Supply chain performance evaluation: a comprehensive evaluation system

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Abstract:

Supply chain is a network of suppliers, manufacturers, distributors, and retailers that act together to control, manage, and improve the overall supply chain performance. The most important and critical part of decision making is identifying the different sides of supply chain's performance. Evaluating the performance of the whole supply chain is a complex task, due to the complexity inherent in the structure and operations of the supply chain. This study presents a suggestion for a comprehensive system to evaluate the performance of the supply chain in eight dimensions (i.e., financial, customer, internal operations, learning and growth, people, environmental, and political perspectives). The proposed performance evaluation system (PES) suggests a procedural framework to explain the application methodology of that PES. Moreover, the study offers a simulation modelling methodology for modelling the complex system of supply chain. It also provides a real world case study to clarify the applicability of the proposed PES.

Keywords:

supply chain; performance; performance evaluation system; PES; key performance indicators; KPIs; simulation.

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