

# UKS31587

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**CRITICALLY EVALUATING THE ROLE AND APPLICATION  
OF SUPPLY CHAIN PERFORMANCE MEASUREMENT  
SYSTEM**

## Introduction

Supply chain has gradually become a significant portion of modern business operations over a few decades and thus, effective management of supply chain attracted a mass attention of contemporary business organisations as well as business studies. However, effective supply chain management can be determined merely by measuring the performance frequently as such a practice enables the organisations to earn greater degree of competitive advantage in the aggressive competitive business environment. Therefore, this study tends to focus on assessing the role as well as the application of supply chain management performance measuring systems based on several real-time case studies.

## Main body

### Conceptualisation of supply chain management performance

In recent years, supply chain management has been developed to be an integral part of modern businesses since performing an effective supply chain management assists organisations to secure ultimate success even in the competitive business marketplaces. As per the statement of Lorenc & Kužnar (2021), supply chain management performance is perceived to be those activities responsible for meeting the requirements of end- customers by offering adequate and easy availability of products in the markets, delivering products on schedule and also managing inventory and capacity. There are several reasons that have emerged to increase the significance of supply chain management performance in the modern business industry. As per the statement of Saragih *et al.* (2020), streamlining the performance of supply chain management, organisations are able to witness high-speed production which in turn, results in enabling those companies to adeptly compete against its rivals existing in the same industry and increase brand value amongst customers. However, it is to be noted that ensuring effective performance throughout the supply chain management is critical to a great extent as there are several challenges identified to be associated with this practice and has sufficient potential to create hindrance for modern businesses in the time of accomplishing business goals and utter success. Shortage of raw materials, economic uncertainties, industrial unrest, climate change, changing consumer behaviours are some of the forces giving rise to some unprecedented challenges around supply chain management and restricts companies to maintain their optimised performance standard around it. It is clearly observed that the abrupt emergence of the recent global pandemic, Covid-19 has severely affected the global supply chain which has apparently led many companies towards prolonged collapse. As per the

statement of Jain (2021), 94% of global enterprises have gone through a disrupted <sup>7</sup> supply chain management performance in 2020 during the encounter of Covid-19. Consequently, the sustainable development and durability of the supply chain is determined to be hampered significantly. Taking the example of Walmart amongst so many companies into consideration, it is worth mentioning that despite being a strong retailer with robust supply chain management, this company has also suffered from the same issue in recent days. An in-depth analysis has indicated high levels of inventory to be one of the major reasons behind Walmart's depreciated supply chain managing performance. However, sudden change in consumer buying behaviours and latest inventory accounting are the other significant aspects responsible for breaching the successful supply chain management performance of Walmart. As per the statement of Banker (2022), excessive inventory including electronics, apparel, home and sporting goods reached approximately 15% which is significantly higher as compared to the optimised inventory level of Walmart which afterwards created a pressure on the company to cancel billion dollars of orders and also selling those overstocked items at such a competitive pricing. In effect, the company has witnessed a growth in the revenue standard; however, both the operating standard and gross margin are observed to decline by 6.8% and 132 basis points respectively. Forecasting demands during the economic turmoil is the other reason responsible for degrading the supply chain management performance of Walmart. Due to the global crisis and economic inflation, consumer behaviour shifted from in-store to online shopping and their inclination increased towards those brands that offer excessively low cost for products.

#### **Supply chain management performance measurement and useful system**

<sup>1</sup> In the context of effective management of the supply chain, the performance measurement system seems to behold an impeccable role. As per the statement of Moons, Waeyenbergh & Pintelon (2019), the performance measurement system is identified as a framework that can be used mostly in measuring the efficiency standard <sup>1</sup> of the supply chain. Timely measurement of the supply chain <sup>10</sup> management performance plays a vital role in further business growth; however, reluctance in measuring the performance level of supply chain management is responsible for leading the companies to undergo critically challenging phases. It is to be noted that an accurate measurement of the <sup>11</sup> supply chain management performance is likely to empower the management of the companies with the information and knowledge that relates to the ways according to which the supply chain management can be performed and the areas that require immediate improvements.

In particular, as posited by Sodhi & Tang (2021), since supply chain management covers each dynamic aspect of business management including sales, human resources, finance, production and quality and distribution, accurate measurement of the supply chain management performance regarding these aspects tends to allow organisations to accomplish both of its long and short term goals. However, it is argued by Elder (2019) that an organisation is required to monitor the success of its <sup>1</sup> supply chain management since, in the absence of a collaborative structure for organising metrics, a high risk can be raised due to which resources would be sacrificed on creating redundant and incompatible statistics. Hence, it can be said that well-timed practice of measuring the supply chain management capacity and success seems to dominate over the overall organisational behaviour of Walmart which has further helped the firm to remain protected from the risks of financial or revenue loss and substandard business growth in the long run.

#### **Theoretical view: <sup>4</sup> Supply Chain Operations Reference model (SCOR)**

##### **Concept:**

Contemplating each significance related to the measurement of <sup>13</sup> supply chain management performance, the Supply Chain Council has given rise to the model of <sup>2</sup> Supply Chain Operations Reference (SCOR) model in order to facilitate the companies with an self-assessment methods and a symmetrical balance amongst all the facets of supply chain and its essential activities that can easily justify the standard of cross-industry <sup>9</sup> supply chain management. As a result, the gain of consistency, reliability and efficiency takes place across sales and operational <sup>3</sup> planning of the companies. As per the statement of Chehbi-Gamoura et al. (2020), the inclusion of <sup>3</sup> six primary processes including plan, source, make, deliver, return and enable, are assumed to be the driver of increasing significance of the SCOR framework in the supply chain management industry.

##### **Application:**

###### **Planning:**

According to this model, the process planning is significant for including the determination of essential resources and their requirements along with the chain of communication in order to produce items that can fit the best with the business goals. This stage offers great assistance to the companies; for instance, Walmart to integrate the best practice with an intention to enhance efficiency throughout the supply chain performance by taking transportation, compliance, inventory, assets and other essential elements of supply chain into consideration.

###### **Sourcing:**

As per the statement of Alshawabkeh et al. (2022), sourcing is a process that involves businesses to collect raw materials and required services for the purpose of meeting market demands. In this stage, the professionals are required to supervise the activities including receiving receipts after purchasing materials and services along with the agreement with suppliers.

***Making:***

In the process of making, the goods and services are made ready to place in the markets to meet the identified market demands. In this stage, the company is able to identify the right time of making order, stocking and integrating as well the necessary facilities and equipment.

***Delivering:***

Following the making of final products, the goods are determined to be delivered to the clients in order to fulfil the demands and preferences of the consumer markets. Therefore, this process tends to draw the attention of Walmart towards the orders, distributions and transportation management.

***Returning:***

As per the statement of Rodríguez Mañay, Guaita-Pradas & Marques-Perez (2021), the return process indicates the scope of products can be returned from either the customers or the suppliers. Hence, this process can be categorised as the customer support services at Walmart followed by the delivery of items.

***Enabling:***

The process of enabling is directly associated with the supply chain management including business rules, data resources, facilities performance, compliance, contracts and risk management.

**Critical review:**

It is worth mentioning that the benefits of the SCOR model is accountable for increasing the significance of its application in supply chain performance management. As per the statement of Ikasari kasari, Sutopo & Zakaria (2020), this model is efficient in providing an in-depth analysis of the overall supply chain performance standard of a company so that the organisations can improve the weak areas accordingly and adeptly accomplish cost-effectiveness, competitiveness and effectiveness to a great level. On the contrary, the application of this model is not exempt from limitations. As per the statement of Cole, Stevenson & Aitken (2019), this model is extensively involved in helping companies to improve their traditional supply chain activities procurement, manufacturing and distributions, while the idea of sustainable development or the social responsibility are highly neglected.

### **Implications of performance measuring system application over supply chain management**

Taking the performance of supply chain management into account for being a greatest asset of modern businesses, the conduction of performance measurement of the supply chain management is highly essential. In this context, as posited by Pettit, Croxton & Fiksel (2019) that the application of a performance measuring system increases the significance of measuring supply chain management performance by helping the companies to accurately measure the overall performance standard which will provide unbiased outcomes. Moreover, this specific system leverages the optimised flow of essential information regarding inventory status, delivery time, price of goods and more which further facilitates the management of an organisation in taking impactful decisions. In the instance of Walmart, it is observed that the incorporation of artificial intelligent (AI) technology has not merely brought a revolution in their supply chain management, yet also casting an overarching impact for a long-term on the same. Applying AI technology in the supply chain management, Walmart is able to dominate the supply chain management issues and yield success in turn by predicting the demand, managing levels of stock and optimising the supply chain ().

### **Challenges hampering the measurement of supply chain management performance**

Despite being a dynamic system of supply chain management performance, the application of such a system is quite challenging for some businesses.

#### ***Lack of information communication technology (ICT)***

As per the statement of Gupta, Kusi-Sarpong & Rezaei (2020), ICT beholds a major contribution to the accurate conduction of supply chain performance measurement as such technology facilitates the process of data gathering and extensive analysis based on which the making of impactful decision is possible. However, some of the modern businesses are still experiencing a barrier while implementing the efficient performance measuring system to enhance their supply chain management performance due to lack of knowledge and inclination towards the adoption of dynamic ICT technology.

#### ***Shortage of skilled labours***

The performance measuring system is able to perform and provide accurate results, only when accurate data are gathered, observed and analysed and this aspect requires the assistance of strongly skilled and well-knowledge professionals who can use the best of their skills and expertise in operating and managing this system. In that case, shortage of relevantly skilled professionals or



even poor recruitment for this role are the major reasons <sup>1</sup> responsible for undermining the success of supply chain performance management.

### **Conclusion**

The above analysis provides insights to this conclusion that measuring supply chain management performance is quintessential for modern businesses since it is one of the effective means of conquering higher degree of competitive advantages, even in the aggressively competitive business environment. Walmart is one of the leading retailing e-commerce has also witnessed severe challenges <sup>3</sup> in managing their supply chain performance. Therefore, the SCOR model has been used to <sup>1</sup> enrich this study with a clear perspective of the processes through which the performance of supply chain management can be measured accurately. Implementation of such a system seems to benefit companies like Walmart in terms of impactful decision making capability based on the data gathered and analysed extensively. However, lack of skilled workforce and poor ICT infrastructure create barriers to some companies regarding the implementation of this system for the betterment of their supply chain management performance.



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