Effect of supply chain performance measures on supply chain profitability: an empirical investigation using structural equation modelling in Indian retail sector

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Abstract

The purpose of the research is to investigate relationship between two major constructs (supply chain performance measures and supply chain profitability) as supply chain has a key role to play in the expansion and profitability of retailers and it also provides a recognized foundation for retail industry success, the most significant challenge that impedes by R-SCM is the development of an efficient and modern retail sector is an underdeveloped supply chain, thus this research provides a model using rigorous empirical method to validate the instrument scale for measuring the validity and reliability of the identified constructs. Additionally the paper further tests the relationship between supply chain performance measures and supply chain profitability using structural equation modelling (SEM).

The data was compiled and collected from 213 Operations and Supply Chain heads from leading retail stores in India. Confirmatory factor analysis (CFA) was used to test the validity of the proposed measurement scale and the relationship is tested using structural equation modelling (SEM). The results exhibit that all the SCPM items have significant loadings to their corresponding second-order construct, similarly all the SCP items have significant loadings to their corresponding first-order construct. The relationship between the second order construct SCPM and SCP was also found to be significant.
The results of the structural equation model analysis supports the developed hypothesis, which states that, higher level of SCM Performance leads to higher level of SC Profitability. It was found that standardized coefficient was statistically significant at ($p < 0.01$). The hypothesis is accepted which states that Organizations implementing SCM have obtained improved performance, cost savings, increased revenues, and the reduction of defects in products are some of the chief advantages of introducing supply chain management. It has been demonstrated that business profitability is closely associated with performance measures. Overall, the model has a satisfactory fit with CMIN/DF 2.648, RMR 0.078, RMSEA 0.088, GFI 0.813, NFI 0.810 and CFI 0.872.

From the results it can be mentioned that the selected measures provide a good guide to managerial decision making processes. Another significant contribution of the research lies in the fact that there are a plethora of studies identifying different dimensions of SC performance; however, there is no study identifying important dimensions for managers. This study identifies important SC performance measures beneficial to managers, which deserve their immediate attention. The research contributes a model to the knowledge of theories on supply chain management by suggesting to obsolete old performance measures to eradicated

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and new set of tradition and relationship measures should be implemented, so that the downstream and upstream SCM happens smoothly in the organized retail sector in India.

Keywords
Supply chain performance measures, supply chain profitability, Structural equation modelling, and Indian retail sector

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Biography

Shraddha Gawankar is Visiting Research Scholar from Robins School of Business, University of Richmond, VA and Doctorate from National Institute of Industrial Engineering (NITIE), Mumbai India in the field of Operations Management. She holds a BE in Computer Engineering with post-graduation in operations management. Her teaching interest includes Operations Management, Supply Chain Management, Project Management and Quantitative methods, Research Methodology and aims to contribute in the field of research in fields like Supply chain modelling, Scholastic modelling, Mathematical modelling etc. She has published research papers in International refereed journals such as Benchmarking International Journal, International Journal of Physical Distribution and Logistics Management, International Journal of Procurement Management, International Journal of Business Information Systems etc.

Sachin Kamble is an Associate Professor in the area of Operations Management at National Institute of Industrial Engineering (NITIE), Mumbai. He gained his B Tech in Mechanical Engineering with post-graduation and doctorate in operations management. His research area includes Mathematical Modelling of Supply chain, Supply Chain Performance, Agriculture Supply Chain, Medical Supply Chain, Retail Supply Chain and Automobile Supply Chain. He has been consulting leading manufacturing companies in the area of productivity, manufacturing strategy and supply chain management. He has published several papers in refereed journals. He is highly acknowledged person in the field of research and academics.

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