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Organizational Diagnosis in Indonesian Manufacturing: A Systematic Review

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Abstract

Indonesian manufacturing organizations operate in increasingly complex socio-technical environments shaped by structural interdependence, leadership dynamics, cultural norms, and accelerating Industry 4.0 transformation pressures, making organizational diagnosis (OD) essential for identifying systemic misalignment prior to intervention. This study conducts a Systematic Literature Review (SLR) guided by PRISMA 2020 to synthesize peer-reviewed research published between 2012 and 2024 on organizational diagnosis in manufacturing, with particular emphasis on Indonesian contexts. The findings indicate that effective diagnostic practices consistently revolve around four interrelated dimensions: structural alignment, leadership capability, cultural openness, and socio-technical integration. Dominant frameworks include the McKinsey 7S model, the Weisbord Six-Box model, the Burke–Litwin transformational model, Lean-based diagnostics, and socio-technical approaches. The review concludes that integrated and context-sensitive diagnostic strategies, rather than isolated model application, are necessary to enhance transformation readiness, digital adaptation, and long-term organizational resilience in Indonesian manufacturing.

Keywords: Organizational Diagnosis, Indonesian Manufacturing, Socio-technical Systems, Organizational Alignment, Industry 4.0

INTRODUCTION

Manufacturing organizations operate as complex socio-technical systems in which performance is shaped not only by production processes and technology, but also by organizational structure, leadership behavior, cultural norms, and the alignment between strategic intent and operational execution. In Indonesia, manufacturing firms frequently face structural complexity, coordination gaps, and capability disparities that hinder the translation of strategy into operational effectiveness (Budiono et al., 2021). These conditions highlight the need for systematic approaches that can diagnose internal misalignment before performance deterioration becomes embedded in routines.

Organizational diagnosis (OD) has long been positioned as a foundational element of organizational development because it provides a structured and evidence-based process for identifying systemic misfit and determining appropriate interventions (McFillen et al., 2013). Early scholarship during the 2012–2017 period emphasized that ineffective change initiatives often stem from inadequate diagnosis of structural, cultural, and leadership misalignment rather than from the absence of technical solutions (Al-Haddad & Kotnour, 2015; Appelbaum et al., 2012; Burnes & Bargal, 2017). These studies reinforced the view that diagnosing organizational dynamics is a prerequisite for sustainable transformation, particularly in environments characterized by complexity and interdependence.

The urgency of organizational diagnosis has intensified with the acceleration of Industry 4.0. Digitalization, automation, and data-driven production systems require not only technological upgrades but also organizational readiness in terms of structure, skills, governance, and cultural adaptability. Indonesian manufacturing firms frequently encounter barriers to digital transformation, including capability gaps, structural misalignment, and insufficient integration between technology and workflow systems (Rezqianita & Ardi, 2020). Without adequate diagnostic assessment, transformation initiatives risk becoming fragmented, reactive, and unsustainable.

Although OD frameworks are widely discussed in global literature, empirical synthesis focusing on their application within Indonesian manufacturing remains limited. Prior research demonstrates that systematic diagnostic approaches can effectively identify workflow–technology coupling issues and organizational design weaknesses in complex operational settings (Unertl et al., 2020). At the same time, Indonesian organizational contexts are often characterized by hierarchical cultural norms and limited communication openness, which may constrain diagnostic accuracy and intervention legitimacy (Hendriati et al., 2024). Evidence from Indonesian safety-critical sectors further shows that misalignment among structure, procedures, and culture can increase operational risk and reduce reliability (Lestiani et al., 2017), underscoring the importance of integrated diagnostic approaches.

Several diagnostic models offer analytical lenses for understanding these challenges. The McKinsey 7S Framework provides a comprehensive alignment perspective across strategy, structure, systems, skills, staff, style, and shared values, and has been applied in Indonesian contexts to identify organizational misfit (Komarsyah et al., 2019). The Weisbord Six-Box Model supports rapid assessment of operational dimensions such as leadership, relationships, and coordination mechanisms (Adebayo et al., 2021). The Burke–Litwin Transformational Model emphasizes the interaction between transformational and transactional drivers of change, highlighting leadership and culture as central determinants of sustainable performance (Burnes & Bargal, 2017). In addition, Lean-based diagnostic approaches address process inefficiencies but often face cultural and managerial constraints in manufacturing environments (Maware & Parsley, 2022).

Given these theoretical and contextual considerations, a systematic synthesis of organizational diagnosis in Indonesian manufacturing is needed. This study therefore conducts a Systematic Literature Review (SLR), guided by PRISMA 2020, to examine how OD models are applied in Indonesian manufacturing contexts and to identify recurring structural, cultural, leadership, and technological barriers. Specifically, the review aims to (1) identify dominant diagnostic frameworks used in the literature, (2) analyze how these models are contextualized within Indonesian manufacturing characteristics, and (3) map persistent constraints that influence diagnostic effectiveness and transformation readiness. By integrating foundational OD scholarship (2012–2017) with more recent Industry 4.0-oriented studies, this review contributes to a more coherent and context-sensitive understanding of organizational diagnosis in Indonesian manufacturing.

Despite the growing discussion of organizational diagnosis and change management in international scholarship, the literature remains fragmented when examined through the lens of Indonesian manufacturing. Existing studies tend to focus either on structural alignment, cultural dynamics, or digital transformation barriers in isolation, rather than examining how these dimensions interact within an integrated diagnostic logic. Moreover, many empirical studies address organizational change outcomes without explicitly positioning diagnosis as a structured pre-intervention phase, creating a conceptual gap between diagnosis and implementation.

By synthesizing diagnostic frameworks across classical alignment models, transformational theories, and socio-technical perspectives, this review advances a more integrative understanding of organizational diagnosis tailored to manufacturing complexity. Rather than treating diagnostic models as interchangeable tools, this study positions them as complementary lenses that illuminate different layers of organizational functioning. This integrative positioning is particularly relevant for Indonesian manufacturing, where hierarchical structures, coordination interdependence, and uneven digital capability require context-sensitive and multi-level diagnostic approaches.

RESEARCH METHODS

This study employed a Systematic Literature Review (SLR) design to synthesize empirical and conceptual publications on organizational diagnosis (OD) within manufacturing environments, with specific attention to Indonesian organizational contexts. The review followed the PRISMA 2020 framework to ensure transparency and systematic documentation of identification, screening, eligibility, and inclusion stages.

The temporal scope covered peer-reviewed publications from 2012 to 2024. The starting year (2012) was intentionally selected to capture foundational evidence-based discussions on organizational diagnosis and alignment-oriented change scholarship prior to the acceleration of Industry 4.0 discourse (Al-Haddad & Kotnour, 2015; Appelbaum et al., 2012; Burnes & Bargal, 2017; McFillen et al., 2013). This periodization enables integration of early OD alignment perspectives with more recent studies addressing digital transformation challenges in Indonesian manufacturing (Budiono et al., 2021; Rezqianita & Ardi, 2020).

The search process combined keywords related to organizational diagnosis, organizational development, manufacturing or industrial context, and Indonesia-specific identifiers. Model-specific terms were also incorporated to capture literature explicitly engaging with established diagnostic frameworks, including the McKinsey 7S Framework (Komarsyah et al., 2019), the Weisbord Six-Box Model (Adebayo et al., 2021), the Burke–Litwin Transformational Model (Deny et al., 2024), Lean-based diagnostic approaches (Maware & Parsley, 2022), and Systematic Iterative Organizational Diagnostics (SIOD) (Unertl et al., 2020). These frameworks were included because prior studies indicate that Indonesian manufacturing frequently encounters alignment problems between strategy, complexity, and operational performance, alongside structural and technological readiness barriers under Industry 4.0 conditions (Budiono et al., 2021; Rezqianita & Ardi, 2020).

Inclusion criteria required that articles be peer-reviewed journal publications published between 2012 and 2024, explicitly apply or discuss an organizational diagnostic framework, and demonstrate relevance to manufacturing or comparable socio-technical organizational environments. Studies were excluded if they did not incorporate diagnostic logic, focused solely on general change outcomes without structured diagnostic orientation, lacked sufficient methodological transparency, or were not meaningfully transferable to industrial contexts. This staged screening process was implemented to maintain conceptual consistency and reduce selection bias.

To enhance rigor, the selected studies were appraised using a modified Critical Appraisal Skills Programme (CASP) framework, assessing conceptual clarity, methodological transparency, appropriateness of the diagnostic model applied, and relevance to organizational alignment and intervention logic. Only studies meeting minimum quality thresholds were retained for synthesis.

Data extraction captured publication characteristics, research design, organizational setting, diagnostic framework utilized, focal diagnostic dimensions (e.g., structure, leadership, systems, culture, workflow–technology fit), and reported implementation barriers. The analysis employed thematic content analysis, consisting of descriptive mapping, thematic coding, and analytical synthesis. Themes were triangulated across alignment-based models (e.g., 7S), transformational perspectives (e.g., Burke–Litwin), process-oriented diagnostics (Lean), and socio-technical approaches (SIOD), reflecting the assumption that organizational effectiveness in manufacturing arises from the interaction of structural, human, cultural, and technological dimensions (Unertl et al., 2020).

RESULT AND DISCUSSION

Results

The systematic review reveals that organizational diagnosis (OD) in Indonesian manufacturing is conceptualized as a multi-layered analytical process integrating structural alignment, leadership orientation, cultural dynamics, operational efficiency, and technological readiness. Rather than being treated as a standalone assessment activity, diagnosis appears in the literature as a precursor to change implementation, performance improvement, or digital transformation.

Across the reviewed studies, five diagnostic frameworks are most prominently discussed: the McKinsey 7S Framework (Komarsyah et al., 2019), the Weisbord Six-Box Model (Adebayo et al., 2021; Wardhani et al., 2024), the Burke–Litwin Transformational Model (Deny et al., 2024), Lean-based diagnostic approaches (Maware & Parsley, 2022) and Systematic Iterative Organizational Diagnostics (SIOD) (Unertl et al., 2020). These frameworks differ in analytical emphasis but converge in recognizing that organizational effectiveness is shaped by interdependent internal components.

The synthesis indicates three dominant diagnostic dimensions recurring across studies. First, structural alignment problems frequently emerge in the form of unclear job responsibilities, overlapping authority, inconsistent coordination mechanisms, and weak linkage between strategic objectives and operational routines. These issues are particularly salient in manufacturing systems characterized by high complexity and production interdependence (Budiono et al., 2021). Structural fragmentation often produces inefficiencies that manifest as delays, quality inconsistencies, or performance variability.

Second, cultural and relational constraints are consistently identified as underlying barriers to effective diagnosis. Hierarchical organizational norms, centralized decision-making patterns, and limited cross-level communication reduce diagnostic transparency and limit employee participation in identifying systemic weaknesses (Hendriati et al., 2024). This dynamic affects the reliability of data collected during diagnostic interventions and may obscure root causes of performance gaps.

Third, leadership capability and transformational readiness significantly influence the success of diagnostic application. Studies drawing on transformational models highlight that leadership communication, clarity of mission, and alignment of values are decisive variables shaping whether diagnostic findings translate into meaningful organizational improvement (Burnes & Bargal, 2017; Deny et al., 2024). Without leadership commitment, diagnosis risks becoming a formal procedural exercise rather than a catalyst for change.

In addition to structural and cultural dimensions, digital transformation pressures introduce new diagnostic complexity. Industry 4.0 adoption in Indonesian manufacturing is often constrained by limited digital infrastructure, uneven technological competence, and insufficient integration between workflow systems and technological platforms (Rezqianita & Ardi, 2020). These constraints indicate that contemporary diagnosis must extend beyond structural mapping to include socio-technical assessment. SIOD exemplifies this approach by explicitly linking workflow processes and technological configurations within iterative evaluation cycles (Unertl et al., 2020).

Lean diagnostics, while effective in identifying process inefficiencies and waste reduction opportunities, are reported to produce sustainable outcomes only when embedded within broader cultural and leadership alignment (Maware & Parsley, 2022). This finding suggests that operational efficiency tools alone cannot compensate for systemic misalignment across organizational layers. Overall, the synthesized findings demonstrate that organizational diagnosis in Indonesian manufacturing is most effective when structural, cultural, leadership,

process, and technological dimensions are evaluated holistically. Fragmented or single-model applications tend to overlook interdependencies that shape performance outcomes.

In summary, the synthesis indicates that organizational diagnosis in Indonesian manufacturing consistently revolves around four interrelated dimensions: structural alignment, cultural openness, leadership capability, and socio-technical integration. While alignment-based models dominate structural assessment, transformational and socio-technical frameworks provide explanatory depth regarding change sustainability and digital readiness. The recurring interaction among these dimensions suggests that diagnostic effectiveness is contingent upon the integration of multiple analytical perspectives rather than reliance on a single framework.

Discussion

Before interpreting these findings theoretically, it is important to recognize that the recurring patterns across studies reflect systemic interdependence rather than isolated organizational weaknesses.

The findings suggest that organizational diagnosis in Indonesian manufacturing must be understood as an integrative and context-sensitive process rather than a purely technical assessment exercise. Alignment-based frameworks such as the McKinsey 7S provide a foundational structure for identifying internal inconsistencies across strategic and operational domains (Komarsyah et al., 2019). However, the persistence of structural misfit indicates that alignment assessment alone does not fully capture deeper organizational dynamics.

Transformational perspectives, particularly the Burke–Litwin model, extend the explanatory scope by emphasizing leadership behavior, organizational culture, and mission clarity as drivers of sustained change (Burnes & Bargal, 2017; Deny et al., 2024). The prominence of hierarchical norms in Indonesian organizational contexts suggests that diagnostic processes are socially mediated. In high power-distance settings, employees may be reluctant to disclose operational deficiencies, thereby limiting the validity of diagnostic outputs. This dynamic reinforces earlier organizational development scholarship asserting that systematic and evidence-based diagnosis must precede intervention to avoid superficial change strategies (Al-Haddad & Kotnour, 2015; Appelbaum et al., 2012; McFillen et al., 2013).

The increasing complexity introduced by Industry 4.0 further intensifies the need for multi-layered diagnosis. Digital transformation requires not only technological upgrades but also structural reconfiguration, capability development, and cultural adaptation (Rezqianita & Ardi, 2020). The synthesis indicates that technology-focused initiatives frequently underperform when diagnostic processes fail to account for organizational readiness and workflow–technology integration. Socio-technical frameworks such as SIOD address this gap by integrating human, structural, and technological components into iterative diagnostic cycles (Unertl et al., 2020).

The interaction between Lean diagnostics and broader organizational alignment also merits attention. While Lean tools effectively identify operational waste, their long-term impact depends on leadership commitment and cultural reinforcement (Maware & Parsley, 2022). This suggests that process-level diagnosis should not be isolated from structural and transformational analysis.

Theoretically, this review advances an integrative perspective positioning alignment-based, transformational, process-oriented, and socio-technical diagnostic frameworks as complementary layers of analysis. Rather than treating these models as mutually exclusive alternatives, the findings support a staged diagnostic logic beginning with structural alignment mapping, followed by cultural and leadership evaluation, operational process assessment, and technological integration analysis.

Practically, Indonesian manufacturing firms should avoid “solution-first” interventions driven solely by efficiency or digitalization pressures. Instead, firms should implement sequential and iterative diagnostic cycles that integrate structural, behavioral, and technological assessment.

Such integrative approaches reduce the risk of fragmented implementation and enhance resilience under transformation pressures.

Beyond practical implications, the findings also invite deeper theoretical reflection on the strategic positioning of organizational diagnosis. Prior studies emphasize that diagnostic frameworks become most effective when aligned with long-term organizational sustainability rather than short-term corrective interventions (Zhang et al., 2016). Similarly, debates on the evolution of change management argue that diagnosis remains a critical precursor to adaptive transformation, even in contemporary organizational environments characterized by rapid technological change (Worley & Mohrman, 2014). These perspectives reinforce the finding that organizational diagnosis in Indonesian manufacturing should not be treated as episodic evaluation but as a strategic mechanism embedded within continuous improvement cycles.

The review also aligns with integrative change literature suggesting that successful transformation depends on coherence between diagnostic depth and intervention design (Al-Haddad & Kotnour, 2015; Appelbaum et al., 2012). When diagnostic analysis fails to capture structural interdependence and cultural dynamics, change initiatives risk addressing surface-level inefficiencies without resolving systemic misalignment. In Indonesian manufacturing contexts, where operational complexity and hierarchical coordination structures intersect, diagnostic oversimplification may amplify implementation resistance. This underscores the importance of multidimensional assessment prior to strategic restructuring or digital transformation initiatives.

Furthermore, the findings resonate with foundational organizational development scholarship emphasizing that effective diagnosis precedes sustainable behavioral and structural change (Burnes & Bargal, 2017). The Harwood tradition of OD highlights the interplay between leadership, group dynamics, and organizational learning processes, reinforcing the argument that diagnostic processes must integrate structural mapping with behavioral understanding. In manufacturing settings undergoing Industry 4.0 transformation, such integration becomes even more critical, as technological shifts reshape workflows, authority patterns, and performance metrics simultaneously.

Despite its contributions, this review is subject to limitations. The reliance on peer-reviewed publications may underrepresent unpublished diagnostic practices or industry-specific proprietary tools. Additionally, while the review centers on Indonesian manufacturing, some frameworks originate from broader organizational contexts, potentially limiting contextual specificity. Future research should empirically test integrated diagnostic models across distinct manufacturing subsectors and explore comparative dynamics in other emerging industrial economies.

CONCLUSION

This systematic review confirms that organizational diagnosis is a strategic foundation for improving effectiveness and transformation readiness in Indonesian manufacturing. The findings demonstrate that organizational problems rarely arise from isolated deficiencies; instead, they stem from interdependent misalignments across structure, leadership, culture, operational processes, and technological integration.

The synthesis highlights that alignment-based frameworks such as the McKinsey 7S remain useful for mapping structural consistency, while transformational perspectives such as the Burke–Litwin model provide deeper insight into leadership and cultural drivers of sustained change. Lean diagnostics contribute operational efficiency analysis, and socio-technical approaches such as SIOD extend diagnostic capability by explicitly addressing workflow–technology interaction under Industry 4.0 conditions. However, the review indicates that these models are most effective when positioned as complementary layers rather than standalone tools.

Importantly, the Indonesian manufacturing context presents recurring constraints, including hierarchical organizational norms, coordination fragmentation, limited communication openness, uneven digital capability, and insufficient leadership involvement in change processes. These contextual characteristics influence both diagnostic accuracy and intervention sustainability. Therefore, integrated and context-sensitive diagnostic approaches are necessary to avoid fragmented "solution-first" initiatives and to strengthen systemic alignment. These findings further reinforce foundational organizational development perspectives that position systematic diagnosis as a prerequisite for sustainable and context-sensitive organizational change.

Future research should focus on empirically validating integrated diagnostic sequences within specific manufacturing subsectors and examining how hybrid socio-technical diagnostic approaches influence long-term performance, resilience, and digital transformation outcomes in emerging industrial economies.

In conclusion, this review reinforces the view that organizational diagnosis should be positioned not merely as a technical assessment tool, but as a continuous governance mechanism that guides strategic alignment and transformation efforts in manufacturing organizations. As Indonesian manufacturing continues to navigate competitive pressures and accelerating digitalization, systematic and integrated diagnostic practices will become increasingly essential for sustaining organizational learning, adaptive capacity, and long-term industrial resilience.

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