

Risk management in supply chain: a real option approach

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Purpose

The aim of this paper is that of individualizing a framework for the management of uncertainty in supply chain finalized to reduce the firm risks.

Design/methodology/approach

Since a way for reducing the damages deriving from uncertainty sources is increasing the level of flexibility inside the supply chain, and the real option theory allows the increase of the flexibility level, in order to achieve the aim of this work, we utilize the real options theory to coverage of one or more risks inside the supply chain.

Findings

A useful theoretical framework has been individualized enabling the selection of possible options to protect the firm against the risk originating from every source of uncertainty. In particular, on two types of risks, using Matlab software, a test has been conducted that proves the ability of the outsource option to cover risks under examination.

Practical implications

In the paper a framework providing useful information for the supply chain management is presented.

Originality/value

The paper attempts to provide an original tool for the risks management deriving from production activities inside a supply chain.

Keywords: [Supply chain management](#), [Risk management](#), [Supplier relations](#)

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