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THE IMPACT OF SUPPLY CHAIN MANAGEMENT ON RETAIL MARKETING: A STUDY IN THE CONTEXT OF JHARKHAND

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ABSTRACT

In today's competitive business environment, effective supply chain management (SCM) has emerged as a critical enabler of success in the retail sector. This study investigates the impact of SCM practices on retail marketing performance, with a particular focus on the regional context of Jharkhand, India. Drawing upon key dimensions such as inventory management, transportation efficiency, supplier relationship management, and technology adoption, the research evaluates their influence on retail outcomes including sales growth, brand reputation, market share, and customer satisfaction.

Primary data is collected through structured surveys administered to retailers across urban and semi-urban areas of Jharkhand. Statistical techniques such as regression analysis, ANOVA and Process Macro (Model 4) were used to analyze the relationships among the variables.

Findings reveal that effective SCM practices significantly enhance both retail marketing performance and customer satisfaction. Moreover, operational efficiency serves as a partial mediator in these relationships, highlighting its strategic importance in bridging SCM implementation and marketing outcomes. The study offers practical recommendations for retailers, policymakers, and supply chain professionals seeking to enhance marketing effectiveness through optimized supply chain strategies in emerging markets.

Keywords: *Supply Chain Management (SCM), Retail Marketing, Operational Efficiency, Customer Satisfaction, Inventory Management, Transportation Efficiency, Supplier Relationship, Technology Adoption, Retail Sector, Jharkhand.*

INTRODUCTION

In the rapidly evolving business landscape, retail has emerged as one of the most dynamic sectors globally, particularly in developing economies like India. As consumer expectations continue to rise and competitive pressures intensify, supply chain management (SCM) has transitioned from a back-end operational function to a strategic tool that directly influences market responsiveness, customer satisfaction, and overall retail performance. In this context, effective SCM practices—encompassing inventory management, transportation logistics, supplier relationship management, and technological integration—are now critical drivers of retail success.

Retail marketing, traditionally focused on branding, promotions, and customer engagement, now heavily depends on the efficiency and responsiveness of the underlying supply chain. Stockouts during promotional campaigns, delivery delays, and inconsistent product availability can undermine even the most well-designed marketing strategies. Conversely, a robust and agile supply chain enhances marketing efforts by ensuring timely availability, pricing accuracy, and service quality. This growing interdependence between SCM and retail marketing warrants detailed academic investigation, particularly in emerging market contexts where infrastructural and operational challenges are more pronounced.

The state of Jharkhand in India provides a unique regional context for this study. With increasing urbanization, rising disposable incomes, and expanding organized retail, Jharkhand's retail landscape is undergoing significant transformation. However, the state continues to face substantial supply chain challenges, including fragmented

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logistics networks, inadequate infrastructure, and limited technological adoption, especially in semi-urban and rural markets. These constraints directly impact retail marketing outcomes such as sales conversion, brand reputation, and customer loyalty.

Despite the critical link between SCM and marketing performance, existing literature tends to address these domains in isolation, with limited empirical research exploring their interaction in regional markets like Jharkhand. This study seeks to fill this gap by examining how effective SCM practices influence retail marketing performance and customer satisfaction, with operational efficiency serving as a mediating variable. By grounding the analysis in real-world practices and challenges faced by retailers in Jharkhand, this research aims to provide both theoretical insights and actionable recommendations for stakeholders.

LITERATURE REVIEW

Over the past two decades, the integration of supply chain management (SCM) and marketing functions has garnered increasing academic attention. Traditionally viewed as a back-end operational function, SCM now plays a pivotal role in shaping customer experience and retail competitiveness (Chopra & Meindl, 2016). Efficient SCM practices such as inventory optimization, responsive logistics, and supplier collaboration directly contribute to reduced lead times, improved product availability, and enhanced service levels—all of which influence marketing outcomes.

Several scholars emphasize the strategic role of SCM in aligning supply-side capabilities with market demand. For example, Lee (2002) introduces the concept of the "responsive supply chain," which adapts quickly to changing customer needs—critical for retail marketing success. Similarly, Mentzer et al. (2001) argue that integration across the supply chain can improve customer value and organizational performance.

In the Indian retail context, Mukherjee & Ghosh (2021) and IBEF (2022) note that while urban retail is becoming increasingly structured, smaller and regional markets still struggle with fragmented supply chains, low technological adoption, and vendor unreliability. These inefficiencies often result in stockouts, delivery delays, and higher costs, which directly affect brand perception and customer loyalty.

Recent studies also highlight the role of technology adoption—such as ERP systems, GPS-enabled logistics, and AI-based demand forecasting—in bridging the gap between SCM and marketing (Ghosh & Tripathi, 2020). However, despite growing interest in digital SCM, empirical research connecting these innovations to retail marketing performance, particularly in underserved regions like Jharkhand, remains sparse.

Moreover, the mediating role of operational efficiency—defined by metrics such as cost reduction, lead time, and order accuracy—has not been fully explored in most existing models. Understanding this mediation can provide deeper insight into how SCM contributes to retail competitiveness beyond traditional logistics metrics.

This study addresses these gaps by offering an integrated framework that empirically examines how specific SCM practices influence retail marketing outcomes, with operational efficiency as a mediator—grounded in the practical realities of the Jharkhand retail sector.

Effective supply chain management (SCM) is increasingly recognized as a strategic enabler of retail competitiveness. Research highlights that practices like inventory control, logistics efficiency, supplier collaboration, and technology adoption contribute significantly to retail outcomes such as customer satisfaction, brand image, and sales growth (Chopra & Meindl, 2016; Elg & Welinder, 2022). However, much of the existing literature is focused on developed markets, with limited empirical studies addressing how SCM impacts retail marketing in regional Indian contexts like Jharkhand. Furthermore, the mediating role of operational efficiency remains underexplored.

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Table 1: Literature Gaps Identified

Area of Focus	Findings from Prior Literature	Identified Gap
SCM's impact on retail marketing	SCM improves inventory flow, responsiveness, and service levels (Lee, 2002)	Lack of empirical studies on its influence on marketing performance metrics
Technology in SCM	ERP, AI, and real-time tracking boost efficiency (Ghosh & Tripathi, 2020)	Limited studies linking tech adoption to customer satisfaction in retail
Indian retail supply chains	Fragmented logistics and low digital penetration outside metro cities (IBEF, 2022)	Minimal focus on tier-2 and tier-3 regions like Jharkhand
Operational efficiency as a mediator	SCM improves cost and time efficiency (Mentzer et al., 2001)	Few studies model operational efficiency as a mediating variable
SCM–marketing integration frameworks	Conceptual links proposed but not often tested (Chopra & Meindl, 2016)	Lack of integrated models tested with field data in emerging market settings

Source: Author's Analysis after literature review

PROBLEM STATEMENT

Retailers in Jharkhand face persistent challenges such as stockouts, delayed deliveries, and limited SCM technology adoption, which undermine marketing effectiveness. Despite retail growth, there is a lack of empirical insight into how SCM practices influence marketing performance and customer satisfaction in this region. This study addresses this gap by examining the direct and mediated impact of SCM on retail outcomes, emphasizing operational efficiency.

RESEARCH OBJECTIVES

- To evaluate the impact of SCM practices on retail marketing performance in Jharkhand.
- To analyze the relationship between SCM components and customer satisfaction.

RESEARCH METHODOLOGY

The study adopts an exploratory research design aimed at understanding the impact of supply chain management (SCM) practices on retail marketing performance in the context of Jharkhand. The exploratory nature allows for identifying key patterns and associations between SCM dimensions and marketing outcomes, while also offering insights into customer satisfaction and operational efficiency.

Primary data was collected using a structured questionnaire based on a 5-point Likert scale (ranging from Strongly Disagree to Strongly Agree). The questionnaire items were developed based on constructs identified in the literature review, covering areas such as inventory management, transportation efficiency, supplier relationships, technology adoption, customer satisfaction, and retail performance indicators.

A total of 100 respondents participated in the study, comprising retail managers, supply chain professionals, and store operators from various sectors, including groceries, fashion, electronics, and general merchandise. The sampling method employed was convenient random sampling, ensuring accessibility while maintaining respondent relevance to the study objectives.

The collected data was analyzed using regression analysis, which allowed for examining the predictive relationship between independent variables (SCM practices) and dependent variables (retail marketing performance and customer satisfaction). Regression analysis was chosen due to its effectiveness in modelling relationships and testing the strength and direction of influence among multiple variables.

Statistical analysis was conducted using SPSS software, ensuring reliability and accuracy of results. Data reliability was assessed through internal consistency measures, and multi-collinearity diagnostics were applied where necessary.

DATA ANALYSIS

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Table 1: Reliability Statistics (Cronbach's Alpha)

Scale	No. of Items	Cronbach's Alpha
SCM Practices	4	0.81
Retail Marketing Performance	3	0.84
Customer Satisfaction	3	0.79

Source: Author's Analysis using SPSS

All constructs demonstrated acceptable internal consistency ($\alpha > 0.70$), indicating that the questionnaire items reliably measure the respective variables.

Descriptive Statistics

Descriptive statistics were calculated to understand respondent perceptions of SCM practices and retail performance indicators. As shown in Table 1, the mean values for most variables were above 3.5 on a 5-point Likert scale, suggesting a generally favorable perception of current SCM practices and their outcomes.

Table 2: Descriptive Statistics of Key Variables

Variable	Mean	Std. Deviation
Inventory Management	3.84	0.66
Transportation Efficiency	3.71	0.71
Supplier Relationship	3.68	0.75
Technology Adoption	3.59	0.69
Operational Efficiency	3.77	0.63
Retail Marketing Performance	3.89	0.68
Customer Satisfaction	3.91	0.65

Source: Author's Analysis using SPSS

These results indicate that retailers generally recognize the importance of SCM components, especially inventory management and timely delivery, in achieving customer satisfaction and marketing goals.

Regression Analysis: SCM and Retail Marketing Performance

A multiple regression analysis was conducted to examine the influence of SCM practices on retail marketing performance.

Table 3: Model Summary – Regression Output

Model	R	R^2	Adjusted R^2	Std. Error
1	.68	.46	.44	0.42

Source: Author's Analysis using SPSS

The model summary (Table 2) indicates that 46% of the variance in retail marketing performance was explained by the four SCM predictors ($R^2 = 0.46$).

Since, the model explains 46% of the variance in retail marketing performance, indicating a strong predictive relationship between SCM practices and marketing outcomes.

Table 4: ANOVA Table (Model Significance)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	22.40	4	5.60	23.71	.000

Source: Author's Analysis using SPSS

The regression model is statistically significant ($F(4, 95) = 23.71$, $p < .001$), confirming that the

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independent variables collectively impact the dependent variable.

Table 5: Coefficients Table – Regression Weights

Predictor Variable	B	Std. Error	Beta (β)	t	Sig.
Inventory Management	0.32	0.08	0.28	4.00	.000
Transportation Efficiency	0.19	0.07	0.21	2.71	.008
Supplier Relationship	0.15	0.06	0.17	2.50	.014
Technology Adoption	0.10	0.05	0.13	2.00	.048

Source: Author's Analysis using SPSS

All SCM practices significantly predict retail marketing performance ($p < .05$). Inventory management has the strongest standardized impact ($\beta = 0.28$), followed by transportation efficiency ($\beta = 0.21$). All predictors were statistically significant ($p < 0.05$). These results confirm that well-coordinated supply chain activities directly enhance retail marketing effectiveness.

Table 6: Mediation Output using PROCESS Macro

Path	Coefficient	SE	t	p-value
SCM → OE	0.48	0.07	6.86	.000
OE → RMP	0.35	0.06	5.83	.000
SCM → RMP	0.29	0.08	3.63	.000
Indirect Effect (Bootstrapped)	0.17	—	—	95% CI [.09, .26]

Source: Author's Analysis using SPSS

Using PROCESS macro (Model 4), operational efficiency was tested as a mediating variable. Results showed that operational efficiency partially mediated the relationship between SCM and retail marketing performance (indirect effect = 0.17; 95% CI [.09, .26]). Operational efficiency partially mediates the relationship between SCM and retail marketing performance, as the indirect effect is significant and the confidence interval does not include zero.

DISCUSSION

The findings demonstrate a strong and positive relationship between SCM practices and retail marketing performance, aligning with previous studies (Chopra & Meindl, 2016; Mukherjee & Ghosh, 2021). Inventory management emerged as the most influential SCM factor, highlighting its role in ensuring product availability and promotion readiness. Technology adoption showed a moderate yet significant effect, emphasizing the growing importance of digital solutions in modern supply chains. The mediating effect of operational efficiency further underscores that SCM's impact on marketing outcomes is not only direct but also facilitated by improvements in lead time and cost optimization. This study affirms that for retailers in emerging regions like Jharkhand, optimizing supply chain processes is essential for achieving marketing success and sustaining customer loyalty.

CONCLUSION

This study set out to explore the impact of supply chain management (SCM) practices on retail marketing performance, with a particular focus on the emerging market context of Jharkhand. The results confirm that core SCM components—inventory management, transportation efficiency, supplier relationship management, and technology adoption—positively influence retail outcomes, including sales growth, market share, brand reputation, and customer satisfaction.

Furthermore, operational efficiency was found to partially mediate this relationship, reinforcing the idea that well-managed supply chains not only support but amplify the effectiveness of retail marketing strategies. These findings offer both theoretical insights and practical relevance for

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enhancing competitive positioning through integrated supply chain strategies.

MANAGERIAL IMPLICATIONS

Inventory management was the strongest predictor of retail marketing success. Managers should invest in demand forecasting tools and just-in-time practices to avoid stockouts during key promotional periods.

Efficient logistics contribute not only to cost savings but also to improved brand perception. Route planning, real-time tracking, and last-mile delivery innovations should be adopted. Reliable supplier partnerships ensure smoother operations. Managers are encouraged to foster long-term, collaborative supplier engagements to improve supply responsiveness. While technology adoption showed a moderate effect, it is a foundational enabler for SCM scalability. Tools like ERP systems, warehouse automation, and mobile-based inventory apps should be strategically implemented. Metrics like lead time, order accuracy, and logistics cost should be routinely measured. Operational efficiency is not just an internal metric—it enhances external marketing performance.

Retailers in states like Jharkhand should consider the infrastructural and logistical limitations of their regions and adopt localized solutions, such as micro-warehousing or regional sourcing.

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