

Chapter 11

Operational Risk Management in Third Party Logistics (3PL)

Diego Fernando Manotas-Duque
Universidad del Valle, Colombia

Juan Carlos Osorio-Gómez
Universidad del Valle, Colombia

Leonardo Rivera
Universidad del Valle, Colombia

ABSTRACT

Supply chain risk management processes are among the most important activities in the value chain of any industry. The supply chain risk management process includes different activities, focused on the identification, measurement, assessment, and mitigation of the main risk sources that can affect a supply chain. The increasing complexity facing global supply chains generates the need for suppliers to collaborate in different processes in a supply chain. In this context, Third Party Logistics Providers (3PL) have been widely promoted by the phenomenon of outsourcing, on which companies increasingly rely. The growth in logistics outsourcing is mainly attributed to the benefits it brings in terms of reducing costs, improving performance, allowing companies to focus on their core businesses and building virtual enterprises through strategic alliances. In this chapter we develop a model to identify the operational risk factors of a 3PL provider.

INTRODUCTION

Supply chain risk management processes are among the most important activities in the value chain of any industry. The supply chain risk management process includes different activities, focused on the identification, measurement, assessment, and mitigation of the main risk sources that can affect a supply chain. The increasing complexity facing global supply chains generates the need for suppliers to collaborate in different processes in a supply chain. In this context, Third Party Logistics Providers (3PL) have been widely promoted by the phenomenon of outsourcing, on which companies increasingly

DOI: 10.4018/978-1-5225-0130-5.ch011

rely. The growth in logistics outsourcing is mainly attributed to the benefits it brings in terms of reducing costs, improving performance, allowing companies to focus on their core businesses and building virtual enterprises through strategic alliances. Approximately 60% of the Fortune 500 companies in the US reported having at least one 3PL contract, and the market for logistics providers continues to grow. Today, global companies have a greater need to focus on the core of their businesses. In this framework, the main logistics processes have been outsourced to companies geared precisely to their management. The outsourcing of logistics services is perceived as a viable business strategy, as it enables companies to focus on developing the competitive advantages of their core business.

Recent studies discuss the potential economic benefits of logistics outsourcing. Some of these are: the elimination of infrastructure investments, access to best practices in logistics processes and services, improved ability to quickly react to changes in business environments, better cash flow, reduction of operational costs, exchanging fixed cost with variable cost, and risk sharing.

Third-party logistics providers are key players in most supply chains, given that transportation services and basic value-added logistics services are highly mature areas in terms of outsourcing. Third party logistics providers do not “own” the goods that flow through a supply chain, but they assume responsibility for their customers’ products as they move through a warehouse or are shipped around the globe.

Supply chain risks and the management of these risks is the subject of this chapter. Specifically, the focus will be on the logistical aspects of the supply chain and thus the perspective of the third-party logistics (3PL) provider companies.

Considering the fundamental role of third-party logistics (3PL) providers in the success of different supply chain models, it is necessary to analyze the main risk factors that may be faced by the logistics outsourcing companies. It is very important to understand the main risk sources from the perspective of third-party logistics (3PL) providers.

In this chapter we present the main supply chain risk processes from the perspective of logistics outsourcing providers. We present a methodological approach to identify the main supply chain risk factors considering different kinds of criteria. Secondly, we expose some indicators to measure and to assess the impact of different risk factors identified. Finally, the chapter presents some mitigation strategies to reduce the impact of different kind of risk factors considered.

The structure of this chapter has four main parts. The first part is devoted to the identification and characterization of the services that are commonly outsourced, along with their expected benefits. We have observed, both in practice and in the literature, that third-party logistics providers may take charge of storage and warehousing activities (safekeeping of raw materials and supplies, as well as finished products); transportation (moving materials between factories, distribution centers and different echelons of the finished product distribution network); materials management (controlling materials from the point of entry, to the transformation process, and to the warehousing of finished products); value added services (packaging, assembly of promotions, invoicing, customer relationship management, sales profiling, handling of returns and warranty claims, reverse logistics and others); cross-docking operations (receiving products from different suppliers and preparing orders to send to different points of sale without accumulating), and other activities that are constantly evolving to satisfy the needs of their customers.

The second part of the chapter deals with the identification of operational risk factors. There are two main categories of risk: Those that are related to the operation of the 3PL per se and those related to the relationship between the customer company and the 3PL. In the operation side, anything and everything that may cause disruptions in the normal flow of operations must be considered and evaluated using techniques such as Risk Failure Modes and Effects Analysis (R-FMEA). These analyses are well

20 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/operational-risk-management-in-third-party-logistics-3pl/151784

Related Content

Conclusions for South Australia From the Analysis

Göran Roosand Anthony Cheshire (2019). *Harnessing Marine Macroalgae for Industrial Purposes in an Australian Context: Emerging Research and Opportunities* (pp. 171-179).

www.irma-international.org/chapter/conclusions-for-south-australia-from-the-analysis/211644

Management Practices for Processes Optimization: Case of Slovenia

Zlatko Nedelkoand Vojko Potocan (2016). *Handbook of Research on Managerial Strategies for Achieving Optimal Performance in Industrial Processes* (pp. 545-561).

www.irma-international.org/chapter/management-practices-for-processes-optimization/151801

CAD Applied to the Design and Cost Reduction in the Use of Molds for DIE Casting Process

Julian Israel Aguilar-Duque, Jesus Salinas-Coronado, Hector E. Ruiz-yRuiz, Guillermo Amaya-Parra, Victor M. Juarez-Lunaand Jose L. J. Sanchez-Gonzalez (2016). *Handbook of Research on Managerial Strategies for Achieving Optimal Performance in Industrial Processes* (pp. 278-303).

www.irma-international.org/chapter/cad-applied-to-the-design-and-cost-reduction-in-the-use-of-molds-for-die-casting-process/151788

Fuzzy Adaptive Controller for Uncertain Multivariable Nonlinear Systems with Both Sector Nonlinearities and Dead-Zones

Abdesselem Boulkroune (2015). *Handbook of Research on Advanced Intelligent Control Engineering and Automation* (pp. 334-363).

www.irma-international.org/chapter/fuzzy-adaptive-controller-for-uncertain-multivariable-nonlinear-systems-with-both-sector-nonlinearities-and-dead-zones/123321

An Examination of the Decision Making Styles of Egyptian Managers

Hisham M. Abdelsalam, Reem H. Dawoudand Hatem A. ElKadi (2013). *Business Strategies and Approaches for Effective Engineering Management* (pp. 219-236).

www.irma-international.org/chapter/examination-decision-making-styles-egyptian/74685