

Inventory Management And Organizational Performance Of Manufacturing Firms In Mbarara City, Uganda

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Abstract

The research was guided by the following objective; to establish the relationship between inventory management and organizational performance of manufacturing firms. The study adopted a cross sectional research design which involved collection of data on different variable from the same place at one point in time. The design was used to collect data on the role of inventory management, employee competence and Performance of manufacturing firms in a short period of time. A sample size of 133 respondents were determined. Findings showed that inventory management has a positive significant relationship with organizational performance of manufacturing firms. This means that improvement in ways of managing inventory in terms of using economic order quantity and always better control, it will result into improvement in efficiency and effectiveness of the employees which leads to improvement in performance of the manufacturing firms. Hence there is need to improve on the two variables since they are significant predictors of dependent variables. The indicated that, inventory management and employee competence explain 49.3% (Adjusted R square=.493) of the variations in the organizational performance of manufacturing firms. This further means that the remaining 50.7% is explained by other variables not considered in this study. Therefore, based on the findings, manufacturing firms need to invest a lot of time in ensuring that different stock items are managed well since not all items have equal contribution to production. This can help to control costs relating to stock and proper allocation of limited funds available in a productive manner that affects the company's performance.

Keywords: Inventory Management, Employee, Performance, Manufacturing Firms.

Introduction

Inventory management is a critical operational process that involves the systematic planning, control, and optimization of a company's inventory of goods and materials (Deus, 2023). It plays a key role in maintaining the delicate balance between product supply and demand dynamics, ensuring availability of goods when needed while minimizing excessive holding costs. Effective inventory management includes various strategies, such as Just-In-Time (JIT) and Economic Order Quantity (EOQ), aimed at optimizing inventory levels and increasing overall operational efficiency (Paul et al., 2023). By implementing robust inventory management practices, businesses can streamline production, reduce transportation costs, prevent inventory, and ultimately increase customer satisfaction and profitability (Polycarp et al., 2023).

The term organizational performance is a measure of how well an organization achieves its intended goals, both financial and market. Organizational procurement performance refers to efficiency and effectiveness (Annet et al., 2023). Efficiency measures how successfully inputs have been converted into outputs, while effectiveness measures how successfully the system achieves the desired output. Organizational performance includes the organization's actual output or results measured against its intended outputs, and organizational performance includes three specific areas of corporate performance: financial performance, product market performance, and shareholder return (Alex & Kazaara, 2023). Performance measurement in organizations is still largely focused on financial data for coordination and control purposes.

Globally, the evaluation of the organizational performance of US manufacturing firms includes a comprehensive assessment of various dimensions, including financial, operational and strategic indicators. Financial metrics such as return on assets (ROA), return on equity (ROE), gross margin, and profitability ratios provide insight into a firm's efficiency in using its resources to generate profits (Ntirandekura, Friday, et al., 2022). Operational metrics such as manufacturing efficiency, cycle times, and quality performance reflect a firm's ability to optimize processes and deliver products efficiently to meet customer demands. Several critical factors contribute to the organizational performance of US manufacturing firms. Technological progress and digitization have changed production processes, increased efficiency and product quality. A skilled and motivated workforce drives productivity and innovation, enhances a firm's operational excellence, and tailoring products to customer preferences and sustainability considerations strengthens market presence and competitiveness (Turyatamba et al., 2022).

The organizational performance of manufacturing firms in Sub-Saharan Africa (SSA) has shown both opportunities and challenges. The manufacturing sector of the region was characterized by a combination of factors that influence its performance (T. Christopher, 2022). On a positive note, there is a growing emphasis on economic diversification, technological advancement and increased investment in infrastructure that could potentially increase the performance of manufacturing firms (African Development Bank Group, 2020). In addition, the African Continental Free Trade Area (AfCFTA), which aims to create a single market for goods and services across the continent, presents new prospects for manufacturing firms to expand their market reach (Moses et al., 2022). However, the manufacturing sector in sub-Saharan Africa also faces several challenges that affect its performance. Limited access to finance, insufficient infrastructure, bureaucratic obstacles and an unstable regulatory environment hinder the growth and efficiency of manufacturing firms (Annet et al., 2023). Inadequate skills and human capital development, together with low levels of research and development (R&D) investment, have also contributed to constraints on innovation and productivity (African Development Bank Group, 2020). In addition, the region's heavy dependence on commodity exports, coupled with vulnerability to global market fluctuations, affects the stability and growth prospects of the manufacturing sector.

The organizational performance of manufacturing firms in Uganda is a complex landscape characterized by a combination of opportunities and challenges. While the country's manufacturing sector has demonstrated growth potential (Tasha et al., 2023), it faces multifaceted obstacles that affect its overall performance. Uganda's manufacturing industry contributes significantly to GDP and provides employment opportunities (UBOS, 2020). However, the industry faces several challenges, including inadequate infrastructure, unreliable energy supplies, and high production costs, which hinder productivity and competitiveness (Frank et al., 2023). Limited access to finance and a challenging business environment characterized by bureaucratic obstacles and corruption further hinder the growth and expansion of manufacturing firms (Kasozi et al., 2020).

A lack of skilled labor, together with a lack of technical and vocational training programs tailored to the needs of the industry, is a barrier to innovation and efficient operations (Lydia et al., 2023). Moreover, limited access to modern technologies and low levels of investment in research and development hinder progress and improvement in production processes and product quality (Turyatamba et al., 2022). In addition, the landlocked nature of Uganda's geography presents logistical challenges and increases the cost of importing raw materials and exporting finished products, impacting supply chain efficiency (Faridah et al., 2023). Despite these obstacles, efforts are being made to improve the business environment and infrastructure and create an environment conducive to increased organizational performance of manufacturing firms in Uganda. Therefore, the link between inventory management, managerial competencies and organizational performance in selected manufacturing firms in Mbarara City forms a critical link that requires further investigation. Effective inventory management plays a key role in optimizing resources and meeting customer demands, while managerial competence ensures sound decision making (Nelson, Christopher, Teddy et al., 2022). This potentially affects the overall performance of the organization. Given the unique industrial context of Mbarara and the limited research on this specific intersection, conducting a comprehensive study would clarify the dynamics and provide practical insights to increase the efficiency, competitiveness and sustainable growth of manufacturing firms in the region.

Statement of the problem

Organizational performance is a critical aspect of the success of manufacturing firms in Uganda, it is a benchmark.

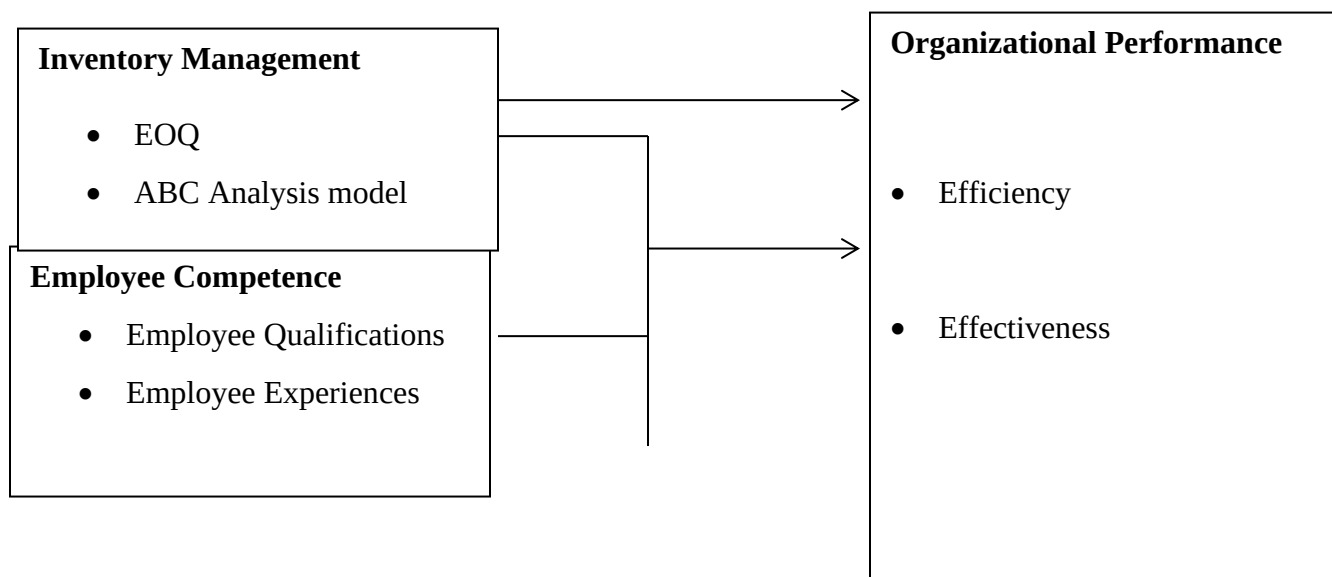
Objective of the Study

To establish the relationship between inventory management and organizational performance of manufacturing firms in Mbarara City, Uganda.

Research Question

What is relationship between inventory management and organizational performance of manufacturing firms in Mbarara City, Uganda?

Conceptual Framework



The association between the variables within this framework revolves around the interplay of inventory management practices, employee competence, and organizational performance. Inventory management, characterized by Economic Order Quantity (EOQ) and ABC Analysis, stands as the foundation of operational efficiency. These techniques, when correctly implemented, optimize inventory levels and minimize costs. However, it is the competency of employees that breathes life into these strategies. Employee qualifications and experiences form the backbone of this competence (Kazaara & Kazaara, 2023). Competent employees ensure that EOQ and ABC Analysis are accurately applied, preventing overstocking or stockouts. This integration of inventory management and employee competence creates a direct pathway to enhanced organizational efficiency and effectiveness.

The mediating role of employee competence becomes the pivotal link between inventory management and organizational performance (Mark & Jacob, 2023). Employee qualifications, encompassing the relevant skills and knowledge, lay the groundwork for informed decision-making in inventory control. Employee experiences, on the

other hand, offer a practical perspective, enabling the adaptation of inventory strategies to dynamic operational scenarios. As competent employees implement these strategies (F. Christopher et al., 2022), organizational performance is propelled to greater heights. Efficiency, driven by accurate inventory control, results in optimal resource utilization and reduced wastage. Meanwhile, effectiveness is elevated as efficient inventory management, coupled with the expertise of employees, and translates into meeting customer demands promptly, informed strategic choices, and overall goal attainment (Winny et al., 2023).

Ultimately, the synergy of these variables underscores a holistic approach to organizational success. Inventory management serves as the strategic framework, guided by EOQ and ABC Analysis, while employee competence channels this strategy into actionable outcomes. This interdependence ripples through the fabric of organizational performance, where efficiency and effectiveness thrive. Through this lens, the association among inventory management, employee competence, and organizational performance becomes an intertwined narrative of strategic planning, skillful execution, and the achievement of overarching goals.

Methodology

A research design was a detailed plan that guided the study. According to Mugenda (2003), a research design was the plan and structure of investigation conceived to obtain answers to research questions. The current study used a cross-sectional research design. A cross-sectional survey design was where data was gathered over a period of time to answer research questions (Sekaran, 2003). This study adopted a quantitative approach to investigate the relationship between inventory management, managerial competence, and organizational performance in selected manufacturing firms in Mbarara City. The research design involved collecting and analyzing numerical data to draw statistical inferences and identify patterns and correlations.

Study Population

The study population consisted of four manufacturing firms operating in Mbarara City. The selection criteria for these firms included:

- Manufacturing firms that had been in operation for at least two years.
- Manufacturing firms that had a minimum of 50 employees.
- Manufacturing firms that had a well-established inventory management system.

The inclusion of manufacturing firms with a minimum of 50 employees helped ensure that the sample was representative of medium to large-sized firms. Larger firms often faced distinct challenges and opportunities in terms of inventory management, managerial dynamics, and overall organizational performance compared to smaller enterprises. This enhanced the generalizability of the study's findings to similar firms in Mbarara City and potentially in other contexts.

Therefore, the total study population was 200 respondents from four manufacturing firms operating in Mbarara City. The researcher hoped that the study population was representative enough for the study.

Sample Size Determination:

The sample size was determined by use of scientific method derived by Yamane (1967).

The formula is expressed as follows;

$$n = \frac{N}{1+N(e)^2}$$

Where N = target population, e = marginal error of 0.05 (5%) and n = sample size

$$n = \frac{200}{1+200(0.05)^2}$$

N= 133 respondents.

Data was analyzed inform of tables, frequencies and percentages using SPSS & STATA (Nelson, Christopher, & Milton, 2022)

Results**Table 1: Correlation results**

Variables	1	2	3	4	5
Inventory Management (1)	1				
Employee Qualification (2)	.536**	1			
Employee Experiences (3)	.744**	.610**	1		
Employee Competence (4)	.1197**	.505**	.543**	1	
Organizational Performance (5)	.618**	.570**	.540**	.719**	1

**. Correlation is significant at the 0.01 level (2-tailed).

The relationship between inventory management and organizational performance

The results in table 1 show that there is a positive significant relationship between inventory management and organizational performance ($r=.618^{**}$, $p\leq.01$) (Nelson et al., 2023). This means that any positive change in inventory management is associated with a positive change in organizational performance of manufacturing firms. This further means that improvements in inventory management in terms of economic order quantity and better of always better control, it will result in to improvement in efficiency and effectiveness which improves the performance of manufacturing firms. The results in indicate that inventory management contributes 36.5% change in organizational performance of manufacturing firms. This implies that for a unit change in inventory management, performance of manufacturing firms would improve by .612 units. The results show that inventory management is a significant predictor of organizational performance of manufacturing firms ($\beta = 0.612$, $P\leq 0.01$).

Discussion

Findings from chapter four indicated that there was a positive significant relationship between inventory management and organisation performance of manufacturing firms. This means that any positive change in inventory management.

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This means that improvement in inventory management in terms of using well economic order quantity in managing inventory and always better control, it will result in to improvement in organisation performance. This is because, when firm manage well their inventory, production cannot be disrupted and this enables them to meet the customer needs that is both foreign and local customer and this improves the organisational performance

This is in line with the findings of Anichebe and Agu (2013) who found out that effects of Inventory Management on Organizational Effectiveness in selected organizations in Enugu, was carried out, to assess the impact of proper inventory management on organizational performances in Yemenite, Hardis & Drumheads, and the Nigeria Bottling Company all in Enugu, Enugu State. Descriptive research method, especially survey, and case study were employed in carrying out the study. Data were generated using questionnaire, oral interviews, observations, books, journals and the internet. Data were presented in tables and analyzed using simple percentages. Pearson product moment correlation coefficient and linear regression were used in the hypotheses testing. From the analyses, it was discovered that irrespective of the fact that the organizations studied, painted the picture that they were applying the tenets of good inventory management, they from time to time run into the problems of inventory inadequacy.

From the findings and discussion, it can be concluded that inventory management has a positive significant relationship with organizational performance of manufacturing firms. This means that improvement in ways of managing inventory in terms of using economic order quantity and always better control, it will result into improvement in efficiency and effectiveness of the employees which leads to improvement in performance of the manufacturing firms

Recommendations

It should be noted that for manufacturing firms to improve their performance, there is need to manage their inventory by applying economic order quantity and always better control since by using the two, the manufacturing firms will be able to keep the required inventory which will enable firms to meet their market need hence improved performance.

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