Theoretical Discussion on the Classification of Risks in Supply Chain Management

Authors : Liane Marcia Freitas Silva, Fernando Augusto Silva Marins, Maria Silene Alexandre Leite

Abstract : The adoption of a network structure, like in the supply chains, favors the increase of dependence between companies and, by consequence, their vulnerability. Environment disasters, sociopolitical and economical events, and the dynamics of supply chains elevate the uncertainty of their operation, favoring the occurrence of events that can generate break up in the operations and other undesired consequences. Thus, supply chains are exposed to various risks that can influence the profitability of companies involved, and there are several previous studies that have proposed risk classification models in order to categorize the risks and to manage them. The objective of this paper is to analyze and discuss thirty of these risk classification models by means a theoretical survey. The research method adopted for analyzing and discussion includes three phases: The identification of the types of risks proposed in each one of the thirty models, the grouping of them considering equivalent concepts associated to their definitions, and, the analysis of these risks groups, evaluating their similarities and differences. After these analyses, it was possible to conclude that, in fact, there is more than thirty risks types identified in the literature of Supply Chains, but some of them are identical despite of be used distinct terms to characterize them, because different criteria for risk classification are adopted by researchers. In short, it is observed that some types of risks are identified as risk source for supply chains, such as, demand risk, environmental risk and safety risk. On the other hand, other types of risks are identified by the consequences that they can generate for the supply chains, such as, the reputation risk, the asset depreciation risk and the competitive risk. These results are consequence of the disagreements between researchers on risk classification, mainly about what is risk event and about what is the consequence of risk occurrence. An additional study is in developing in order to clarify how the risks can be generated, and which are the characteristics of the components in a Supply Chain that leads to occurrence of risk.

Keywords : sisks classification, survey, supply chain management, theoretical discussion

Conference Title : ICIEOM 2015 : International Conference on Industrial Engineering and Operations Management
Conference Location : Paris, France
Conference Dates : July 20-21, 2015