

A Review Article on Gaps in Supply Chain Management

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Abstract— In recent years, the supply chain management industry underwent many transformations with the introduction to supply chain integration and thus closing gaps in the supply chain through innovation and integration with new technologies like artificial Intelligence for analysing strategies to gain competitive advantage. The present review article aims to show the key gaps in the supply chain industry, some of which are still prevailing and the areas where there is possible scope of innovation. We have proposed key implementations that must be included in the supply chain solutions to decrease these gaps.

Keywords— *SCI- Supply Chain Innovation, SCM- Supply Chain Management, IT- Information Technology, KPI- Key Performance Index.*

I. INTRODUCTION

The Field of Supply Chain Management (SCM) includes various aspects such as procurement of raw materials from the suppliers, storing of raw materials, manufacturing of products, outsourcing the manufacturing with third party manufacturers, warehousing the final product at various distribution centres in the distribution network and finally sending it to the designated customer. This whole process has to be done in an optimal way to minimize the use of resources and thus decreasing the cost involved in the processes and in turn increase the margins for the company. There are lot of gaps in the supply chain management that need to be addressed and resolved which are possible through innovation using integration and collaboration to achieve the competitive growth for the company.

II. LITERATURE REVIEWS

1. In the Research article [1], the author talks about the need for supply chain management in the industry is no longer a transactional but more of strategic need. It also talks about the need for the framework to minimize the gaps in supply chain between suppliers, manufacturers and distributors and consumers. These gaps include deciding the fit for the product in one of the 4 distinct supply chain structures which are design to order, assemble to order, built to order and make to stock.
2. In the Research, article [2], the author talks about the need for innovation to include all the stakeholders of SCM starting from the suppliers where the procurement of raw materials is done to the final retail outlets or the distribution networks with the sole purpose of minimizing the cost incurred in the manufacturing and logistic processes.

3. The Research article [3], talks about the concept of practically relevant SCM research and theoretical relevant SCM research. The author also talks about the risk widening the gap with respect to the practical applications in the industry due to the more inclination towards the theoretical approach in the research.
4. In the Research article [4], the author discusses the importance of information visibility and understanding the both internal/external environments across the supplier stream which are the key factors in any SCI for developing a successful framework. The article also focused on impact of innovation on various aspects in supply chain.
5. In the research article [5], the author identifies five competence areas where there are knowledge gaps in the firms that were taken under the study. These are human resource, supplier relationship, logistical processes, production planning and environment & ethical concerns. The author also suggests few relevant strategies to close these knowledge gaps and to increase the overall firm's competence.
6. In the research article [6], the author presents service quality based conceptual models based on the gaps in the supply chain. The author identifies these gaps as bidirectional, covers both intra and inter organizational transactions. The author discuss about novel methodologies for measuring these gaps with the help of models such as data envelope analysis, quality loss functions and segregation of indicators into 3 categories (Service, Service & Performance, Performance)
7. In the research article [7], the authors classified the e-hubs into two groups namely procurement and transportation. They identified need for integration measured at 3 levels (Information, Resources, Organization) which contribute to the knowledge gaps. They also suggest a framework for integrating the e-hubs with evolving IT such as ERP and CRM to lessen the gaps and provide functionally better solutions.
8. In this research article [8], the author identified that gaps between planning and execution should me a measurable quantity that defines the supply chain performance and to identify the scope of improvement. They call these as KPI's and found that companies should have small list of selective KPI's which are critical to customer service, operations management for each of SCOR model's 4 meta processes.

9. In this research article [9], the author describes Knowledge-Based-Collaborative-Supply-Chain-Management (KBCSCM) as an important tool for an organization to overcome the gaps/challenges in their current supply chain in this era of collaborative commerce. This approach is mainly useful in aiding the companies in manufacturing sector to lessen their gaps.
10. In this research article [10], the author gave an overview on how collaborative innovation is crucial among the members of extended manufacturing enterprise (EME). It also discusses on how IT cannot alone contribute to the success of the company without overcoming the lack of trust and ineffective goals set between/among the key entities in the cross company or inter-company projects.

III. CONCLUSION

Identifying the gaps in supply chain and resolving them through innovative information technological tools can bring a competitive advantage for a company. The gaps should be measurable using KPI's and thus help in incremental growth of the company. With the growth in manufacturing, there is the need for collaboration among the members of extended manufacturing enterprise (EME).

The following are few implementations that must be included in the supply chain solutions to decrease the gaps.

1. Visibility across all stakeholders in the supply chain.
2. Ability to test alternative strategies (What if scenarios) based on planner's input.
3. Ability to use native applications (like Microsoft Excel) alongside the main platform.
4. Ability to sense and adapt to the changes in market that affect the third-party manufacturers and suppliers.
5. Use of appropriate KPIs to enhance the performance of the supply chain.
6. Flexible UI for users to adapt to the software solution with less or no training.

From our research we have found that technologies like SAP-SCM has been successful in closing the gaps but has limitations like high initial costs (makes it infeasible for smaller organizations) and complex user interface (requires lot of training).

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