



Research School for Operations
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Novel performance measurement models for supply chain management

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A supply chain is an integrated system in which raw materials are processed into final products/services, and delivered to consumers. In supply chains with multiple vendors, manufacturers, service providers, distributors and retailers, performance measurement is challenging because it is difficult to attribute performance results to one particular entity within the chain, especially if objectives are conflicting. An instance of such conflicting objectives is when the sustainability of a supply chain is concerned: economic, environmental and social impacts are most often contradictory. Novel decision support tools are, therefore, required for the supply chain performance evaluation. In that respect, data envelopment analysis (DEA) is a promising methodology. The objective of this research project is, therefore, to develop flexible DEA models capable of decomposing network performance, considering dynamics of the environment, accounting for uncertainties, and taking into consideration different types of available data.

The outcomes of this project contribute to supply chain management research and practice in operations benchmarking, resource allocation, profit/cost sharing, target setting, improvement strategies suggestion, and partner/player clustering etc.