

Assessment of inventory management strategies and organizational outcomes in Phinorma Poultry Farm Nig. Ltd., Ngwo, Enugu

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Abstract

This study examined the impact of inventory management practices on organizational performance at Phinorma Poultry Farm Nig. Ltd., Ngwo, Enugu (Igwe Anyalogu Poultry Farm). The research specifically evaluated the effect of Economic Order Quantity (EOQ) practices on operational effectiveness and assessed how Just-in-Time (JIT) inventory practices influence cost effectiveness. A sample of 88 employees was selected from a population of 120 staff members. Mean scores and standard deviations were used to answer the research questions, while regression analysis tested the stated hypotheses. The results revealed that EOQ inventory practice significantly improves operational effectiveness ($t = 5.887$; $p = 0.000 < 0.05$), and JIT inventory practice has a significant positive effect on cost effectiveness ($t = 6.446$; $p = 0.000 < 0.05$). Based on these findings, the study recommends that management should closely monitor and optimize inventory systems to ensure production consistency and enhance organizational performance. Additionally, adequate storage space and timely inventory delivery should be ensured to prevent production disruptions and support operational efficiency.

Keywords: Inventory Management practices; Economic order quantity (EOQ) inventory practice and Just-in-time (JIT) inventory practice

Introduction

Background to the Study

In today's highly competitive business environment, organizations are under increasing pressure to implement effective strategies that enhance performance and meet customer expectations for high-quality, customized products at minimal cost. As consumer demand becomes more dynamic and unpredictable, many firms are adopting postponement and other advanced inventory strategies to remain competitive (Mbugi & Deusdedita, 2022). Effective inventory management is therefore central to ensuring organizational efficiency. It plays a critical role in regulating the flow of materials and goods that must be stored for future production or service delivery.

The core objective of inventory management is to maintain an optimal balance between holding too much stock—which ties up capital and increases the risk of storage-related costs such as spoilage, pilferage, and obsolescence—and maintaining too little stock, which can result in stockouts and lost sales opportunities. Achieving this balance ensures that materials are available in the required quantity, quality, and timing to support continuous operations (Gemachis, Khan & Mohd-Abass, 2022).

Statement of the problem

Inventory is often regarded as the lifeblood of an organization because it directly contributes to profitability and operational continuity. The challenge for many firms lies in selecting the most suitable inventory control method that ensures optimal

stock levels while maximizing return on investment. The persistent economic volatility in Nigeria has worsened this challenge, particularly for firms dealing in consumable goods, which frequently encounter unpredictable fluctuations in customer demand.

Organizations face the dual problem of maintaining sufficient stock to meet customer needs while avoiding excessive inventory that leads to high carrying costs. Determining the appropriate stock levels—ones that support uninterrupted operations without resulting in waste or obsolescence—has remained difficult for many firms. These challenges often lead to stockouts, lost sales, reduced productivity, and operational inefficiencies.

In the context of Phinorma Poultry Farm Nig. Ltd. (Igwe Anyalogu Poultry Farm, Ngwo, Enugu), these problems are evident in the difficulty of maintaining steady inventory levels that support production and customer satisfaction. This study therefore examines how inventory management practices influence the organizational performance of the firm.

Objectives of the study

The main objective of this study is to assess the impact of inventory management practices on the organizational performance of Phinorma Poultry Farm Nig. Ltd., Ngwo, Enugu. Specifically, the study aims to:

1. Assess the effect of Economic Order Quantity (EOQ) inventory practices on operational effectiveness.
2. Determine the effect of Just-in-Time (JIT) inventory practices on cost effectiveness.

Research questions

The study is guided by the following research questions:

- What is the effect of Economic Order Quantity (EOQ) inventory practice on operational effectiveness in Phinorma Poultry Farm Nig. Ltd., Ngwo, Enugu?
- What is the effect of Just-in-Time (JIT) inventory practice on cost effectiveness in Phinorma Poultry Farm Nig. Ltd., Ngwo, Enugu?

Significance of the study

This study is significant to several stakeholders, including the management and founder of Phinorma Poultry Farm Nig. Ltd., as well as researchers and students. For the management, the study provides insights that can help strengthen inventory operations, improve efficiency, enhance profitability, and minimize liquidity risks. The findings will also assist inventory managers in determining appropriate stock levels needed to maintain satisfactory customer service.

For finance managers, the study offers guidance on key factors to consider when making inventory-related investment decisions. Researchers and students will also benefit from the study as it adds to existing literature and provides a useful reference for future studies relating to inventory management and organizational performance.

Conceptual literature

Inventory management practices

Inventory management refers to the systematic control of stock levels to minimize costs while meeting organizational objectives (Olanipon, Akinola & Oladele, 2022). It encompasses various activities, including information management, procurement, material handling, warehousing, packaging, and security of inventory (Akinlabi, Asikhia & Obamiro, 2018). Effective inventory practices ensure a smooth flow of materials essential for continuous production and service delivery.

Organizational performance

Organizational performance continues to attract scholarly attention, with researchers identifying several internal and external factors—including structure, strategy, innovation, and human capital—that influence performance outcomes (Oduonye, Azuogalanya & Igbanugo, 2022). Okeke (2016) describes performance as a combination of financial and non-financial indicators that reflect the degree to which an organization achieves its goals. While traditional performance measures focus on financial metrics alone, modern approaches advocate a multidimensional view that incorporates non-financial indicators such as product quality, efficiency, customer satisfaction, and responsiveness (Mbugi & Deusdedita, 2022).

Literature gaps

Agu, Obi-Anike, and Eke (2019) examined inventory management and organizational performance among selected

manufacturing firms but did not specifically identify key inventory management practices, and their sample size was limited. This study fills the gap by evaluating specific practices—EOQ and JIT—and by applying the analysis to Phinorma Poultry Farm Nig. Ltd., thereby contributing more comprehensive insights into the relationship between inventory management and performance.

Methodology

This study adopted a descriptive survey design. The research was conducted in Enugu State, drawing a sample size of 92 respondents from a population of 120 staff members of Phinorma Poultry Farm Nig. Ltd. The selection of staff was based on accessibility and availability of data. A structured questionnaire was used for data collection.

Research questions were analyzed using mean scores and standard deviations, while the hypotheses were tested using simple regression analysis. Data were presented in tables, and analysis was conducted using the Statistical Package for Social Sciences (SPSS).

Data presentation and analysis

Table 1: Comprehensive demographic of respondents

Title	Frequency	Percentage
Questionnaire distribution		
Questionnaires Distributed	92	100%
Returned Questionnaires	88	95%
Not Returned Questionnaires	4	5.0%
Gender		
Female	72	82.24%
Male	16	18.6%
Age bracket		
20-30 Years	19	22.0%
31-40 Years	9	10.2%
41-50 Years	43	28.4%
51 Years – above	17	19.3%
Marital status		
Married	45	51.4%
Single	35	40.0%
Widow/widower	4	4.5%
Divorce	4	4.5%
Academic Qualifications		
FLSC	15	17.0%
SSCE	29	33.0%
NCE/OND	38	43.1%
Bsc/BA	6	6.8%

Sources: Field Survey, 2023

Ninety two (92) copies of questionnaires were designed and distributed to the respondents. Out of the 92 Questionnaires distributed, 88 (95%) were completed and returned while 18 (5%) were not returned. Therefore, 95 percent respondents were a good representation. The study showed the respondents profile in frequency and percentage distribution of gender, age bracket and marital status.

Discussion of findings

Effect of Economic Order Quantity (EOQ) inventory practice on operational effectiveness

The study found that the Economic Order Quantity (EOQ) inventory technique has a significant positive effect on operational effectiveness at Phinorma Poultry Farm Nig Ltd Ngwo, Enugu. EOQ ensures optimal ordering quantities that minimize holding and ordering costs, thereby enhancing operational efficiency ($t = 5.887$; $p = 0.000 < 0.05$). This finding aligns with Oduonye, Azuogalanya, and Igbanugo (2022), who reported that efficient inventory management practices significantly improve productivity and profitability in manufacturing firms in Anambra State. Their study established that proper inventory management strengthens organizational effectiveness and positively correlates with productivity. The current study reinforces these observations by showing that EOQ contributes to consistent production flow and reduced operational costs.

Effect of Just-in-Time (JIT) inventory practice on cost effectiveness

The results further revealed that the Just-in-Time (JIT) inventory practice significantly enhances cost effectiveness in Phinorma Poultry Farm Nig Ltd Ngwo, Enugu ($t = 6.446$; $p = 0.000 < 0.05$). JIT emphasizes timely stock delivery, reduced storage costs, and improved inventory accuracy, all of which lower operational expenses. However, this finding contrasts with the outcome of Olusuyi, Obafemi, and Araoye (2021), who examined inventory management among consumable goods firms listed on the Nigerian Stock Exchange. Their results indicated a significant positive relationship between inventory practices and return on capital employed and firm growth, but a non-significant relationship with return on investment. Despite this inconsistency, the present study confirms that JIT can be highly effective in reducing costs and maintaining production continuity in the poultry sector.

Summary of findings

EOQ inventory practice significantly improves operational effectiveness, as it determines optimal order quantities and minimizes inventory-related costs ($t = 5.887$; $p < 0.05$).

JIT inventory practice significantly enhances cost effectiveness, as timely supervision and availability of stock support efficient cost management ($t = 6.446$; $p < 0.05$).

Conclusion

The study concludes that inventory management practices—particularly EOQ and JIT—have a significant and positive impact on organizational performance in Phinorma Poultry Farm Nig Ltd Ngwo, Enugu. EOQ enhances efficiency by determining the optimal order size and appropriate reorder timing, thereby supporting continuous production and customer satisfaction. JIT helps maintain adequate inventory levels while reducing storage costs and unnecessary stock accumulation.

Furthermore, computerized and perpetual inventory systems, when properly implemented, contribute substantially to

improved employee productivity, cost reduction, production efficiency, timely delivery, and customer satisfaction. Overall, effective inventory management positions the organization for improved competitiveness and sustainable profitability.

Recommendations

Strengthen inventory monitoring

Management should consistently monitor and adjust inventory systems to ensure uninterrupted production and enhanced organizational profitability. Adequate storage space should be provided to support timely deliveries and prevent production downtime.

Enhance training and development

Management should invest in both on-the-job and off-the-job training for staff involved in inventory management. Empowering personnel with modern inventory control skills will ensure more efficient and reliable inventory operations.

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