Supply Chain Risk Management of the Pharmaceutical Industry in Sri Lanka: Exploring Mitigation and Resilience Strategies

Fernando, W. W. J. N.[1], Subasinghe, I. K.[2], Fernando, W. B. N. D.[3] and Herath, H. M. R. P.[4]

Introduction

The frequently recurring man-made and natural disasters have made supply chains prone to significant levels of risks compared to the past (Stephan & Nikrouz, 2010). Unlike other industries, disruptions in the supply chain of the Pharmaceutical industry can create severe harm to human life by hindering access to medicine (Kapoor et al., 2018). The importance of this industry in Sri Lanka is critical as 85 percent of the total medicine requirement is met through imports (Jayasinghe, 2018). Recent succession of natural disasters, regulatory and operational complexities and pressure to contain high R&D costs have signified the importance of risk management in the industry (Jaberidoost et al., 2013; Enyinda, 2009).

Methodology

A qualitative case study research design was chosen, and purposive sampling was used to derive the sample. Data were collected through face to face and telephone interviews from professionals attached to four pharmaceutical manufacturing firms. The semi-structured interviews were conducted referring to an interview guide developed through literature. Further, data triangulation was used to confirm the validity of data and thematic analysis for analyzing data.

Findings

Through literature, authors have identified risks relating to various areas of the supply chain and causes behind them (Uthayakumar & Priyan, 2013; Candan & Yazgan, 2016; Puri & Ranjan, 2012). The validity of secondary sources to the Sri Lankan pharmaceutical context was assessed and the key findings of the research are summarized below.

Table 1: Summary of key findings

Risk Identification (Objective 01)	Investigation of Causes (Objective 02)	Exploration of Strategies (Objective 03)

[1] SLIIT Business School, Malabe *(nathashafdo98@gmail.com)*

[2] SLIIT Business School, Malabe

[3] SLIIT Business School, Malabe

[4] Department of Marketing Management, Faculty of Commerce and Management studies, University of Kelaniya, Sri Lanka. *(renukaherath@kln.ac.lk)*

Quality risks	▪ Supplier problems ▪ Poor specifications	Use of detailed specifications, supplier audits, approved supplier lists, multiple sourcing, quality management systems and sample checking.
Delivery risks	▪ Miscommunication ▪ Payment problems	Use of relationship, buffer stock, rapid follow up and supplier evaluations.
Logistic risks	▪ Document delays due to time differences ▪ Strikes ▪ Changing regulations	Discussions with internal and external stakeholders.
Other risks	▪ Price volatility ▪ Limited capacity ▪ Limited shelf life	System developments, use of agreements, expanding capacity and building risk management culture.

Conclusion

Findings imply that the strategies should be adopted and they are more effective when linked to the risk category. Further, the use of resilience strategies in the industry is at an undesired level as firms are only reacting to risks. Thus, the continuity of supply is at stake. However, the Pharmaceutical industry demands continuity of supply due to its close link with human life (Yousefa & Alibabaei, 2015).

The findings can be generalized to similar companies in other developing countries. However, the lack of risk and strategy evaluation related to other partners in the pharmaceutical industry such as importers, distributors, retailers act as a research limitation.

Keywords: *Pharmaceutical, Resilience, Risk management, Strategies, Supply Chain,*

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