

# Designing a Learning-Oriented Performance Evaluation Model in the Power Industry

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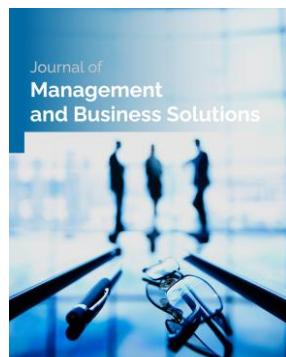
## ABSTRACT

Performance evaluation in infrastructure industries is not merely a control instrument for measuring past results; rather, it plays a decisive role in organizational learning, continuous improvement, and the enhancement of accountability. However, empirical evidence indicates that performance evaluation systems in Iran's power industry are predominantly grounded in traditional, static, and result-oriented approaches and pay limited attention to organizational learning capacities. The present study was conducted with the aim of designing an indigenous model for performance evaluation based on the learning organization approach in Iran's power industry. In terms of purpose, this research is applied, and in terms of methodology, it is qualitative and was carried out using the grounded theory strategy. Data were collected through semi-structured interviews with experts and managers in the power industry and were analyzed through open, axial, and selective coding. The findings led to the identification of the core category of "learning-oriented performance management" and the articulation of its causal, contextual, and intervening conditions, as well as its strategies and consequences. The results indicate that accountability pressures, productivity requirements, and performance transparency, alongside structural and cultural constraints, play a key role in shaping learning-oriented performance evaluation. The proposed model can be used as a practical framework for reforming and enhancing performance evaluation systems in power industry organizations.

**Keywords:** Performance evaluation, learning organization, power industry, grounded theory, performance management

## Introduction

Performance evaluation has long been regarded as a core managerial mechanism for monitoring goal attainment, controlling organizational behavior, and ensuring accountability. In traditional management paradigms, performance evaluation systems were primarily designed to measure past results, compare actual outcomes with predefined standards, and support administrative decisions related to rewards and sanctions. Such approaches, while useful for short-term control, have increasingly been criticized for their static, retrospective, and compliance-oriented nature, particularly in complex and knowledge-intensive environments. Contemporary organizations operate in conditions characterized by rapid technological change, heightened uncertainty, and growing expectations for transparency, adaptability, and sustainable value creation. Under these conditions, performance



### Article history:

Received 13 October 2025  
Revised 15 November 2025  
Accepted 23 November 2025  
Published online 20 December 2025

### How to cite this article:

Ebrahimitabar, M., Bohlooli, N., Ramezani, M., & Beikzad, J. (2025). Designing a Learning-Oriented Performance Evaluation Model in the Power Industry. *Journal of Management and Business Solutions*, 3(6), 1-11. <https://doi.org/10.61838/jmbs.184>



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evaluation can no longer be confined to a narrow control function but must evolve into a dynamic process that supports learning, capability development, and continuous improvement (1, 2).

The shift from control-oriented to learning-oriented performance management reflects broader transformations in management thought, including the growing prominence of knowledge-based views of the firm and learning organization theory. Learning organizations are defined by their ability to continuously acquire, create, share, and apply knowledge in ways that enhance collective performance and long-term viability. Within this perspective, learning is not an isolated activity but is embedded in everyday managerial practices, structures, and processes, including performance evaluation. The learning organization framework emphasizes feedback loops, reflection on action, experimentation, and the alignment of individual learning with organizational objectives (3). Consequently, performance evaluation systems that ignore learning dynamics risk reinforcing inertia, discouraging innovation, and undermining employee engagement.

A growing body of research highlights the positive relationship between organizational learning and organizational performance across different sectors and contexts. Empirical studies demonstrate that learning capabilities enhance adaptability, innovation, and resilience, thereby contributing to sustained competitive advantage. For instance, organizational learning has been shown to mediate the relationship between knowledge management practices and innovation performance, indicating that learning processes are central to translating knowledge into value-creating outcomes (4, 5). Similarly, learning-oriented practices strengthen human capital development and improve adaptive performance, particularly in dynamic industrial environments (6, 7).

The relevance of learning-oriented performance management becomes even more pronounced in infrastructure and utility industries, where organizations are expected to balance efficiency, reliability, public accountability, and long-term sustainability. In such sectors, performance failures can have far-reaching economic and social consequences, while rigid bureaucratic structures often constrain innovation and learning. Research on organizational resilience underscores that learning-oriented systems play a critical role in enabling organizations to anticipate disruptions, respond effectively to crises, and recover from shocks (8). Performance evaluation systems that incorporate learning mechanisms—such as continuous feedback, reflection, and adaptive indicators—can therefore serve as strategic tools for resilience-building rather than mere compliance instruments.

Despite these insights, evidence suggests that many organizations continue to rely on traditional performance evaluation models that emphasize quantitative targets, short-term efficiency, and hierarchical control. Such models often fail to capture intangible assets, learning processes, and dynamic capabilities that are essential for long-term performance. Dynamic capability theory emphasizes that organizational performance depends not only on existing resources but also on the firm's ability to integrate, build, and reconfigure competencies in response to environmental change (9, 10). Performance evaluation systems that are disconnected from learning and capability development may therefore weaken the very foundations of sustainable performance.

Recent studies across different industries provide empirical support for integrating learning into performance management. In manufacturing and service contexts, organizational learning has been linked to improved financial and non-financial performance, especially when supported by supportive leadership styles and enabling technological infrastructures (11, 12). In knowledge-intensive and digital environments, learning-oriented approaches are particularly critical, as performance outcomes increasingly depend on employees' ability to interpret data, collaborate across boundaries, and innovate continuously (13, 14). These findings suggest that performance

evaluation systems must evolve in tandem with broader organizational transformations associated with digitalization and Industry 4.0 and 5.0 paradigms.

Leadership plays a pivotal role in shaping the learning orientation of performance management systems. Transformational and participative leadership behaviors foster psychological safety, encourage knowledge sharing, and legitimize learning from both success and failure. Empirical evidence indicates that leadership behaviors significantly influence organizational learning and innovative performance, particularly in technology-driven environments (12). Conversely, authoritarian or purely transactional leadership styles tend to reinforce control-oriented evaluation practices that suppress learning and experimentation. Thus, understanding performance evaluation requires attention not only to formal systems and indicators but also to the social and cultural contexts in which they are enacted.

Another critical dimension of learning-oriented performance evaluation concerns the integration of knowledge management and learning culture. Knowledge management frameworks emphasize the systematic processes of knowledge creation, storage, sharing, and application, while learning culture reflects shared values and norms that support inquiry, reflection, and continuous improvement. Research demonstrates that performance systems aligned with knowledge management processes are more likely to generate meaningful learning outcomes and sustainable performance improvements (15, 16). In contrast, misalignment between evaluation criteria and learning objectives can lead to superficial compliance, gaming of indicators, and resistance to change.

The contextual specificity of performance evaluation systems has also been highlighted in the literature. Models developed in one institutional or cultural context may not be directly transferable to another without adaptation. Indigenous or context-sensitive models are therefore needed to reflect local organizational structures, cultural norms, and sectoral characteristics. Studies conducted in developing and emerging economies emphasize that bureaucratic constraints, limited learning maturity, and rigid compensation systems can hinder the effectiveness of learning-oriented initiatives (17, 18). These findings underscore the importance of designing performance evaluation frameworks that are grounded in empirical understanding of the specific organizational and institutional environment.

In the context of Iran, performance evaluation research has increasingly recognized the limitations of traditional, result-oriented approaches and called for more developmental and learning-focused models. Prior studies have addressed employee performance evaluation, human resource performance management, and the alignment of evaluation systems with organizational objectives, highlighting the need for integrated and dynamic frameworks (1, 2). More recently, attention has turned to competency development and individual learning as central components of performance evaluation, reflecting global shifts toward learning-centered management paradigms (19). However, much of the existing work remains conceptual or focused on individual-level evaluation, with limited empirical exploration of organizational-level learning-oriented performance management.

Sector-specific research further indicates that industries characterized by technological complexity and public accountability—such as energy, healthcare, and infrastructure—require tailored performance evaluation models. Studies in insurance, hospitality, education, and healthcare demonstrate that continuous learning and feedback mechanisms significantly enhance performance outcomes when embedded in evaluation systems (20-22). These insights suggest that similar approaches may be beneficial in other complex sectors, yet empirical evidence remains uneven across industries and national contexts.

The power industry represents a particularly salient context for examining learning-oriented performance evaluation. As a critical infrastructure sector, it operates under stringent requirements for reliability, efficiency, safety, and transparency, while simultaneously facing pressures related to technological change, sustainability, and human capital development. Organizational learning is essential for addressing challenges such as system complexity, regulatory change, and the integration of new technologies. Nonetheless, performance evaluation practices in such settings are often shaped by bureaucratic logics that prioritize compliance and short-term output measures over learning and adaptation. Bridging this gap requires a systematic examination of how learning-oriented performance management can be conceptualized and operationalized within the specific context of the power industry.

Moreover, recent advances in data analytics and machine learning have opened new possibilities for performance evaluation, enabling more sophisticated analysis of performance patterns and learning dynamics. While machine learning has been applied to performance prediction and marketing analytics, its implications for learning-oriented performance management remain underexplored (14, 23). Integrating analytical tools with learning-focused evaluation frameworks may enhance organizations' ability to generate actionable insights and support evidence-based learning. However, technological solutions alone are insufficient without supportive organizational cultures and learning-oriented evaluation criteria.

Taken together, the literature suggests a growing consensus on the importance of integrating organizational learning into performance evaluation systems, while also revealing significant gaps related to contextual adaptation, sector-specific models, and empirical grounding. There is a particular need for qualitative, theory-building research that captures the complex interactions among structural conditions, leadership practices, cultural factors, and learning mechanisms that shape performance evaluation in real organizational settings. Grounded theory approaches are well suited to this task, as they enable the development of context-sensitive models derived from the lived experiences of organizational actors rather than imposed *a priori* frameworks (3, 24).

Accordingly, this study seeks to address these gaps by developing an indigenous, learning-oriented performance evaluation model grounded in empirical data from organizational contexts, with particular attention to the interaction between performance management practices and organizational learning processes. The aim of this study is to design and explain a context-specific model of performance evaluation based on the learning organization approach that can support continuous improvement and sustainable organizational performance.

## Methods and Materials

In terms of purpose, the present study falls within the category of applied–developmental research, as its objective is to develop an indigenous model for performance evaluation based on the learning organization approach and to provide the groundwork for its application in improving organizational performance, particularly in Iran's power industry. Given the nature of the research problem and its focus on gaining an in-depth understanding of organizational processes and interactions, a qualitative research approach was adopted, and in terms of inferential logic, an inductive reasoning strategy was employed. Within this framework, grounded theory was used as the principal research strategy for extracting concepts and categories and for formulating the final model.

In qualitative research, the primary aim is to explain and achieve a deep understanding of phenomena that are complex, multidimensional, and context-dependent. The phenomenon examined in this study—namely, the manner in which organizational learning is integrated into the performance evaluation process—possesses these

characteristics and cannot be adequately explained solely through quantitative variables and linear relationships. Accordingly, hypothesis-driven methods were set aside, and the focus was placed on discovering concepts emerging from the lived experiences of organizational actors.

The grounded theory approach enables the researcher to begin with empirical data and gradually arrive at the formation of categories and theoretical relationships without imposing predetermined theoretical frameworks. In this method, data collection and analysis are conducted simultaneously, and the theory-building process is based on the constant comparison of data, concepts, and categories. In the present study, data analysis was carried out through open, axial, and selective coding, and causal, contextual, and consequential relationships among categories were identified in order to systematically derive the final model.

The research population consisted of senior managers, performance evaluation experts, and organizational learning specialists active in Iran's power industry. This population was selected due to their key roles in the design, implementation, and revision of performance evaluation systems, as well as their direct involvement in organizational learning processes. The participants possessed substantial professional experience and tacit knowledge relevant to the research topic, which contributed to the richness of the data.

Sampling in this study was conducted using theoretical sampling. In theoretical sampling, participants are selected based on emerging concepts, with the aim of refining and enriching theoretical categories. The sampling process continued until theoretical saturation was achieved; that is, data collection was halted when new data no longer added new concepts or relationships to the model. In selecting the sample, organizational and professional diversity was taken into account to ensure that perspectives from the power generation, transmission, and distribution sectors were adequately represented.

The primary data collection instrument was semi-structured interviews. This type of interview, due to its flexible structure, allows for the use of open-ended questions and the in-depth exploration of issues. The main interview themes included participants' experiences with performance evaluation systems, the manner in which these systems relate to individual and organizational learning, mechanisms for enhancing learning through evaluation, and the challenges encountered in this process. All interviews were conducted with the informed consent of the participants, recorded, and fully transcribed.

In addition to interviews, field notes, limited observation, and the analysis of organizational documents were used as complementary data collection tools. These supplementary methods contributed to a better understanding of the organizational context and increased the depth of data analysis. To ensure the credibility of the findings, strategies such as expert review, participant review, and pretesting of the interview guide were employed. Collectively, these measures strengthened the trustworthiness and methodological coherence of the study and provided the necessary foundation for extracting a valid and context-specific model.

## Findings and Results

Data analysis indicated that "learning-oriented performance management," as the core category of the study, emerges through the interaction among a set of conditions and strategies. Accountability and productivity pressures, as causal conditions, drive organizations toward revising their performance evaluation systems. However, bureaucratic structures and a static organizational culture, as contextual conditions, constrain the full realization of this approach.

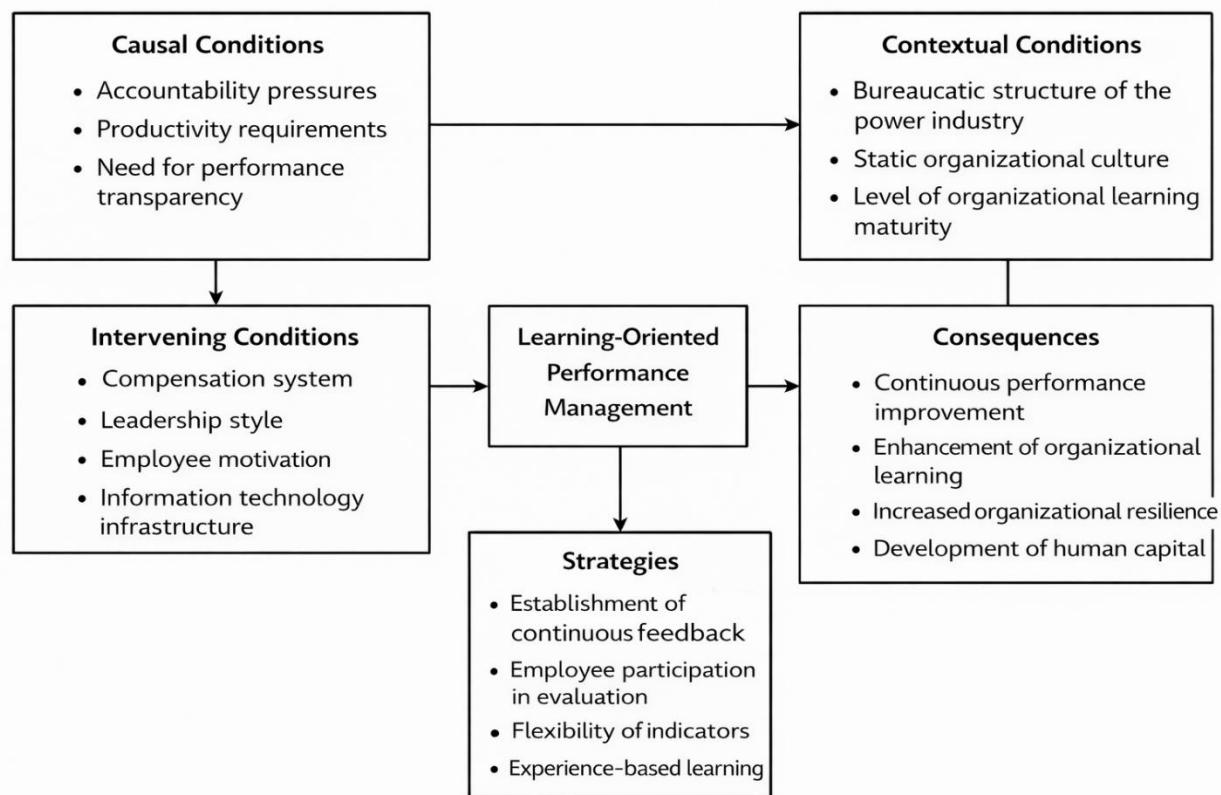
Strategies such as the establishment of continuous feedback, employee participation, and flexibility of indicators play a mediating role in transforming performance evaluation from a control instrument into a learning-oriented process. The outcomes of this approach include continuous performance improvement, enhancement of organizational learning capacity, and increased organizational resilience.

Based on the relationships identified among the categories, the final model of performance evaluation grounded in the learning organization approach in Iran's power industry was developed as presented in Table 1.

**Table 1. Results of Qualitative Analysis**

Model Components	Identified Categories
Causal conditions	Accountability pressures, productivity requirements, need for performance transparency
Contextual conditions	Bureaucratic structure of the power industry, static organizational culture, level of organizational learning maturity
Intervening conditions	Leadership style, compensation system, information technology infrastructure, employee motivation
Strategies	Establishment of continuous feedback, employee participation in evaluation, flexibility of indicators, experience-based learning
Consequences	Continuous performance improvement, enhancement of organizational learning, increased organizational resilience, development of human capital
Core category	Learning-oriented performance management

To provide an integrated presentation of the relationships among the identified categories and to explicate the theoretical logic of the study, the conceptual model of performance evaluation based on the learning organization approach is presented in Figure 1.



**Figure 1. Conceptual Model of the Study**

As shown in Figure 1, learning-oriented performance management, as the core category, is shaped under the influence of causal conditions and within the context of contextual conditions, and through specific strategies leads to performance-related and learning-related outcomes; meanwhile, intervening conditions play a moderating role.

## Discussion and Conclusion

The findings of the present study indicate that learning-oriented performance management constitutes a central mechanism through which organizations can move beyond traditional, control-based evaluation systems toward more dynamic, adaptive, and developmental approaches. The results demonstrate that accountability pressures, productivity requirements, and the need for performance transparency act as key causal conditions that trigger reconsideration of existing performance evaluation systems. This aligns with prior research emphasizing that external and internal accountability demands often serve as catalysts for reforming managerial control systems, particularly in sectors characterized by public responsibility and operational complexity (1, 2). In this sense, performance evaluation emerges not merely as a technical tool but as a strategic response to environmental expectations and institutional pressures.

At the same time, the study highlights that bureaucratic structures and static organizational cultures function as contextual conditions that can either constrain or shape the implementation of learning-oriented evaluation practices. This finding is consistent with studies suggesting that rigid hierarchies, rule-bound procedures, and low levels of learning maturity often limit organizations' capacity to transform evaluative practices into learning processes (17, 18). In line with learning organization theory, such contextual factors influence whether feedback is used for reflection and improvement or merely for compliance and reporting (3). The results therefore reinforce the argument that performance evaluation reforms cannot succeed in isolation from broader cultural and structural change.

A key contribution of the findings lies in identifying specific strategies that mediate the transition from control-oriented evaluation to learning-oriented performance management. The establishment of continuous feedback mechanisms, employee participation in evaluation processes, flexibility of performance indicators, and experience-based learning were found to play a decisive role in this transformation. These strategies resonate strongly with empirical evidence showing that continuous learning and feedback loops enhance organizational performance by fostering reflection, knowledge sharing, and adaptive behavior (6, 20). In particular, employee participation in evaluation processes appears to strengthen psychological ownership and engagement, which in turn facilitates deeper learning and more meaningful use of performance information (21).

The prominence of continuous feedback in the proposed model is also supported by research on dynamic capabilities and strategic performance management. Dynamic capability theory emphasizes the importance of sensing, seizing, and transforming capabilities, all of which rely on timely feedback and learning from performance outcomes (9, 10). The findings suggest that when feedback is embedded as an ongoing process rather than an annual or episodic event, performance evaluation becomes a platform for learning and capability development rather than a retrospective judgment mechanism. This insight is particularly relevant for organizations operating in technologically complex and rapidly changing environments.

Intervening conditions identified in the study—such as leadership style, compensation systems, information technology infrastructure, and employee motivation—further explain variability in the effectiveness of learning-oriented performance management. Leadership style, in particular, emerged as a critical moderating factor shaping

how evaluation practices are interpreted and enacted. This finding aligns with recent studies demonstrating that participative and learning-oriented leadership behaviors significantly enhance organizational learning and innovative performance, especially in advanced technological contexts (12). Leaders who frame evaluation as an opportunity for development rather than control appear more capable of fostering trust, openness, and learning-oriented behaviors among employees.

The role of compensation systems as an intervening condition highlights the importance of aligning incentives with learning objectives. When reward systems emphasize short-term quantitative targets, they may undermine learning-oriented evaluation by encouraging gaming behavior and risk aversion. Conversely, compensation systems that recognize learning efforts, knowledge sharing, and capability development are more likely to reinforce learning-oriented performance management. This finding echoes prior research indicating that misalignment between evaluation criteria and reward structures can weaken the impact of organizational learning initiatives (4, 18). Thus, performance evaluation reforms must be accompanied by complementary changes in incentive systems.

Information technology infrastructure was also identified as a key intervening condition facilitating learning-oriented evaluation. Advanced information systems enable timely data collection, performance visualization, and analytical feedback, which support reflection and evidence-based learning. While prior studies have primarily examined the role of digital tools in performance prediction and analytics, the present findings suggest that technology also plays an enabling role in learning-oriented performance management when combined with appropriate cultural and managerial practices (14, 23). This underscores that technological investments alone are insufficient without parallel investments in learning-oriented evaluation frameworks.

The outcomes associated with learning-oriented performance management—continuous performance improvement, enhanced organizational learning capacity, increased organizational resilience, and human capital development—are strongly supported by existing literature. Organizational learning has been repeatedly linked to improved adaptability and resilience, particularly in environments characterized by uncertainty and systemic risk (8). The study's findings reinforce the view that learning-oriented evaluation systems contribute to resilience by enabling organizations to learn from both successes and failures, anticipate disruptions, and respond more effectively to change.

Human capital development emerged as a significant consequence of learning-oriented performance management, reflecting the developmental orientation of such systems. This finding aligns with prior research emphasizing the interdependence of human capital, organizational learning capability, and performance outcomes (5, 7). By integrating learning objectives into performance evaluation, organizations can create virtuous cycles in which individual development reinforces organizational capabilities, leading to sustained performance improvement.

Importantly, the study contributes to the literature by offering a context-specific, empirically grounded model of learning-oriented performance evaluation. While prior research has examined learning organization concepts and performance management separately, fewer studies have systematically integrated these perspectives within a coherent evaluative framework tailored to a specific industry context. The proposed model extends existing work by demonstrating how causal, contextual, intervening, strategic, and outcome dimensions interact to shape learning-oriented performance management. This integrative perspective responds to calls for more holistic and context-sensitive approaches to performance evaluation (3, 24).

The findings also complement research on quality and excellence models, which emphasize continuous improvement and knowledge management as drivers of performance. Studies on the EFQM excellence model, for

example, highlight the importance of aligning performance measurement with learning and knowledge processes to achieve sustainable results (15). The present study extends this logic by explicitly positioning learning-oriented performance management as the core category through which such alignment can be operationalized in practice.

Overall, the discussion suggests that learning-oriented performance management represents a strategic shift from evaluating what organizations have achieved to understanding how they learn and improve. This shift is particularly critical in sectors where performance outcomes are intertwined with public accountability, technological complexity, and long-term sustainability. By embedding learning into performance evaluation, organizations can transform evaluation from a source of control and anxiety into a mechanism for empowerment, adaptation, and continuous improvement.

Despite its contributions, this study has several limitations. First, the qualitative and context-specific nature of the research limits the generalizability of the findings to other industries or national contexts. Second, the study relied primarily on interview data, which may be subject to respondent bias or retrospective interpretation. Third, the cross-sectional design captures perceptions and practices at a particular point in time and does not fully account for the dynamic evolution of performance evaluation systems over time.

Future research could extend this study by testing the proposed model quantitatively across different organizational contexts to examine its explanatory and predictive power. Longitudinal studies would be particularly valuable in capturing how learning-oriented performance management evolves and influences performance over time. Comparative studies across industries or countries could also shed light on the role of institutional and cultural factors in shaping learning-oriented evaluation systems.

From a practical perspective, managers should view performance evaluation as a learning infrastructure rather than a mere control mechanism. Organizations are encouraged to invest in continuous feedback systems, participatory evaluation practices, and flexible performance indicators that support learning and adaptation. Aligning reward systems, leadership development, and information technology infrastructure with learning-oriented evaluation principles can further enhance the effectiveness of performance management reforms.

## Acknowledgments

We would like to express our appreciation and gratitude to all those who helped us carrying out this study.

## Authors' Contributions

All authors equally contributed to this study.

## Declaration of Interest

The authors of this article declared no conflict of interest.

## Ethical Considerations

All ethical principles were adhered in conducting and writing this article.

## Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

## Funding

This research was carried out independently with personal funding and without the financial support of any governmental or private institution or organization.

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