IJAAR PUBLISHING®

International Journal of Advanced Academic Research | ISSN: 2488-9849
Vol. 12, Issue 3 (2026) | www.ijaar.org

INFLUENCE OF INVENTORY MANAGEMENT PRACTICES ON CUSTOMER RETENTION OF QUOTED MANUFACTURING COMPANIES

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ABSTRACT

The manufacturing sector plays a crucial role in Nigeria's economic development, contributing approximately 8.23% to the nation's Gross Domestic Product (GDP) in the fourth quarter of 2023. Despite this contribution, manufacturing firms continue to experience persistent challenges in managing inventory effectively due to limited resources, inadequate adoption of modern inventory technologies, and insufficient managerial expertise in inventory control. While effective inventory management systems are essential for improving operational efficiency and sustaining customer relationships, empirical evidence on how specific dimensions of inventory management practices influence customer retention in Nigeria remains limited. This study therefore examines the influence of inventory management practices (IMPs) on customer retention among quoted manufacturing companies in Nigeria. Data were collected through a structured questionnaire administered to operational and managerial staff of selected quoted manufacturing firms in Southwest Nigeria. Out of 298 questionnaires distributed, 268 valid responses were obtained, representing a 90.5% response rate. The data were analysed using descriptive statistics and Partial Least Squares Structural Equation Modelling (PLS-SEM) due to its suitability for predictive analysis and complex model estimation. The findings reveal that technology-driven inventory management practices have the strongest and most significant positive influence on customer retention ($\beta = 0.314$, $t = 3.603$, $p < 0.001$). This suggests that the adoption of digital inventory systems enhances inventory visibility, improves delivery reliability, and

https://doi.org/10.46654/x25t5664

reduces stock-out occurrences, thereby strengthening customer loyalty. The study contributes to the literature by providing empirical evidence on the disaggregated effects of inventory management practices on customer retention within the context of developing economies. The findings also offer practical implications for production managers and policy stakeholders by highlighting the importance of technology-enabled inventory systems in improving customer satisfaction and retention in the manufacturing sector.

***Keywords*:** Inventory Management Practices, Production Lead Time, Quoted Manufacturing Companies, Theory of Constraints.

1. Introduction

Inventory management constitutes a critical component of operational efficiency and strategic competitiveness in manufacturing firms, particularly within emerging economies. In the context of Nigeria, the manufacturing sector continues to play a vital role in economic development; however, its performance is often constrained by inefficiencies in resource utilization, especially in inventory control. Ineffective inventory management practices have been widely associated with production disruptions, increased operational costs, and declining customer satisfaction, ultimately undermining firm performance and long-term sustainability.

Extant literature suggests that poor inventory systems can lead to excessive stock levels, stock-outs, and wastage arising from obsolescence, spoilage, pilferage, and breakages (Almrdof & Attia, 2021). These inefficiencies not only tie down significant working capital but also reduce liquidity and limit firms' ability to invest in productive assets. Given that a substantial proportion of manufacturing firms' funds is committed to inventory holdings, ineffective management of this resource can severely impact operational performance and profitability. More importantly, persistent inventory challenges may translate into delayed deliveries, inconsistent product availability, and reduced service reliability—factors that directly influence customer retention (Anichebe, 2013).

Customer retention has emerged as a critical performance indicator in contemporary business environments, as retaining existing customers is often more cost-effective than acquiring new ones. Loyal customers tend to generate repeat purchases, contribute to stable revenue streams, and enhance firms' competitive positioning. Consequently, organizations are increasingly focusing on operational strategies—such as inventory management—that can strengthen customer relationships through improved service delivery, product availability, and responsiveness.

Despite the recognized importance of inventory management, prior studies have largely examined its aggregate effects on firm performance, with limited attention given to how specific dimensions of inventory management practices influence customer retention, particularly within developing economies. This represents a significant gap in the literature, as inventory management is a multidimensional construct encompassing planning-based, control-based, lean and flow-oriented, and technology-driven practices. Understanding the distinct contribution of each dimension is essential for developing targeted managerial interventions that enhance customer retention outcomes.

Furthermore, empirical evidence from Southwest Nigeria remains scarce, especially among quoted manufacturing companies that operate in a highly competitive and resource-constrained environment. The increasing adoption of digital technologies and lean practices

in inventory systems also necessitates a more nuanced investigation into how these evolving practices shape customer retention.

Against this backdrop, this study examines the influence of inventory management practices on customer retention of quoted manufacturing companies in Nigeria by disaggregating inventory practices into four key dimensions: planning-based, control-based, lean and flow-based, and technology-driven practices. To achieve this objective, the study tests the following null hypotheses:

- H_{01}: Planning-based inventory management practices have no significant effect on customer retention of quoted manufacturing companies in Southwest Nigeria.
- H_{02}: Control-based inventory management practices have no significant effect on customer retention of quoted manufacturing companies in the study area.
- H_{03}: Lean and flow-based inventory management practices have no significant effect on customer retention of quoted manufacturing companies in the study area.
- H_{04}: Technology-driven inventory management practices have no significant effect on customer retention of quoted manufacturing companies in the study area.

By providing empirical insights into the disaggregated effects of inventory management practices, this study contributes to both theory and practice by offering a more refined understanding of how specific operational strategies influence customer retention in the manufacturing sector.

2. Literature Review

2.1 Inventory Management Practices and Customer Retention

Inventory management remains a central pillar of operational excellence in manufacturing and supply chain systems, particularly in dynamic and resource-constrained environments. Inventory refers to the stock of raw materials, work-in-progress, and finished goods maintained to meet present and future organizational needs. As one of the most capital-intensive assets, inventory requires careful coordination to balance cost efficiency with service responsiveness. Ineffective inventory management often results in stock-outs, excess inventory, and operational inefficiencies, which ultimately undermine customer satisfaction and long-term retention (Eckert, 2007). Conversely, well-structured inventory systems enhance product availability, improve delivery reliability, and strengthen customer relationships.

The increasing competitiveness of modern markets has shifted managerial focus from mere cost control to customer-centric operations. In this context, inventory management plays a strategic role in ensuring that customer expectations regarding product availability, delivery speed, and service reliability are consistently met. According to Ahmad and Buttle (2002), customer retention reflects a firm's ability to sustain long-term relationships with its customers, which is more cost-effective and profitable than acquiring new customers. Inventory management practices (IMPs), therefore, serve as a critical mechanism through which firms can enhance customer retention by improving service quality and operational performance.

Inventory management practices encompass a broad range of strategies and techniques designed to optimize stock levels, reduce waste, and ensure efficient resource utilization. These practices have evolved from traditional stock control methods to more integrated and technology-driven systems that leverage real-time data and predictive analytics. Kumar,

Rabbani, and Khan (2024) emphasize that efficient inventory management enhances operational maintenance and customer service delivery by ensuring the timely availability of products and minimizing disruptions in supply chains. Similarly, Kamau and Kagiri (2015) argue that effective inventory practices contribute significantly to organizational competitiveness by improving responsiveness to customer demand and reducing operational costs.

From a conceptual standpoint, inventory management practices can be disaggregated into four key dimensions: planning-based, control-based, lean and flow-based, and technology-driven practices. Planning-based practices, such as Materials Requirement Planning (MRP), Manufacturing Resource Planning (MRP II), and Distribution Requirements Planning (DRP), facilitate accurate demand forecasting and production scheduling. These systems enable firms to align supply with demand, thereby reducing uncertainty and improving service delivery. Control-based practices, including Economic Order Quantity (EOQ), ABC classification, and Re-order Point (ROP) systems, help maintain optimal inventory levels while minimizing holding and ordering costs.

Lean and flow-based practices, such as Just-in-Time (JIT) and Kanban systems, focus on eliminating waste, reducing lead times, and improving process efficiency. These approaches enhance operational flexibility and responsiveness, which are critical for meeting customer expectations in competitive markets. Technology-driven practices represent the most advanced dimension of inventory management, incorporating tools such as Enterprise Resource Planning (ERP) systems, Radio Frequency Identification (RFID), artificial intelligence (AI), and Internet of Things (IoT) technologies. These innovations enable real-time tracking, predictive forecasting, and improved decision-making, thereby enhancing inventory visibility and accuracy across supply chains.

Recent empirical studies have highlighted the growing importance of digital technologies in inventory management and their implications for customer retention. For instance, Ma et al. (2024) demonstrate that AI-based inventory systems significantly improve retail supply chain optimization by enhancing demand forecasting accuracy and reducing stock-outs, which in turn leads to increased customer retention and revenue growth. Similarly, Naznin et al. (2024) find that machine learning applications in inventory optimization not only improve financial forecasting but also strengthen customer retention by enabling firms to anticipate customer needs more effectively.

The relationship between inventory management and customer-related outcomes has been widely documented in the literature. Eckert (2007) established that efficient inventory management positively influences customer satisfaction by ensuring product availability and timely delivery. Rukiya and Kibet (2019) further confirm that effective inventory control systems significantly enhance customer satisfaction in public institutions by reducing delays and improving service reliability. While customer satisfaction is often considered a precursor to retention, recent studies have begun to explore the direct linkage between inventory practices and customer retention.

Ahmed (2021) provides empirical evidence that supply chain management practices, including inventory management, significantly influence both customer satisfaction and customer retention. The study highlights that firms that adopt efficient inventory systems are better positioned to meet customer expectations, thereby fostering loyalty and repeat patronage. Similarly, Israel (2022) finds that innovative supply chain practices, including

advanced inventory systems, play a crucial role in enhancing customer retention among manufacturing small and medium-sized enterprises (SMEs).

Furthermore, Nadason, Vasudevan, and Cheok (2024) reveal that customer loyalty mediates the relationship between inventory management and firm performance, suggesting that effective inventory practices contribute to retention indirectly through improved customer experiences. This finding underscores the importance of viewing inventory management not merely as an operational function but as a strategic tool for building long-term customer relationships.

Despite the growing body of literature, most existing studies have focused on customer satisfaction and overall firm performance, with limited attention given to customer retention as a distinct outcome variable. Moreover, there is a paucity of research that disaggregates inventory management practices into their constituent dimensions to examine their individual effects on customer retention. This gap is particularly evident in developing economies, where infrastructural challenges, limited technological adoption, and supply chain inefficiencies pose significant constraints on inventory management effectiveness.

In the context of Nigeria, manufacturing firms face persistent challenges such as inadequate infrastructure, fluctuating demand patterns, and limited access to advanced inventory technologies. These challenges often result in inefficiencies that negatively affect customer service delivery and retention. Furthermore, empirical studies examining the relationship between inventory management practices and customer retention in Nigerian manufacturing firms remain scarce, particularly among quoted companies in Southwest Nigeria.

Given these gaps, this study adopts a multidimensional perspective of inventory management practices to examine their influence on customer retention. By disaggregating IMPs into planning-based, control-based, lean and flow-based, and technology-driven dimensions, the study provides a more nuanced understanding of how specific practices contribute to customer retention. This approach not only advances theoretical knowledge but also offers practical insights for managers seeking to enhance customer loyalty through improved inventory systems.

2.2 Research Framework

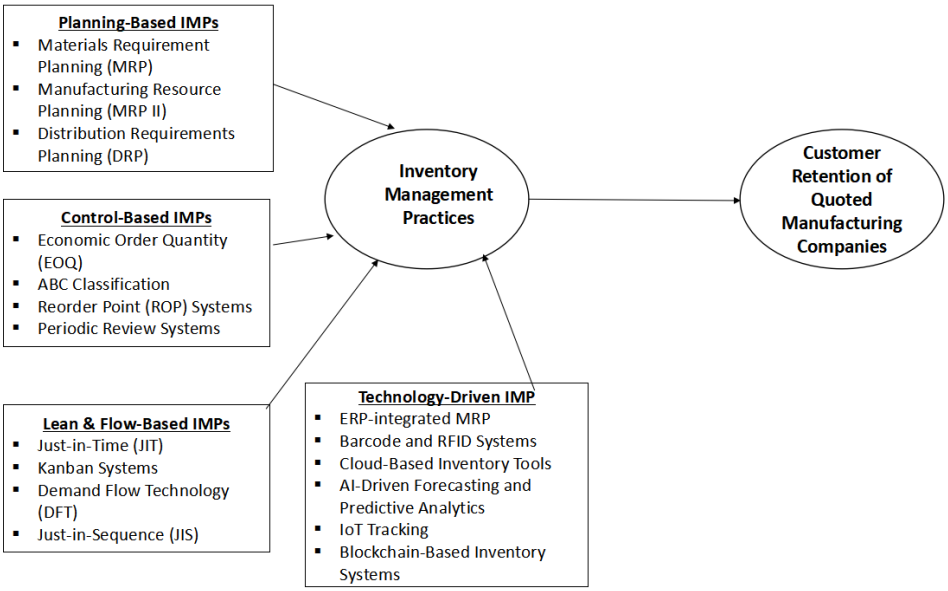


Figure 1: Conceptual Framework on the Relationship between Inventory Management Practices and Customer Retention of Quoted Manufacturing Companies

Source: Adapted from Akinlabi and Okorie (2020), Oyediran and Adeleke (2021) and Ogbemudia and Oko (2022)

3. Methodology

This study adopts a quantitative, cross-sectional survey design to examine the influence of inventory management practices on customer retention among quoted manufacturing companies in Nigeria. The study focuses on firms operating in Lagos State, Oyo State, and Ondo State, which collectively represent a significant proportion of manufacturing activities in Southwest Nigeria. The combined employees (respondents) population from the selected departments in the selected manufacturing across the three states was 1300 (738 from Lagos state; 351 from Ogun State; and 211 from Oyo State) according to the Human Resource Departments in the selected companies. Hence, using Krejcie and Morgan's (1970) formula, the sample size was determined. Lagos is widely regarded as the industrial and commercial hub of the country, while Oyo and Ondo States host a diverse range of manufacturing sub-sectors, including food and beverages, chemicals, pharmaceuticals, cement, textiles, plastics, and agro-allied industries (National Bureau of Statistics [NBS], 2024; Manufacturers Association of Nigeria [MAN], 2023). This geographical scope enhances the representativeness and generalizability of the findings within the Nigerian manufacturing context. A multistage sampling technique was employed to ensure adequate representation across firms and functional units. In the first stage, quoted manufacturing companies were purposively selected based on their operational presence in the study area. In the second stage, respondents were selected across key departments such as operations, production, procurement, and supply chain management. The target population comprised managerial staff at the assistant manager level and above, including senior managers and members of executive teams, given their direct involvement in inventory-related decision-making processes. A total of 298 questionnaires were administered, out of which 268 valid responses were retrieved, representing a response rate of 90.5%. This high response rate is considered adequate for statistical analysis and enhances the reliability of the study findings. Data were collected using a structured questionnaire administered through a combination of physical

distribution and direct engagement with respondents to ensure clarity and completeness. The measurement instrument was developed in line with the study's conceptual framework and research objectives. Items for inventory management practices and customer retention were adapted from validated scales in prior empirical studies (Oyediran & Adeleke, 2021; Mahajan et al., 2024), with necessary modifications to suit the Nigerian manufacturing context. All constructs were measured using a five-point Likert scale, ranging from 1 = Strongly Disagree (SD) to 5 = Strongly Agree (SA). Inventory management practices were operationalized as a multidimensional construct comprising planning-based, control-based, lean and flow-based, and technology-driven practices, while customer retention was measured in terms of repeat patronage, customer loyalty, and long-term relationship orientation. Data analysis was conducted using IBM SPSS Statistics version 26 and Partial Least Squares Structural Equation Modelling (PLS-SEM). The analysis followed a two-stage approach involving measurement model assessment and structural model evaluation. Reliability of the constructs was assessed using Cronbach's alpha coefficients, with all values exceeding the recommended threshold of 0.70, indicating satisfactory internal consistency (Hair, Hult, Ringle, & Sarstedt, 2019). Construct validity was evaluated through Confirmatory Factor Analysis (CFA), ensuring both convergent and discriminant validity of the measurement model. Subsequently, PLS-SEM was employed to test the hypothesized relationships between inventory management practice dimensions and customer retention. The choice of PLS-SEM is justified by its suitability for predictive analysis, its ability to handle complex models with multiple constructs, and its robustness in situations involving relatively small sample sizes and non-normal data distributions.

Overall, the methodological approach adopted in this study ensures rigor, reliability, and validity in examining the influence of inventory management practices on customer retention within the Nigerian manufacturing sector.

4. Results and Discussion

Table 1 shows the industry classification of sampled companies and the demographic profile of the respondents. It summarises information relating to geographical location, industry classification, job designation, and years of work experience In terms of industry classification, firms in the chemicals sector constitute the largest proportion of respondents, followed closely by food and beverages companies. These sectors are typically characterised by complex inventory requirements, including raw material variability, quality control, and in some cases specialised storage conditions. Regarding respondents' job positions, the majority occupy operational, technical, and supervisory roles directly involved in inventory planning, procurement, production, logistics, and warehousing. This enhances the quality of the data, as these respondents possess firsthand knowledge of inventory processes and their operational consequence.

Table 1. Demographic Characteristics of Respondents

Variable	Category	Frequency (n)	Percent (%)
Company Name	Quoted manufacturing firms	268	100.0
State	Lagos	148	55.2
	Ogun	80	29.9
	Oyo	40	14.9
Total		**268**	**100.0**

Industry Classification

Variable	Category	Frequency (n)	Percent (%)
Industry	Chemicals	94	35.1
	Food and Beverages	78	29.1
	Fast Moving Consumer Goods	48	17.9
	Pharmaceuticals	40	14.9
	Household Products	8	3.0
Total		**268**	**100.0**

Respondents' Work Profile

Variable	Category	Frequency (n)	Percent (%)
Job Title	Managerial and supervisory roles	77	28.7
	Operational and technical roles	191	71.3
Years in Company	Less than 10 years	207	77.2
	10–14 years	23	8.6
	15–20 years	32	11.9
	Above 20 years	6	2.2
Total		**268**	**100.0**

The results in Table 2 indicate that Cronbach's alpha values range from 0.761 (bPIMP) to 0.886 (bTIMP), while composite reliability (rho_c) values range from 0.839 (bPIMP) to 0.910 (bTIMP). Similarly, rho_a values closely align with these estimates, ranging between 0.762 and 0.889. All constructs therefore exceed the minimum threshold for internal consistency reliability, indicating that the indicators within each construct consistently measure the same underlying concept.

Convergent validity was evaluated using the Average Variance Extracted (AVE), with the commonly accepted threshold of 0.50, signifying that a construct explains at least half of the variance in its indicators (Hair et al., 2017). The AVE values reported in Table 2 range from 0.508 (bCIMP) to 0.628 (cCPS). Since all AVE values exceed the recommended threshold, convergent validity is established for all constructs. This confirms that the indicators

adequately represent their respective latent variables in the context of inventory management and customer satisfaction.

The Fornell–Larcker criterion was also applied. According to this criterion, the square root of each construct's AVE should be greater than its highest correlation with any other construct (Fornell & Larcker, 1981). As reported in Table 3, the square root of AVE for each construct, bCIMP (0.713), bLIMP (0.730), bPIMP (0.715), bTIMP (0.747), and cCPS (0.793) exceeds the corresponding inter-construct correlations in all cases. This indicates that each construct shares more variance with its own indicators than with other constructs, thereby satisfying the Fornell–Larcker criterion for discriminant validity. To further strengthen the assessment, discriminant validity was also examined using the Heterotrait–Monotrait ratio (HTMT), which is regarded as a more sensitive test in PLS-SEM (Henseler et al., 2015).

A conservative threshold of 0.90 was adopted. And as shown in Table 4, all HTMT values range between 0.691 and 0.874, remaining comfortably below the critical threshold. Although some construct pairs (such as bLIMP–bTIMP) exhibit relatively high HTMT values, these remain within acceptable limits and reflect conceptual relatedness rather than a lack of discriminant validity. Overall, the HTMT results confirm that the constructs are empirically distinct.

Accordingly, the retained indicators and constructs provide a sound measurement foundation for examining the structural relationships between inventory management practices and customer retention among quoted manufacturing companies in the study area.

Table 2. Construct Reliability and Validity for Inventory Management and Customer Retention of Quoted Manufacturing Companies

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
bCIMP	0.838	0.841	0.878	0.508
bLIMP	0.854	0.855	0.889	0.533
bPIMP	0.761	0.762	0.839	0.511
bTIMP	0.886	0.889	0.910	0.558
cCPS	0.802	0.807	0.871	0.628

Table 3. Fornell-Larcker criterion for Inventory Management and Customer Retention of Quoted Manufacturing Companies

	bCIMP	bLIMP	bPIMP	bTIMP	cCPS
bCIMP	0.713				
bLIMP	0.703	0.730			
bPIMP	0.661	0.673	0.715		
bTIMP	0.734	0.761	0.650	0.747	
cCPS	0.634	0.633	0.546	0.668	0.793

Table 4. HTMT of Constructs for Inventory Management and Customer Retention of Quoted Manufacturing Companies

	bCIMP	bLIMP	bPIMP	bTIMP	cCPS
bCIMP					
bLIMP	0.834				
bPIMP	0.824	0.831			
bTIMP	0.851	0.874	0.785		
cCPS	0.765	0.761	0.691	0.788	

4.1 Hypothesis Testing Using Partial Least Square Structural Equation Modelling (PLS-SEM)

Following the confirmation of measurement model's adequacy, the structural model was evaluated to assess the effect of inventory management practices on customer retention of quoted manufacturing companies in Southwest Nigeria. The assessment of the structural model adheres strictly to the guidelines outlined by Hair et al. (2021). Statistical significance is determined using T-values greater than 1.96 and P-values less than or equal to 0.05 at a 95 per cent confidence level, while T-values above 1.65 and P-values below 0.10 are regarded as moderately significant. The coefficient of determination (R^2) is interpreted using Cohen's (1992) thresholds, where values of 0.26, 0.13, and 0.02 indicate substantial, moderate, and weak explanatory power, respectively. Effect sizes (f^2) are evaluated using the criteria proposed by Cohen (1992), as supported by Tehseen et al. (2019) and Adepoju et al. (2023), where values of 0.02, 0.15, and 0.35 represent small, medium, and large effects, respectively.

Planning based Inventory Management Practices (bPIMP) do not exhibit a statistically significant effect on customer retention ($\beta = 0.063$, $T = 0.924$, $p = 0.356$). The T-statistic falls below both the 95 per cent and 90 per cent confidence thresholds, indicating that traditional planning and forecasting practices do not significantly influence customer retention in the current model. Therefore, the hypothesis proposing a significant relationship between planning based inventory practices and customer retention is rejected. This finding corroborates earlier observations by Odhiambo and Kihara (2018), who noted that planning activities such as demand forecasting and materials requirement planning primarily influence internal efficiency rather than customers' direct service perceptions.

The path coefficients reported in Table 5 and depicted in Figure 2 indicate the magnitude and direction of the relationships between the dimensions of inventory management practices and customer retention. Control-based Inventory Management Practices (bCIMP) have a positive and statistically significant effect on customer retention ($\beta = 0.227$, $T = 3.055$, $p = 0.002$). This relationship meets the 95 per cent confidence threshold, indicating that improvements in cost-oriented inventory practices are associated with increased levels of customer satisfaction and by extension, customer retention. Consequently, hypothesis 2 which states that control-based inventory management practices do not exert a significant influence on customer retention of quoted manufacturing companies in the study area stands rejected. This finding is consistent with the works of Kamau and Kagiri (2015) and Atnafu and Balda (2018), who reported that effective stock control mechanisms such as Economic Order Quantity (EOQ) models, reorder point systems, and periodic stock reviews improve order fulfillment consistency and service dependability.

Similarly, Lean Inventory Management Practices (bLIMP) demonstrate a positive and statistically significant relationship with customer retention ($\beta = 0.192$, $T = 2.035$, $p = 0.042$).

Although the magnitude of the effect is smaller than that of bCIMP and bTIMP, the relationship remains significant at the 95 per cent confidence level. This implies that lean-oriented practices such as waste reduction and flow optimisation contribute meaningfully to customer satisfaction outcomes. This finding supports the conclusions of Opoku et al. (2020), who argued that lean practices such as Just-in-Time (JIT) and continuous flow systems enhance responsiveness and reduce operational waste, indirectly improving customer experiences. However, empirical studies in sub-Saharan Africa caution that partial or poorly synchronised implementation of lean systems may limit their full benefits (Acquah, 2024; Oyetade et al., 2024).

Consequently, hypothesis 3 which states that lean and flow-based inventory management practices have no significant effect on customer retention stands rejected.

Technology-based Inventory Management Practices (bTIMP) emerge as the most influential predictor of customer satisfaction. The path coefficient is positive and highly significant ($\beta = 0.314$, $T = 3.603$, $p < 0.001$), exceeding the 95 per cent confidence threshold by a substantial margin. This finding indicates that technology-enabled inventory systems play a critical role in enhancing customer satisfaction. The findings reveal that technology-driven inventory management practices have the strongest and most significant positive effect on customer satisfaction. This result aligns closely with empirical evidence reported by Mahajan et al. (2024), who found that the adoption of ERP systems, real-time inventory tracking, and digital integration significantly reduces stock-outs and order inaccuracies, thereby improving service reliability and customer satisfaction. Similarly, Holloway (2024) observed that inventory visibility enabled by bar-code scanning, RFID, and cloud-based systems enhances responsiveness to customer demand and strengthens service delivery outcomes. This study extends these findings by demonstrating that, within the Nigerian manufacturing context, technology-enabled inventory practices are the most influential drivers of customer retention. As such, hypothesis 4 which states that technology-driven inventory management practices have no significant effect on customer retention stands rejected.

The practical significance of each predictor was assessed using the effect size (f^2). As presented in Table 5, the effect size for bCIMP is 0.040, indicating a small but meaningful effect on customer retention. bLIMP records an f^2 value of 0.026, which also falls within the small effect category. bPIMP exhibits a negligible effect size of 0.004, reinforcing its lack of practical and statistical significance. In contrast, bTIMP records the largest effect size ($f^2 = 0.067$), which, although still categorised as small under Cohen's thresholds, is the most substantial among the predictors. This highlights the comparatively stronger contribution of technology-based inventory practices to explaining variations in customer satisfaction and retention.

Table 5: Path Analysis for Inventory Management and Customer Retention of Quoted Manufacturing Companies

Path	Beta	STD	T stat	P values	f-square	VIF	R-square	R-square adjusted
bCIMP -> cCPS	0.227	0.074	3.055	0.002	0.040	2.619	0.509	0.502
bLIMP -> cCPS	0.192	0.094	2.035	0.042	0.026	2.890		
bPIMP -> cCPS	0.063	0.068	0.924	0.356	0.004	2.150		
bTIMP -> cCPS	0.314	0.087	3.603	0.000	0.067	2.992		

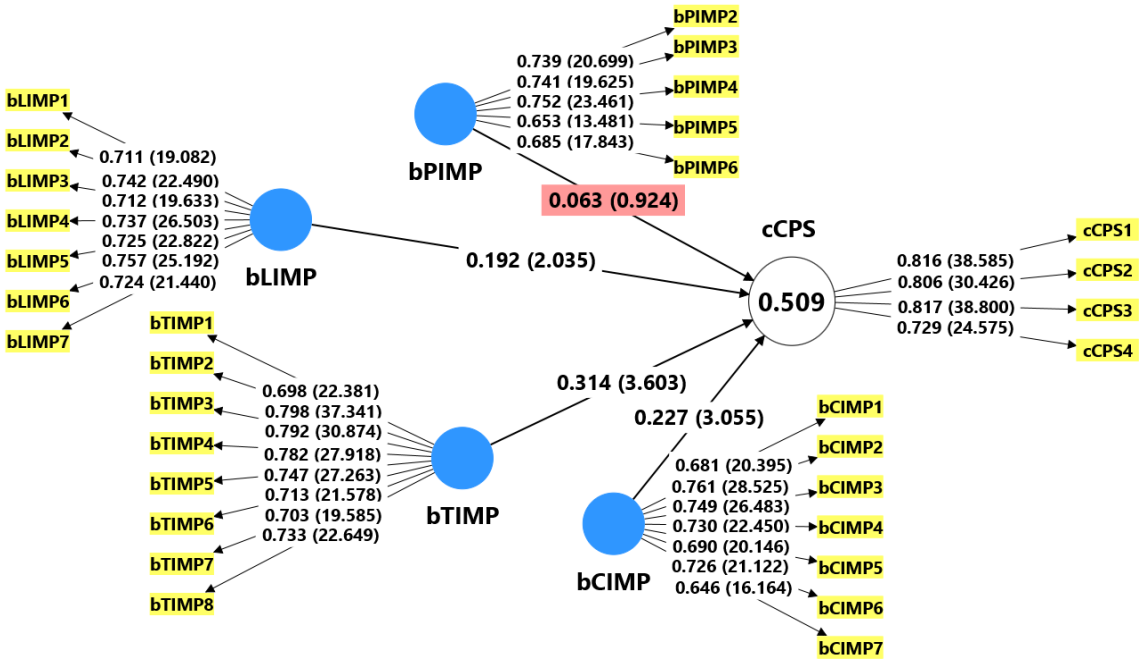


Figure 2: Path Analysis for Inventory Management and Customer Retention of Quoted Manufacturing Companies

5.0 Conclusion and Recommendations

This study examined the effect of inventory management practices on customer retention of quoted manufacturing companies in Southwest Nigeria. The study was motivated by persistent operational inefficiencies observed among manufacturing firms in the study area, leading to fluctuating customer satisfaction and reduced customer trust, despite increased investment in inventory-related systems. These challenges underscore the need for empirical evidence on how different dimensions of inventory management practices contribute to customer retention within the Nigerian manufacturing context.

The review focused on inventory management practices planning-based, lean and flow-based, control-based, and technology-driven practices and their links with customer retention. From the theoretical perspective, The Theory of Constraints (TOC) emphasized a direct focus on identifying and eliminating bottlenecks in production and inventory flows to improve system-wide performance.

The findings lead to the conclusion that customer retention is strongly influenced by inventory management practices, particularly those that enhance responsiveness and service reliability. Technology-driven inventory management practices are the most influential predictor of customer retention, indicating that customers benefit from accurate information, timely deliveries, and reduced stock-outs enabled by digital systems. Control-based practices and lean and flow-based practices also contribute positively, though to a lesser extent. Planning-based practices remain insignificant. The model's explanatory strength confirms that effective inventory management is a key determinant of customer retention in the manufacturing sector. Therefore, it is recommended that manufacturing firms should prioritise technology-driven inventory management practices as a strategic tool for enhancing customer retention.

5.1 Recommendations for Future Research

There is a gap in research related to inventory management practices and customer retention in Nigeria. Despite its contributions, this study presents opportunities for further research. Future studies could adopt a longitudinal research design to examine how changes in inventory management practices over time influence customer retention outcomes, thereby addressing potential causality limitations inherent in cross-sectional data.

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