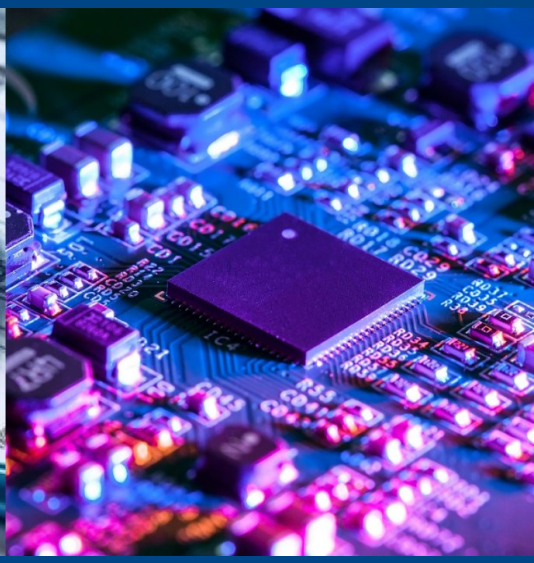
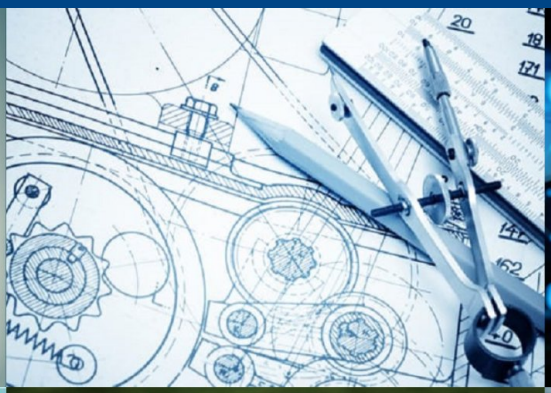
ISSN: 2582-7219

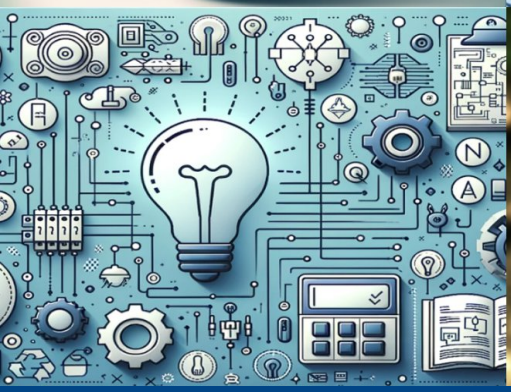




International Journal of Multidisciplinary Research in Science, Engineering and Technology

(A Monthly, Peer Reviewed, Refereed, Scholarly Indexed, Open Access Journal)



Impact Factor: 8.206 **Volume 9, Issue 4, April 2026**

© 2026 IJMRSET | Volume 9, Issue 4, April 2026 | DOI:10.15680/IJMRSET.2026.0904224

ISSN: 2582-7219 | www.ijmrset.com | Impact Factor: 8.206| ESTD Year: 2018|

International Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET)

(A Monthly, Peer Reviewed, Refereed, Scholarly Indexed, Open Access Journal)

A Study on Impact of Supply Chain Practices on the Overall Performance on the Organization with Special Reference to YSI Automotive Pvt Ltd., Chennai

Bharath.S, Dr.M. Jayaseely

MBA Student, School of Management Studies, Sathyabama Institute of Science and Technology, Chennai, Tamil Nadu, India

Professor, School of Management Studies, Sathyabama Institute of Science and Technology, Chennai, Tamil Nadu, India

ABSTRACT: A supply chain is an entire system of producing and delivering a product or service, from the very beginning stage of sourcing the raw materials to the final delivery of the product or service to end-users. The supply chain is the chain of stakeholders involved from initial production stage to final consumption of any product. The objective of the study is to analyse on impact of supply chain operations on organisational performance with special reference to YSI Automotive Pvt Ltd., Chennai. The sample of the study is 120. Descriptive research design and convenience sampling method has been used. Questionnaire has been used as a primary data. Simple percentage analysis, chi-square analysis and correlation statistical tools have been applied to reach the findings of the study. It is found that there is no significant relationship between year of experience and strategic supplier partnership. There is negative relationship between the department of the respondents and organisational performance. It is suggested that the company has to adjust supply chain processes to suit individual preferences and expectations for customers. The company should engage customers when it comes to joint development of projects aimed at increasing value of products/services. It is concluded that it is stated that poor practices in supply chains (poor communication, lack of coordination and poor supplier engagement) can result in delays, rise of costs and lower levels of customer satisfaction and is likely to discourage organisational growth. Hence, businesses need to take a strategic view of managing supply chain relationships and processes.

KEYWORDS: Supplychain Practices, Customer relationship, Organisational Performance, Overall Performance, Strategic Supplier Partnership.

I. INTRODUCTION

A supply chain is an entire system of producing and delivering a product or service, from the very beginning stage of sourcing the raw materials to the final delivery of the product or service to end-users. The supply chain is the chain of stakeholders involved from initial production stage to final consumption of any product. A supply chain is a coordinated network that includes all the companies, facilities and business activities involved in sourcing, developing, manufacturing and delivering products. Each business relies on its supply chain to be able to build products and bring them to market; a business may itself be a crucial link in other companies' supply chains. A supply chain transforms raw materials and components into a finished product that's delivered to a customer. It is made up of a complex network of organizations and activities, such as raw materials suppliers, manufacturers, distributors, retailers and the customer. Supply chain operations encompass the systems, activities, and processes that move goods from suppliers to customers. It involves managing the flow of materials, information, and funds across the entire supply chain, from sourcing raw materials to delivering finished goods to the end consumer. Supply Chain Operations typically include five main parts**,** often based on the SCOR Model (Supply Chain Operations Reference model). Supply chain operations consist of several key stages that work together to move a product or service from the supplier to the end customer. Each stage plays a crucial role and must function efficiently to ensure that the supply chain as a whole operates smoothly.

ISSN: 2582-7219 | www.ijmrset.com | Impact Factor: 8.206| ESTD Year: 2018|

International Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET)

(A Monthly, Peer Reviewed, Refereed, Scholarly Indexed, Open Access Journal)

Objectives of the Study

- To examine the customer relationship practices for the supply chain's contribution in the organisation
- To assess the quality of information sharing for the efficiency and effectiveness of supply chain operations in the organisation
- To analyze the strategic supplier partnership for the contribution of improved organisational performance in the organisation
- To evaluate the overall effect of supply chain management practices on the operational performance of the organization.

II. REVIEW OF LITERATURE

Muchenje, C., Mtengwa, E., Maregere, L., & Masengu, R. (2025). The use of (AI) and (ML) have become essential for supply chain resilience and efficiency. This chapter examines the state of supply chains, focusing on factors affecting their performance and stability. It explores how companies can become more resilient by leveraging AI and ML applications to predict risks, maximize resources, and respond quickly to changing circumstances. The chapter also looks at strategies to leverage AI/ML to increase productivity. The chapter demonstrates the useful benefits and quantifiable impacts of these technologies in supply chain management by combining case studies with real dataSuggestions for companies that want to use these technologies to gain a long-term competitive advantage are outlined. This chapter provides a comprehensive overview of how AI and ML can transform supply chains into flexible, efficient networks that can withstand a wide range of uncertainties.

Gammelgaard, B., & Nowicka, K. (2024). The purpose of this paper is to investigate the impact of cloud computing (CC) on supply chain management (SCM). Today, digital technology is the primary enabler of supply chain (SC) competitiveness. CC capabilities support competitive SC challenges through structural flexibility and responsiveness. An Internet platform based on CC and a digital ecosystem can serve as “information cross-docking” between SC stakeholders. In this way, the SC model is transformed from a traditional, linear model to a platform model with the simultaneous cooperation of all partners. Platform-based SCs will be a milestone in the evolution of SCM – here conceptualised as Supply Chain 3.0.

Anisah, Z. (2024). The study addresses the critical issue of optimizing supply chain management (SCM) for operational efficiency in a highly competitive and dynamic global market. The primary problem investigated is how companies can enhance their SCM processes to achieve significant operational improvements through various strategies, technologies, and practices. This research employs a comprehensive methodology, incorporating qualitative and quantitative analyses to examine key aspects such as inventory management, supplier relationships, technological integration, risk management, sustainability practices, and cross-departmental collaboration. The research methodology involves an in-depth analysis of SCM practices across multiple industries, utilizing case studies, surveys, and interviews with supply chain professionals. This mixed-methods approach provides a holistic understanding of how different elements of SCM contribute to overall operational efficiency. The findings reveal that effective inventory management, particularly through Just-In-Time (JIT) practices and Economic Order Quantity (EOQ), significantly reduces holding costs and minimizes waste. Strong supplier relationships are identified as pivotal for ensuring a reliable supply of quality materials, enhancing coordination, pricing, and delivery schedules. Technological integration, including Enterprise Resource Planning (ERP) systems, Internet of Things (IoT), and big data analytics, plays a crucial role in optimizing SCM by improving decision-making and operational visibility.

III. RESEARCH METHODOLOGY

Descriptive research design is used in this study. Convenience sampling was applied in this study. In this study, both primary and secondary data were utilized. 120 sample size used in this study. Percentage Analysis, Chi square analysis and correlation are used in this study.

© 2026 IJMRSET | Volume 9, Issue 4, April 2026 | DOI:10.15680/IJMRSET.2026.0904224

ISSN: 2582-7219 | www.ijmrset.com | Impact Factor: 8.206| ESTD Year: 2018|

International Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET)

(A Monthly, Peer Reviewed, Refereed, Scholarly Indexed, Open Access Journal)

Data Analysis and Interpretation

Table No: 1 Year of Experience

Year of Experience	No. of the respondents	Percent
Less than 1 year	24	20.0
1 - 3 years	64	53.3
4 – 6 years	17	14.2
Above 6 years	15	12.5
Total	120	100.0

Source: Primary data

INTERPRETATION

The above table shows that 20.0% of respondents have less than 1 year, 53.3% of the respondents have 1 - 3 years, 14.2% of the respondents have 4 – 6 years and 12.5% of the respondents have above 6 years as their year of experience. Thus the majority of the respondents have 1 - 3 years as their year of experience.

Table No: 2 Department

Department	No. of the respondents	Percent
Supply chain	45	37.5
Logistics	23	19.2
Procurement	28	23.3
Operations	24	20.0
Total	120	100.0

Source: Primary data

INTERPRETATION

The above table shows that 37.5% of respondents said that supply chain, 19.2% of the respondents said that logistics, 23.3% of the respondents said that procurement and 20.0% of the respondents said that operations as their department. Thus the majority of the respondents said that supply chain as their department.

Table No: 3 Strategic Supplier Partnership

Statements	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Collaboration with suppliers is encouraged in product development and innovation	33(27.5%)	29(24.2%)	17(14.2%)	23(19.2%)	18(15.0%)
Long-term contractual agreements are established with key suppliers	20(16.7%)	63(52.5%)	23(19.2%)	12(10.0%)	2(1.7%)

ISSN: 2582-7219 | www.ijmrset.com | Impact Factor: 8.206| ESTD Year: 2018|

International Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET)

(A Monthly, Peer Reviewed, Refereed, Scholarly Indexed, Open Access Journal)

Joint problem-solving practices are implemented with suppliers	27(22.5%)	22(18.3%)	44(36.7%)	15(12.5%)	12(10.0%)
Continuous quality improvement is a focus in supplier relationships	28(23.3%)	52(43.3%)	13(10.8%)	10(8.3%)	17(14.2%)
Future plans and demand forecasts are communicated with strategic suppliers	41(34.2%)	29(24.2%)	11(9.2%)	11(9.2%)	28(23.3%)

Interpretation

The table above demonstrates that 27.5% of the respondents are strongly agree towards collaboration with suppliers being encouraged in product development and innovation, 52.5% of the respondents are agree towards long-term contractual agreements being established with key suppliers, 36.7% of the respondents are neither agree nor disagree towards joint problem-solving practices being implemented with suppliers, 43.3% of the respondents are agree towards continuous quality improvement being a focus in supplier relationships, and 34.2% of the respondents are strongly agree towards future plans and demand forecasts being communicated with strategic suppliers.

Table No: 4 Organisational Performance

Statements	Excellent	Good	Average	Bad	Poor
Supply chain efforts have contributed to increased customer satisfaction	23(19.2%)	56(46.7%)	10(8.3%)	14(11.7%)	17(14.2%)
Delivery performance metrics have improved over recent periods	48(40.0%)	28(23.3%)	13(10.8%)	19(15.8%)	12(10.0%)
Significant cost reductions have been achieved through supply chain strategies	22(18.3%)	43(35.8%)	16(13.3%)	26(21.7%)	13(10.8%)
Competitive advantage has been strengthened through supply chain operations	38(31.7%)	24(20.0%)	20(16.7%)	21(17.5%)	17(14.2%)
Financial performance has improved due to effective supply chain management	18(15.0%)	7(5.8%)	62(51.7%)	16(13.3%)	17(14.2%)

Interpretation

The table above demonstrates that 46.7% of the respondents are good towards supply chain efforts contributing to increased customer satisfaction, 40.0% of the respondents are excellent towards delivery performance metrics improving over recent periods, 35.8% of the respondents are good towards significant cost reductions being achieved through supply chain strategies, 31.7% of the respondents are excellent towards competitive advantage being strengthened through supply chain operations, and 51.7% of the respondents are average towards financial performance improving due to effective supply chain management.

Chi Square: Relation Between Year of Experience and Strategic Supplier Partnership

Null hypothesis (Ho): There is no significance difference between year of experience and strategic supplier partnership.

Alternative hypothesis (H1): There is some significance difference between year of experience and strategic supplier partnership.

ISSN: 2582-7219 | www.ijmrset.com | Impact Factor: 8.206| ESTD Year: 2018|

International Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET)

(A Monthly, Peer Reviewed, Refereed, Scholarly Indexed, Open Access Journal)

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	35.064a	45	.856
Likelihood Ratio	35.396	45	.847
Linear-by-Linear Association	9.188	1	.002
N of Valid Cases	120		
a. 58 cells (90.6%) have expected count less than 5. The minimum expected count is .13.			

INTERPRETATION

As per the above table, it is inferred that the P value is 0.856; it is not significant to 5% (0.05) significant level. The minimum expected count is 0.13. Thus null hypothesis is accepted and it is found that there is no significant relationship between year of experience and strategic supplier partnership.

Correlation Analysis: Relationship Between The Department of the Respondents and Organisational Performance

Correlations			
		DEPARTMENT OF THE RESPONDENTS	ORGANISATIONAL PERFORMANCE
DEPARTMENT OF THE RESPONDENTS	Pearson Correlation	1	-.132
	Sig. (2-tailed)		.150
	N	120	120
ORGANISATIONAL PERFORMANCE	Pearson Correlation	-.132	1
	Sig. (2-tailed)	.150	
	N	120	120

INTERPRETATION

The above table indicates that out of 120 respondents, co-efficient of correlation between the department of the respondents and organisational performance is -0.132. It is below 1. So there is negative relationship between the department of the respondents and organisational performance.

IV. SUGGESTIONS

- There is a need for the company to adopt structured mechanisms of feedback collection for supply chain improvements.
- The company has to enhance closer coordination with customers in order to predict and prepare for changing needs.
- The company has to adjust supply chain processes to suit individual preferences and expectations for customers.
- The company should engage customers when it comes to joint development of projects aimed at increasing value of products/services.
- The company needs to improve communication methods, both consistent and timely with all supply chain partners.
- The firm must invest in digital platforms that allow easy exchange of information.
- The company should ensure forecasting data is properly and timely shared with both suppliers and customers.

ISSN: 2582-7219 | www.ijmrset.com | Impact Factor: 8.206| ESTD Year: 2018|

International Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET)

(A Monthly, Peer Reviewed, Refereed, Scholarly Indexed, Open Access Journal)

V. CONCLUSION

Conclusions are made regarding significant impact of supply chain operations in organisational performance. Through the study, it comes out clearly that the key elements that include customer relationship management, quality of information transfer and strategic alliance of suppliers are leverages of efficiency, responsiveness, competitiveness in the supply chain. Organisations that expend resources to foster long term customer relationships while ensuring an open and timely flow of information and close cooperation with credible supply partners are more likely to deliver operating excellence and superior performance outcomes. Additionally it is stated that poor practices in supply chains (poor communication, lack of coordination and poor supplier engagement) can result in delays, rise of costs and lower levels of customer satisfaction and is likely to discourage organisational growth. Hence, businesses need to take a strategic view of managing supply chain relationships and processes. Through this action, they can boost their capacity to adjust to the needs of the market, diminish operational risk, and also improve their relative financial and competitive profile.

REFERENCES

1. Muchenje, C., Mtengwa, E., Maregere, L., & Masengu, R. (2025). Artificial intelligence (AI) and Machine Learning (ML): Enhancing Supply Chain Resilience and Efficiency. In *AI and Machine Learning Applications in Supply Chains and Marketing* (pp. 55-88). IGI Global.
2. Gammelgaard, B., & Nowicka, K. (2024). Next generation supply chain management: the impact of cloud computing. Journal of Enterprise Information Management, *37*(4), 1140-1160.
3. Anisah, Z. (2024). maximizing operational efficiency through integrated supply chain management. *papua*: International Journal of Sharia Business Management, *1*(1), 45-60.
4. Li, S., Ragu-Nathan, B., Ragu-Nathan, T. S., & Rao, S. S. (2006). The impact of supply chain management practices on competitive advantage and organizational performance. Omega, 34(2), 107–124.
5. Gunasekaran, A., Patel, C., & Tirtiroglu, E. (2001). Performance measures and metrics in a supply chain environment. International Journal of Operations & Production Management, 21(1/2), 71–87.
6. Flynn, B. B., Huo, B., & Zhao, X. (2010). The impact of supply chain integration on performance: A contingency and configuration approach. Journal of Operations Management, 28(1), 58–71.
7. Green Jr., K. W., Whitten, D., & Inman, R. A. (2008). The impact of logistics performance on organizational performance in a supply chain context. Supply Chain Management: An International Journal, 13(4), 317–327.

INTERNATIONAL STANDARD SERIAL NUMBER INDIA

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH

IN SCIENCE, ENGINEERING AND TECHNOLOGY

| Mobile No: +91-6381907438 | Whatsapp: +91-6381907438 | ijmrset@gmail.com |

www.ijmrset.com