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**EFFECT OF DIGITAL INVENTORY MANAGEMENT STRATEGY ON
PERFORMANCE OF NAIVAS SUPERMARKETS IN NAIROBI CITY
COUNTY, KENYA**

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Effect of Digital Inventory Management Strategy On Performance of Naivas Supermarkets in Nairobi City County, Kenya

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Abstract:

Purpose of Study: The study examined the effect of digital inventory management strategy on the performance of Naivas Supermarkets in Nairobi City County, Kenya. It sought to establish how adoption of digital inventory systems influences operational efficiency, stock control, and overall supermarket performance amid increasing challenges facing Kenya's retail supermarket sector today.

Methodology: The study adopted a descriptive research design guided by Inventory Management Theory. A stratified random sampling technique selected 100

respondents from 326 employees, with 92 participating. Primary data were collected using structured questionnaires and analyzed using descriptive statistics, Pearson correlation analysis, and simple linear regression techniques for interpretation purposes.

Findings: The findings revealed that digital inventory management practices were highly adopted within Naivas Supermarkets, recording an overall mean score of 4.23 and standard deviation of 0.77. Supermarket performance recorded a mean score of 3.09 and standard deviation of 1.91, indicating moderate performance outcomes despite digitization efforts. Correlation and regression analysis established a statistically significant positive relationship between digital inventory management and supermarket performance. The regression coefficient was $\beta = 0.324$ with a significance value of $p = 0.000$.

Conclusion: The study concluded that digital inventory management significantly influences the performance of Naivas Supermarkets. Investment in integrated digital inventory systems, real-time analytics, automated stock control mechanisms, and employee capacity building can improve operational efficiency, minimize stockouts, optimize inventory levels, and strengthen the overall performance and competitiveness of supermarkets.

Keywords: *Digital inventory management, supermarket performance, stockout reduction, stock optimization, Naivas Supermarkets, Kenya.*

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1. INTRODUCTION

1.1 Background of the Study

The retail supermarket sector plays a significant role in the economic development of Kenya, serving as a major source of formal employment, a channel for consumer goods distribution, and a contributor to government revenue through taxation. However, the sector has experienced severe disruptions in recent years, with well-established chains including Nakumatt, Tusksy, and Uchumi closing their operations or significantly shrinking their branch networks due to financial mismanagement, supply chain inefficiencies, and poor inventory practices (Njogu & Mungai, 2025). These closures have underscored the critical importance of effective inventory management as a foundational pillar of supermarket viability and long-term performance.

Inventory management involves the systematic oversight of a firm's stock levels to ensure that goods are available to customers at the right time, in the right quantities, and at optimal cost. In traditional retail settings, inventory management relied heavily on manual counting, paper-based records, and intuition-driven procurement decisions (Alsoussi & Tahboub, 2025). While these methods were adequate for smaller-scale operations, the growth of modern supermarket chains into multi-branch entities handling thousands of stock-keeping units (SKUs) has rendered manual approaches inadequate (Obadire et al., 2022). Digital inventory management systems have therefore emerged as a necessary strategic response to the growing complexity of retail operations.

Digital inventory management refers to the use of technology-driven tools and platforms to monitor, control, and optimize stock levels, reorder processes, and inventory-related workflows (Rezaeinavaei & Khan, 2025). These tools include electronic point-of-sale (EPOS) systems, enterprise resource planning (ERP) software, barcode scanning, radio frequency identification (RFID), and data analytics platforms that provide real-time visibility of stock movement (Rezaeinavaei & Khan, 2025). When effectively implemented, such systems reduce stockout incidents, limit overstocking, improve demand forecasting accuracy, and support data-informed purchasing decisions.

Globally, the adoption of digital inventory management has been linked to improved supply chain agility, reduced operating costs, and enhanced customer satisfaction. In the African retail context, however, the transition from traditional to digital inventory systems has been uneven, with many businesses continuing to use basic solutions such as spreadsheets or fragmented software that limit operational efficiency (Moloi et al., 2026). Kenya's retail sector, though more advanced than many sub-Saharan African markets, still faces challenges of incomplete digitization, inconsistent system integration, and inadequate staff competencies to leverage digital inventory tools effectively (Kuteyi & Winkler, 2022).

Naivas Supermarket has emerged as one of the most successful retail chains in Kenya following the collapse of its competitors. With over 90 branches across the country, Naivas has invested in digital systems to manage its expansive product range and meet the demands of a growing urban consumer base (Magiri & Barasa, 2024). Despite this, empirical evidence specifically examining how digital inventory management strategies influence Naivas' organizational performance remains limited. Most existing studies in the Kenyan context focus on broader inventory management practices rather than the specifically digital dimension, or they target supermarkets that have since closed. This study therefore seeks to contribute to knowledge by examining the direct effect of digital inventory management strategies on the performance of Naivas Supermarkets in Nairobi City County.

1.2 Statement of the Problem

The performance of supermarkets in Kenya has come under pressure due to poor inventory control, leading to the closure of major retail chains and a declining contribution of the retail sector to GDP from 8.0% in 2014 to 7.0% in 2019 (Ndigwa & Moronge, 2019). In response, supermarkets such as Naivas have increasingly adopted digital inventory management systems. However, despite these investments, Naivas Supermarket continues to experience stock imbalances, supply delays, and inconsistent service delivery across its branches in Nairobi City County (Nyongesa, 2026). These challenges point to a potential gap between the adoption of digital inventory tools and their effective translation into improved performance outcomes.

Empirical studies on inventory management in Kenya have examined systems such as electronic point of sale, barcode tracking, and electronic data interchange in general supermarket settings (Lusweti & Odoyo, 2020). A recent study on Naivas Supermarket specifically found that inventory management had a moderate but significant impact ($\beta = 0.342$, $p = 0.031$) on performance, constrained partly by residual manual processes (Kogei & Gachengo, 2025). This finding reveals that digital inventory adoption alone does not guarantee performance improvement; the depth and integration of digital systems matter. Moreover, little research has examined specific digital inventory dimensions including stock level optimization, material requirements planning, and real-time stockout mitigation in the context of Naivas' current operational environment.

Without a thorough examination of how digital inventory management practices specifically influence key performance outcomes such as market share, customer satisfaction, employee innovation, operational efficiency, and cost reduction at Naivas, management cannot make evidence-based decisions regarding system investments and improvement priorities (Musyoka & Kithandi, 2026). This study therefore sought to fill this empirical gap by investigating the

effect of digital inventory management strategy on the performance of Naivas Supermarkets in Nairobi City County, Kenya.

1.3 Purpose of the Study

The purpose of the study was to determine the effect of digital inventory management strategy on the performance of Naivas Supermarkets in Nairobi City County, Kenya.

1.4 Research Hypothesis

H0₁: Digital inventory management strategy does not significantly influence the performance of Naivas Supermarkets in Nairobi City County, Kenya.

2. LITERATURE REVIEW

2.1 Theoretical Foundation

2.1.1 Theory of Inventory Management

The theoretical foundation of this study is the Theory of Inventory Management, which was advanced through the seminal work of Arrow, Karlin, and Scarf (1958) in their landmark publication, *Studies in the Mathematical Theory of Inventory and Production*. The theory establishes that in any enterprise managing physical goods, inventory occupies a central role in working capital and operational decision-making. The core premise of the theory is that effective inventory management involves balancing the cost of holding excess stock against the risk of stockouts, and that optimal policies can be mathematically determined to minimize total inventory costs while meeting customer demand (Wada et al., 2025).

Within this framework, the objective of an inventory manager is modeled as meeting customer demands while minimizing costs or maximizing profits. A surplus of inventory occupies physical space, raises holding costs, and increases the likelihood of loss, damage, and product obsolescence. At the same time, insufficient inventory disrupts operational workflows and leads to stockout situations that reduce customer satisfaction and erode market share (Bah et al., 2023). The theory thus prescribes a dynamic, data-driven approach to stock control one that digital inventory management systems are uniquely positioned to support.

The relevance of this theory to the present study lies in its conceptual alignment with digital inventory management strategy. Modern digital systems such as ERP platforms, EPOS terminals, and RFID tracking tools enable supermarkets to implement real-time inventory optimization, automated reorder mechanisms, and demand forecasting all consistent with the prescriptions of the Theory of Inventory Management (Unhelkar et al., 2022). For Naivas Supermarket, the adoption of such systems represents a practical application of the theory's

principles, and the study evaluates whether these digital implementations translate into measurable performance gains.

2.2 Empirical Review

2.2.1 Digital Inventory Management Strategy and Performance

A study by Arasa and Achuora (2020) investigated how strategic inventory management practices influence the performance of supermarkets in Nairobi County, Kenya. The study examined four inventory dimensions: vendor-managed inventory, lean inventory systems, e-inventory management systems, and activity-based costing. Using a descriptive cross-sectional survey design with a stratified random sample of 113 supermarkets from a target population of 158, the study found a significant positive relationship between e-inventory management systems and supermarket performance. Specifically, digital inventory systems were found to reduce operating expenses and improve stock control, thereby enhancing supermarket efficiency. The study was grounded in the Resource-Based View theory and is directly relevant to the current study, though it did not specifically isolate Naivas Supermarket as a unit of analysis.

Macas et al. (2021) conducted a systematic literature review on inventory management for retail companies covering publications from 2015 to 2019. The study, which focused on the retail sector and small and medium-sized enterprises, identified the leading inventory management systems, models, and key performance indicators relevant to inventory control. Findings indicated that many retail SMEs primarily relied on physical inventory methods, simple ERP systems, or basic software such as Microsoft Excel rather than adopting sophisticated digital solutions. This tendency to underinvest in digital inventory systems limits operational agility, increases the risk of stockouts and overstocking, and weakens overall performance. The study highlights the performance gap between retailers using basic systems and those deploying advanced digital tools.

Gachengo and Kogei (2025) investigated the effect of inventory management on the performance of selected Naivas Supermarkets in Nairobi City County, Kenya. The study used a descriptive research design with a sample of 137 staff members from eight randomly selected Naivas branches. Using semi-structured questionnaires and regression analysis, the study found that inventory management had a moderate but statistically significant impact on performance ($\beta = 0.342$, $p = 0.031$). The findings further indicated that the impact was constrained by partial reliance on manual verification processes, suggesting that full digitization of inventory tracking using IoT and AI-driven systems could strengthen the performance outcomes. The study's context and subject closely align with the present research, providing a strong empirical anchor for the current investigation.

Immadietty (2025) examined real-time inventory management systems and their role in reducing stockouts and overstocks in the retail sector. Published in the Journal of Recent Trends in Computer Science and Engineering, the study found that the deployment of real-time inventory systems significantly improved inventory accuracy and reduced instances of both stockouts and excess stock. The study highlighted that predictive analytics and machine learning-enabled demand forecasting are key enablers of inventory optimization, which in turn supports higher customer service levels and improved financial performance. These findings are consistent with the broader argument that digital inventory management contributes positively to supermarket performance.

At a global level, preprint research by Farah et al. (2024), as cited in related literature, confirmed that efficient inventory management is a vital prerequisite for operational performance and financial competitiveness, given its direct influence on supply chain efficiency and firm profitability. This positions digital inventory management not merely as an operational tool but as a strategic capability that influences market competitiveness. For Naivas Supermarket, operating in a competitive urban market with multiple branches, the strategic deployment of digital inventory systems is therefore both a performance imperative and a competitive differentiator.

3. RESEARCH METHODOLOGY

This study adopted a descriptive research design to examine the effect of digital inventory management strategy on the performance of Naivas Supermarket branches in Nairobi City County, Kenya. The target population comprised 326 employees drawn from key departments including accounts, operations, production, sales, ICT, human resource, and procurement across selected Naivas branches. A stratified random sampling technique was used to ensure representation from all departments, and a sample size of 100 respondents was selected. Primary data were collected using structured questionnaires containing both open-ended and closed-ended questions. The questionnaires enabled the collection of quantitative and qualitative data regarding digital inventory management practices and organizational performance. Data collection was conducted through a drop-and-pick approach after obtaining the necessary research authorization and informed consent from respondents. Data analysis involved editing, coding, and classification of responses before analysis using descriptive and inferential statistics. Descriptive statistics included frequencies, percentages, means, and standard deviations, while inferential statistics involved Pearson correlation and simple linear regression analysis to determine the relationship between digital inventory management strategy and supermarket performance. Findings were presented using tables and figures.

4. RESEARCH FINDINGS AND DISCUSSION

4.1 Response Rate

The response rate was determined by calculating the percentage of respondents from the sample of 100 who fully participated in the study. Table 1 presents the outcome.

Table 1: Response Rate

Category	Frequency	Percentage (%)
Questionnaires returned	92	92.0
Questionnaires not returned	8	8.0
Total	100	100

Source: Research Data (2026)

The study achieved a response rate of 92.0%, with 92 respondents fully participating, while 8 respondents (8.0%) did not return their questionnaires. This response rate is considered outstanding and adequate for analysis. Mesioye and Bakare (2024) argued that a response rate of 70% or above is outstanding for study examination and reporting. The high response rate enhances the reliability of the findings and ensures adequate representation of the sampled population.

4.2 Descriptive Analysis

4.2.1 Digital Inventory Management

The study measured the respondents' perceptions of digital inventory management across five key dimensions relating to stock level optimization, stockout mitigation, material requirements planning, simultaneous stock management, and product range improvement. Results are presented in Table 2.

Table 2: Digital Inventory Management

Statements	SD (%)	D (%)	N (%)	A (%)	SA (%)	M	Sdv
Digital inventory management has improved the optimization of stock levels that enhance performance of Naivas Supermarkets	5.2	2.8	1.3	53.5	37.2	3.98	1.02
Digital inventory management mitigates stockouts and makes the supermarket workflow easier	2.4	5.6	0	39.6	52.4	4.23	0.77

Digital inventory management handles Material Requirement Planning leading to higher customer satisfaction	10.4	5.9	3.8	33.7	46.2	4.01	0.99
Digital inventory management enhances stockouts and stocks-in simultaneously, improving customer satisfaction and cutting down on wait times	12.2	6.5	3.1	42.1	36.1	4.45	0.55
Digital inventory management has enhanced the range and quality of goods available to consumers, which boosts the market	5.9	4.4	1.6	39.9	48.2	4.48	0.52
Overall score	7.2	5.0	1.9	41.8	44.0	4.23	0.77

Source: Research Data (2026)

The results presented in Table 2 show an overall mean score of 4.23 (SD = 0.77), indicating that the majority of respondents agreed with the statements describing digital inventory management practices at Naivas Supermarket. The overall agreement rate stood at 85.8%, while disagreement and neutral responses accounted for 12.3% and 1.9%, respectively. The low standard deviation of 0.77 indicates that responses clustered closely around the mean, reflecting a consistent level of agreement across respondents.

The highest mean score was recorded for the statement that digital inventory management enhances the range and quality of goods available to consumers (M = 4.48, SD = 0.52), suggesting strong agreement that digital systems have improved product availability. The second highest mean concerned the simultaneous enhancement of stockouts and stock replenishment, improving customer satisfaction and reducing wait times (M = 4.45, SD = 0.55). Stockout mitigation recorded a mean of 4.23 (SD = 0.77), while stock level optimization (M = 3.98, SD = 1.02) and material requirements planning (M = 4.01, SD = 0.99) recorded slightly lower but still positive scores.

These findings align with the observations of Lusweti and Odoyo (2020), who found that e-inventory management systems significantly improved supermarket efficiency by reducing operating expenses and improving stock control. Furthermore, Gachengo and Kogei (2025) found that inventory management had a moderate but statistically significant impact on Naivas Supermarket performance, with partial manual processes limiting the full realization of benefits. The present study's findings confirm that digital inventory management is widely

perceived as effective in improving the operational dimensions associated with stock management. However, the slightly lower scores for stock level optimization and material requirements planning suggest that these areas require further investment and system refinement to match the stronger performance gains observed in product availability and stockout management. Munoz Macas et al. (2021) noted that SMEs in retail sectors that rely on basic inventory systems rather than sophisticated digital platforms tend to record weaker performance outcomes, which is consistent with the remaining performance gaps observed in this study.

4.2.2 Performance of Naivas Supermarket

Respondents were asked to rate the extent to which digital inventory management strategy had influenced five key dimensions of Naivas Supermarket's performance: market share growth, customer satisfaction, employee innovation, employee efficiency, and overhead cost reduction. Results are presented in Table 3.

Table 3: Performance of Naivas Supermarket

Statements	SD (%)	D (%)	N (%)	A (%)	SA (%)	M	Sdv
Digital inventory management strategy has enabled Naivas Supermarket to increase its market share	21.1	22.8	10.2	20.3	25.6	3.64	1.36
Digital inventory management strategy has enabled the Supermarket to provide goods and services that satisfy the expectations of clients	26.4	19.1	5.4	22.4	26.7	3.07	1.93
Digital inventory management strategy has enabled the Supermarket employees to become innovative	31.9	22.9	3.9	17.8	23.5	2.99	2.01
Digital inventory management strategy has enabled the Supermarket employees to become efficient	34.6	27.1	11.6	15.9	10.8	2.67	2.33
Digital inventory management strategy has enabled the Supermarket to reduce overhead costs	25.4	31.9	9.9	18.9	13.9	3.09	1.91
Overall score	27.9	24.8	8.2	19.1	20.1	3.09	1.91

Source: Research Data (2026)

Table 3 presents performance outcomes with an overall mean score of 3.09 (SD = 1.91). A combined disagreement rate of 52.7% indicates that more than half of the respondents did not agree that digital inventory management had positively influenced supermarket performance, while 39.2% perceived a positive relationship and 8.2% expressed a neutral position. The relatively high standard deviation of 1.91 reflects considerable variability in respondents' views, pointing to inconsistency in how performance outcomes are experienced across different departments and branches.

The most contentious performance dimension was employee efficiency (M = 2.67, SD = 2.33), where the highest level of disagreement was recorded. This suggests that despite the presence of digital inventory systems, employees across the sampled branches did not consistently perceive measurable improvements in their operational efficiency. Employee innovation recorded a similarly low mean of 2.99 (SD = 2.01), indicating that the digital inventory tools in use have not yet been widely perceived as enabling a culture of innovation within the workforce. These findings are consistent with Gachengo and Kogei (2025), who found that partial manual processes constrained performance gains even in the presence of digital inventory systems.

The highest performance score was recorded for market share growth (M = 3.64, SD = 1.36), suggesting a moderate level of agreement that digital inventory systems have contributed to Naivas' competitive positioning. Customer satisfaction (M = 3.07) and overhead cost reduction (M = 3.09) recorded near-neutral overall means, indicating that these dimensions require deliberate management attention. The overall performance findings partially contradict the widely cited view that digital systems automatically lead to comprehensive performance improvements. Instead, they support the argument that the depth of digital integration, staff readiness, and management commitment to system utilization are all necessary conditions for digital inventory management to translate into sustained performance gains (Immadisetty, 2025).

4.3 Inferential Statistics

4.3.1 Model Summary

Table 4 presents the regression model summary showing the relationship between digital inventory management strategy and the performance of Naivas Supermarket.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.651a	.577	.502	.50370

a. Predictors: (Constant), Digital Inventory Management Strategy

Source: Research Data (2026)

The model summary presented in Table 4 shows a correlation coefficient ($R = 0.651$), indicating a moderate-to-strong positive relationship between digital inventory management strategy and the performance of Naivas Supermarket. The coefficient of determination ($R^2 = 0.577$) demonstrates that 57.7% of the variance in supermarket performance can be explained by digital inventory management strategy. The adjusted R^2 value of 0.502 confirms the model's robustness when accounting for the number of predictors. The standard error of estimate of 0.504 reflects relatively small deviations of observed values from the predicted regression line, indicating a well-fitting model.

4.3.2 ANOVA Results

Table 5 presents the ANOVA results testing the statistical significance of the regression model.

Table 5: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	14.769	1	14.769	58.213	.000b
Residual	38.564	152	.254		
Total	53.333	153			

a. Dependent Variable: Performance

b. Predictors: (Constant), Digital Inventory Management Strategy

Source: Research Data (2026)

The ANOVA results indicate that the regression model is statistically significant ($F = 58.213$, $p < 0.001$). This confirms that digital inventory management strategy has a significant effect on the performance of Naivas Supermarket. The regression sum of squares (14.769) relative to the residual sum of squares (38.564) reflects meaningful explanatory power of the model, and the finding establishes adequate grounds to reject the null hypothesis (H_0).

4.3.3 Regression Coefficients

Table 6 presents the regression coefficients for the relationship between digital inventory management strategy and supermarket performance.

Table 6: Beta Coefficients for Digital Inventory Management Strategy

Model	B	Std. Error	Beta	t	Sig.
(Constant)	2.149	.353		6.081	.000
Digital Inventory Management	.324	.082	.391	3.939	.000***

a. Dependent Variable: Performance ***p < 0.001

Source: Research Data (2026)

The data presented in Table 6 show that the unstandardized coefficient for digital inventory management strategy (B = 0.324, p = 0.000) indicates that a one-unit increase in digital inventory management is associated with a 0.324-unit increase in the performance of Naivas Supermarket. The corresponding t-value (t = 3.939) demonstrates that this effect is statistically significant at the 0.001 level. The standardized Beta coefficient of 0.391 confirms that digital inventory management strategy is a positive and significant predictor of supermarket performance.

These findings lead to the rejection of the null hypothesis (H01: Digital inventory management strategy does not significantly influence the performance of Naivas Supermarkets in Nairobi City County, Kenya). The results align with Arasa and Achuora (2020), who established a significant positive relationship between e-inventory management systems and supermarket performance in Nairobi County. They also confirm Gachengo and Kogei's (2025) finding of a moderate but significant inventory management effect on Naivas performance, while extending the evidence base by demonstrating a stronger predictive relationship when digital inventory management is examined as a specific and composite strategic variable. The findings further support the theoretical position advanced by Shukaili et al. (2025) that optimal inventory policies grounded in quantitative, data-driven decision-making improve organizational outcomes.

5. SUMMARY OF THE STUDY

This study examined the effect of digital inventory management strategy on the performance of Naivas Supermarkets in Nairobi City County, Kenya. Guided by the Theory of Inventory Management, a descriptive research design was employed to survey 100 employees drawn from key operational departments, of whom 92 responded, representing a 92.0% response rate.

Descriptive analysis of digital inventory management recorded an overall mean of 4.23 (SD = 0.77), with 85.8% of respondents agreeing that digital inventory management practices were in place and effective in improving product availability, mitigating stockouts, and managing material requirements. The area of greatest strength was product range and quality enhancement

($M = 4.48$), while stock level optimization ($M = 3.98$) and material requirements planning ($M = 4.01$) indicated areas requiring further improvement.

Performance outcomes recorded a more varied picture, with an overall mean of 3.09 ($SD = 1.91$) and a majority of respondents (52.7%) expressing disagreement with the view that digital inventory management had generated consistent performance improvements. Market share growth ($M = 3.64$) was the most positively perceived outcome, while employee efficiency ($M = 2.67$) and employee innovation ($M = 2.99$) were the areas of greatest concern.

Regression analysis confirmed a statistically significant positive relationship between digital inventory management strategy and supermarket performance ($B = 0.324$, $\beta = 0.391$, $p = 0.000$), with the model accounting for 57.7% of performance variation ($R^2 = 0.577$). The ANOVA results further confirmed the statistical significance of the model ($F = 58.213$, $p < 0.001$). These findings collectively support the rejection of the null hypothesis and establish digital inventory management as a significant determinant of Naivas Supermarket performance.

6. CONCLUSION

The study concludes that digital inventory management strategy is a statistically significant and practically meaningful driver of supermarket performance at Naivas Supermarkets in Nairobi City County, Kenya. The evidence demonstrates that digital inventory tools — particularly those enabling real-time stock monitoring, automated reorder processes, and simultaneous management of inflows and outflows — are associated with improved product availability, reduced stockouts, and increased market competitiveness.

However, the study also reveals that the relationship between digital inventory management adoption and performance is not automatic. The moderate and inconsistent performance outcomes observed across dimensions such as employee efficiency, employee innovation, and customer satisfaction suggest that the full potential of digital inventory management is not yet being realized. This points to gaps in system integration, staff training, and change management that must be addressed to translate digital inventory investments into comprehensive performance gains.

The findings reinforce the theoretical predictions of Shukaili et al. (2025) that data-driven, systematic inventory management produces superior organizational outcomes. They also extend the empirical literature on Kenyan supermarkets by providing specific evidence from Naivas Supermarket's multi-branch context in Nairobi, offering a timely contribution to practice and academic discourse on digital transformation in retail management.

7. RECOMMENDATIONS

Based on the research findings, the following recommendations are proposed:

First, Naivas Supermarket should prioritize the full automation of inventory tracking by deploying integrated digital platforms that eliminate residual manual verification processes. As demonstrated by Gachengo and Kogei (2025), partial digitization limits performance outcomes, and full-system integration using IoT-based tracking and AI-driven analytics would address identified weaknesses in stock level optimization and material requirements planning.

Second, management should invest in targeted staff training and digital competency development programs to ensure that employees at all levels can effectively operate, interpret, and act on the outputs of digital inventory systems. The low mean scores for employee efficiency and employee innovation in this study indicate that technology investment alone is insufficient without corresponding human capital development.

Third, Naivas Supermarket should implement real-time performance dashboards linked to inventory systems, enabling operational managers to monitor key performance indicators such as stockout rates, inventory turnover, and reorder cycle times on an ongoing basis. This would support proactive decision-making and help bridge the observed gap between digital system adoption and realized performance outcomes.

Fourth, the supermarket should explore the integration of vendor-managed inventory (VMI) systems with its key suppliers, building on the positive inventory performance dimensions identified in this study. VMI would further reduce procurement lead times, optimize stock levels, and strengthen supplier relationships, all of which contribute to improved customer satisfaction and market competitiveness.

8. AREAS FOR FURTHER RESEARCH

This study recommends that future research examine additional digital transformation strategies employed by Naivas Supermarket and their individual contributions to performance. A longitudinal study examining the long-term effects of digital inventory management on financial and operational performance would provide stronger causal evidence than the cross-sectional design employed here. Future studies should also explore the moderating role of organizational factors such as management support, staff ICT literacy, and branch-level operational maturity on the relationship between digital inventory management and performance. Additionally, comparative studies examining digital inventory management practices across different supermarket chains in Kenya would provide valuable benchmarking insights and contribute to a more comprehensive understanding of the factors that differentiate high-performing from low-performing retail chains in the Kenyan market.

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