




Explaining the Reciprocal Relationships of Constructs Influencing the Technology Management System in the Ministry of Petroleum

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1. Round 1

1.1. Reviewer 1

Reviewer:

The abstract mentions that the research aims to identify and determine the reciprocal relationships and impacts of factors within the technology management system in the Ministry of Petroleum. However, the specific factors or constructs investigated are not clearly stated in the abstract. Consider adding a brief mention of the key constructs or components analyzed to provide a clearer overview of the study.

The eigenvalue criterion is mentioned, but it would be clearer to explain why an eigenvalue greater than one was chosen as the cutoff for factor retention. Additionally, discussing whether any factors were borderline or nearly included/excluded could provide insight into the robustness of the factor selection.

The use of Varimax rotation is described, but it would be beneficial to mention any potential limitations or challenges associated with this method. Were there any issues with factor loadings that might have influenced the results?

The factor labeled "Enhancement of Human Resource Capabilities" should be further clarified. What specific aspects of human resource capabilities are being enhanced? Providing a brief description or example would help in understanding the scope of this factor.

The statement regarding the "intensity level of reciprocal impacts" would benefit from additional context or examples. How does this intensity translate into practical implications for technology management in the studied companies?

In the cause-effect diagram and the reciprocal impact intensity matrix, the threshold value calculation is critical. However, it's not clear why a threshold of 0.25 was selected. Discussing whether other threshold values were considered and how this one was determined would be helpful.

The sentence "The research factors are categorized into influencing and influenced factors" would be clearer with a brief explanation of how these categories were determined. Was there a specific cut-off point in the analysis that separated these groups?

Authors revised the manuscript and uploaded the new document.

1.2. Reviewer 2

Reviewer:

The statement "Technology management drives strategies and thus effective use of technology can lead to efficient production and delivery of goods and services" is compelling but would benefit from a more specific example or reference to existing literature that demonstrates this relationship in practice. This would strengthen the argument and provide more context for the reader.

The sentence "A review of the background and importance of different industries in the country highlights the special role and position of the oil industry..." needs more concrete data or references to support the claim about the oil industry's prominence. Including specific statistics or reports on the oil industry's contribution to the national economy would enhance the credibility of this statement.

The description of the sample selection mentions using a "purposive judgment technique," but it would be beneficial to provide more detail on how this technique was applied in practice. For instance, what criteria were used to judge the relevance of participants? This information is crucial for understanding the representativeness of the sample.

The section mentions the use of exploratory factor analysis (EFA) and DEMATEL technique. However, the rationale for choosing these specific methods over others is not discussed. It would be helpful to include a justification for why these methods were deemed appropriate for this study's objectives.

The AVE values are provided, but the interpretation of these values is not discussed. It would be beneficial to include a brief explanation of what constitutes a "good" AVE and how the reported values compare to these standards.

The sentence "Based on the results from data analysis using the exploratory factor analysis approach 16 factors were identified..." should include a brief discussion on how these findings align with or differ from previous research. Are these factors consistent with what has been found in other industries or contexts?

The claim that "leveraging research and development projects to gain and increase knowledge in growth areas based on technological capabilities" is a reliable path to enhancing competitiveness needs to be supported by empirical evidence or case studies. Consider adding references to studies that have successfully demonstrated this relationship.

Authors revised the manuscript and uploaded the new document.

2. Revised

Editor's decision after revisions: Accepted.

Editor in Chief's decision: Accepted.

