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Procurement Planning Technique: A Strategy for Sustaining Production Capacity of Bread-Baking Firms in Port Harcourt, Rivers State, Nigeria

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Abstract:

The small and medium-scale industry is considered to be an informal section in the Port Harcourt Rivers State, Nigeria. However, the volume of business activity carried out in the sector was perceived to be capable of opening and increasing the per capita income of the city Port Harcourt if their mode of operation is mainstreamed to size procurement of materials geared towards increasing productivity amongst bread baking firms. Thus, the general aim was to evaluate how procurement technique enhances production capacity among firms in the bread-baking industry in Port Harcourt. The study was necessitated as a result of the inability of firms to strategically increase production capacity, given the apparent local means for material procurement in practice. A correlation design was adopted for the study, with the aid of a structured questionnaire on a total population of 96 firms. Questionnaires were administered to 96 production supervisors; hence, it was a judgmental census study. Findings upheld that all dimensions measured were of strong positive correlation at the least measure of 0.6 ($p \geq 0.00$). Among the conclusions reached was that making decisions was more strategically viable for firms to adopt in the industry. Thus, an empirically proven approach to procurement selection technique would be more reliable for sustaining the production capacity of the firms studied.

Keywords: Expert judgment, decision-making, procurement, production, supply

1. Introduction

The system that controls the mode of productive activities is fast becoming dynamic for business based on standardized approaches not only in Nigeria but across the world. Emikso & Nurmi (2023) posited that procurement methods require systematic planning to integrate different forms of firm processes and support functions to form a chain of network that would be capable of synchronizing production with requisition, procurement according to demand, sequencing or scheduling in line with customer need. Thus, Errzau & Ejeru (2023) pointed out that the need and desire to satisfy customers' tastes is fast changing. This change is fueled by the fast-growing state of the economy, where residents of the city find it more convenient to have breakfast light and quick in readiness for daily activities, as well as the increase in rural-urban migration to the city in pursuance of life aspiration (Hamit, 2023). This directly influences the readiness of bread-producing firms to understand and improve their procurement chain for the availability of products to satisfy customers at the right time. Means for procurement approaches is an aspect that can be improved upon in order to further contribute to bread-baking firm's productivity (Baabe, Haldinah & Josiah, 2023). Bread baking firms often choose procurement techniques that are familiar to them; they should instead choose the ones most suited and most beneficial in enhancing their production capacity without consideration to the evolving trend for best practices, such as expert opinion, make decision approach and suppliers selection determination (Ade, & Arsen, 2023). These are core procurement dimensions that should be critical for adoption in the evaluation of procurement decisions for sustaining productive capacity (Cambert & Koper, 2023). Hence, these necessitated further study by the researcher to specifically determine techniques that would assist firms in the studied industry to build or improve on their internal structure for efficient procurement routine.

1.1. Statement of Problem

Organizations are directly influenced by external mechanisms in their bid to efficiently optimize their predetermined goals and objectives, largely because of the inherent need to procure products, raw materials, equipment, and human capital from the external environment. However, this had not all been a hitch-free procedure because of individual firms' internal procedures and the peculiarity tied to their production chain. Thus, the growing concern to adequately satisfy their customer, as in the bread baking industry in Port Harcourt, has posed pressure on the productive ability of firms to deliver products to customers at the right time, quality, and quantity required. This opportunity to maximize profit has exposed their unpreparedness in keeping or maintaining a stock level that is capable of driving capacity to produce. This inability is tied to the firm's procedural approach to procurement and determination of

procurement techniques. Though several researchers have contributed to this subject of study, it is still insufficient in providing a generalized solution to procurement activities for individual firms.

1.2. Conceptual Framework

The conceptual framework showed the variables studied as well as their dimensions. The independent variable is teamwork, while the dependent variable is organizational agility.

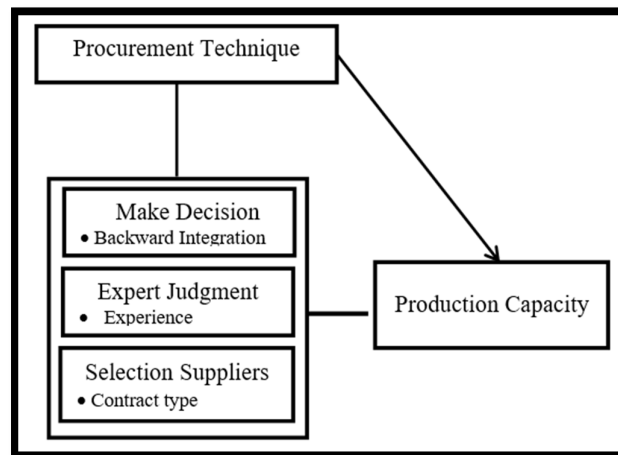


Figure 1: Adopted Conceptual Framework
Source: Cadya, Tajeed & Mallenda (2023), Madina & Bakieva (2023) and Researcher's Conceptualization (2023)

1.3. Objectives of the Study

The specific objectives of the study were identified as:

- To ascertain the extent to which making decisions relates to production capacity in the studied organization
- To ascertain the extent to which expert judgment influences production capacity in the studied organization
- To ascertain the extent to which supplier selection influences production capacity in the studied organization

1.4. Research Questions

The research questions identified below were formulated to guide the researcher in carrying out the study.

- To what extent does making decisions influence production capacity in the studied organization?
- How does expert judgment influence production capacity in the studied organization?
- To what extent does suppliers' selection influence production capacity in the studied organization?

1.5. Research Hypotheses

The hypotheses stated below were formulated in the null form.

- H₀₁: There is no significant relationship between decision-making and production capacity in the studied organization
- H₀₂: There is no significant relationship between expert judgment and production capacity in the studied organization.
- H₀₃: There is no significant relationship between supplier selection and production capacity in the studied organization

1.5.1. Conceptual Review

An organization depends on the chain of a network built over a period of time in determining its ability to be productive since larger material that the organization would need comes from the external environment with the help of other firms to make it available for their internal use (Ebara, Dekomari & Koko, 2023). Bati & Bira (2023) alluded that procurement is the acquisition of material required for the transformation or conversion of resources into finished products or services for efficient performance and the optimization of organizational goals, which are crucial factors to the stakeholders. Also, the gains in meeting and satisfying customers' needs are directly tied to selective procurement strategies, as determined in the foregoing (Hong & Wagdi, 2023).

1.5.1.1. Make or Buy Decision

Firms need to concisely develop means or methods that could enable them to have material for productive purposes with less dependence on external supply. From the contemporary perspective of Vai (2022), management's capability to evaluate the initial scope for determining the processes involved producing a product or service that will be cost-effective becomes the overall technique. In achieving this, deliberate analyses as to the cost components that are directly or

indirectly associated with such productive gain become pivotal in the decision selection of the production department (Grell, Richman & Klvis, 2023).

1.5.1.2. Expert Judgment

Taking a clear contribution from the stance of Ceagbra & Desmond (2023) in determining the productive activities of a producing firm in such a fast-growing or evolving economy requires the technical input of judgment from experts and professionals in the knowledgeable area, which can also be rendered from the perspective of team, group or individuals. Conversely, Wallington (2022) avowed that different sources abound by which organizations can identify and attract such expert skills that are not found within the firm or the productive unity of the organization, such as consultants, professional or technical associations, and industry groups.

1.5.1.3. Contract Type Selection

The performance of every procurement planning is partly tied to the kind of contract entered into for such supply (Ababene, 2023). Effiong & Mafidor (2023) maintained that it is expected to have or determine different forms of contract that best fit any given procurement activity in accordance with the type of product to be produced or made available to consumers. Such forms of contract usually spill into one form of the three general categorizations:

1.5.1.4. Fixed Price or Lump Sum Contracts

From the recent contribution of Modiaca (2023), this type of contract is best used when the total price of the product to procure is adequately ascertained and fixed. Risk is prone to such a contract in a situation where neither the buyer nor the seller of the particular product has information on the item or product to procure. (Eke, & Pisi, 2023). Bartilo (2023) asserted that the risk in it is that the buyer may receive a fake, or it may not be the exact product or desired item he wants to buy; while, on the other hand, the seller may need to incur more expenses just to make the product available for sale. One of the major advantages of entering into such a contract is that, as the expectations or objectives of the project are adequately satisfied or exceeded, an incentive is usually awarded (Agbaji, Cosmira & Pearson, 2023).

1.5.1.5. Cost Reimbursement Contracts

This Categorization is Quite Stimulating For Adoption For Procurement Planning Activities of a given productive activity or project because it details the responsibility of the seller making the product available for the buyer, and on the other hand, the buyer pays for both expenses incurred for providing the product and the associate profit therein as found in the work of Neney, & Bhama, (2022; Jack, 2023). The award of incentive is profound, though the cost can be direct or indirect. Every cost that is of immediate impact or linked to the productive activity, such as payment of staff salary, is a direct cost, whereas indirect costs are of overheads, ongoing concern, etc., which are usually calculated as a percentage of direct cost (Aluenis, & Breatt, 2023).

1.5.1.6. Time and Material Contract (TM)

This is a contract that is usually known as a hybrid because of its combination of fixed price and reimbursement contracts. Halfre (2022) opined that it is a type of contract that is open-ended in the sense that the full value of the arrangement is not usually defined at the time the contract was entered into. However, any of the two modes of payment can be adopted as agreed on by both parties (Baily, 2022).

1.5.2. Empirical Review

Lydiana & Dalmi (2022) carried out a study on procurement and maximization of the organizational output of road construction firms in North Central Region of Nigeria. The aim of the study is to identify. Stratified sampling and simple random sampling techniques were applied in the selection of respondents. Descriptive statistics in the form of frequencies, percentages and inferential statistics were used for analysis in the study. The study collected primary data to achieve its aim. Findings revealed that procurement control was sustained by a mean of 4.30; it also showed a mean score of 4.41 and the standard deviation stood at 0.757 respectively. The study also concludes that the organization can improve training in procurement practices through conducting training needs assessment, allocating adequate training funds, offering relevant training in procurement practices and using procurement experts during training in procurement practices.

2. Theoretical Framework

2.1. The Contract Theory

The contract theory was found to be supportive of the study. The theory was first propounded by Thomas Hobbs in 1588 to 1679 and was later reviewed by other proponents as social contract theory by John Locke and Jean Jacques in 1690 Abali, Brown, & Kuchiel, (2022). Erasim and Joan (2023) noted that, in economics, contract theory studies how capitalists or organizations can and do enter into contractual arrangements, generally in the presence of distorted knowledge about the terms. Hilbor, Cyril, Brown and Offor (2023) argued that contract theory is often categorized within a field known as Law and economics because of its connections with both agency and incentives. The assumption in contract theory is that the incentive contract is less expensive and enforceable and that the contractor can be held accountable for the delivery of any contracted services, typically through the courts (Egbame, Chitomi & Hytie, 2023).

2.2. The Agency Theory

This theory was also found to be very supportive of this study. It emerged due to the combination of the discipline of economics and institutional theory by Stephen Ross and Barry Mitnick in the 1970s. They critically studied the assumptions that surround the principal and the agent based on the context of compensation or payment that is due to the agent in order to motivate him to deliver on his responsibility (Markson, 2023),

3. Methodology

The study adopted a correlation design, with a structured questionnaire administered to 96 production managers or supervisors drawn from 96 bread-baking firms. Convenience and purposeful sampling technique was used in selecting 96 firms, based on their leadership and dominance in the industry; hence, it was a census study. Responses from questionnaire items were structured in accordance with three research questions, which were analyzed using Spearman Correlation Coefficient in combination with Regression Analysis to determine causation.

		Decision-making	Expert Judgment	Supplier Selection	Production Capacity
Make Decision	p - Value	.70**	.62**	.67**	.71**
	2-tailed	0	0	0	0
Expert Judgment	p - Value		.76**	.77**	.67**
	2-tailed		0	0	0
Suppliers Selection	p - Value			.73**	.81**
	2-tailed			0	0
Production Capacity	p - Value				.70**
	2-tailed				0
	N	96	96	96	96

Table 1: Correlation Matrix of Bivariate Analyses
Source: SPSS 25.00 Output. Field Survey, (2023)

Table 1 reveals that all variables tested and analyzed were positively correlated. The degree of measure at which variables were positively significant was strong and very strong.

Model	B	Beta	t	Sig.
(Constant)	0.81		4.23	0.71
Make Decision	-0.87	-0.71	-7.14	0
Expert Judgment	-0.71	-0.83	5.55	0
Supplier Selection	-0.72	-0.69	7.53	0

Table 2: Linear Regression on All Independent Variables
Source: SPSS 25.00 Output. Field Survey, (2023)
a. Dependent Variable: Production Capacity

Table 2 shows how the predictor variables influenced the criteria variable in the study. Thus, the regression values are \leq significant value.

4. Discussion of Finding

In accomplishing objective one of the study, table 1 reveals that decision-making was positively correlated with production capacity at the sign of $0.00 \leq 0.71(p)$, which implies the degree to which decision-making influences production capacity was very strong. The findings are in collaboration with the study by Bwai, Rift and Azi (2023), who, in their assertion, maintained that making a decision is one of the essential internal mechanisms that engineer the strength and capacity of every productive organization. Elutu, Krista & Tenknan (2023) and Cabatin & Datue (2023) alluded that manufacturing firms should build a recovery channel as a substitute for their raw material through backward integration for a sustained stock level to meet and satisfy customers' needs. Considering table 2, regression analysis indicated constant positive significant value for all predictor measures at 0.71. It further showed causality in its value of -0.87, which means that making decisions is negatively proportional to production capacity; it affects the production ability of bread-baking firms significantly.

Objective two was attained with the use of table 2. Magnus and Molfe (2023) opined that organizations should often consider the views and opinions of skilled professionals whose experience and knowledge have improved operations and structure in such a specific industry. Given this assertion, it conforms to the findings, which depict a strong positive significant correlation between expert judgment and production capacity at the measure of $0.00 \leq 0.67$ (p). Using table 2 signaled a cause and effect coefficient measure at 0.83. Thus, expert judgment affects the productivity level of the studied firms significantly.

Finally, objective three was achieved using tables 1 and 2. It proved that suppliers' selection had a very strong positive significance with production capacity at the sign of $0.00 \leq 0.81$ (p). This correlation was further contained in the work of Efee, Olams, Candall and Masie (2023). They asserted that organizations often depend on the activities of middlemen in the acquisition of materials used for manufacturing and organizational processes. The choice or selection of a supply chain requires a legal authentication against adverse action of both parties in the course of obligatory responsibility (Bekee & Vose, 2023). As also shown in table 2, the regression value was found to have a 0.69 cause and effect significance between the measured dimensions.

5. Conclusion

This study demonstrated a sharp departure in its novelty in the introduction of decisions and expert judgment in combination with supplier selection as dimensions of procurement technique. It was imperatively evident that procurement techniques are pivotal in the smooth productive capacity of bread-baking firms in Port Harcourt. This industry had shown strength in its drive to adequately satisfy the growing and teeming population of residents in the city. Hence, it behooves the individual firms in the industry to adequately determine strength base (SB) procurement techniques that would enhance their capability to sustain stock levels to deliver products in a timely manner.

6. Recommendations

- Firms in the studied industry should be prepared to adopt non-conventional techniques in the procurement strategy because of the changes in the external environment.
- Substitute or alternative supply sources should be critically evaluated for inclusion to maintain record-time delivery.
- Firms should analytically evaluate factors of the manufacturability index in their procurement to maintain customer loyalty.

7. Areas for Further Study

It would be most desirable to carry out a comparative study, given the dimensions adopted for the study, to ascertain the disparity in decision-making and expert judgment to other conventional practices.

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