# The Impact of Supply Chain Management Practices on the Overall Performance of the Organization

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Supply Chain Management (SCM) may now be a major technique for assuring advantage and improving authoritative execution since competition now occurs more between supply networks than between associations. Five SCM practice components are established and conceptualized in this inquiry. Testing and data sharing (provider affiliation, client connection, degree, kind, and delay of data sharing) the relationships between hierarchical execution, control, and SCM practice. The system's proposed links were evaluated, and pertinent information from 202 relationships was analyzed. The usage of indicating the underlying condition. The findings show higher, more pronounced levels of SCM usage. This may lead to improved command performance and a decisive advantage. Furthermore, the benefit may also have an impact on how quickly and favorably the hierarchy is executed.

Keywords: Supply chain performance, supply chain efficiency, and supply chain efficacy.

### 1. Introduction

Supply chain management is crucial for overseeing the distribution of goods from raw materials to consumers, starting with order reception and ending with delivery. This concept is gaining popularity among academics and business leaders, aiming to improve overall performance and efficiency within the supply chain. By strategically managing upstream and downstream activities, companies can enhance relationships between supply and demand and utilize technology to serve customers effectively. Logistics networks play a vital role in ensuring smooth delivery processes, involving multiple processes, people, and resources. This study provides practical insights for implementing SCM practices to boost performance and gain a competitive edge.

## 2. Review of literature:

Smith, J., & Wang, Y (2023) this review examines performance measurement frameworks and metrics in supply chain management. It explores how organizations assess and evaluate their supply chain performance, aligning measurement systems with strategic objectives to drive continuous improvement and enhance overall organizational performance.

Garcia, M., & Kim, J. (2023) this review synthesizes research on supply chain collaboration practices and their impact on organizational performance. It examines collaboration mechanisms such as information sharing, joint planning, and coordinated decision-making, highlighting their role in enhancing supply chain agility, efficiency, and overall performance.

Rajasekhar and Devi (2022) the author's state that by studying the Supply Chain Processes in the processing industries, it was determined that in order to improve customer service and achieve a competitive edge, the firms in this sector need to modify their current business strategies to effectively work with their SC partners. To achieve improved performance in the supply chain, the companies should include all entities in the chain and develop an appropriate measuring system

Lummus & Vokurka (2022): The term "supply chain management" refers to the gamut of actions performed in an array in delivering a product from the point of sourcing the component and raw material to the point of reaching the end user along with the information systems that are basically required to monitor all of these activities in order to maximize the objective of better efficiency.

Chen, H., & Kim, J. (2022) this review assesses the relationship between sustainable supply chain management and organizational performance. It examines how environmental, social, and governance (ESG) considerations influence performance metrics such as corporate reputation, risk management, and financial performance.

Cook et al (2021) the author explains that there are several components of supply chain practices that are dispersed, such as information sharing, effective operations, material and supply management, and customer service. They have also emphasized how crucial it is for various components to work together harmoniously in order to achieve a dominant position in the supply chain.

Kannan and Tan (2021) The authors clarify that the essential elements of supply chain management dealt with a broad spectrum of concerns, such as quality control, just-in-time capabilities, and supply chain protocols. The three components of supply chain practises are delivery practices, JIT manufacturing, and supply chain planning.

Supply chain management process:

Plan:

SCM planning focuses on improving customer satisfaction and timeliness of product arrival, as well as maximizing profit. Businesses must create strategies to manage resources for producing goods and services, with a focus on setting standards and Key Performance Indicators.

# Develop:

Development or sourcing is crucial after planning. Building lasting relationships with raw material suppliers is a key focus. Selecting reliable vendors involves determining delivery, shipping, and payment methods. Businesses must choose suppliers for materials and labour for their product. Criteria like price, delivery, and payment terms should include Key Performance Indicators for managing and enhancing relationships. Supply Chain Management professionals oversee these processes to monitor, inspect, and facilitate transactions from raw materials to finished goods.

# Make:

The production phase in the supply chain management process involves creating, examining, testing, packing, and organizing goods ordered by clients. Professionals in this field synchronize responsibilities for production, testing, packaging, and delivery, quantifying labour productivity and quality requirements.

Deliver:

Deliveries are made at the fourth stage. At the agreed-upon location, the provider delivers requested products to the consumer. In essence, order processing and product delivery scheduling take place at this step of logistics. Handling customer orders normally processes and advances through the stage of established network of store housed and through the transport carriers, backed up by an invoicing system to collect payments are all known as delivery.

# Return:

In supply chain management, the return stage involves dealing with damaged or faulty goods returned by customers. This stage often leads to conflict as managers must quickly address customer concerns and expedite the return process. A flexible network is needed to efficiently handle returns and satisfy unhappy customers.

**Research Questions:** 

1. How to evaluate the impact that supply chain management tactics have on the chain's overall effectiveness?

2. How to investigate the impact of supply chain management tactics on corporate performance.

3. How to assess supply chain management strategies' efficacy considering Principles of supply chain management.

# Resource Dependency Theory:

Resource dependency theory examines how organizations rely on external resources and relationships to achieve their goals. In the context of supply chain management, this theory emphasizes the importance of managing dependencies on suppliers, customers, and other stakeholders to ensure a reliable flow of resources and information. Supply chain management practices that enhance collaboration, communication, and trust can help reduce dependency risks and improve organizational performance.

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Objectives:

1. To Establish the correlation between the supply chain management practices (SCMP) and supply chain effectiveness

2. To establish the impact of five of the chosen parameters, the independent variables on the supply chain performance of the organization.

3. To ascertain the application of the parameters, viz, Strategized supply chain structure, Process Development, Information sharing, Imparting forecasting methodologies, and Consistent monitoring of lead time and their value addition in supply chain effectiveness.

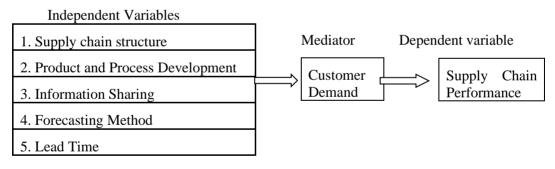
Hypothesis:

- 1. Organizations that apply SCM practices widely have excellent performance levels
- 2. Businesses with extensive SCM practices enjoy a significant competitive edge
- 3. An organization's performance increases with its amount of competitive advantage

## 3. Conceptual Framework:

The performance of an organisation will be affected by supply chain management strategies both directly and indirectly, in accordance with this paradigm. The amount of study makes it simpler to comprehend how supply chain management strategies, competitive advantage, and organisational performance are now associated. 202 replies were provided in a survey.

## CONCEPTUAL FRAMEWORK:



Pilot Study

1. 55 samples from the respondents were collected for the pilot study to test the reliability of the Questionnaire.

2. The Cronbach's alpha was greater than 0.783. After testing the reliability of the Questionnaire, few questions were removed for the final study.

3. The Pilot study provided degree of confidence that the proposed model is based on appropriate constructs and measurement scales.

4. 30 questions taken for pilot study, whereas 5 question's has been removed due to below 0.5 result.

#### The Cronbach's Alpha Value

Cronbach's Alpha	No of Items
0.783	30

## CRONBACH 'S VALUE VARIABLE WISE

Supply chain structure	0.665
Product and Process Development	0.681
Information Sharing	0.721
Forecasting Method	0.731
Lead Time	0.754
Customer Demand	0.744
Supply Chain Performance	0.753

## STATISTICAL DATA ANALYSIS

#### Normality

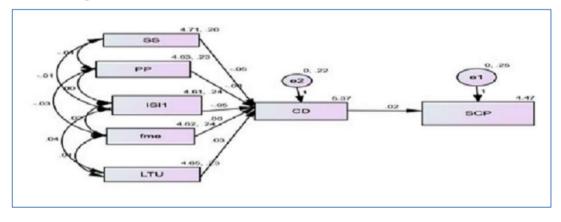
Test of Normality

Kolmogorov - Smirnov			Shapiro - w	Shapiro - wilk		
	statistic	df	sig	statistic	df	sig
SCS	.478	5	.256	.675	5	.698
PP	.578	7	.050	.897	7	.598
IS	.367	6	.165	.698	6	.765
FM	.254	5	.367	.866	5	.689
LT	.562	6	.289	.792	6	.967
CD	.435	7	.050	.987	7	.783
SCP	.435	6	.395	.756	6	.678

a. Lilliefors Significance Correction

Interpretation: According to the results of the normality test, which demonstrated that data distribution is normal.

## Structural Equation Method



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			Estimate	S.E.	C.R.	Р	Label
CD	<	SS	047	.074	637	.524	par_1
CD	<	PP	085	.070	-1.216	.224	par_3
CD	<	IS	052	.070	753	.451	par_4
CD	<	FM	.002	.070	.030	.976	par_5
CD	<	LT	.033	.071	.464	.643	par_6
SCP	<	CD	.021	.073	.290	.772	par_2

Regression Weights: (Group number 1 - Default model)

#### Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
CD	<	SS	045
CD	<	PP	086
CD	<	IS	054
CD	<	FM	.002
CD	<	LT	.033
SCP	<	CD	.020

#### Model Fit Summary - SEM

TEST	THRESHOLD VALUE	STUDY MEASURES
X <sup>2</sup>	p>0.05	P=0.000
CMIN/DF	<5	1.107
RMSEA	<0.080	0.023
RELATIVE FIT MEASURES		
GFI	>0.90	0.00
CFI	>0.90	0.00
NFI	>0.90	.870
RFI	>0.90	.659
IFI	>0.90	.986

#### Parsimonious Fit Measures

Parsimonious Fit Measures		
Test	Threshold Value	Study Measures
PCFI	>0.50	.374
PNFI	>0.50	.331
PRATIO	>0.50	.381

Note: The Chi-Square Test and Degree of Freedom (CMIN/DF), Root Mean Square

Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Suggested CMIN/DF 5 are all based on Hair et al. (2000) and Ullman (1996). Normed Fit Index, Relative Fit Index, Incremental Fit Index, Parsimonious Comparative Fit Index, and PNFI are the acronyms for these measurements, respectively.

### 4. Research Limitations

The research emphasizes the significance of Supply Chain Management (SCM) practices in enhancing organizational performance and competitive advantage. It introduces operational measures for SCM practices, highlighting their impact on customer relationships, information exchange, supplier collaboration, volume, and quality. The study reveals that context variables like industry type and business size can influence the complexity and efficiency of SCM practices. Customer satisfaction and expectations, as well as delays in information flow, also play key roles in implementing SCM practices effectively.

## **5. Research Implications**

Future research in supply chain management should involve multiple stakeholders from each collaborating company to enhance findings. Contrasting viewpoints from organizations in various stages of the chain can offer valuable insights into SCM practices. Analyzing supply chain characteristics, rules, and interactions can expose strengths and weaknesses in current systems. Examining contextual factors like organizational size and structure will contribute to understanding the variation in SCM practices. Furthermore, investigating how supply chain structure affects competitive advantage and SCM practices is a compelling avenue for future study.

## 6. Conclusion:

This study examines the impact of supply chain management practices on organizational performance and competitive advantage. It identifies five key components of SCM and their influence on the success of organizations. The research suggests that organizations with effective SCM practices have a competitive edge and higher success rates. It proposes the development of a tool to evaluate SCM procedures. The findings have implications for SCM managers in improving operational performance in SMEs. However, the study's focus on manufacturing SMEs and potential response bias are limitations that need to be addressed in future research.

### References

- 1. Alvarado, U.Y. and Kotzab, H. (2001), "Supply chain management: the integration of logistics in marketing", Industrial Marketing Management, Vol. 30 No. 2, pp. 183-98.
- 2. Berkoz, L. and Eyuboglu, E. (2005), "Locational preferences of FDI firms in Istanbul", Report for ITU, Research Project, Istanbul.
- 3. Boyson, S., Corsi, T., Dresner, M. and Rabinovich, E. (1999), "Managing effective third party logistics relationships: what does it take?", Journal of Business Logistics, Vol. 20 No. 1, pp. 73-100.
- 4. Burgess, K., Singh, P.J. and Koroglu, R. (2006), "Supply chain management: a structured literature review and implications for future research", International Journal of Operations & Production Management, Vol. 26 No. 7, pp. 703-29.
- 5. Canel, C., Rosen, D. and Anderson, E.A. (2000), "Just-in-time is not just for manufacturing: a service perspective", Industrial Management & Data Systems, Vol. 100 No. 2, pp. 51-60.
- 6. Carter, J.R., Pearson, J.N. and Peng, L. (1997), "Logistics barriers to international operations: the case of the People's Republic of China", Journal of Business Logistics, Vol. 18 No. 2, pp. 129-45.
- 7. Chakravarthy, B.S. (1986), "Measuring strategic performance", Strategic Management Journal, Vol. 7, pp. 437-58.

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- 8. Coyle, J.J., Bardi, E.J. and Langley, C.J. (1996), The Management of Business Logistics, 6th ed., West Publishing Company, St Paul, MN.IMDS107,1118
- 9. Degraeve, Z., Labro, E. and Roodhooft, F. (2000), "An evaluation of vendor selection models from a total cost of ownership perspective", European Journal of Operational Research, Vol. 125, pp. 34-58.
- Demirbag, M., Koh, S.C.L., Tatoglu, E. and Zaim, S. (2006), "TQM and market orientation's Impact on SMEs' performance", Industrial Management & Data Systems, Vol. 106 No. 8, pp. 1206-28.
- 11. Fornell, C. and Cha, J. (1994), "Partial least squares" in Bagozzi", in Bagozzi, R.P. (Ed.), Advanced Methods in Marketing Research, Basil Blackwell, Cambridge, pp. 52-78.
- 12. Fuentes-Fuentes, M.M., Albacate-Saez, C.A. and Llorens-Montes, F.J. (2004), "The impact of Environmental characteristics on TQM principles and performance", Omega, Vol. 32 No. 6, pp. 425-42.
- 13. Gunasekaran, A., Patel, C. and McGaughey, E. (2004), "A framework for supply chain performance measurement", International Journal of Production Economics, Vol. 87, pp. 333-47.
- 14. Hair, J.F., Anderson, R.E., Tatham, R.L. and Black, W.C. (1998), Multivariate Data Analysis, Prentice-Hall, Englewood Cliffs, NJ.
- 15. Hartley, J.L. and Choi, T.Y. (1996), "Supplier development: customer as a catalyst of process Change", Business Horizons, Vol. 39 No. 4, pp. 37-40.
- Hong, P. and Jeong, J. (2006), "Supply chain management practices of SMEs: from a business Growth perspective", Journal of Enterprise Information Management, Vol. 19 No. 3, pp. 292-302.
- 17. Hsu, L.L. (2005), "SCM system effects on performance for interaction between suppliers and buyers", Industrial Management & Data Systems, Vol. 105 No. 7, pp. 857-75.
- 18. Hunger, J.D. and Wheelen, T.L. (1993), Strategic Management and Business Policy, 4th ed., Addison-Wesley, Reading, MA.
- 19. Kros, J.F., Falasca, M. and Nadler, S.S. (2006), "Impact of just-in-time inventory systems on OEM suppliers", Industrial Management & Data Systems, Vol. 106 No. 2, pp. 224-41.
- 20. Lambert, D.M., Emmelhainz, M.A. and Gardner, J.T. (1999), "Building successful logistics partnerships", Journal of Business Logistics, Vol. 20 No. 1, pp. 165-82.
- 21. Larson, P.D. and Sinha, A. (1995), "The total quality management impact: a study of quality Managers' perceptions", Quality Management Journal, Vol. 2 No. 3, pp. 53-66.
- 22. Lau, H.C.W. and Lee, W.B. (2000), "On a responsive supply chain information system", International Journal of Physical Distribution & Logistics Management, Vol. 30, pp. 598-610.
- Li, S., Ragu-Nathan, B., Ragu-Nathan, T.S. and Rao, S.S. (2006), "The impact of supply chain Management practices on competitive advantage and organizational performance", Omega, Vol. 32, pp. 107-24.
- 24. Lin, C. and Tseng, H. (2006), "Identifying the pivotal role of participation strategies and information technology application for supply chain excellence", Industrial Management & Data Systems, Vol. 106 No. 5, pp. 739-56.
- 25. Llorens, F.J., Ruiz, A. and Molina, L.M. (2003), "An analysis of the relationship between quality and perceived innovation: the case of financial firms", Industrial Management & Data Systems, Vol. 103, pp. 579-90.