THE STANFORD JOURNAL
AN INTERNATIONAL JOURNAL

THE STANFORD JOURNAL
(AN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH)
ISSN: XXXX-XXXX
Volume–I, Issues– I July-September: 2024

OPTIMAL INVENTORY MANAGEMENT STRATEGIES AND THEIR IMPACT ON BUSINESS PERFORMANCE FOR SMALL-SCALE AND MEDIUM ENTERPRISES IN NIGERIA

[1]UmarAliyu Maishanu &[2]Abdulhamid Jafar
[1]Department of Business Administration and Management
Abdu Gusau Polytechnic Talata Mafara, Nigeria
Corresponding Author: [1]maishanu001@gmail.com

Abstract

Small and Medium Enterprises (SMEs) are recognized as important drivers of economic growth due to their crucial role in creating employment opportunities, reducing poverty, and facilitating trade as middlemen. Nonetheless, according to the International Labor Organization (2010), around two-thirds of firms earn wages that are either equivalent to or lower than the minimum wage. This fact is significant and should moderate any excessive optimism over the potential of SMEs to address the poverty and employment issues in the country. Inadequate management of working capital has been recognized as a key factor contributing to the failure of SMEs. This study examined the correlation between inventory management techniques and the commercial performance of small and medium-sized enterprises (SMEs) in Kano state, Nigeria. The link was examined using primary data collected through a structured questionnaire from 70 small and medium-sized enterprises (SMEs). The empirical findings demonstrated a statistically significant positive correlation between firm success and effective inventory management procedures, with a significance level of 0.05. In addition, they demonstrated that inventory budgeting had the most significant impact on business performance, as shown by a beta value of 0.329. This was closely followed by shelf-space management, which had a beta coefficient of 0.30. The impact of inventory level management was shown to be statistically significant, albeit rather small, with a beta coefficient of 0.297.

Keywords;- Inventory Management, strategy, SME,

Introduction

In Nigeria, Small and Medium Enterprises (SMEs) are recognized as crucial and substantial contributors to economic development due to their significant contributions to national income, employment, exports, entrepreneurship development, and their essential role in the economy as intermediaries in trade and supply chain. SMEs in developing nations such as Nigeria are battling to thrive in intensely competitive settings on both the domestic and international levels. Small and medium-sized enterprises (SMEs) in Nigeria have not performed admirably, and as a result, they have not played the crucial and lively role in the country's economic growth and development that was anticipated (Mustapha 2017; Yusi1 and Idris 2018). SMEs represent 99.7% of businesses globally while

presenting between 60 and 80% of the new employment positions worldwide (Keskgn et al. 2010; Stephen, Ireneus, and Moses 2019). Since Nigeria's independence in 1960, a great deal of focus has been placed on the development of small and medium-sized enterprises (SMEs) as a method of lowering the prevalence of poverty and unemployment in the country.

Although SMEs are considered important and there have been more attempts to support their success, the International labor organization (2010) has estimated that two-thirds of these enterprises were earning incomes that were equal to or below the minimum wage. This finding is discouraging and should moderate one's optimism regarding the role of SMEs in addressing the country's poverty and employment issues. Therefore, for an organization to endure and achieve optimal results in fulfilling market demand, it is crucial for the company to be aware of and prioritize its supply chain management for improved performance and long-term survival. Raw material stocks in manufacturing enable enterprises to function autonomously from their supply sources(Kamau and Assumpta 2015).Small and Medium-sized Enterprises (SMEs) hold a substantial portion of the key economic activities in Nigeria and have a crucial impact on the attainment of the Sustainable Development Goals (SDGs). The ultimate objective is for small and medium-sized enterprises (SMEs) to optimize their impact on the nation's economic and social progress by enhancing output, income distribution, and job opportunities. Additionally, it aims to foster greater inclusion of women and those residing in rural areas into the overall national economy. Thus, According to Baron, Berman, and Perry (2011) to enhance corporate performance, it is necessary to implement intelligent demand management strategies that are based on efficient inventory management.

Therefore, inventory management is crucial for the operation of small and medium-sized enterprises (SMEs), as inventory is the most important physical asset listed on the balance sheet of almost every merchant. Inventory often represents the most substantial asset on a company's balance sheet at any one moment. Effective inventory management is crucial for achieving success in today's highly competitive business. The notion of resource-based view (HASHED and SHAIK 2022)provides support for the impact of effective inventory management on organizational performance. The theory of resource-based view posits that sustained organizational performance can be achieved by effectively using available resources. Gruler et al. (2018)found that the primary obstacle in efficiently managing inventory in a particular industry is to maintain a proper equilibrium between the supply and demand of inventory. Thus, this study aims to investigate the correlation between inventory management techniques and the performance of small and medium-sized enterprises (SMEs) in Kano state, Nigeria. And the study was guided by the following specific objectives:

THE STANFORD JOURNAL
(AN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH)
ISSN: XXXX-XXXX
Volume–I, Issues– I July-September: 2024

I. To assess the efficacy of inventory management strategies employed by small and medium-sized enterprises (SMEs) in Kano State.
II. To assess the operational effectiveness of small and medium-sized enterprises (SMEs) in Kano State.
III. To determine the correlation among the efficiency of inventory management techniques and the operational achievement of small and medium-sized firms (SMEs) in Kano State.

Literature review

It involves the activities of watching, recording, and calculating the quantity of supplies needed for future orders and deciding to fulfill them(Singh and Verma 2018). Therefore, efficient inventory management involves maintaining a suitable quantity of goods. Excessive inventory occupies physical space, imposes a financial burden, and heightens the likelihood of damage, spoilage, and loss(Nyabwanga, R. N., and Ojera 2015).Effective inventory management necessitates analyzing the expenses associated with maintaining specific inventory levels. Holding excessive stock incurs costs, as does holding insufficient stock (Koumanakos 2008; Lagat and Kihara 2017). Therefore, implementing a reliable stock management system is crucial to ensure accurate sales forecasts.

The optimal inventory level is situated between insufficient stocks and excessive inventories. Competitiveness is a strategic approach that outlines the specific client requirements a company aims to meet through its offerings and services(Aro-Gordon and Gupte 2016). Competitive strategy focuses on specific consumer segments and strives to deliver products and services that effectively meet their needs. It involves preserving an adequate amount of stock, regulating inventory investment by optimizing production levels, and minimizing carrying costs and time. Various additional macroeconomic, industry, and firm-specific factors are also significant. In the past, economists have mostly concentrated on industry-level factors under the framework of structure-conduct-performance (SCP)(Kasim, Zubieru, and Antwi 2015).

Regarding the impact of efficient inventory management on corporate performance, In their study Vishnani and Shah (2007)examined 23 enterprises in the Indian Consumer Electronics Industry and found that the inventory management policies of these organizations influenced their profitability performance. Lazaridis and Tryfonidis (2006)examined 131 companies listed on the Athens Stock Exchange and found that mishandling inventory can result in tying up excessive capital, which hampers profitable operations. They proposed that managers can enhance the value of their firms by maintaining inventory at an optimal level. Rajeev (2008)conducted a study on 91 Indian

Machine Tool SMEs to assess the correlation between inventory management practices and inventory cost.

Their findings suggested a favorable influence on the profitability margins. Inventory management is a crucial component of the supply chain, regardless of whether a company offers services or products (Baron et al. 2011; Nyabwanga, R. N., and Ojera 2015).Hence, effective inventory management strategies must address the query: what is the optimal quantity to be ordered? At what time should it be placed? These questions pertain to the issue of calculating the economic order quantity(Kasim et al. 2015). This problem can be resolved by analyzing the costs associated with maintaining different inventory levels. Therefore, it is crucial to establish an efficient stock management system that relies on accurate sales forecasts for ordering purposes.

Thus, this study holds significance due to the scarcity of literature about inventory management, specifically in the context of small and medium-sized enterprises (SMEs). Currently, there is a lack of research conducted in the Nigerian SME setting to determine the specific correlation between inventory management techniques and business performance. Furthermore, no model has been created to illustrate this link. Hence, the aim of this study is to narrow this divide by examining the current perception of small and medium enterprises (SMEs) on their inventory management techniques and the subsequent impact on their overall performance. The current study provides additional validation, utilizing regression analysis, of the influence of the level of efficacy of inventory management methods on the performance of the small and medium-sized enterprises (SMEs) under investigation. The studied literature on inventory management practices recognizes effective inventory management techniques as key factors in determining the performance model of firms. Enhancing the efficacy of inventory management procedures can lead to greater business performance. An effective inventory management system aims to fulfill expected demand, optimize production needs, mitigate price hikes, capitalize on bulk discounts, separate manufacturing components, prevent stock shortages, leverage order cycles, and enable smooth operations (Wanjira and Njagiru 2018).

Methodology

This study design was a cross-sectional survey. The researchers chose this research strategy because it allows them to gather data by using questionnaires given to a specific group of people. This data can then be used to propose explanations for the connections between different factors and create models to represent these connections (Saunders, Lewis, and Thornhill 2009). A survey design was chosen because it enables the rapid, efficient, and accurate collecting of a substantial amount of data(Kothari 2004).

THE STANFORD JOURNAL
(AN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH)
ISSN: XXXX-XXXX
Volume–I, Issues– I July-September: 2024

The study focused on owners or managers of Small and Medium Enterprises (SMEs) operating within Kano state and registered by the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN). The study included a total of 230 small and medium-sized firms (SMEs), with 161 engaged in trading and 69 in manufacturing. From this group, a subset of 70 SMEs was selected using stratified random sampling, with 49 engaged in trading and 21 in manufacturing. The sample size was calculated with the help of formula.

$$n = \frac{NC^2}{C^2 + (N-1)e^2} = \frac{230 * 0.5^2}{0.5^2 + (230-1) * 0.05^2} = 70$$

Where n is the sample size N is the population C is the Coefficient of variation (0.5) e is the level of precision (0.05).

The owners/managers of the small and medium-sized enterprises (SMEs) completed a structured questionnaire on their own to collect primary quantitative data. The survey was segmented into three categories: demographic data, inventory management strategies, and business outcomes. The questionnaire was specifically created to obtain responses regarding inventory management methods, including the development of inventory budgets, assessment of inventory levels, and the administration of shelf-space. The objective was to collect data on business success in terms of revenue growth, market share growth, perceived product/service quality, and the company's image relative to competitors.

Perceptual responses were recorded using a five-point likert scale. Perceptual performance indicators were favored due to the lack of publicly accessible financial data for most of the sampled SMEs, which hindered the ability to verify the authenticity of any claimed financial information. The likert scale was chosen because it can handle a significant number of items and addresses challenges in obtaining precise information from the participants (Singh & Smith, 2006). The study employed multiple regression analysis to determine the correlation and extent of the association between inventory management techniques (independent variables) and the business performance of small and medium-sized enterprises (dependent variable). The analysis was conducted using the model outlined below:

$$B_p = \alpha_0 + \beta_1 I_B + \beta_2 I_L + \beta_3 S_M + \varepsilon_0 \quad (1)$$

Where B_p is business performance, α is constant, I_B is inventory budget, I_L is inventory level, S_M is she lf –space management, $\beta_1, \beta_2, \beta_3$, are the regression

THE STANFORD JOURNAL
(AN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH)
ISSN: XXXX-XXXX
Volume–I, Issues– I July-September: 2024

coefficients of independent variables and ε is the error term.

Result and discussion

The primary research purpose aimed to ascertain the inventory management strategies employed by small and medium-sized enterprises (SMEs). To tackle this issue, the participants were requested to specify the frequency at which they engage in inventory budgeting, assess inventory levels, and evaluate shelf-space allocation. The findings indicated that Small and Medium-sized Enterprises (SMEs) frequently formulated inventory budgets and assessed inventory levels, with mean scores of 3.60 and 3.89, respectively. The SMEs, however, prioritized reviewing inventory levels over preparing inventory budgets. These findings indicate that small and medium-sized enterprise (SME) owners/managers have a good understanding of inventory processes, including inventory budgeting and inventory level review. As a result, they are likely to be able to efficiently monitor item numbers and maintain a balance between availability and consumer demand. These findings are like the findings of Kwame (2007), who discovered that a majority of the businesses polled consistently examined their inventory levels and created inventory budgets.The findings also indicate that small and medium-sized enterprises (SMEs) infrequently assessed their shelf-space allocation, thus limiting their ability to adjust stock levels in response to fluctuating client demand.

TABLE 1

Inventory Management Practices

	Never 1	Rarely 2	Sometimes 3	Often 4	Very Often 5	$\frac{\Sigma f_i w_i}{\Sigma f_i}$
Prepare inventory budgets	2	8	12	30	18	3.77
Review inventory levels	2	7	10	18	33	4.04
Review of shelf-space allocations	6	23	27	14	0	2.70

The data shown in Table 2 demonstrates that a significant proportion of the surveyed organizations conducted stock monitoring on a regular basis, either daily, weekly, or fortnightly. This is evident from the responses of 54 out of the total 70 participants. Furthermore, 51 out of the 70 participants stated that they order inventory either on a daily, weekly, or fortnightly basis. The frequent ordering of inventory may suggest that the investigated SMEs either do not maintain ideal stock levels or have a shorter inventory conversion period, resulting in stock-outs. This discovery aligns with Muchaendepi et al. (2019)conclusion that a reduced inventory conversion period leads to higher stock-out costs, which in turn leads to a loss of sales. According Lazaridis and Tryfonidis (2006)having a short inventory period can benefit organizations by preventing

THE STANFORD JOURNAL
(AN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH)
ISSN: XXXX-XXXX
Volume–I, Issues– I July-September: 2024

them from using too much capital on unused stock, which could otherwise be used for productive operations..

TABLE 2

Inventory Monitoring and Inventory Ordering

	Daily	Weekly	Fortnightly	Monthly	Quarterly
Stock Monitoring frequency	14	19	21	12	4
Order frequency	10	12	29	16	3
Total	24	31	50	28	7

Additional study was conducted to ascertain whether there was a correlation between the frequency of stock monitoring and the frequency of inventory ordering. A $\chi 2$ value of 4.25 was calculated. The observed $\chi 2$ value was significantly smaller than the critical $\chi 2$ value of 9.488 at a 0.05 significance level for 4 degrees of freedom. Consequently, the assessed SMEs demonstrated that the frequency of monitoring stock and the frequency of ordering inventory were separate and unrelated tasks. There was no notable correlation observed between the frequency of stock monitoring and the frequency of inventory ordering.

This conclusion contradicts the findings of Rajeev (2008), who demonstrated a substantial correlation between the frequency of stock monitoring and the frequency of inventory ordering. The study found that 42.9 percent of the manufacturing enterprises surveyed used either the economic order quantity or inventory turnover ratio to optimize their inventory levels. None of the trade businesses evaluated utilized the economic order quantity or inventory turnover ratio to optimize their inventory. Consequently, most SMEs do not utilize quantitative methods to establish the optimal inventory thresholds. Most of them relied on assessments made by owners or managers. This finding aligns with the research conducted by Olowolaju and Mogaji (2020)which revealed that more than 90% of the small businesses examined depended on the owner/manager's expertise for their inventory management methods. Furthermore, it aligns with Sunday and E. Joseph (2017)discovery that most small-scale enterprises do not employ quantitative methods to optimize their inventories.

TABLE 3

Methods used to determine the Maximum or Minimum Inventory Levels to Hold

	Trading SMEs	Manufacturing SMEs
Method	Percentage use (%)	Percentage use (%)
Economic order quantity(EOQ)	0.0	28.6
Inventory turnover ratio	0.0	14.3
Owner/manager judgments	44.9	42.9

THE STANFORD JOURNAL
AN INTERNATIONAL JOURNAL
THE STANFORD JOURNAL
(AN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH)
ISSN: XXXX-XXXX
Volume–I, Issues– I July-September: 2024

Sales projections	22.4	14.2
Experience	32.7	0.0
No method	0.0	0.0

Effectiveness in the Inventory Management Practices.

On a five-point Likert scale with summation, respondents were asked to rate how effective they thought the various inventory management techniques were.

Inventory Budgeting Practices.

The efficacy of the inventory budgeting procedures used by SMEs is shown in Table 4. The results demonstrate that, with a weighted average of 3.57, the owners and managers of the SMEs were successful in creating inventory budgets. Their inventory budgets were updated efficiently, and they tracked inventory using the budgets, with weighted averages of 3.24 and 3.30, respectively. With a weighted average of 1.74, the SMEs performed the least well when it came to using computers for inventory budgeting, nevertheless. Overall, the SMEs examined performed well when it came to inventory budgeting procedures.

TABLE 4

Level of Effectiveness in Inventory Budgeting Practices

IV Indicators	Not effective	Least effective	Fairly effective	Effecti ve	Highly effective	Mean
Preparation of inventory Budgeting	2	10	17	28	13	3.57
updating the inventory budgets	9	7	18	30	6	3.24
Use of inventory budgets in tracking inventory	3	16	18	23	10	3.30
Use of computers in inventory budgeting	43	13	3	11	0	1.74

Management of Inventory Levels.

The efficiency of the SME's inventory level management procedures is seen in Table 5. The results indicate that, with a weighted average of 3.63, the SMEs' owners/managers performed an effective check of inventory levels. They used weighted averages of 3.14 to determine the proper maximum and minimum inventory levels, and a weighted average of 2.51 to guarantee that there was always enough inventory on hand. These methods proved to be reasonably effective. With a weighted average of 2.23, the SMEs performed the least well in establishing the proper stock reorder level; that is, the SMEs were not very excellent at deciding when to place replenishment orders. This indicates that neither

THE STANFORD JOURNAL
(AN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH)
ISSN: XXXX-XXXX
Volume–I, Issues– I July-September: 2024

the wait time nor the degree of demand during the lead period affect their order level. With a weighted average of 1.74, the results also demonstrate that SMEs were least successful in using computers to monitor inventory levels. This conclusion supports Sunday and E. Joseph (2017)claim that small enterprises do not use computers in their daily operations. The SMEs polled do a good job of managing inventory levels overall.

TABLE 5

Level of Effectiveness in Inventory Levels Management Practices

IL Indicators	Not effective 1	Least effective 2	Fairly effective 3	Effective 4	Highly effective 5	$\frac{\sum f_i w_i}{\sum f_i}$
review of inventory levels	5	7	12	31	15	3.63
Determination of appropriate maximum and minimum inventory levels	7	11	23	28	2	3.14
Determination of appropriate reorder level of stock	21	19	23	7	0	2.23
Ensuring availability of adequate stock at all times	12	25	18	15	0	2.51
Use of computers in monitoring inventory levels	43	13	3	11	0	1.74

Shelf-Space Management

With a weighted average of 2.66, Table 6 below demonstrates that SMEs were generally successful in their shelf-space management. With a weighted average of 2.90, the SMEs were more successful in controlling the stock order schedule to prevent stock-outs by utilising changes in shelf space. With weighted averages of 2.61 and 2.64, respectively, they were successful in balancing shelf space with customer demand and in allocating shelf space to products and their complements or supplements. However, with a weighted average of 2.47, SMEs performed the least well when it came to rearranging shelf space to attract customers' attention.

The results show that SMEs are not good in their shelf space management. As observed RUTENDO MELODY KANGURU (2016)shelf space ineffectiveness has an effect on stock-outs. Increasing shelf space decreases stock-outs hence helps in achieving product availability targets.

TABLE 6

Level of Effectiveness in Shelf-Space Management Practices

SM Indicators	Not Effective	Least effective	Fairly effective	Effective	Highly effective	Mean
Allocating shelf-space to products &their compliments or Supplements	21	12	11	23	3	2.64

THE STANFORD JOURNAL
(AN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH)
ISSN: XXXX-XXXX
Volume–I, Issues– I July-September: 2024

Reconciliation of inventory demand and shelf-space	13	19	21	16	1	2.61
Using shelf-space fluctuation to control stock order schedule so as to avoid stock-outs	6	17	27	18	2	2.90
Shelf space reorganization to catch customers' attention	21	19	14	8	8	2.47

Determining the business performance of SMEs was the second objective. In order to address this, the respondents were asked to rank their degree of satisfaction with the performance of their companies based on factors such as sales growth, market share growth, the company's reputation in comparison to rivals, and the calibre of goods and services provided in comparison to nearby competitors.Table 7 presents the analysis results, which indicate that the SMEs questioned had a favourable rating of these indicators' performance, with weighted averages of 2.51, 2.53, 2.76, and 2.90, respectively. Comparing them to the competition, they were, nevertheless, happier with their assessment of the calibre of their goods and services.

TABLE 7

Distribution of Indicators of Business Performance of SMEs

BP Indicators	Least Satisfactory	Moderately satisfactory	Satisfactory	Very satisfactory	Most satisfactory	Mean
Growth in total sales	11	21	29	9	0	2.51
Growth in market Share	9	23	30	8	0	2.53
Business's image	12	13	25	20	0	2.76
Quality of products/ Services	2	21	29	18	10	2.90

Business performance and the effectiveness of inventory management practices. Determining the connection between inventory management procedures and company success was the third research goal. A multiple regression analysis was performed to address this. A model that might be utilized to explain the impact of efficient inventory management techniques on business performance was derived using multiple regression analysis.

Standardized Beta values, which evaluate each variable's contribution to the dependent variable's prediction, are used in Table 8 to illustrate each variable's contribution to the business performance model. The most significant impact on business performance came from inventory budgeting effectiveness. A unit change in IB, holding IL and SM constant, increased business performance by 32.9%. A unit change in IL effectiveness, holding IB and SM constant, increased business performance by 29.7%. A unit change in SM effectiveness, holding IB and IL constant, increased business performance by 30.1%. The conceptual framework's proposed general equation can be represented by using unstandardized coefficients such as Bp.

THE STANFORD JOURNAL
AN INTERNATIONAL JOURNAL
THE STANFORD JOURNAL
(AN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH)
ISSN: XXXX-XXXX
Volume–I, Issues– I July-September: 2024

$$B_p = 0.952 + 0.344I_B + 0.315I_L + 0.311S_M$$

The positive beta values show that SMEs' business success is positively impacted by the efficacy of their inventory management procedures. This suggests that improved inventory management leads to improved business performance. Similar conclusions were reached by Baron et al. (2011)who claimed that effective demand management, which is influenced by shelf space allocations, has an impact on business performance. The results are likewise in line with those of Wanjira and Njagiru (2018)who demonstrated that shelf positioning, reorganization, and location all significantly increase sales and profitability. The conclusion that efficient inventory management techniques have a beneficial impact on business performance is consistent with Rajeev (2008)observation that formal, effective inventory management practices have a positive effect on firm performance.

TABLE 8

Regression Coefficients (N=70, R2 = 0.712)

	Unstandardized Coefficients	Standardized Coefficients	p-value
(Constant)	.942		.003
IB	.344	.329	.005
IL	.315	.297	.008
SM	.311	301	.006

Based on Table 8, 71.2% of the fluctuations in business performance may be explained by the regression model. Changes in efficient inventory budgeting, inventory level control, and shelf-space management may be the cause of the discrepancies. Table 9 displays the F-Statistic, demonstrating a statistically significant correlation between the set of predictor variables (IB, IL, and SM) and business success ($F(3,66) = 54.463$, $p < 0.05$). This indicates that the variation in business performance was a result of the three predictor variables taken together.

TABLE 9
Summary ANOVA (N=70)

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Regression	**1123.326**	**3**	**374.442**	**54.463**	**.000**
Residual	**453.760**	**66**	**6.875**		
Total	**1577.086**	**69**			

Conclusion

The goal of the study was to ascertain how SMEs' business performance in Kano State, Nigeria, related to their inventory management techniques. To accomplish this, three distinct goals were addressed. Finding out how the SMEs managed their inventories was the first goal. The results

showed that, overall, SMEs frequently handled inventory budgeting, inventory level reviews, and shelf-space management. The study also found no connection between the frequency of stock monitoring and the frequency of inventory ordering. The study concludes that, on the whole, the SMEs that were questioned had successful inventory management procedures, and it suggests that, in order to increase their degree of effectiveness, SMEs owners and managers look for additional information on the subject. These companies ought to recognize the importance of inventory management activities in establishing and maintaining a competitive edge.

Furthermore, the study aimed to assess the operational effectiveness of the small and medium-sized enterprises (SMEs). The results indicated that most participants expressed contentment with their performance, as assessed by metrics such as sales growth, market share growth, perceived business image relative to competitors, and product/service quality compared to competitors. The weighted means for these metrics were 2.51, 2.53, 2.76, and 2.90, respectively. Based on this discovery, the study reached the conclusion that the businesses were exhibiting strong performance.

The goal was to ascertain the correlation between inventory management techniques and the operational effectiveness of small and medium-sized enterprises (SMEs). The study found a correlation between the degree of efficiency in inventory management and the overall business performance of small and medium-sized enterprises (SMEs). The impact on business performance was most significant for effective inventory budgeting, as indicated by a beta coefficient of 0.329. Shelf-space management had the second highest effect, with a beta coefficient of 0.301. Inventory levels management had the least impact, with a beta coefficient of 0.297. Consequently, the study suggests that improving the efficiency of inventory management procedures will enhance the commercial performance of small and medium-sized enterprises (SMEs).

The present study was a cross-sectional survey conducted on a limited sample size only from Kano state. In addition, the study employed perceptual measurements to assess business performance and the efficacy of inventory management procedures in SMEs. Consequently, this approach may restrict the generalize ability of the findings. This study suggests conducting a comparable study that utilizes a longitudinal survey and employs a case study approach to validate these research findings. In addition, future study could employ alternative data collection methods, such as document analysis, to acquire more impartial data.

Reference

Aro-Gordon, Stephen, and Jaideep Gupte. 2016. “Contemporary Inventory Management Techniques.” Pp. 1–20 in *International Conference on Operations Management and Research*.

Baron, Opher, Oded Berman, and David Perry. 2011. “Shelf Space Management WhenDemand Depends on the Inventory Level.” *PRODUCTION AND OPERATIONS MANAGEMENT* 20(5):714–26.

Bilal Altaf, Tahir Ali. 2018. "Impact of Inventory Management on Organization Performance and Sales of Textile Industry in Pakistan." *Journal of Marketing and Management* 14(2):45–57.

Gruler, Aljoscha, Javier Panadero, Jesica de Armas, José A. Moreno Pérez, and Angel A. Juan. 2018. "Combining Variable Neighborhood Search with Simulation for the Inventory Routing Problem with Stochastic Demands and Stock-Outs." *Computers and Industrial Engineering* 123:278–88. doi: 10.1016/j.cie.2018.06.036.

HASHED, Abdul Wahid Ahmed, and Abdul Rahman SHAIK. 2022. "The Nexus Between Inventory Management and Firm Performance: A Saudi Arabian Perspective*." *Journal of Asian Finance* 9(6):297–0302. doi: 10.13106/jafeb.2022.vol9.no6.0297.

Herron, David P. 1967. "Inventory Management for Minimum Cost." *Management Science* 14(4):B-219-B-235. doi: 10.1287/mnsc.14.4.b219.

Kamau, Lucy Wangari, and W. Kagiri Assumpta. 2015. "Influence of Inventory Management Practices on Organizational Competitiveness: A Case of Safaricom Kenya Ltd." *International Academic Journal of Procurement and Supply Chain Management* 1(5):72–98.

Kasim, Hamza, Mutala Zubieru, and Stephen kadwo Antwi. 2015. "An Assessment of the Inventory Management Practices of Small and Medium Enterprises (SMEs) in the Northern Region Of." *European Journal of Business and Management* 7(20):28–40.

Keskgn, Hidayet, Canan Ġenturk, Onur Sungur, and Hakan M. Kiris. 2010. "The Importance of SMEs in Developing Economies." Pp. 183–92 in *2nd International Symposium on Sustainable Development, June 8-9 2010, Sarajevo*.

Kothari, C. R. 2004. *Research Methodology (Methods & Techniques)*. 2nd Revise. New Delhi: NEW AGE INTERNATIONAL (P) LIMITED, PUBLISHERS.

Koumanakos, Dimitrios P. 2008. "The Effect of Inventory Management on Firm Performance." *International Journal of Productivity and Performance Management* 57(5):355–69. doi: 10.1108/17410400810881827.

Lagat, robert kipng'etich, and Allan Kihara. 2017. "Influence of Inventory Management Practices on Performance." *International Journal of Human Resources and Procurement* 6(10):60–75.

Lazaridis, Ioannis, and Dimitrios Tryfonidis. 2006. "Relationship Between Working Capital Management and Profitability of Indian Automobile Manufacturers." *Journal of Financial Management & Analysis* 19(1):26–35. doi: 10.2139/ssrn.4173907.

Lwiki, Timothy, Patrick Boniface Ojera, Nebat Galo Mugenda, and Virginia Kirigo Wachira. 2013. "The Impact of Inventory Management Practices on Financial Performance of Sugar Manufacturing Firms in Kenya." *International Journal of Business, Humanities and Technology* 3(5):75–85.

Muchaendepi, W., C. Mbohwa, T. Hamandishe, and J. Kanyepe. 2019. "Inventory Management and Performance of SMEs in the Manufacturing Sector of Harare." *Procedia Manufacturing* 33:454–61. doi: 10.1016/j.promfg.2019.04.056.

Mustapha, Bintu. 2017. "Effects of Marketing Mix Strategy on Performance of Small Scale Businesses in Maiduguri Metropolitan, Borno State Nigeria." *Journal of Marketing and Consumer Research* 31(2):1–6.

Nyabwanga, R. N., and Ojera, P. 2015. "Inventory Management Practices and Business Performance for Small- Scale Enterprises in Kenya." *Journal of Business Management* 4(3):54–87.

Olowolaju, P. .., and B. J. Mogaji. 2020. "Effects of Inventory Management Practices on the Performance of Small and Medium Scale Enterprises SMEs in Akure Metropolis." *IOSR Journal of Business and Management (IOSR-JBM)* 22(1):1–07. doi: 10.9790/487X-2201050107.

Rajeev, N. 2008. "An Evaluation of Inventory Management and Performance in Indian Machine Tool SMEs: An Exploratory Study." *Proceedings of the 4th IEEE International Conference on Management of Innovation and Technology, ICMIT* 1412–17. doi: 10.1109/ICMIT.2008.4654578.

RUTENDO MELODY KANGURU. 2016. "NVENTORY MANAGEMENT PRACTICES OF SMALL, MEDIUM AND MICRO ENTERPRISES IN THE CAPE METROPOLE, SOUTH AFRICA." Cape Peninsula University of Technology, Cape Town.

Saunders, Mark, Philip Lewis, and Adrian Thornhill. 2009. *Reserach Methods for Business Students, Fithh Edition,Prentice Hall*.

Singh, Deepesh, and Ajay Verma. 2018. "Inventory Management in Supply Chain." *Materials Today: Proceedings* 5(2):3867–72. doi: 10.1016/j.matpr.2017.11.641.

Stephen, Otika Udoka, Nwaizugbo Ireneus, and Olise Chigbata Moses. 2019. "Entrepreneurial Marketing Practices and Competitive." *European Journal of Business and Innovation Research* 7(3):1–30.

Sunday, Otuya, and Eginiwin E. Joseph. 2017. "Inventory Management and SMEs Profitability. A Study of Furniture Manufacturing, Wholesale and Eatery Industry in Delta State, Nigeria." *Journal of Finance and Accounting* 5(3):75–79. doi: 10.12691/jfa-5-3-1.

Vishnani, Sushma, and Bhupesh Kr Shah. 2007. "Impact of Working Capital Management Policies on Corporate Performance—An Empirical Study." *Global Business Review* 8(2):267–81. doi: 10.1177/097215090700800206.

Wanjira, Jeremiah Nyaga, and Dr. John Mungai Njagiru. 2018. "Inventory Management Practices and Financial Performance of Small and Medium Scale Enterprises in Laikipia County , Kenya." *International Academic Journal of Economics and Finance* 3(2):117–32.

THE STANFORD JOURNAL
(AN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH)
ISSN: XXXX-XXXX
Volume–I, Issues– I July-September: 2024

Yusi1, M. Syahirman, and Umiyati Idris. 2018. "Marketing Environment and Marketing Mix: The Basic Factors in Increasing Sales Performance (Survey on Agribusiness Small and Medium Enterprises)." *Journal of Economics and Business* 1(1):19–33.