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REVIEWER'S REPORT

Manuscript No.: IJAR-56181

Title: A Multi-Criteria Decision-Making Framework for Productivity Measurement in Calibration Facilities Based on OMAX and AHP

Recommendation:
Accept

Rating	Excel.	Good	Fair	Poor
Originality	Yes			
Techn. Quality		Yes		
Clarity		Yes		
Significance		Yes		

Reviewer Name: Dr. Ashish Yadav

Detailed Reviewer's Report

Reviewer's Comment for Publication.
Acceptance Comment are mentioned below suitable for the paper titled "A Multi-Criteria Decision-Making Framework for Productivity Measurement in Calibration Facilities Based on OMAX and AHP"

Reviewer Comments: Accept

Reviewer Comments –

Introduction
The manuscript titled *"A Multi-Criteria Decision-Making Framework for Productivity Measurement in Calibration Facilities Based on OMAX and AHP"* addresses a relevant and practical problem in manufacturing operations, particularly within calibration and metrology environments where maintaining measurement accuracy while achieving operational efficiency is critical. The introduction clearly defines the research gap by identifying the fragmented nature of productivity monitoring when multiple performance ratios are evaluated independently. The study's objective—to integrate the Objective Matrix (OMAX) with the Analytical Hierarchy Process—is well articulated and aligned with contemporary multi-criteria decision-making approaches. The problem statement is relevant, timely, and grounded in real industrial practice, justifying the study's contribution.

Literature Review
The literature review adequately synthesizes prior research on productivity measurement systems and multi-criteria decision-making techniques. The manuscript effectively explains the theoretical foundations of OMAX as a structured productivity scoring model and AHP as a systematic weighting method based on pairwise comparisons and consistency evaluation. The integration of both methods is positioned as a methodological advancement, particularly in calibration facilities where limited prior research exists. The review demonstrates sufficient academic grounding and identifies a clear research gap, thereby supporting the originality and necessity of the proposed framework.

Solution Approach

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The methodology is clearly described and technically sound. The use of AHP pairwise comparisons aggregated through the geometric mean is appropriate, and the reported consistency ratio (CR = 0.004 < 0.10) confirms the reliability of expert judgments. The derived weights (0.30, 0.40, 0.23, 0.06) are logically embedded into the OMAX scoring structure to compute monthly productivity indices. The integration procedure between AHP and OMAX is transparent, reproducible, and well justified. The case study application within an automotive calibration facility enhances the practical relevance of the research and demonstrates the feasibility of the framework.

Results and Discussion

The results section provides a clear presentation of productivity trends from January to July 2025, highlighting significant fluctuations across months. The discussion appropriately interprets the declines and improvements, linking them to operational variability and performance dynamics. The integrated OMAX–AHP model successfully captures productivity changes and enables weighted performance evaluation rather than relying on isolated ratios. The findings demonstrate managerial applicability by supporting diagnostic analysis and targeted interventions. The analytical rigor and clarity of interpretation strengthen the overall contribution of the manuscript.

Conclusion

The conclusion effectively summarizes the study's contributions and managerial implications. The manuscript demonstrates that integrating AHP-derived weights into the OMAX framework enhances transparency, consistency, and strategic decision-making in productivity assessment. The proposed model offers a scalable and adaptable approach for calibration facilities and similar technical service operations. Based on the clarity of presentation, methodological robustness, practical relevance, and academic contribution, the manuscript is suitable for publication in its current form and is recommended for acceptance.