

REVIEWER'S REPORT

Manuscript No.: IJAR-59182

Title: Advanced Decision Intelligence for Financial and Operational Resilience in Saudi Pharmaceutical Manufacturing under Vision 2030: Integrating SAP S/4HANA, Power BI, Predictive Forecasting and Working-Capital Analytics.

Recommendation:

Accept as it is

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

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

Reviewer Id: JPR-397

Reviewer's Comment for Publication.

The manuscript addresses a timely and relevant topic concerning financial and operational resilience in Saudi pharmaceutical manufacturing under Vision 2030. It presents an integrated decision-intelligence framework connecting SAP S/4HANA, Power BI, predictive forecasting, and working-capital analytics. The manuscript's central contribution is its attempt to connect operational continuity with financial resilience through a closed decision loop rather than treating digital technologies as isolated tools.

The review methodology is reasonably structured. The authors describe an integrative review approach, define search domains and eligibility criteria, identify 30 high-relevance sources, and explain thematic coding and comparative synthesis. The decision not to calculate pooled effect sizes is also appropriately justified because of the heterogeneity of the included evidence.

The manuscript has several strengths. The integration of transactional data, visual analytics, predictive forecasting, and working-capital management is clearly explained. The discussion appropriately recognises that predictive models require data quality, human judgement, governance, explainability, and documented overrides. The proposed resilience scorecard also provides a practical connection between indicators and managerial actions.

The Saudi-specific discussion is another important feature. The manuscript considers localisation, supplier development, regulatory traceability, workforce capability, data governance, and the financial implications of domestic versus imported supply. These aspects help contextualise the proposed framework within Saudi pharmaceutical manufacturing rather than presenting it solely as a generic digital-transformation model.

The maturity model and closed-loop operating model are also useful conceptual elements. The progression from fragmented visibility to governed integration, predictive control, scenario-based orchestration, and adaptive learning provides a logical structure for implementation.

REVIEWER'S REPORT

However, the following minor revisions are recommended before publication:

1. **Clarify the literature-search procedure.** Although the manuscript states that 30 sources were included and describes five search domains, it does not provide sufficient information about the specific databases/search platforms used, search dates, screening stages, or the number of records initially identified and subsequently excluded. Providing these details would improve reproducibility.
2. **Clarify the distinction between evidence and the authors' proposed framework.** Several sections move from findings in the literature to proposed architectural recommendations. The manuscript would benefit from explicitly distinguishing established findings from the authors' conceptual synthesis and proposed implementation model.
3. **Strengthen the empirical basis for the Saudi-specific claims.** The manuscript acknowledges that direct studies integrating all four capabilities in Saudi pharmaceutical manufacturing remain scarce and that some findings are transferred from adjacent manufacturing, supply-chain, and finance contexts. This limitation should remain clearly visible when making Saudi-specific recommendations.
4. **Clarify the role of SAP S/4HANA and Power BI as examples rather than universally required technologies.** The manuscript appropriately states that the value of SAP S/4HANA lies in the integration principle rather than the brand itself. This distinction could be made more explicit throughout the paper so that the framework is not interpreted as vendor-specific technology advocacy.
5. **Improve presentation of tables and figures.** Table 1 and Table 2 should be checked carefully for formatting, alignment, and readability in the final manuscript. Figures 1 and 2 should also be provided at publication quality and should clearly correspond to the descriptions in the text.
6. **Strengthen the explanation of validation.** Since the proposed architecture and maturity pathway are conceptual and have not yet been validated longitudinally in Saudi pharmaceutical manufacturing, the manuscript should clearly distinguish the proposed model from empirically validated outcomes. The authors already identify longitudinal plant-level evaluation as an important area for future research.
7. **Perform a final language and reference-format review.** Minor typographical, spacing, line-break, and formatting inconsistencies should be corrected. The references should also be checked for consistent bibliographic formatting and completeness.
8. **Further clarify the practical implementation pathway.** The manuscript provides a five-stage maturity model and discusses phased implementation, but a concise implementation table linking each maturity stage to required data capabilities, governance requirements, technology capabilities, and measurable outcomes would make the framework easier for practitioners to apply.

Overall, the manuscript provides a coherent and relevant conceptual synthesis of decision intelligence, operational resilience, and financial resilience in Saudi pharmaceutical manufacturing. Its integration of enterprise systems, visual analytics, predictive forecasting, working-capital management, regulatory governance, and localisation provides practical and academic relevance. The manuscript is suitable for publication **after minor revision**, particularly after strengthening methodological transparency, clarifying the distinction between evidence and proposed concepts, improving presentation of tables/figures, and explicitly acknowledging the limited direct empirical validation in Saudi pharmaceutical manufacturing.