فصلنامه علمی
رویکردهای نو در مدیریت دولتی
The scientific quarterly of
New Approaches in Public Administration
JNAPA

Design and Explanation of a Risk Assessment Model for the Logistics Industry in Iran[1]

Nasser Hassan Daee
PhD student, Department of Management, KhorasganBranch, Islamic Azad University, Isfahan, Iran.
ORCID: 0000-0002-1197-755X
nasserdaee@gmail.com

Seyyed Ali Sadabadi (Corresponding Author)
Assistant Professor, Khorasgan Branch, Islamic Azad University, Isfahan, Iran.
ORCID: 0000-0003-0075-3355
naderhooshmandyar@skiff.com

Mohsen Jalali Majidi
Assistant Professor, Department of Industrial Management, Science and Research Branch, Islamic Azad University, Tehran, Iran.
ORCID: 0009-0004-4348-0945
m_jalalimajidi@yahoo.com

Mansouri Pour Miri
Assistant Professor of Communication and Business Sciences, Faculty of Humanities, Islamic Azad University, Isfahan (Khorasgan) Branch, Isfahan, Iran.
ORCID: 0000-0002-4228-9944
pourmiri90@gmail.com

Received: 17 January 2025 | Revised: 27 February 2025 | Accepted: 3 March 2025

[1] **https://sanad.iau.ir/Journal/napa/Article/1196803**

فصلنامه علمی
رویکردهای نو در مدیریت دولتی
The scientific quarterly of
New Approaches in Public Administration
JNAPA

Extended Abstract

Introduction

In recent years, significant transformations and the emergence of new technologies in global markets have made supply chain management a vital matter for various industries. Given the managerial challenges and the need to develop sustainable approaches in this industry, examining the factors influencing the success of the supply chain from the perspective of the sustainability paradigm has become increasingly important. While various techniques exist in supply chain management, there are still no specific and practical models designed for assessing the unique risks of the logistics industry in Iran. This research aims to fill this gap by providing a comprehensive model for risk assessment, which can assist managers in adopting effective strategies to improve the performance and sustainability of their supply chains. Considering the importance of sustainability and social responsibility in supply chain management, this study not only helps enhance efficiency and reduce costs in the logistics industry but can also serve as an effective tool for achieving economic, environmental, and social objectives within Iran's logistics sector. Therefore, this research addresses the managerial challenges in the supply chain and the necessity for developing sustainable approaches, seeking to offer solutions for creating a competitive advantage for companies and their associated supply chains.

Case Study

This research, as a case study, examines the managerial challenges and factors influencing the success of the supply chain in Iran's oil and gas industry. Given recent developments and the need for sustainable approaches in supply chain management, this study aims to identify and analyze various dimensions that impact the performance and sustainability of the supply chain. The statistical population of this research includes middle and senior managers, as well as specialists active in this industry, from which necessary information is collected and analyzed using data collection tools such as a researcher-made questionnaire and research notes. The goal of this study is to provide a comprehensive model for risk assessment and performance improvement in the supply chain of this industry, which can lead to competitive advantages for companies and enhance sustainability in their processes.

Theoretical Framework

The conceptual framework of this research is designed based on the sustainability paradigm and its impact on the success of the supply chain in Iran's oil and gas industry. This framework examines three main dimensions: economic, social, and environmental, which are considered key factors in determining supply chain performance. Recent studies indicate that effective management of social and ecological risks can enhance supply chain performance and provide companies with a competitive advantage in the market (Zhang et al., 2018; Hong et al., 2018). Additionally, integrating economic, social, and environmental goals is recognized as a key strategy for improving overall supply chain performance (Jabbour et al., 2014).

This conceptual framework aims to identify and analyze the systematic interactions between key success factors in the supply chain of the oil and gas industry, and to elucidate the relational model among these factors. Given the increasing pressures on companies to address environmental issues and social responsibilities, this research seeks to provide solutions for enhancing supply chain performance from a sustainability perspective (Azizi & Behruz, 2018). Ultimately, the goal of this research is to design a model that can assist companies in achieving sustainable objectives and improving supply chain performance (Titt et al., 2019; Chung, 2011).

Methodology

This research employs a qualitative thematic analysis approach to identify factors and dimensions influencing the success of the supply chain from a sustainability perspective. The data collection tools include a researcher-made questionnaire designed with a five-point Likert scale and research notes for organizing key information from various scientific sources. The statistical population comprises middle and senior managers and senior specialists in the oil and gas sector in Iran, with a sample size of 381 determined using Cochran's formula. The study emphasizes the validation of the theoretical model through triangulation methods and external reviewers, ensuring the findings are based on credible scientific evidence and expert opinions. Participants provided informed consent, which was documented as part of the research ethics.

Discussion and Results

The research findings indicate that a total of 850 base codes were summarized into 50 sub-themes and 9 main themes, based on the analysis of 398 questionnaires collected over four months. Out of these, 381 questionnaires with fewer missing data were selected for the statistical sample. The data were analyzed using confirmatory factor analysis in SmartPLS4, focusing on internal consistency

reliability, composite reliability, convergent validity, and discriminant validity. The results showed that the average variance explained for the main constructs was around 0.5, confirming the convergent validity of the model. All constructs demonstrated Cronbach's alpha and composite reliability values greater than 0.7, indicating their unidimensionality.

However, some constructs, particularly "Knowledge Management Facilitators," exhibited lower performance compared to others, with a significant but relatively low effect size of 0.442. This suggests that while knowledge management plays a positive role in the success of sustainable supply chains, it may be hindered by insufficient attention to knowledge-sharing processes within organizations, possibly due to resource constraints, inadequate training, or a lack of a culture that promotes knowledge sharing. Overall, the study confirms the existence of significant relationships among the main constructs, supporting the hypothesis of causal pathways in the structural equations model.

Conclusion

This research presents a model of key factors for enhancing value from a sustainability perspective in the Iranian oil and gas industry. Utilizing a thematic content analysis approach, 62 out of 1103 initially gathered scientific documents were selected for qualitative analysis, resulting in the categorization of 850 open codes into 50 sub-themes and 9 main themes. The model was statistically validated, aligning with findings from previous studies, indicating its relevance to the discourse on innovation. Based on the extracted key factors, several recommendations were made, including the establishment of clusters for sustainable activities, fostering innovative practices among employees, sharing research outcomes with the industry, promoting a culture of transparency in sustainability, shifting managerial approaches towards creativity and proactive risk management, and enhancing training for optimal use of AI-based reporting systems. Additionally, the study emphasizes the importance of documenting best practices from other countries, supporting external research, and continuously evaluating the sustainability of the oil and gas supply chain to inform corrective decisions.

Contribution of authors

All authors have participated in this research in equal proportion.

Ethical approval

This research was conducted by ethical principles. All participants in the study voluntarily provided their consent to participate with full awareness of the research objectives.

Conflict of interest

فصلنامه علمی
رویکردهای نو در مدیریت دولتی
The scientific quarterly of
New Approaches in Public Administration
JNAPA

No conflicts of interest are declared by the authors.

Keywords: Risk Assessment, Logistics, Content Analysis