

Ranking of factors affecting the performance of supply chain performance and reducing logistics costs in the petrochemical industry by using the IPA method

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abstract

Objective: With increasing and diversifying customer demand, advances in recent information systems technology, global competition, and increasing public awareness, industries need to focus more on supply chain management. Due to the high value of petrochemical products, supply chain management is of great importance in the petrochemical industry. In general, supply chain performance evaluation is an essential element in effective planning, control, and decision-making. In this regard, the aim of this study is to rank the factors influencing the performance of the supply chain and reduce its costs in the petrochemical industry. **Method:** The approach used is Importance performance analysis matrix (IPA). The statistical population of the study consists of experts in the petrochemical industry. Data collection method, questionnaire and in the first half of 2021 has been done. **Results:** In this study, two questions were answered; What are the factors influencing the performance of the supply chain in the petrochemical industry? And according to the above factors, which factor is the first priority? Finally, the factors influencing the performance of supply chain performance in the importance-performance matrix have been established and suggestions have been made to improve the company's situation. **Conclusion:** Based on the results, the performance of the petrochemical industry supply chain is affected by factors such as quality and variety of products and services, flexibility in meeting customer needs, bill delivery speed and program schedule effectiveness and order cycle time. Using these results, through the matrix analysis of performance-importance matrix using Excel software, these factors were ranked in order to improve the supply chain and increase competitiveness. Findings show that in terms of importance, the factors affecting the performance of the supply chain are process, flexibility, supplier, satisfaction and time, respectively. The results of this research can help continuous monitoring, increase production, create and maintain competitive position in industries.

Keywords: supply chain; Supply chain performance; Reduce logistics costs; Petrochemical industry, IPA method.