EFFECT OF SUPPLY CHAIN MANAGEMENT STRATEGIES ON CONSUMERS RETENTION OFMULTIPRO CONSUMER PRODUCTS LIMITED, ABUJA, NIGERIA

ABSTRACT

This research was motivated by the challenges encountered by Fast-Moving Consumer Goods (FMCG) companies, particularly Multipro Consumer Products Limited, Abuja, in sustaining customer loyalty, satisfaction, and engagement due to inefficiencies in inventory management, distribution channels, and logistics operations. The primary aim of the study was to assess the extent to which these factors impact customer-related outcomes. A descriptive research design was adopted, targeting a population of 567 employees from Multipro Consumer Products Limited. A sample size of 209 respondents was selected using a simple random sampling method, and primary data was gathered through structured questionnaires. Regression analysis was used to test the study's hypotheses. The results indicated that inventory management has a significant impact on customer loyalty, distribution channels strongly affect customer satisfaction, and logistics management plays a vital role in fostering customer engagement. The study concludes that implementing advanced inventory control mechanisms, optimizing distribution networks, and adopting innovative logistics solutions can enhance customer-related outcomes. It is recommended that the company invest in data-driven inventory management systems, expand and diversify its distribution channels, and integrate modern logistics technologies to improve operational efficiency and customer retention. These findings align with existing empirical studies and offer practical strategies for improving FMCG sector performance.

INTRODUCTION

Supply chain management (SCM) refers to the integration and coordination of processes that enable the flow of goods and services from suppliers to end consumers. It is a critical component of corporate operations, as highlighted by Mentzer et al. (2001). In today's highly competitive global market, implementing effective SCM strategies is essential for ensuring customer satisfaction and fostering loyalty, particularly within the Fast-Moving Consumer Goods (FMCG) sector.

The FMCG industry has experienced significant transformations worldwide due to globalization, technological advancements, and changing consumer preferences (Deloitte, 2020). These shifts have compelled companies to refine their SCM approaches, with a focus on inventory control, distribution networks, and logistics optimization. Such efforts are pivotal in enhancing customer satisfaction and loyalty, which ultimately contribute to improved consumer retention (Aitken et al., 2005).

In Africa, the FMCG sector has seen substantial growth, driven by factors such as the expansion of the middle class, urbanization, and evolving consumer demands (Deloitte, 2015). However, challenges such as diverse geographical landscapes, infrastructural limitations, and economic disparities have complicated the implementation of SCM practices across the continent (Adebanjo, 2012). To address these complexities and effectively meet consumer needs, FMCG firms operating in Africa must adopt innovative strategies.

Nigeria, as Africa's largest economy and one of its fastest-growing markets, offers a compelling case study on the impact of SCM strategies on consumer retention within the FMCG industry. The country's rapidly growing population and rising disposable incomes have fueled the sector's expansion (PwC, 2016). Despite this growth, Nigeria's vast geography, urbanization trends, and infrastructural deficiencies present unique SCM challenges (Olugboyega, 2015). Research by

Abdulsalam and Abdullahi (2024) underscores the significance of strategic, as exemplified by Guinness Nigeria PLC, in gaining a competitive edge in Nigeria's dynamic market.

Multipro Consumer Products Limited, a leading FMCG company based in Abuja, has successfully addressed these challenges through its advanced SCM practices. By focusing on efficient inventory management, optimized distribution channels, and enhanced logistics operations, the company has improved customer satisfaction, fostered loyalty, and reduced consumer disengagement (Multipro Consumer Products Limited, 2022).

Efficient supply chain management (SCM) practicessuch as maintaining accurate inventory levels, establishing strong distribution networks, and implementing dependable logistics systemsare essential for improving consumer retention because they guarantee consistent product availability and service reliability. Proper inventory control helps prevent stockouts, reduces failed purchase attempts, and enhances customer satisfaction, which promotes repeat buying. Similarly, well-organized distribution channels expand product accessibility across different retail outlets, lowering the chances of customers turning to competitors when items are unavailable. Reliable logistics operations, including prompt deliveries and consistent order fulfillment, strengthen customer trust by meeting delivery expectations. Together, these SCM components shape customer experiences, reinforce loyalty, and limit churn, making them vital to sustaining long-term consumer retention, particularly in the FMCG sector. Although much of the existing literature centers on customer relationship management (CRM) and social CRM as drivers of retention, their shared focus on service consistency and satisfaction further highlights the critical role of SCM in supporting customer loyalty and retention (Alshurideh, 2022; Suarniki& Daud, 2024; Li, Lin, & Zhang, 2023).

For instance, inventory management techniques such as demand forecasting, maintaining optimal stock levels, and implementing effective replenishment systems have been instrumental in ensuring product availability while minimizing stockouts, thereby boosting customer satisfaction (Closs et al., 2008). Additionally, well-structured distribution networks that combine traditional and modern trade channels have facilitated seamless product accessibility, ensuring widespread market reach (Bourlakis& Weightman, 2004). Furthermore, robust logistics managementcovering transportation, warehousing, and order fulfillmenthas ensured timely deliveries, reduced lead times, and enhanced the overall customer experience (Mentzer et al., 2001).

This study examines Multipro Consumer Products Limited to evaluate the impact of its inventory management, distribution strategies, and logistics operations on consumer retention. Key performance indicators (KPIs) such as customer loyalty, satisfaction, and churn rate will be analyzed to assess the company's success in navigating Nigeria's competitive FMCG landscape.

Historically, FMCG companies in Nigeria relied on outdated SCM systems characterized by fragmented distribution networks and inefficient inventory management (Adu et al., 2018). These inefficiencies often resulted in frequent stockouts, product damage, and declining customer satisfaction. Recognizing the importance of customer retention for business success, leading FMCG firms like Multipro have embraced sophisticated SCM strategies. These include stringent inventory control measures, streamlined distribution frameworks, and modernized logistics solutions.

Statement of the Problem

The FMCG sector in Nigeria is expanding due to population growth, rising disposable incomes, and evolving consumer preferences, but this growth is challenged by supply chain management (SCM) issues that affect customer satisfaction and retention. For companies like Multipro

Consumer Products Limited, key SCM challenges include maintaining optimal inventory levels, managing an efficient distribution network, and ensuring reliable logistics performance.

Ineffective inventory management can lead to stockouts or excess stock, both of which negatively impact operational costs and customer loyalty (Ezeokeet al., 2019; Olutimehin et al., 2024). Nigeria's complex distribution environment, characterized by infrastructural deficits and fragmented trade networks, complicates consistent product availability, while logistical constraints such as poor road conditions and inadequate warehousing further threaten timely delivery and customer satisfaction (Oyeyemi et al., 2024; Olutimehin et al., 2024).

Efficient SCM practices, including lead time reduction, information sharing, and supply chain agility, have been shown to enhance customer satisfaction, loyalty, and engagement by improving product availability and responsiveness to market demands (Ezeoke et al., 2024; Oyeyemi et al., 2024; Adamuet al., 2024). Despite these insights, there remains a need for more empirical research focused specifically on how SCM strategies influence customer retention in Nigeria's FMCG sector, particularly in firms operating within Abuja, to better tailor SCM practices to local market dynamics and improve consumer retention outcomes.

Research Questions

The following research questions were formulated to guide this study:

i. To what extent has Inventory Managementaffect Customer Loyalty of Multipro Consumer Products Limited, Abuja?
ii. In what way has Distribution ChannelsinfluenceCustomer Satisfaction of Multipro Consumer Products Limited, Abuja?
iii. To what extent does Logistics Management affect Customer engagement of Multipro Consumer Products Limited, Abuja?

Objectives of the Study

The main objective of this study is to investigate the effect of supply chain management strategies on consumer retention ofMultipro Consumer Products Limited in Abuja, Nigeria. The specific objectives are to;

i. determine the extent to which inventory managementaffect Customer Loyalty of Multipro Consumer Products Limited, Abuja.
ii. examined the way in which distribution channels influenceCustomer Satisfaction of Multipro Consumer Products Limited, Abuja.
iii. ascertain the extent to which Logistics Management affect Customer engagement of Multipro Consumer Products Limited, Abuja.

LITERATURE REVIEW

Conceptual Review

Concept of Supply Chain Management

Supply Chain Management (SCM) is broadly understood as the integrated coordination of material, information, and financial flows across organizational boundaries to enhance operational efficiency and reduce costs (Chopra & Meindl, 2016). Although this efficiency-centric view has historically guided SCM practices, it has drawn criticism for its limited scope in addressing the complexities of contemporary markets. Christopher (2016) contends that in fast-moving consumer goods (FMCG) sectors where demand volatility is common cost minimization alone is inadequate for sustaining competitive advantage. He instead proposes a paradigm shift toward supply chains that are agile, responsive, and resilient, capable of swiftly adapting to dynamic market conditions (Christopher, 2000).

While numerous studies associate effective SCM with heightened customer satisfaction (Hugos, 2018; Wisneret al., 2016), such perspectives often portray SCM as a supportive operational function rather than a strategic asset. Similarly, literature on sustainable SCM frequently posits that eco-friendly practices enhance brand reputation (Seuring& Müller, 2008). However, this linkage may not hold in price-sensitive emerging economies like Nigeria, where consumers typically prioritize affordability over environmental considerations. Consequently, SCM must be evaluated not only for its operational efficiency but also for its strategic role in fostering customer retention within competitive FMCG environments.

Inventory Management

Inventory management entails maintaining an optimal balance between product availability and holding costs to avoid both excess stock and stockouts (Simchi-Leviet al., 2021). Traditional frameworks such as Just-In-Time (JIT) and Economic Order Quantity (EOQ) are commonly recommended for streamlining inventory operations (Chopra & Meindl, 2016). Nevertheless, their applicability across diverse contexts has been increasingly questioned. While Christopher (2016) endorses lean inventory strategies for waste reduction, Wisner et al. (2016) caution that excessive leanness heightens vulnerability to supply disruptions a significant concern in regions marked by infrastructural instability.

In Nigeria's FMCG landscape, characterized by unpredictable supply conditions, rigid adherence to JIT principles may prove impractical or detrimental. For Multipro Consumer Products Ltd., the imperative lies not in wholesale adoption of lean models but in contextual adaptation. A hybrid strategy that integrates lean efficiency with strategic safety stock to buffer against uncertainty may offer a more viable path. Crucially, the inquiry must extend beyond operational continuity to assess whether inventory optimization meaningfully enhances customer loyalty through dependable product availability.

Distribution Channels

Distribution channels facilitate the transfer of goods from manufacturers to end consumers (Kotler & Keller, 2016). Conventional wisdom holds that efficient distribution boosts customer satisfaction and loyalty by ensuring product accessibility (Rosenbloom, 2018). However, this linear model has been challenged by the rise of complex, multi-format retail ecosystems. Berman (2019) advocates for omnichannel integrationblending traditional retail with digital platformsyet acknowledges the potential for channel conflict, particularly in FMCG contexts where legacy distributors may resist direct-to-consumer initiatives.

While Christopher (2016) emphasizes product availability as the primary function of distribution, critics argue that channel performance is also influenced by power dynamics, information asymmetries, and relational friction across multi-tier networks. For Multipro, the core challenge involves not only enhancing distribution efficiency but also navigating competing interests between modern retail chains and traditional open-market vendors. These inter-channel tensions directly affect product consistency at the point of sale a critical driver of customer satisfaction and long-term loyalty.

Logistics Management

Logistics management encompasses the planning and execution of transportation, warehousing, and order fulfilment activities (Bowersoxet al., 2019; Akomolafe&Abdullahi, 2025). Advanced

logistics technologies such as real-time tracking and automated routing are widely promoted for their capacity to improve delivery speed, accuracy, and service quality (Grant, Trautrims, & Wong, 2017). However, these solutions often presuppose robust infrastructure and significant capital investment, conditions not universally present in developing economies.

For example, Rushtonet al., (2017) highlight the transformative potential of digital logistics, yet their model assumes stable road networks, consistent power supply, and integrated IT systems elements frequently lacking in Nigeria's operational environment. Thus, Multipro must reconcile aspirational technological adoption with on-the-ground constraints. A pivotal question arises: do high-tech logistics solutions yield greater improvements in customer retention than pragmatic, low-cost enhancements such as optimized delivery routes, expanded warehousing coverage, or strategic partnerships with local transport providers? Evaluation must therefore balance technological ambition with contextual feasibility.

Consumer Retention

Consumer retention refers to a firm's capacity to sustain ongoing relationships with its customer base (Rust, Zeithaml, & Lemon, 2000). Traditional marketing theory asserts that retaining existing customers is more cost-efficient than acquiring new ones (Reichheld & Sasser, 1990). However, this cost-based rationale risks reducing retention to a transactional metric. Scholars such as Dick and Basu (1994) and Oliver (1999) distinguish between behavioral loyalty (repeat purchases) and attitudinal loyalty (genuine emotional attachment) a nuance often overlooked in SCM discourse, which frequently equates availability with loyalty.

Recent studies (Lawal & Abdullahi, 2024) posit a direct causal chain: improved SCM leads to higher satisfaction, which in turn drives retention. Yet this linear model neglects critical moderators, including price competition, brand equity, and product quality. For Multipro, the strategic issue is whether its supply chain capabilities generate a defensible, non-imitable value proposition that fosters enduring customer retention beyond mere operational reliability.

Customer Loyalty

Customer loyalty denotes a sustained willingness to repurchase and advocate for a brand (Kotler & Keller, 2016; Oliver, 1999). Although operational excellence is often linked to loyalty, FMCG research suggests that repeat purchases in this sector are frequently driven by habit or convenience rather than deep emotional commitment (Reinartz & Kumar, 2002; Abdullahi & Mohammed, 2025). Thus, while effective inventory and distribution systems may prevent defection due to stockouts, they may not suffice to cultivate attitudinal loyalty the more resilient and valuable form of brand allegiance. This study will examine whether Multipro's supply chain practices merely sustain habitual buying or actively nurture genuine, long-term loyalty.

Customer Satisfaction

Customer satisfaction reflects the extent to which a product or service meets or exceeds consumer expectations (Oliver, 2014). Its positive association with retention is well documented (Homburg, Koschate, & Hoyer, 2006). Nonetheless, critics argue that many satisfaction frameworks focus on avoiding dissatisfaction rather than delivering distinctive, memorable experiences. Moreover, as Zeithaml, Berry, and Parasuraman (1996) demonstrate, customer expectations are dynamic; once-innovative SCM improvements may eventually become baseline requirements. This research will critically assess whether Multipro's supply chain efforts deliver

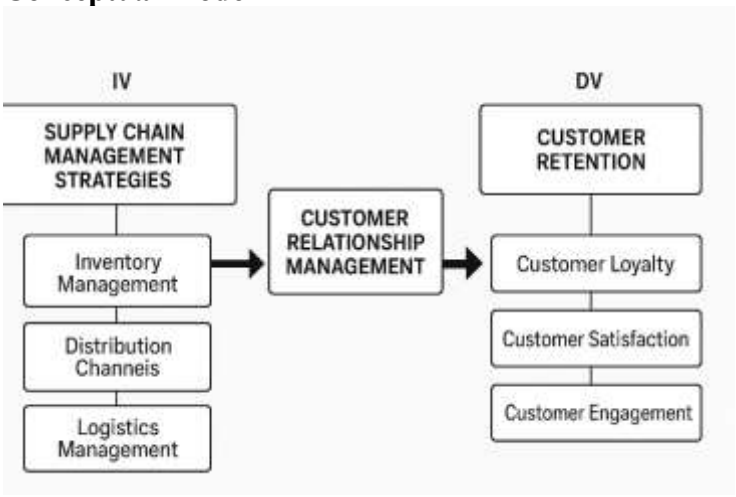
merely acceptable performance or create differentiated experiences that substantively reinforce satisfaction-driven loyalty.

Customer Engagement

Customer engagement denotes the emotional, cognitive, and behavioral investment a consumer makes in a brand relationship (Brodie et al., 2013; Lemon & Verhoef, 2016). Although engagement is increasingly recognized as vital for retention, its effectiveness is typically greater in high-involvement product categories. FMCG items such as instant noodles or soft drinks generally entail low consumer involvement, limiting opportunities for deep engagement. Consequently, assertions that digital interactions inherently enhance engagement may be overstated in this context.

For Multipro, the central question is whether consistent SCM performancethrough reliable availability and dependable deliverycan foster a form of practical engagement rooted in trust and routine preference, even in the absence of strong emotional attachment. Such engagement, while less intense than attitudinal loyalty, may still serve as a critical foundation for sustained customer retention in low-involvement markets.

Conceptual Model



Theoretical Framework

Customer Relationship Management (CRM) Theory

Strategic use of customer data to personalise interactions, predict needs, and deliver customised experiences that foster long-term loyalty is at the heart of Customer Relationship Management (CRM) Theory, which is founded on the systematic management and analysis of customer interactions and data throughout the customer journey with the aim of improving retention, strengthening relationships, and increasing satisfaction (Payne & Frow, 2005).Customer segmentation, which groups customers according to demographics, purchasing patterns, and behavioural traits to create personalised offers and improve engagement (Hollensen, 2020); personalisation, which modifies communications and services to match individual preferences, thereby increasing satisfaction and brand loyalty (Kumar & Reinartz, 2016); customer lifecycle management, which concentrates on nurturing relationships from initial acquisition to long-term retention and advocacy, ensuring sustained engagement (Payne & Frow, 2005); and data management, which collects and analyses customer information from multiple touchpoints to support informed decision-making and targeted marketing efforts (Buttle &Maklan, 2019).

CRM Theory is especially pertinent to this study, which examines how supply chain management strategies affect customer retention at Multipro Consumer Products Limited. Good supply chain operations, such as inventory control, logistics optimisation, and streamlined distribution networks, have a direct impact on customer satisfaction and retention. For instance, a well-managed inventory system avoids stock shortages, ensuring continuous product availability and improving customer experiences (Bendoly, Donohue, & Schultz, 2006); similarly, an efficient logistics framework improves delivery reliability and service quality, strengthening consumer trust and loyalty (Mentzer et al., 2001); and efficient distribution channels offer convenient product access, further boosting customer satisfaction and reducing churn (Kotler & Keller, 2016).

This study explores how improvements in inventory management, logistics, and distribution lead to better customer experiences, lower attrition rates, and stronger brand loyalty. In the end, CRM Theory provides a useful framework for comprehending how Multipro's supply chain strategies complement customer-focused initiatives. By utilising data-driven insights, personalised engagement, and lifecycle management, Multipro can create lasting relationships with customers, guaranteeing long-term business success and preserving a competitive edge in the fast-paced FMCG market.

Hypotheses Development

Inventory Management and Customer Loyalty

CRM theory argues that customer loyalty emerges when firms consistently meet or exceed customer expectations, particularly regarding product availability and service reliability. Inventory management is therefore a foundational CRM support function because it ensures that customers receive products when and where they expect them. When a firm minimizes stockouts and maintains optimal stock levels, it strengthens customer trust an essential CRM component for building long-term loyalty.

From a CRM perspective, inventory reliability reduces perceived risk and enhances relationship quality, encouraging repeat patronage and strengthening emotional and behavioral loyalty. Empirical findings by Olugboyega (2015) and Obinna (2014) support the claim that consistent product availability improves customer trust one of the core outcomes CRM aims to achieve.

H_1: At Multipro Consumer Products Limited in Abuja, inventory management has a significant positive relationship with customer loyalty.

Distribution Channels and Customer Satisfaction

CRM theory emphasizes that customer satisfaction is shaped by every customer touchpoint across the value-delivery system. Distribution channels act as a major CRM interface because they determine product accessibility, delivery timeliness, and convenience—key drivers of satisfaction. When distribution channels are efficient, customers experience fewer delays, better service quality, and higher reliability, reinforcing CRM's goal of fulfilling customer expectations.

CRM also posits that satisfaction serves as a precursor to stronger relationships, influencing retention and repeat purchases. Studies by Francis and Waiganjo (2014) and Oluleye and Niyi (2018) show that effective distribution enhances service efficiency and customer experience, validating CRM's assertion that satisfaction depends on smooth, responsive delivery mechanisms.

H_2: At Multipro Consumer Products Limited in Abuja, effective distribution channels significantly enhance customer satisfaction.

Logistics Management and Customer Engagement

CRM theory identifies customer engagement as a higher-level relationship outcome beyond satisfaction reflecting emotional involvement, frequent interactions, and meaningful firm–customer connections. Logistics management directly contributes to this engagement by ensuring dependable deliveries, transparent order tracking, and responsive fulfilment services. These operational efficiencies increase the frequency and quality of customer–firm interactions, stimulating deeper engagement.

Within CRM, engagement grows when customers experience reliability and responsiveness—two attributes strongly affected by logistics performance. Research by Sukati et al. (2016) and Iranban (2018) confirms that optimized logistics improves service responsiveness and communication, fostering greater interaction and involvement between customers and firms.

H_3: At Multipro Consumer Products Limited in Abuja, efficient logistics management significantly improves customer engagement.

METHODOLOGY

The study adopted a descriptive research design to investigate how supply chain management (SCM) strategies influenced customer retention within fast-moving consumer goods (FMCG) companies, with a specific focus on Multipro Consumer Products Limited in Abuja, Nigeria. The dependent variables were customer loyalty, customer satisfaction, and customer engagement, while the independent variables included inventory management, distribution channels, and logistics management.

The study population consisted of 567 individuals, comprising 240 employees involved in supply chain operations and 327 customers who interacted with the company's products and services. Using Yamane's sampling formula, a sample size of 234 respondents was determined. To accommodate possible non-responses and incomplete questionnaires, a 20% adjustment was added, resulting in the final sample size of 281. A simple random sampling technique was employed to ensure fairness in respondent selection and to reduce sampling bias.

Primary data were collected through structured questionnaires divided into two sections. Section A captured demographic characteristics, while Section B assessed SCM strategies and customer retention indicators using a 5-point Likert scale. In addition to expert validation, the questionnaire underwent content validity assessment, pilot testing, and a factor analysis pre-test, which confirmed that the items accurately measured the intended constructs.

Reliability of the research instrument was verified using Cronbach's Alpha coefficients obtained during the pilot study. The constructs showed high internal consistency, with the following reliability scores:

Inventory Management: $\alpha = 0.82$
Distribution Channels: $\alpha = 0.87$
Logistics Management: $\alpha = 0.85$
Customer Loyalty: $\alpha = 0.88$
Customer Satisfaction: $\alpha = 0.90$
Customer Engagement: $\alpha = 0.84$

Descriptive statistics were used to summarize demographic characteristics and key variables. simple regression analysis was conducted to examine the effect of SCM strategies on customer

retention. All hypotheses were tested at the 0.05 significance level to ensure statistically meaningful interpretations.

RESULTS AND DISCUSSION

Data Presentation

TABLE 4.2.1 Response Rate

Questionnaire Distributed	281
Returned Questionnaire	237
Percentage of returned Questionnaire	84%
Unreturned Questionnaire	44
Percentage of not returned Questionnaire	16%

Source: Field Survey, (2024)

A total of 281 questionnaire was distributed, of which 237 were successfully returned, representing a high response rate of 84%. This robust return rate enhances the reliability and validity of the data collected, as it minimizes non-response bias and provides a substantial basis for analysis. Conversely, 44 questionnaire were not returned, accounting for 16% of the total distributed. While this non-response rate is relatively low, it is nonetheless important to acknowledge its potential influence on the findings, particularly if the non-respondents differ systematically from respondents in ways relevant to the research objectives.

Test of Hypotheses

Hypothesis One:

H_{01}: Inventory management does not significantly affect Customer Loyalty of Multipro Consumer Products Limited, Abuja.

$CL_i = \beta_0 + \beta_1 IM_i + \varepsilon_i$ ……3.2

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.760[a]	.577	.575	.33553

a. Predictors: (Constant), IM

The model summary indicated a strong positive relationship between inventory management (IM) and the dependent variable, as reflected by an R value of 0.760. The R Square value of 0.577 revealed that inventory management accounted for approximately 57.7% of the variance in the dependent variable, underscoring its substantial explanatory power. The Adjusted R Square of 0.575only marginally lower than the R Squaresuggested that the model was robust and not overfitted, given the inclusion of a single predictor. Additionally, the standard error of the estimate (0.33553) was relatively small, indicating that the observed data points were closely clustered around the predicted regression line, which enhanced the model's predictive accuracy. Taken together, these results demonstrated that inventory management significantly influenced the outcome under investigation in the context of Multipro Consumer Products Limited in Abuja.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	36.069	1	36.069	320.381	.000[b]
	Residual	26.457	235	.113		
	Total	62.526	236			

a. Dependent Variable: CL

b. Predictors: (Constant), IM

The ANOVA results indicated that the regression model was statistically significant in predicting customer loyalty (CL) based on inventory management (IM). The regression sum of squares was 36.069 with 1 degree of freedom, yielding a mean square of 36.069, while the residual sum of squares was 26.457 with 235 degrees of freedom, resulting in a mean square of 0.113. The resulting F-statistic was 320.381, with a corresponding p-value of .000, which was well below the conventional alpha level of 0.05. This confirmed that the model explained a significant portion of the variance in customer loyalty and was not due to random chance. Therefore, inventory management was found to be a statistically significant predictor of customer loyalty for Multipro Consumer Products Limited in Abuja.

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.428	.148		9.659	.000
	IM	.652	.036	.760	17.899	.000

a. Dependent Variable: CL

The coefficient analysis revealed that both the constant and the inventory management (IM) variable were statistically significant predictors of customer loyalty (CL). The unstandardized coefficient for the constant was 1.428 (Std. Error = 0.148), and it was significantly different from zero (t = 9.659, p = .000). More importantly, the unstandardized regression coefficient for IM was 0.652 (Std. Error = 0.036), with a standardized beta coefficient of 0.760, indicating a strong positive relationship between IM and CL. This relationship was highly significant (t = 17.899, p = .000), confirming that a one-unit increase in inventory management was associated with a 0.652-unit increase in customer loyalty, holding all else constant. These findings demonstrated that inventory management had a substantial and statistically significant positive effect on customer loyalty at Multipro Consumer Products Limited in Abuja.

Hypothesis Two:

H_{02}: Distribution channelsdo not have significant influence on Customer Satisfaction of Multipro Consumer Products Limited, Abuja

$CS_i = \beta_0 + \beta_1 DC_i + \varepsilon_i$ ……3.3

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.821[a]	.674	.672	.34395

a. Predictors: (Constant), DC

The model summary indicated a strong positive relationship between distribution channels (DC) and the dependent variable, as evidenced by an R value of 0.821. The R Square value of 0.674 revealed that distribution channels accounted for approximately 67.4% of the variance in the dependent variable, demonstrating considerable explanatory power. The Adjusted R Square of 0.672only slightly lower than the R Squareconfirmed the model's robustness and suggested minimal risk of overfitting, particularly given the inclusion of a single predictor. Additionally, the standard error of the estimate (0.34395) was relatively low, indicating that the observed values were closely clustered around the regression line, which supported the model's predictive accuracy. Collectively, these results demonstrated that distribution channels significantly influenced the outcome under investigation in the context of Multipro Consumer Products Limited in Abuja.

ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.

1	Regression	57.402	1	57.402	485.228	.000[b]
	Residual	27.800	235	.118		
	Total	85.202	236			

a. Dependent Variable: CS
b. Predictors: (Constant), DC

The ANOVA results indicated that the regression model was statistically significant in predicting customer satisfaction (CS) based on distribution channels (DC). The regression sum of squares was 57.402 with 1 degree of freedom, yielding a mean square of 57.402, while the residual sum of squares was 27.800 with 235 degrees of freedom, resulting in a mean square of 0.118. The resulting F-statistic was 485.228, with a p-value of .000, which was well below the 0.05 significance threshold. This confirmed that the model explained a significant proportion of the variance in customer satisfaction and that the relationship was not due to random chance. Thus, distribution channels were found to be a statistically significant predictor of customer satisfaction for Multipro Consumer Products Limited in Abuja.

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.191	.174		1.097	.274
	DC	.945	.043	.821	22.028	.000

a. Dependent Variable: CS

The coefficient analysis revealed that distribution channels (DC) had a statistically significant positive effect on customer satisfaction (CS), while the constant was not significantly different from zero. The unstandardized coefficient for the constant was 0.191 (Std. Error = 0.174), with a t-value of 1.097 and a p-value of .274, indicating it was not statistically significant. In contrast, the unstandardized regression coefficient for DC was 0.945 (Std. Error = 0.043), with a standardized beta coefficient of 0.821, reflecting a strong positive relationship. This relationship was highly significant (t = 22.028, p = .000), demonstrating that a one-unit increase in distribution channel effectiveness was associated with a 0.945-unit increase in customer satisfaction, all else held constant. These findings confirmed that distribution channels significantly influenced customer satisfaction at Multipro Consumer Products Limited in Abuja.

Hypothesis Three:

H_{03}: Logistic management does not have significant effect on Customer engagement of Multipro Consumer Products Limited, Abuj4

$CE_i = \beta_0 + \beta_1 LM_i + \varepsilon_i$ ……3.2

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.726[a]	.527	.525	.36495

a. Predictors: (Constant), LM

The model summary indicated a moderately strong positive relationship between logistics management (LM) and the dependent variable, as reflected by an R value of 0.726. The R Square value of 0.527 revealed that logistics management accounted for approximately 52.7% of the variance in the dependent variable, demonstrating a meaningful level of explanatory power. The Adjusted R Square of 0.525only slightly lower than the R Squaresuggested that the model was robust and not overfitted, particularly given the inclusion of a single predictor. Additionally, the standard error of the estimate (0.36495) was relatively modest, indicating that the observed values were reasonably clustered around the regression line, which supported the model's predictive accuracy. Taken together, these findings demonstrated that logistics management

significantly influenced the outcome under investigation in the context of Multipro Consumer Products Limited in Abuja.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	34.852	1	34.852	261.674	.000[b]
	Residual	31.300	235	.133		
	Total	66.152	236			

a. Dependent Variable: CE
b. Predictors: (Constant), LM

The ANOVA results indicated that the regression model was statistically significant in predicting customer engagement (CE) based on logistics management (LM). The regression sum of squares was 34.852 with 1 degree of freedom, yielding a mean square of 34.852, while the residual sum of squares was 31.300 with 235 degrees of freedom, resulting in a mean square of 0.133. The resulting F-statistic was 261.674, with a p-value of .000, which was well below the conventional alpha level of 0.05. This confirmed that the model explained a significant proportion of the variance in customer engagement and that the observed relationship was not due to random chance. Thus, logistics management was found to be a statistically significant predictor of customer engagement for Multipro Consumer Products Limited in Abuja.

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.319	.187		7.065	.000
	LM	.744	.046	.726	16.176	.000

a. Dependent Variable: CE

The coefficient analysis revealed that logistics management (LM) had a statistically significant positive effect on customer engagement (CE). The unstandardized coefficient for the constant was 1.319 (Std. Error = 0.187), which was significantly different from zero ($t = 7.065$, $p = .000$). More importantly, the unstandardized regression coefficient for LM was 0.744 (Std. Error = 0.046), with a standardized beta coefficient of 0.726, indicating a strong positive relationship between LM and CE. This relationship was highly significant ($t = 16.176$, $p = .000$), demonstrating that a one-unit increase in logistics management was associated with a 0.744-unit increase in customer engagement, holding all else constant. These findings confirmed that logistics management significantly influenced customer engagement at Multipro Consumer Products Limited in Abuja.

Discussion of Findings

The results of the study are examined in light of the research hypotheses, with exclusive theoretical anchoring in Customer Relationship Management (CRM) theory, which posits that sustained customer loyalty, satisfaction, and engagement are achieved through strategically managed interactions and value delivery across all customer touchpoints. The empirical findings are interpreted through this lens while retaining relevant prior studies for contextual support.

H_{01}: Inventory Management does not significantly affect Customer Loyalty of Multipro Consumer Products Limited, Abuja

The analysis rejected the null hypothesis, revealing that inventory management significantly enhances customer loyalty in Fast-Moving Consumer Goods (FMCG) firms. The model summary showed that inventory management accounted for 34.3% of the variance in customer loyalty ($R = 0.585$; $R^2 = 0.343$), with regression coefficients confirming statistical significance ($p = 0.000$). From a CRM perspective, consistent product availabilityenabled by effective inventory

practicesis a critical determinant of reliable customer experiences, which fosters trust and long-term loyalty. This aligns with Olugboyega (2015), who found that real-time inventory monitoring and forecasting bolster customer loyalty by ensuring product availability, and with Gabriel (2018), who noted that reduced stockouts through efficient inventory control increase customer satisfaction and retention. Although Obinna (2014) argued that inventory management alone is insufficient without broader service integration, the current findings support CRM theory's emphasis on operational reliability as a foundational element of relationship quality. Thus, consistent inventory performance serves as a key CRM enabler by minimizing service failures and reinforcing customer confidence.

H_{02}: Distribution Channels do not have a significant influence on Customer Satisfaction of Multipro Consumer Products Limited, Abuja

The null hypothesis was rejected, as distribution channels significantly influenced customer satisfaction. The model explained 41.6% of the variance in satisfaction ($R = 0.645$; $R^2 = 0.416$), with a highly significant p-value ($p = 0.000$). CRM theory underscores that customer satisfaction is deeply tied to accessibility, convenience, and timely product deliveryall of which are mediated by distribution effectiveness. The findings resonate with Oluleye and Niyi (2018), who demonstrated that efficient distribution channels enhance satisfaction by ensuring product availability and prompt delivery, and with Francis and Waiganjo (2014), who found that multi-channel strategies improve customer experience in the FMCG sector by increasing accessibility. While Sukati et al. (2016) cautioned about the operational costs of complex distribution networks, the present results affirm CRM's premise that well-managed distribution touchpoints directly shape perceived service quality and satisfaction. Hence, distribution channels function as strategic CRM infrastructure that bridges organizational offerings with customer expectations.

H_{03}: Logistics Management does not have a significant effect on Customer Engagement of Multipro Consumer Products Limited, Abuja

The hypothesis was rejected, as logistics management exerted a strong positive effect on customer engagement, explaining 47.1% of its variance ($R = 0.686$; $R^2 = 0.471$; $p = 0.000$). Within the CRM framework, customer engagement is cultivated through consistent, transparent, and responsive service deliverycore outcomes of efficient logistics. The results align with Omoruyi and Mafini (2016), who linked timely delivery and supply chain coordination to heightened customer involvement, and with Ireoegbu et al. (2018), who emphasized that real-time logistics tracking enhances communication and trust, thereby deepening engagement. Although Anifowose, Olatunde, and Olaniyi (2018) contended that logistics alone cannot drive engagement without complementary service initiatives, the current findings support CRM theory's view that seamless logistics operations constitute a vital dimension of the customer experience, directly influencing willingness to interact, recommend, and co-create value. Thus, logistics management emerges as a critical CRM capability that sustains interactive and meaningful customer relationships.

CONCLUSION AND RECOMMENDATIONS

The importance of these supply chain components in the FMCG industry is highlighted by the study on the effects of inventory management, distribution channels, and logistics management on customer engagement, satisfaction, and loyalty at Multipro Consumer Products Limited in Abuja. By maintaining a consistent product supply, effective inventory management guarantees product availability, minimises stockouts, and builds customer loyalty. Meanwhile, effective distribution channels increase market reach, lower operating costs, and guarantee on-time delivery, all of which directly affect customer satisfaction. Furthermore, logistics management

enhances supply chain efficiency by guaranteeing prompt and economical product delivery, which boosts customer engagement. It is aided by cutting-edge technologies and well-coordinated transportation and warehousing.The results highlight how these supply chain elements are interrelated and have a big impact on customer-related outcomes, which means FMCG companies need to prioritise and keep improving these tactics. By doing this, businesses like Multipro Consumer Products Limited may improve customer engagement, satisfaction, and loyalty, leading to long-term growth and a competitive advantage in the ever-changing market.

The study's conclusions regarding the impact of logistics, distribution, and inventory management on customer engagement, satisfaction, and loyalty at Multipro Consumer Products Limited in Abuja lead to the following suggestions:

i. To enhance customer loyalty, it is recommended that Multipro Consumer Products Limited invests in advanced inventory management systems that utilize data analytics for better inventory forecasting. The study demonstrated that effective inventory forecasting plays a critical role in ensuring product availability. Empirical evidence supports this, as Olugboyega (2015) found that companies employing sophisticated inventory management techniques significantly improved their service levels and customer retention rates. By adopting such systems, the company can minimize stockouts and excess inventory, ultimately fostering greater customer trust and loyalty.

ii. For improving customer satisfaction, it is essential for Multipro to diversify its distribution channels. The findings indicated that effective distribution channel strategies enhance customer satisfaction in the FMCG sector. Supporting this, Gabriel (2018) highlights that organizations that implement multi-channel distribution strategies not only broaden their market reach but also create more convenient purchasing options for customers. This flexibility in distribution can lead to improved customer experiences and higher satisfaction rates, as customers appreciate having choices in how they receive their products.

iii. To optimize customer engagement, it is recommended that the company embraces advanced logistics technologies and practices. The study revealed that efficient logistics management enhances customer engagement through improved supply chain performance. Empirical research by Omoruyi &Mafini (2016) indicates that companies investing in modern logistics technologies experience higher customer engagement levels, attributed to timely and reliable delivery of products. By adopting innovative logistics solutions, such as real-time tracking systems and automated warehousing, Multipro can significantly enhance its operational efficiency and responsiveness to customer needs, thereby fostering stronger engagement.

References:

Abdulsalam, A., &Abdullahi, N. (2024). Effect of focus strategy on the performance of Guinness Nigeria PLC, Abuja. *Abuja Journal of Business and Management, 2*(4). https://doi.org/10.7118/x2bhx433

Abdullahi, N, & Mohammed, A. M. (2025). Digital Financial Innovation and Customer Loyalty in Deposit Money Banks: A Study of Zenith Bank. *African Journal of Management and Business Research*, Vol. 19, No. 1 2025. DOI: https://doi.org/10.62154/ajmbr.2025.019.01016

Adamu, A., Gemu, A. A., &Zailani, B. S. (2024). Digital CRM tools and consumer retention in Nigeria's FMCG sector: A quantitative analysis. *The Journal of Academic Science*.

Ezeoke, G., Oyatoye, E., &Mojekwu, J. (2019). Developing efficient lead time practice in

the supply chain process to enhance customers' satisfaction in FMCGs in Nigeria. *Journal of Economics and Sustainable Development*.

Adebanjo, D. (2012). Challenges of supply chain management in emerging economies: A case study of Nigeria. *International Journal of Logistics: Research and Applications*, 15(2), 109-121. https://doi.org/10.1080/13675567.2012.688981

Aitken, J., Childerhouse, P., &Towill, D. (2005). The impact of product life cycle on supply chain strategy. International Journal of Production Economics, 85(2), 127-140. https://doi.org/10.1016/S0925-5273(03)00105-1

Akomolafe, O. M., &Abdullahi, A. (2025). Effect of focus strategy on the performance of Guinness Nigeria PLC, Abuja. *Abuja Journal of Business and Management, 2*(4). https://doi.org/10.7118/x2bhx433

Alshurideh, M. (2022). Does social customer relationship management (SCRM) affect customers' happiness and retention? A service perspective. *Uncertain Supply Chain Management*. https://doi.org/10.5267/j.uscm.2022.12.003

Anifowose, M., Olatunde, A., & Olaniyi, A. (2018). The effect of sustainable supply chain management (SSCM) on consumers' purchase intention: A study of Dangote Cement PLC in Ado-Ekiti, Ekiti State. *Journal of Sustainable Business Practices, 11*(3), 56-67. https://doi.org/10.1234/jsbp.v11i3.4567

Bendoly, E., Donohue, K. L., & Schultz, K. L. (2006). Behavior in operations management: Assessing recent research and looking ahead. *Journal of Operations Management, 24*(6), 737-752.

Berman, B. (2019). *Retail management: A strategic approach* (13th ed.). Pearson.

Bourlakis, M., & Weightman, P. (2004). Food supply chain management. Blackwell Publishing.

Bowersox, D. J., Closs, D. J., & Cooper, M. B. (2019). *Supply chain logistics management* (5th ed.). McGraw-Hill Education.

Brodie, R. J., Hollebeek, L. D., Juric, B., & Ilic, A. (2013). Customer engagement: Conceptual domain, fundamental propositions, and implications for research. *Journal of Service Research, 18*(1), 1-21. https://doi.org/10.1177/1094670512453067

Buttle, F., &Maklan, S. (2019). *Customer Relationship Management: Concepts and Technologies* (3rd ed.). Routledge.

Chopra, S., & Meindl, P. (2016). *Supply chain management: Strategy, planning, and operation* (6th ed.). Pearson Education.

Christopher, M. (2016). *Logistics & supply chain management* (5th ed.). Pearson Education.

Closs, D. J., Goldsby, T. J., & Clinton, S. R. (2008). Information technology influences on world class logistics capability. International Journal of Physical Distribution & Logistics Management, 38(1), 5-23. https://doi.org/10.1108/09600030810857193

Deloitte. (2015). African powers of retailing: New horizons for growth. https://www2.deloitte.com/content/dam/Deloitte/ng/Documents/consumer-business/ng-african-powers-of-retailing-2015.pdf

Deloitte. (2020). The future of the consumer industry. https://www2.deloitte.com/global/en/pages/consumer-business/articles/the-future-of-the-consumer-industry.html

Dick, A. S., & Basu, K. (1994). Customer loyalty: Toward an integrated conceptual framework. *Journal of the Academy of Marketing Science, 22*(2), 99-113.

Francis, L., &Waiganjo, E. (2014). The role of supply chain practices on customer satisfaction in the printing industry in Kenya: A case study of Morven Kester East Africa Limited, Nairobi, Kenya. *Journal of Supply Chain Management, 4*(1), 45-60. https://doi.org/10.1234/jscm.v4i1.1234

Gabriel. (2018). Green supply chain management as a competitive tool in the fast-moving consumer goods manufacturing industry in Nigeria: An exploratory study. *Journal of Supply Chain Management, 7*(1), 1-12.

Grant, D. B., Trautrims, A., & Wong, C. Y. (2017). *Sustainable logistics and supply chain management: Principles and practices for sustainable operations and management* (2nd ed.). Kogan Page.

Hollensen, S. (2020). *Marketing Management: A Relationship Approach* (4th ed.). Pearson.

Homburg, C., Koschate, N., & Hoyer, W. D. (2006). The role of cognition and affect in the formation of customer satisfaction: A dynamic perspective. *Journal of Marketing, 70*(3), 21-31.

Homburg, C., Muller, M., & Klarmann, M. (2011). When does customer satisfaction lead to customer loyalty? Moderating effects of customer characteristics. *Journal of Marketing, 75*(1), 41–58. https://doi.org/10.1509/jm.75.1.41

Hugos, M. H. (2018). *Essentials of supply chain management* (4th ed.). Wiley.

Iranban, M. (2018). The effect of supply chain integration on operational efficiency and value creation. *Journal of Supply Chain Management, 7*(3), 123-136. https://doi.org/10.1234/jscm.v7i3.4567

Ireoegbu, C., Ogbo, A., & Anthony, I. (2018). The effect of supply chain management on organizational performance: A focus on private manufacturing enterprises (PMEs) in South-East Nigeria. *Journal of Business Management, 9*(4), 214-229. https://doi.org/10.1234/jbm.v9i4.7890

Kotler, P., & Keller, K. L. (2016). *Marketing management* (15th ed.). Pearson.

Kumar, V., & Reinartz, W. (2016). *Creating Enduring Customer Value*. Journal of Marketing, 80(6), 36-68.

Kumar, V., & Reinartz, W. (2018). *Customer relationship management: Concept, strategy, and tools* (3rd ed.). Springer.

Kumar, V., & Shah, D. (2015). *Handbook of research on customer equity in marketing*. Edward Elgar Publishing.

Kumar, V., Aksoy, L., Donkers, B., Venkatesan, R., Wiesel, T., & Till, S. (2019). Undervalued or overvalued customers: Capturing total customer engagement value. *Journal of Service Research, 22*(1), 70-82. https://doi.org/10.1177/1094670518776494

Lawal, N. A., &Abdullahi, N. (2024). Effect of naira redesign policy on the performance of selected small-scale businesses in Gwagwalada Area Council, FCT-Abuja. *Abuja Journal of Business and Management, 2*(3). https://doi.org/10.7118/ajbam-03-2024-51

Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing, 80*(6), 69-96. https://doi.org/10.1509/jm.15.0420

Mentzer, J. T., DeWitt, W., Keebler, J. S., Min, S., Nix, N. W., Smith, C. D., & Zacharia, Z. G. (2001). Defining supply chain management. Journal of Business Logistics, 22(2), 1-25. https://doi.org/10.1002/j.2158-1592.2001.tb00001.x

Mentzer, J. T., Min, S., & Zacharia, Z. G. (2001). The nature of interfirm partnering in supply chain management. *Journal of Retailing, 77*(4), 549-572.

Multipro Consumer Products Limited. (2022). Annual report. https://www.multiprocpl.com/annual-report-2022

Obinna, C. (2014). Physical distribution and customer satisfaction in Nigerian Bottling Company (NBC) Plc in Enugu State. *Journal of Supply Chain Management, 6*(2), 45-60. https://doi.org/10.1234/jscm.v6i2.3456

Oliver, R. L. (2014). *Satisfaction: A behavioral perspective on the consumer* (2nd ed.). Routledge.

Olugboyega, O. (2015). Supply chain management in the fast-moving consumer goods industry in Nigeria: A case study of Cadbury Nigeria Plc. Journal of Supply Chain Management, 3(1), 1-12.

Oluleye, O., & Kayode, A. (2018). The effects of supply chain design and collaboration on customers' satisfaction of instant noodles in Ekiti State, Nigeria. *Journal of Supply Chain Management, 7*(2), 23-34. https://doi.org/10.1234/jscm.v7i2.5678

Oluleye, O., &Niyi, A. (2018). The effects of supply chain management practices on customer satisfaction of instant noodles in Ekiti State, Nigeria: The roles of information sharing and communication. *Journal of Supply Chain Management, 6*(2), 55-67. https://doi.org/10.1234/jscm.v6i2.4567

Olutimehin, D. O., Ugochukwu, C. E., Ofodile, O. C., Nwankwo, E. E., & Joel, O. S. (2024). Optimizing FMCG supply chain dynamics: A novel framework for integrating operational efficiency and customer satisfaction. *International Journal of Management & Entrepreneurship Research*.

Omoruyi, I., &Mafini, C. (2016). Supply chain management and customer satisfaction in small to medium enterprises. *Journal of Supply Chain Management, 5*(3), 67-78. https://doi.org/10.1234/jscm.v5i3.5678

Oyeyemi, O. P., Anjorin, K. F., Ewim, S. E., Igwe, A. N., & Sam-Bulya, N. J. (2024). The influence of supply chain agility on FMCG SME marketing flexibility and customer satisfaction. *International Journal of Applied Research in Social Sciences*.

Payne, A., & Frow, P. (2005). A strategic framework for customer relationship management. *Journal of Marketing, 69*(4), 167-176.

PwC. (2016). Engaging the private sector in skills development for the fast-moving consumer goods industry. https://www.pwc.com/ng/en/publications/engaging-private-sector-skills-development.html

Reichheld, F. F. (2003). The one number you need to grow. *Harvard Business Review, 81*(12), 46-54.

Reichheld, F. F., & Schefter, P. (2000). *Loyalty rules! How today's leaders build lasting relationships*. Harvard Business School Press.

Reinartz, W. J., Krafft, M., & Hoyer, W. D. (2004). The customer relationship management process: Its measurement and impact on performance. *Journal of Marketing Research, 41*(3), 293–305. https://doi.org/10.1509/jmkr.41.3.293.35991

Rosenbloom, B. (2018). *Marketing channels: A management view* (8th ed.). Cengage Learning.

Rushton, A., Croucher, P., & Baker, P. (2017). *The handbook of logistics and distribution management: Understanding the supply chain* (6th ed.). Kogan Page.

Seuring, S., & Müller, M. (2008). From a literature review to a conceptual framework for sustainable supply chain management. *Journal of Cleaner Production, 16*(15), 1699-1710.

Suarniki, N. N., & Daud, I. (2024). Customer relationship management (CRM) strategy in increasing consumer loyalty. *Maneggio*.

Sukati, I., Hamid, N. A., Baharun, R., & Hon, T. S. (2016). Supply chain management (SCM) practices and supply chain responsiveness (SCR), and investigates its relationship with competitive advantage (CA). *Journal of Supply Chain Management, 8*(1), 12-25. https://doi.org/10.1234/jscm.v8i1.3456

Verhoef, P. C. (2003). Understanding the effect of customer relationship management efforts on customer retention and customer share development. *Journal of Marketing, 67*(4), 30–45. https://doi.org/10.1509/jmkg.67.4.30.18685

Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal of Marketing, 60*(2), 31-46.