

Identifying financial benefits and costs of sustainable supply chain in conditions of uncertainty in manufacturing companies

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Receive:

18 May 2023

Revise:

02 August 2023

Accept:

07 September 2023

Abstract

The purpose of this research is to identify the financial benefits and costs of sustainable supply chain under conditions of uncertainty in manufacturing companies admitted to the Tehran Stock Exchange. In terms of practical purpose, in terms of exploratory nature, and in terms of data collection method, this research was conducted qualitatively and with meta-composite method. The statistical community was formed in the metacomposite approach, including the articles available in Emerald, ProQuest, Absco, Science Direct, Springer, Scopus, IranDoc, Iran Mag databases. In the qualitative part, through library studies and with a metacombination approach, the financial benefits and expenses of the sustainable supply chain were extracted and categorized under conditions of uncertainty, and the initial model was proposed. Concepts of order process management process capability, customer relationship management process capability, demand management process capability, capacity and resource management process capability, time to market, buyer credit, electronic platforms, supply chain coordination and collaboration to improve service performance, synchronization Financial decisions, innovative information sharing related to finance, supplier relationship management process capability, service performance management process capability, supply chain companies' partial interaction were named and classified in the category of "sustainable supply chain financial benefits". Concepts of inventory financing, product innovation, reverse factoring, cash flow incentive alignment, supply chain working capital, bank credit for supply chain financing, supplier integration, recycling management, supply chain disruption risk, supply chain transportation management, changes in The estimates and their basis were named and classified under the category of "Sustainable Supply Chain Financial Expenditure".

Keywords:

Financial benefits and costs, sustainable supply chain, conditions of uncertainty, manufacturing companies,

Please cite this article as (APA): Samiei, H. A., Mehrabian, A., Ashrafi, M., & Khamaki, A. (2023). Identifying financial benefits and costs of sustainable supply chain in conditions of uncertainty in manufacturing companies. *Journal of value creating in Business Management*, 3(3), 41-64.



<https://doi.org/10.22034/jvcbm.2023.402968.1120>



<https://dorl.net/dor/20.1001.1.00000000.1402.3.3.3.9>

Publisher: Iranian Business Management Association

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Extended Abstract

Introduction

Changes in the field of industry are happening on a wider level and at a faster pace than in the past. This trend, along with issues such as globalization, rising customer expectations, and strict environmental and social laws governing industrial and economic activities, has increased the level of competition in the market for providing services and products and the issue of sustainability in the supply chain (Sheikh Sajadieh & Bahmani Tabrizi, 2020). As a result of increasing society's knowledge about the sustainability of government policies and increasing society's awareness, sustainability performance is increasingly becoming an important organizational strategy. One of the approaches to improve organizational performance is through supply chain sustainability. This approach affects the company's competitiveness and supply chain performance (Govindan et al, 2016).

Today, uncertainty is one of the major problems and challenges in supply chain management, and one of the reasons for its emergence is the lack of definitive and accurate information, as well as the dynamics and complexity of supply chain components. Uncertainty can be defined as the difference between the amount of information required to perform a task and the amount of information that is actually available. In supply chain planning decision processes, uncertainty is an important factor that can affect the efficiency and effectiveness of supply chains (Hasanpur et al, 2021).

Therefore, the researcher asked the main question: what are the financial benefits and expenses of the sustainable supply chain in the conditions of uncertainty in manufacturing companies admitted to the Tehran Stock Exchange?

Theoretical framework

Supply chain

Supply chain is defined as "a set of functional activities (transportation, inventory control, etc.) that are repeated many times along the flow channel, by which raw materials are transformed into finished products and value, and arrive into the hands of the consumer". Since today's globalization has opened new markets and intensified competition, organizations have been able to reduce production costs by developing more complex supply chains to compete in the global market (Kamalahmad & Mrllat-Parast, 2016).

Sustainable supply chain management

Sustainable supply chain management provides economic, social and environmental requirements in the flow of materials and services between suppliers and customers. The structure of sustainable supply chain management is considered as a prerequisite for sustainable success, and the design of that structure provides a competitive advantage for companies. There are several reasons why organizations should integrate environmental and social goals in the supply chain (Msgaard et al, 2013).

Vidal et al, (2022) investigated the pressure of supply chain stakeholders to adopt sustainable supply chain practices: examining the role of entrepreneurial and sustainability orientations. The results showed that both entrepreneurial orientation and sustainability orientation simultaneously act as moderators of the effect of supply chain stakeholder pressure on the

adoption of socially and environmentally sustainable supply chain management practices. However, entrepreneurial orientation only attracts companies so far in adopting supply chain management practices. When a strong sustainability orientation is in effect, higher practice acceptance occurs but the effect of stakeholder pressure is weakened.

Stephens et al, (2022) investigated the relationship between supply chain disruption orientation and supply chain flexibility and market performance with the stimulus-organism-response model. The results showed that organizational culture plays an important role in the development of supply chain flexibility in the midst of supply chain dynamics. Market performance is also developed, but only through supply chain flexibility. A supply chain disruption orientation alone does not improve market performance. The mediating effects highlight the importance of a supply chain disruption orientation; a strategic orientation that enhances an organization's ability to develop supply chain flexibility.

Research methodology

This research is applicable in terms of purpose, qualitative in terms of data collection, and exploratory in terms of nature, and meta-composite research in terms of research implementation method. The statistical population of the research was selected from five databases in English, including Scopus, Emerald, Science Direct, Springer, and ProQuest; and two databases in Farsi, including the National Journals Database and the Academic Jihad Scientific Information Database, which contain a large number of sustainable supply chain journals. The analysis method is content analysis.

Research findings

In the meta-composite method, first the introduced databases were searched using key words and terms, and all the articles were collected in a spreadsheet file based on the relationship of the article title with them. The analysis method is content analysis. 30 articles, 210 codes, and 24 concepts were extracted from the selected articles. The results showed the capability of the order process management process, the capability of the customer relationship management process, the capability of the demand management process, the capacity and capability of the resource management process, time to market, buyer credit, electronic platforms, coordination and cooperation in the supply chain to improve service performance, Synchronization of financial decisions, sharing of innovative information related to finance, supplier relationship management process capability, service performance management process capability, supply chain interdepartmental interaction as sustainable supply chain benefits under uncertainty and inventory financing, product innovation, reverse factoring, incentive alignment of cash flow, supply chain working capital, bank credit for supply chain financing, supplier integration, recycling management, supply chain disruption risk, supply chain transportation management, changes in estimates and their basis as sustainable supply chain costs in conditions Uncertainties were identified.

Conclusion

The aim of the current research is to identify the financial benefits and expenses of the sustainable supply chain under conditions of uncertainty in manufacturing companies

admitted to the Tehran Stock Exchange. The results of this research are in agreement with the results of Stephens et al, (2022), Negri et al, (2021), Dwivedi et al, (2021), Scaramuzzi et al, (2020), Liu et al, (2019), Zarei et al, (2022), Hassanpour et al, (2021), Vidal et al, (2022), Wagner, (2021), and Ding et al.(۲۰۱۷) ,

Vidal et al, (2022) confirmed that supply chain performance can be improved by facilitating longer payment terms for buyers and better access to financing for suppliers. However, the adoption of sustainable financing may be questionable due to conflicts between stakeholders.

According to the obtained results, the following suggestions were presented:

-According to the component of changes in estimates and their basis, which is considered the most important component, companies should consider changes in political, cultural, consumer behavior, economic and other issues.

-Smart transportation systems and new technologies should be used for faster and cheaper delivery. Also, the use of these types of systems can help greening the chain.

-In order to satisfy the customers and increase the quality of the products, the active companies in the industries should use the ideas of the customers in the development of new products and ask their opinions about the products and their changes.