate number of the respondents had married. The variable might influence how respondents rated the test items.

Also, the frequency distribution of respondent by department showed that 18.18% of the respondents were

from procurement and logistics department while 9.09% of the respondents were from ICT. Also, 36.36% were from the general administration department, 27.27% were from Plant and Operation Department while 9.09% of the respondents were others such as Finance, budgeting and planning, payroll and so on. The variable might affect the way the respondent rated the test item.

Furthermore, the frequency distribution of respondents according to highest academic qualification, revealed that 18.18% had OND/NCE while 63.64% had HND/B.SC. . More so, 12.73% and 5.45% had Master Degree/PGD and other such as trade certificate and professional qualification. This indicated that a substantial number of the respondents had HND/B.Sc.. Therefore, any opinion generated from this category of the respondent would influence the outcome of the study significantly. The variable may positively influence how respondents rated the test items.

Table2 Mean and Standard Deviation Computed for the Respondent Respond on the Variable of ICT

S/N	Variable	N	Mean	STD	Remark
1	Artificial intelligent has been inbuilt in the company procurement process	220	4.06	0.32	Effective used
2	Block chain has enhanced the procurement procedures of the manufacturing company	220	3.87	1.12	Fairly used
3	Large data size has been an ICT compliance inbuilt in the company procurement.	220	4.45	0.08	Effective used
4	Cloud accounting has enhanced effective performance indicators communication to the management.	220	4.23	0.12	Used

*Source: Researcher's Fieldwork, 2026 ** items are tested on a 5 point likert scale ** A test item is effectively used if mean cal is greater or equal to 4.00 or otherwise*

Table II presented the result of the mean and standard deviation computed for the variable of ICT. Checking the result it was discovered that Artificial intelligent had been effectively used to affect information and communication relating to procurement processes in the firm. This assertion was hinged on the fact that the mean value obtained for the test item of 4.06 was greater than the acceptable mean of 3.00 with a standard deviation of 0.32

that showed a slight dispersion from the mean. on this premises the variable of AI was found to be effective used. More so, other ICT tools such as block chain, cloud accounting and large data size were found to be an integral part of procurement processes in the company, thus, helping the company to enhance information and communication processes regarding procurement and company performance.

Table III Mean and Standard Deviation Computed for the variable of Procurement Performance 5

S/N	Variable	N	Mean	STD	Remark
1	Delay relating to manual procurement processes has been eliminated as a result of integration of ICT tools in the company procurement	220	3.89	1.15	Procurement has improved
2	Long process in meeting customers need has been eliminated due to e-procurement.	220	4.05	0.84	Procurement has improved
3	E-procurement has enhanced accuracy of procurement data and information.	220	4.23	0.23	Procurement has improved
4	The activities of unscrupulous procurement agents have been completely wiped out as a result Integration of ICT in procurement processes.	220	4.54	0.07	Procurement has improved

*Source: Researcher's Fieldwork, 2026 ** Acceptable Mean= 3.00 on a 5 point likert scale. a test item has improved procurement process if mean calculated > or equal to 3.00 or otherwise. STD = Standard Deviation*

Table III presented the result of the mean and standard deviation computed for the respondents respond on the variable of procurement performance. From the table, it was found that a sufficient number of the respondents agreed that delay relating to manual procurement processes had been eliminated as a result of integration of ICT tools in the company procurement.

The assertion was because the mean value computed for the test statement of 3.89 was far greater than the acceptable mean of 3.00, thus, revealing that the integration of ICT in the company procurement processes had eliminated delays usually noted with the manual procurement system the company was using before. This according the respondent the researcher interacted had helped in enhancing procurement procedures of the company.

More so, other test items used for the variable of procurement further confirmed that the integration of ICT in procurement process of the company had facilitated effectiveness in procurement processes of Dangote Sugar Company.

For instance, the long process in meeting customers need has been eliminated due to e-procurement according to the respondents. This confirmed that the use of ICT in procurement might aid procurement performance in the company.

Table IV Mean and Standard Deviation Computed for the variable of Organizational Performance

S/N	Variable	N	Mean	STD	Remark
1	Performance has regard customers satisfaction has been ensued due to ICT integration	220	4.67	0.06	Enhanced performance
2	The company sales has improved as a result of integration of ICT in marketing and product advertisement.	220	4.34	0.11	Enhanced performance
3	The company market share has improved as a result of e-marketing	220	4.23	0.21	Enhanced performance
4	Performance indicators (such as ROA, ROE, and ROI) have been positive since when ICT has been introduced in every segment of the organization.	220	3.89	1.08	Enhanced performance

*Source: Researcher's Fieldwork, 2026 ** Acceptable Mean= 3.00 on a 5 point likert scale. A test item has enhanced performance if mean calculated > or equal to 3.00 or otherwise. STD = Standard Deviation*

Table 4 presented the result of the mean and standard deviation computed for the variable of performance. Checking the result in the table, it was discovered that the performance of the organization had improved as a result of the roles of ICT. From the result in the table, it was found that Performance has regard customers satisfaction had been ensued due to ICT integration. This inferred was premised on the fact that the mean value computed for the test item of 4.67 was far greater than the acceptable mean of 3.00 with a standard deviation of 0.06 that showed an

insignificant dispersion from the mean. This indicated that the introduction of ICT in the company had increased the capacity of the company to be able to meet its customer's request and produced goods that melt the expectation of its customers. This was because ICT facilitated timely notice of customers' request. This helped the company to put in place necessary process that might help in meeting the customer's request in time.

Other test items further confirmed that ICT aid organizational performance.

Test of Hypothesis

H₀: There is no significant mediating roles of ICT on procurement management and Organizational Performance

Table 5 Sobel Test Result for the Test of Hypothesis

Input			Test statistics (Z)	Standard Error	p-value
A	0.135097	Sobel test	2.89	0.0291	0.03454235
B	0.602948	Aroian test	2.89	0.0291	0.03454235
S _a	0.042395	Goodman test	2.89	0.0291	0.03454235
S _b	0.104624				

Source: Author's Computation, 2026 (Sobel Calculator version 8)

Table 5 indicated the result of the Sobel test obtained to investigate the mediating role of ICT on the relationship between procurement management and organizational performance. Looking critically at the result in the table, it was found that the relationship between the measured variables of procurement management and organizational performance of the selected company without the effect of the ICT (the mediating variable) was positive. This was revealed by the regression coefficient of 0.14 denoted in the mediating relationship as a 'a' coefficient. The implication of this was that without the effect of ICT the independent variable of the study denoted by Procurement management positively affected the variable of organizational performance. Therefore, with a 1% increase in the variable of procurement management, the organizational performance of the selected company might increase by 0.14%.

Furthermore, with the introduction of the ICT into the model of the actual measured variables where both the variables of the procurement management and ICT served as the predictor and mediating variables respectively, it was discovered that the effect of the mediating variable (ICT) on the relationship between Procurement management and performance was positive. This assertion was hinged on the fact that the estimated coefficient computed for the mediating effect of ICT on the relationship between procurement management practices and performance of 0.60 was positive. This revealed that the variable of ICT positively mediated the relationship between Procurement management and performance of the selected company. Therefore, a 1% increase in the mediating effect of ICT could cause a 0.60% increase in the relationship between procurement management and performance in the selected company.

Moreover, the result of the Sobel test computed for the mediating effect of ICT on the relationship between Procurement management and organizational performance of the company selected was found to be significant. This inferred was premised on the fact that the P-value of the Sobel test statistics computed of 0.0345 was less than the critical value of 5% with a significant Z-statistics value of 2.89. This confirmed that ICT played a positive mediating effect on the relationship between Procurement management and organizational performance. The implication of this was that with a strong ICT integration, procurement management might positively influenced the degree of organizational performance a company might enjoy. For instance, the culture of continuous ICT integration in all segments of the company could greatly influence the level of performance the company might enjoy.

V. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This research paper had showed that ICT played a positive effect influencing both procurement management and organizational performance. The study concluded that ICT positively boosted procurement management. ICT enhanced the performance of organization if it is well integrated in to affect all processes and procedures in the organization. ICT positively mediate on procurement management and organizational performance.

Recommendations

The study recommends that;

- ICT must be adequately integrated in procurement processes of the Dangote Sugar Company.
- There is need for the organization to source for ICT experts that can use the various procurement software integrated in the computer system or ICT platform of the company in order to improve procurement producers of the organization.
- There is need for the company to integrate ICT in other departments in the organization.
- More so, since ICT positively moderate the relationship between procurement management and performance, there is need for the organization to inbuilt ICT in the computation and analysing of the company financial platform. this may help in effective monitoring of financial recklessness of official and unscrupulous management.

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