

13. Risk factors

Based on Panjehfouladgaran, H. & Lim, S.F.W.T. (2020), "Reverse logistics risk management: identification, clustering and risk mitigation strategies", *Management Decision*, Vol. 58 No. 7, pp. 1449-1474.

Purpose participants and application

- **Purpose**

- To examine different types of risks that can create vulnerabilities in the supply chains.

- **Participants**

- The various participants from the cross-functional areas (sales, logistics, production, procurement, product development, finance, IT).

- **application**

- In phase 2 and 3: Analysis of vulnerabilities.

Risk factors and their definitions (1/6)

Risk factors	Definition
Poor communication	All obstacles which prevent information exchange meaningfully and timely between firms.
Lack of shared goals	Differences in organizations, cultures, and goals can create limitations for relocation.
Asymmetric power	Changed power balance between the company and customers/suppliers.
Information risk	Losses due to unavailable, incomplete, inaccurate, inconsistent, and uncertain information through outsourcing.
Dependence risk	Unfortunate consequences of switching to another supplier.
Service deterioration	Failure in maintaining delivery performance due to lack of resources.
Poor strategic development	Failure in developing strategic resources to foster flexibility and innovation in response to volatile markets.

Risk factors and their definitions (2/6)

Risk factors	Definition
Supplier risk	Risks related to sourcing materials and resources for various tasks.
Materials availability	Material shortages for production processes leading to high transaction costs.
Long distance	The distance between suppliers and producers leading to large purchasing quantities and scarcity.
Capacity	Unavailable financial resources to realize products and services demanded by the market.
Financial instability	Financial instability indicates higher switching costs, which can lead to rush orders.
Unstable workforce	All the risks associated with competence gaps among current employees.

Risk factors and their definitions (3/6)

Risk factors	Definition
Management risk	Different management methods and cultures that leads to different decisions.
Political instability	Usually refers to major changes in political regimes.
Macroeconomic uncertainty	Involves levels of economic activity and price development.
Environmental risks	How vulnerable one is to events that can harm the physical or biological environment.
Technological changes	Major technological changes often disrupt existing competencies, requiring the regrouping of resources to develop capabilities that align with the new technological regime.
Competitive uncertainty	A broad category that covers uncertainty associated with rivalry among existing firms and potential entrants in the industry.

Risk factors and their definitions (4/6)

Risk factors	Definition
Biased knowledge/skills	Decision-makers' preconceived knowledge/skills/experience of the overall risk landscape and the issues it entails.
Demand fluctuation	Factors leading to fluctuating demand such as seasonality, taxation, product availability, and pricing.
Customer risk	Customer and company loyalty when multiple suppliers are available.
Information seeking	Risk in decision variables in individual and group decision-making processes.
Rules and procedures	Exposure to changes in regulations affecting the business, such as environmental regulations.
Currency	Regular changes in exchange rates.
Transportation risk	Excessive handling due to crossing borders or changing transportation modes.

Risk factors and their definitions (5/6)

Risk factor	Definition
Quality	Poor quality in goods supplied including defective, damaged, and/or incorrect products and components.
Safety	All risks causing safety hazards.
Business disruptions	Inability to produce goods or sell to customers.
Inventory	Warehouse/inventory costs, uncertainty about demand and supply.
Technical and implementation Failure	Natural disasters, accidents, deliberate actions, data and information security and management issues.
Culture	Inadequate knowledge about people, culture, and language.
Dependency and opportunity	Supplier and customer risks due to lack of flexibility.
Production planning	Short-term changes in production schedule, nervous system response, inaccurate master data, and batch sizes.

Risk factors and their definitions (6/6)

Risk factors	Definition
Purchase risk	Lack of coordination with bottleneck suppliers and delayed information about changes in demand.
Outsourcing risk	All the risks related to the supplier contract.
Order risks	On-time deliveries, order completeness, order accuracy, and error-free deliveries.
Security risk	Application of policies, procedures, and technology to protect assets in the supply chain.
Corporate Social Responsibility	The company's commitment to society and stakeholders in the communities impacted by the company.
Forecast risk	Result from mismatch between a company's forecast and the actual demand.
Loss of control	Concern among wholesalers regarding intangible assets such as information resources.