





Identification and Analysis of Supply Chain and Supplier Risks Using Frog-Leaping and Genetic Algorithms (A Case Study in the Automotive Industry)

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1. Round 1

1.1. Reviewer 1

Reviewer:

The research question is pertinent and timely, given the complexities of supply chains in the automotive industry. However, the question could be framed more clearly to specify the nuances of risk identification and analysis that the algorithms aim to address. A more detailed discussion on how these algorithms improve upon existing methods would also add depth to the study.

While the study presents a compelling case for using frog-leaping and genetic algorithms, the argument would benefit from a more structured comparison with traditional risk assessment methods. This comparison should highlight not only the advantages but also the limitations of the proposed approach.

The literature review covers a broad spectrum of related studies but lacks critical analysis of how the current research fills gaps in existing knowledge. A more focused review on studies specifically comparing different risk assessment algorithms in supply chain management would be beneficial.

The presentation of findings, especially in Tables 1-6, is comprehensive but overwhelming. Simplifying these tables or providing a summary figure could improve readability. Additionally, discussing the practical implications of the results in terms of actual risk management outcomes for Iran Khodro would enhance the analysis.

The methodology section is detailed but could be improved by including a validation of the algorithms with real-world scenarios or comparing the outcomes with historical data. This would add to the reliability of the findings and their applicability in the industry.

The manuscript is generally well-written but suffers from some redundancy and could benefit from tighter editing for conciseness. Ensuring consistency in terminology and refining the discussion section to more directly tie the results to the research question are recommended.

Authors revised the manuscript and uploaded the new document.

1.2. Reviewer 2

Reviewer:

The manuscript would benefit from a clearer explanation of why frog-leaping and genetic algorithms are particularly suited for the automotive industry's supply chain risk assessment. Highlighting specific challenges these algorithms address could provide more insight.

While the study mentions the comparison with exact solution methods, a more detailed discussion on the practical trade-offs between these and the proposed metaheuristic algorithms would be valuable. This includes considerations of time, computational resources, and accuracy.

The experimental results are well-documented but could be enhanced by providing a more detailed discussion on their practical significance. How do these results translate into actionable strategies for supply chain managers?

The conclusion briefly mentions the potential for future research. Expanding on this with specific directions or questions that arose from the current study would make for a stronger ending. For instance, exploring the integration of these algorithms into real-time supply chain management systems could be an intriguing avenue.

Authors revised the manuscript and uploaded the new document.

2. Revised

Editor's decision after revisions: Accepted.

Editor in Chief's decision: Accepted.