

Adoption of Early Supplier Integration (ESI) for Manufacturing Strategy Formulation: A Literature Review

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Abstract

Collaboration between buyers and suppliers with a total commitment to the company's integrated strategy will ensure a successful of Early Supplier Integration (ESI) programme. The role of suppliers in a manufacturing company in a global environment has driven the development of strategies for the implementation of the ESI program. This article discusses the adoption of the ESI programme for manufacturing system strategy determination. This desk research uses a literature review of twenty articles on ESI published between 2011 and 2022, which are grouped according to research objectives, result, and conclusions. The results of the literature review indicate that the adoption of ESI for determining manufacturing strategies can be categorized into four categories: the challenges and benefits of ESI for manufacturers, the role of ESI in the design process, the effect of ESI implementation on development costs, and the success factors of ESI. It covers a discussion of effective supplier management, cooperative partnerships, strategic partnerships, and supplier networks, as well as a holistic view of the supply chain, the creation of cooperation contracts, and shared interests and objectives. Thus, it can be concluded that ESI has numerous advantages and roles in the design process, which can serve as a foundation for the formulation of a reliable manufacturing strategy. Besides, ESI also faces its own challenges, such as an organisational culture that causes ESI to be rejected by the design team or insufficient resources that prevent anyone from devoting time to supplier collaboration, among others.

Keywords

Early supplier integration, Literature review, Manufacturing strategy