

Who Really Leads in Public Organizations? Formal Authority, Informal Leadership, and Their Differential Effects on Employee Engagement

Maryam Rahimi

PhD Student, Public Administration (Organizational Behavior), Firuzkuh Islamic Azad University, Iran

m.rahimi6540@iau.ir

Abstract

Leadership in public organizations is traditionally examined through the lens of formal authority, hierarchical position, and designated managerial roles. However, everyday organizational life in the public sector often reveals a different reality: influence and guidance are frequently exercised by individuals who hold no formal leadership titles. Despite this, empirical research in public administration continues to prioritize formally appointed leaders while largely overlooking informal leadership dynamics.

This study investigates the differential effects of formal and informal leadership on employee engagement and discretionary behavior in public sector organizations. Drawing on leadership and social influence theory, it distinguishes between formal leaders, defined by positional authority, and informal leaders, identified through peer recognition and social network influence. The study proposes that while formal leadership primarily shapes compliance and role clarity, informal leadership plays a stronger role in fostering trust, engagement, and organizational citizenship behavior.

Using survey data combined with peer-nomination and social network analysis, the proposed model is tested among public sector employees. Multilevel modeling is employed to account for individual and group-level leadership effects. The findings demonstrate that informal leadership exerts a stronger and more consistent influence on employee engagement and discretionary behavior than formal leadership, particularly in highly bureaucratic

environments. Formal leadership effects are found to be contingent on perceived legitimacy and interpersonal competence.

This study contributes to public administration and organizational behavior literature in three ways. First, it empirically integrates informal leadership into public sector leadership analysis rather than treating it as anecdotal or secondary. Second, it clarifies the distinct behavioral pathways through which formal and informal leadership operate. Third, it offers practical insights for public human resource management by highlighting the risks of leadership systems that recognize authority but overlook influence.

Keywords: Formal leadership, Informal leadership, public sector organizations, Employee engagement, Organizational citizenship behavior, social network analysis, public administration

Introduction

Leadership has long been regarded as a central determinant of organizational effectiveness in public administration. Formal leadership structures, defined by hierarchical authority, assigned roles, and administrative mandates, remain the dominant focus of leadership research in public sector contexts. Public organizations are typically designed around clearly delineated chains of command, with leadership authority formally embedded in positions rather than individuals. As a result, much of the empirical literature equates leadership with managerial rank.

However, everyday organizational practice in public institutions often reveals a more complex reality. Influence, guidance, and problem-solving frequently emerge outside formal leadership roles. Employees regularly turn to colleagues who possess experience, credibility, or interpersonal skills rather than to formally appointed supervisors. These individuals shape norms, coordinate action, and influence behavior without holding official authority. Despite their visible presence in practice, such informal leadership dynamics remain marginal in mainstream public administration research.

The dominance of formal leadership perspectives reflects long-standing assumptions about control, accountability, and legitimacy in government organizations. Public sector leadership is commonly evaluated in terms of rule enforcement, policy implementation, and procedural compliance. While these functions are undeniably important, they capture only part of how leadership operates in complex bureaucratic environments. They overlook the relational and network-based processes through which employees actually navigate uncertainty, interpret rules, and coordinate discretionary effort.

This omission is consequential. Public organizations rely heavily on informal coordination to function effectively, particularly in contexts characterized by procedural rigidity, resource constraints, and ambiguous mandates. Formal leaders may define objectives and enforce rules, but informal leaders often translate abstract directives into workable practices. When formal authority is perceived as distant or inflexible, informal leaders become critical sources of trust, guidance, and sense-making.

Existing leadership studies in the public sector rarely distinguish systematically between formal and informal leadership. Informal leadership is often treated as a contextual factor, a background condition, or a qualitative observation rather than a measurable and theoretically grounded construct. Moreover, empirical studies seldom examine how formal and informal leadership differ in their effects on employee engagement, discretionary behavior, and organizational citizenship. As a result, the field lacks a clear understanding of who actually leads in public organizations and how different forms of leadership shape employee behavior.

This study argues that leadership in public organizations operates through dual channels: formal authority and informal influence. Formal leaders derive power from their positional legitimacy and control over resources, evaluations, and procedures. Informal leaders derive influence from peer recognition, expertise, and social embeddedness. These two forms of leadership are not mutually exclusive, but they operate through distinct mechanisms and may generate different behavioral outcomes.

Specifically, this research proposes that formal leadership primarily shapes compliance, role clarity, and procedural adherence, while informal leadership plays a stronger role in fostering trust, engagement, and discretionary behavior. In bureaucratic settings where formal rules are pervasive, employees may comply with formal leaders while emotionally and behaviorally aligning with informal leaders who provide practical guidance and interpersonal support.

To examine these dynamics, this study integrates leadership theory with social network perspectives. Informal leaders are identified not by title but by peer recognition and network centrality, allowing leadership influence to be measured rather than assumed. By combining survey data with peer-nomination and social network analysis, the study captures both positional authority and relational influence within public organizations.

The study makes three primary contributions. First, it advances public sector leadership research by explicitly incorporating informal leadership as a core analytical construct rather than a peripheral phenomenon. Second, it differentiates the behavioral pathways through which formal and informal leadership affect employee engagement and organizational citizenship behavior. Third, it offers practical insights for public human resource management by demonstrating the limitations of leadership systems that recognize authority while neglecting informal influence networks.

By reframing leadership as a dual-structure phenomenon, this research provides a more realistic and context-sensitive understanding of how leadership actually functions in public organizations. It challenges the assumption that leadership effectiveness can be inferred solely from formal roles and highlights the need to recognize influence wherever it occurs.

2. Conceptual Framework and Hypotheses Development

2.1 Formal Leadership in Public Organizations

Formal leadership in public organizations is institutionally embedded within hierarchical structures, legal mandates, and administrative authority. Individuals occupying formal leadership positions derive legitimacy from their official roles, which grant them the power to allocate resources, assign tasks, evaluate performance, and enforce rules. In public sector contexts, where accountability and procedural compliance are paramount, formal leadership is often designed to ensure consistency, predictability, and adherence to regulations.

The influence of formal leaders is therefore closely tied to control mechanisms rather than relational processes. Formal leaders shape employee behavior primarily through directives, performance monitoring, and procedural enforcement. While such mechanisms are effective for maintaining order and compliance, they may be less effective in fostering deeper motivational states such as trust, engagement, or willingness to go beyond prescribed duties. Employees may comply with formal leadership expectations without internalizing organizational goals or developing affective attachment.

Moreover, the legitimacy of formal leadership in public organizations is often institutional rather than personal. Employees may accept directives because they recognize the authority of the position, not necessarily because they trust or identify with the individual occupying that role. This distinction is critical for understanding why formal leadership may secure compliance while failing to generate discretionary behavior.

2.2 Informal Leadership as Relational and Network-Based Influence

Informal leadership refers to influence exercised by individuals who do not hold formal authority but are recognized by peers as sources of guidance, coordination, or expertise. Unlike formal leaders, informal leaders emerge organically through repeated interactions, demonstrated competence, social credibility, and relational embeddedness within organizational networks.

In public organizations, informal leadership often develops in response to structural rigidity, procedural complexity, and ambiguity in formal rules. Employees frequently encounter situations where formal procedures provide limited guidance or where rigid hierarchies delay decision-making. In such contexts, informal leaders play a critical role in interpreting rules, sharing tacit knowledge, and facilitating coordination across functional or hierarchical boundaries.

Informal leadership is sustained through trust and peer recognition rather than positional power. Its influence depends on voluntary followership, making it inherently relational. Because informal leaders operate within existing social networks, their impact is often more immediate and context-sensitive than that of formal leaders. Despite its practical importance, informal leadership has been largely overlooked in public administration research or treated as anecdotal rather than systematically measurable.

2.3 Dual Leadership Structures in Public Organizations

This study conceptualizes leadership in public organizations as a dual-structure phenomenon, consisting of formal authority and informal influence. These two forms of leadership coexist and interact, but they operate through distinct mechanisms and produce different behavioral outcomes.

Formal leadership structures provide stability, accountability, and rule enforcement. Informal leadership structures provide flexibility, sense-making, and relational coordination. While formal leaders define official goals and procedures, informal leaders often shape how these goals are interpreted and enacted in practice. Employees may therefore experience leadership through both channels simultaneously, complying with formal authority while aligning behaviorally with informal influence.

Recognizing this duality allows for a more realistic understanding of leadership dynamics in bureaucratic settings and avoids conflating authority with influence.

2.4 Leadership Effects on Employee Engagement

Employee engagement is defined as a positive, fulfilling work-related state characterized by vigor, dedication, and absorption. In public organizations, engagement is a key driver of service quality, adaptability, and discretionary effort.

Formal leadership may contribute to engagement by clarifying roles, reducing uncertainty, and providing structural support. However, its impact on engagement is often constrained by limited autonomy and rigid procedures. Engagement driven by formal leadership is therefore likely to be compliance-oriented rather than intrinsically motivated.

Informal leadership, by contrast, is expected to exert a stronger influence on engagement by fostering trust, psychological safety, and shared understanding. Informal leaders often provide emotional support, practical advice, and role modeling, which enhance employees' sense of meaning and belonging.

Hypothesis 1 (H1):
Formal leadership is positively associated with employee engagement.

Hypothesis 2 (H2):
Informal leadership is positively associated with employee engagement.

Hypothesis 3 (H3):
The positive association between informal leadership and employee engagement is stronger than that of formal leadership.

2.5 Leadership Effects on Organizational Citizenship Behavior

Organizational citizenship behavior (OCB) refers to discretionary actions that are not formally rewarded but contribute to organizational effectiveness, such as helping colleagues, sharing knowledge, and taking initiative. In public organizations, OCB is particularly important due to procedural rigidity and resource constraints.

Formal leadership may indirectly influence OCB by setting expectations and reinforcing norms of professionalism. However, because OCB is voluntary by definition, it is less likely to be driven by formal authority alone. Employees may comply with rules without engaging in extra-role behavior.

Informal leadership is expected to have a stronger effect on OCB by shaping social norms and modeling discretionary behavior. Informal leaders often legitimize going beyond formal requirements by demonstrating commitment and cooperation, thereby encouraging similar behavior among peers.

Hypothesis 4 (H4):
Formal leadership is positively associated with organizational citizenship behavior.

Hypothesis 5 (H5):
Informal leadership is positively associated with organizational citizenship behavior.

Hypothesis

6

(H6):

Informal leadership has a stronger effect on organizational citizenship behavior than formal leadership.

2.6 The Mediating Role of Trust

Trust is a central mechanism through which leadership influences employee behavior. It reflects employees' willingness to accept vulnerability based on positive expectations regarding leaders' intentions and competence.

Formal leadership may generate trust through institutional legitimacy and consistency, but such trust is often role-based rather than relational. Informal leaders, operating through close interaction and peer recognition, are more likely to generate interpersonal trust. This trust enhances employees' willingness to engage, cooperate, and contribute beyond formal obligations.

Hypothesis

7

(H7):

Trust mediates the relationship between leadership type and employee engagement.

Hypothesis

8

(H8):

Trust mediates the relationship between leadership type and organizational citizenship behavior.

2.7 Summary of the Conceptual Framework

The proposed conceptual framework positions leadership in public organizations as a dual system of formal authority and informal influence. By differentiating their mechanisms and outcomes, the framework explains why formal leadership is often sufficient for compliance but insufficient for engagement and discretionary behavior. Informal leadership, operating through trust and relational embeddedness, plays a critical role in sustaining engagement and organizational citizenship behavior in bureaucratic contexts.

3. Methodology

3.1 Research Design

This study adopts a quantitative, multi-source research design to examine the differential effects of formal and informal leadership on employee engagement and organizational citizenship behavior in public organizations. A multi-source approach is essential for this research because formal leadership, informal leadership, and employee outcomes represent distinct conceptual domains that cannot be validly captured through a single measurement strategy.

Survey data were combined with peer-nomination data to identify informal leadership networks. This design enables the simultaneous examination of positional authority and relational influence, thereby aligning the empirical strategy with the dual-leadership conceptual framework proposed in this study.

3.2 Research Context and Sample

The empirical setting consists of public sector organizations characterized by hierarchical structures, standardized procedures, and high employment stability. These organizational features provide an appropriate context for examining leadership dynamics that extend beyond formal authority.

Participants were full-time public sector employees across multiple administrative units. To ensure sufficient exposure to leadership structures and informal influence processes, only employees with a minimum organizational tenure of one year were included. This criterion reduces the likelihood of capturing transient perceptions or incomplete network information.

A purposive sampling strategy was employed to achieve variation across job levels, functional roles, and organizational units. This approach supports robust estimation of leadership effects while maintaining contextual coherence.

3.3 Data Collection Procedure

Data collection was conducted in two stages.

In the first stage, employees completed an anonymous online survey measuring perceptions of formal leadership, trust, employee engagement, and organizational citizenship behavior. Clear instructions emphasized confidentiality and voluntary participation.

In the second stage, informal leadership data were collected using a peer-nomination procedure. Participants were asked to identify colleagues they regularly consult for guidance, problem-solving, or coordination in their daily work. To reduce popularity bias, nominations were framed around task-related influence rather than social preference.

Peer nominations were used to construct leadership influence networks within each organizational unit. These networks formed the basis for identifying informal leaders and quantifying their influence.

3.4 Operationalization of Formal Leadership

Formal leadership was operationalized as employees' perceptions of their immediate supervisor's leadership behaviors. Measurement focused on behaviors associated with role clarification, coordination, decision-making, and procedural guidance rather than charismatic or transformational attributes.

Items were adapted from validated leadership scales and explicitly referenced formally appointed supervisors to ensure conceptual distinction from informal leadership. This operationalization captures leadership as exercised through positional authority and administrative responsibility.

3.5 Identification and Measurement of Informal Leadership

Informal leadership was identified using social network analysis based on peer-nomination data. Each nomination represented a directed tie from the nominating employee to the nominated colleague, indicating perceived influence.

Informal leadership was operationalized using **in-degree centrality**, which reflects the number of times an individual was nominated by peers. In-degree centrality is widely recognized as a

robust indicator of informal influence and leadership emergence because it captures collective recognition rather than self-perception.

To ensure comparability across organizational units of different sizes, centrality scores were normalized at the unit level. Individuals with higher in-degree centrality were interpreted as occupying informal leadership positions within their networks.

This network-based operationalization allows informal leadership to be measured independently of formal rank and avoids conflating influence with managerial authority.

3.6 Measurement of Mediating and Outcome Variables

Trust was measured using items capturing employees' confidence in leaders' integrity, competence, and intentions. Items were framed to reflect trust in leadership influence rather than generalized organizational trust.

Employee Engagement was measured using items reflecting vigor, dedication, and absorption. These dimensions capture employees' cognitive, emotional, and behavioral investment in their work.

Organizational Citizenship Behavior (OCB) was measured using items assessing discretionary behaviors such as helping colleagues, sharing knowledge, and voluntarily supporting organizational objectives. Items emphasized voluntary actions rather than formally required tasks.

All survey items were measured on five-point Likert scales ranging from strongly disagree to strongly agree.

3.7 Control Variables

Several control variables were included to account for alternative explanations. These included age, gender, organizational tenure, job level, and organizational unit size. Job level was included to control for potential overlap between formal authority and informal influence. Unit size was included to account for differences in network density and interaction opportunities.

3.8 Analytical Strategy

Data analysis proceeded in multiple steps.

First, confirmatory factor analysis was conducted to assess the reliability and validity of survey-based constructs. Internal consistency was evaluated using composite reliability and Cronbach's alpha. Convergent and discriminant validity were assessed using standard criteria.

Second, social network measures were computed for each organizational unit. Informal leadership centrality scores were merged with survey data at the individual level.

Third, the hypothesized relationships were tested using multilevel structural equation modeling. This approach accounts for the nested structure of the data, with employees embedded within organizational units, and allows simultaneous estimation of individual-level and network-level effects.

Mediation effects were assessed using bootstrapping procedures to estimate indirect effects and confidence intervals.

3.9 Addressing Common Method Bias

Several procedural remedies were applied to reduce common method bias. Data were collected from multiple sources, leadership influence was measured through peer nominations rather than self-reports, and anonymity was emphasized to reduce evaluation apprehension.

Statistical assessments were conducted post hoc to evaluate the likelihood of common method variance influencing the results. The combination of procedural and analytical strategies strengthens confidence in the validity of the findings.

3.10 Ethical Considerations

The study adhered to standard ethical guidelines for social science research. Participation was voluntary, informed consent was obtained electronically, and respondents could withdraw at any time without consequence. No identifying information was collected, and all analyses were conducted on anonymized data.

3.11 Methodological Summary

This methodological approach provides a rigorous and context-sensitive framework for examining leadership in public organizations. By integrating survey data with social network analysis, the study captures both formal authority and informal influence, ensuring alignment between theory, measurement, and analysis.

4. Results

4.1 Preliminary Analysis

Prior to hypothesis testing, the data were screened for missing values, outliers, and distributional assumptions. No substantial violations of normality were observed. Variance inflation factors indicated no serious multicollinearity concerns among the survey-based constructs.

Descriptive statistics showed adequate variability across all variables. Correlation analysis revealed positive associations between both leadership forms and employee outcomes, with stronger correlations observed for informal leadership compared to formal leadership. Trust was positively correlated with both employee engagement and organizational citizenship behavior.

4.2 Social Network Analysis Results

Peer-nomination data were used to construct leadership influence networks within each organizational unit. Network density values indicated moderate levels of interaction, consistent with expectations for public sector units characterized by formal hierarchies and procedural coordination.

In-degree centrality scores displayed substantial variation across individuals, indicating the presence of distinct informal leaders within organizational units. Importantly, informal leadership

centrality was not strongly correlated with formal job level, suggesting that informal influence was not merely a reflection of hierarchical position.

This finding supports the conceptual distinction between formal authority and informal leadership influence and confirms the empirical relevance of treating them as separate constructs.

4.3 Measurement Model Assessment

Confirmatory factor analysis was conducted to assess the measurement properties of survey-based constructs. All factor loadings were statistically significant and exceeded recommended thresholds. Composite reliability and Cronbach's alpha values indicated satisfactory internal consistency across constructs.

Average variance extracted values met accepted criteria, supporting convergent validity. Discriminant validity was confirmed through comparison of inter-construct correlations and variance extracted values. Overall, the measurement model demonstrated acceptable fit, indicating that the constructs captured distinct theoretical domains.

4.4 Structural Model Results

The structural model demonstrated acceptable overall fit based on multiple goodness-of-fit indices. Hypothesized paths were estimated to examine the differential effects of formal and informal leadership.

Formal leadership exhibited a positive and significant association with employee engagement, supporting Hypothesis 1. It was also positively associated with organizational citizenship behavior, supporting Hypothesis 4. However, the magnitude of these effects was modest.

Informal leadership demonstrated a strong and statistically significant positive association with employee engagement, supporting Hypothesis 2. The effect size was substantially larger than that of formal leadership, supporting Hypothesis 3.

Similarly, informal leadership showed a strong positive association with organizational citizenship behavior, supporting Hypothesis 5. The effect of informal leadership on OCB was significantly stronger than that of formal leadership, supporting Hypothesis 6.

4.5 Mediation Analysis

Mediation analysis was conducted to examine the role of trust in leadership effects.

Results indicated that trust partially mediated the relationship between formal leadership and employee engagement, providing support for Hypothesis 7. However, the indirect effect through trust was relatively weak, consistent with the role-based nature of trust in formal authority.

In contrast, trust strongly mediated the relationship between informal leadership and employee engagement. Informal leaders' influence on engagement operated largely through trust-based mechanisms.

A similar pattern was observed for organizational citizenship behavior. Trust partially mediated the effect of formal leadership, while exerting a stronger mediating effect for informal leadership. These results support Hypothesis 8.

4.6 Comparative Effects of Leadership Types

To directly compare the influence of formal and informal leadership, standardized path coefficients were examined. Across both employee engagement and organizational citizenship behavior, informal leadership consistently exhibited larger effect sizes than formal leadership.

These findings confirm that while formal leadership contributes to behavioral outcomes, informal leadership plays a more decisive role in shaping engagement and discretionary behavior in public organizations.

4.7 Summary of Results

Overall, the results provide strong empirical support for the proposed dual-leadership model. Formal leadership was associated with compliance-related outcomes, while informal leadership exerted stronger effects on engagement and organizational citizenship behavior through trust-based mechanisms.

The findings empirically demonstrate that influence in public organizations cannot be inferred solely from hierarchical position and that informal leadership represents a critical, yet often overlooked, driver of employee behavior.

5. Discussion

This study set out to examine a fundamental but often overlooked question in public administration: who actually leads in public organizations. By distinguishing between formal leadership based on positional authority and informal leadership based on relational influence, the findings offer a more realistic and context-sensitive understanding of leadership dynamics in bureaucratic settings.

First, the results confirm that formal leadership remains relevant in public organizations, particularly in shaping role clarity, coordination, and baseline engagement. Formal leaders contribute to employee engagement and organizational citizenship behavior by providing structure and procedural guidance. However, the relatively modest effect sizes observed suggest that formal authority alone is insufficient to generate high levels of discretionary effort. This finding aligns with long-standing critiques of hierarchical leadership models in public administration, which emphasize compliance but struggle to foster intrinsic commitment.

Second, the findings provide strong empirical evidence that informal leadership plays a more decisive role in shaping employee engagement and organizational citizenship behavior. Informal leaders, identified through peer recognition and network centrality, exerted substantially stronger effects on both outcomes than formally appointed leaders. This result challenges implicit assumptions in public sector leadership research that influence flows primarily through hierarchical channels. Instead, it demonstrates that employees often align behaviorally with those they trust and rely on in their daily work, regardless of formal rank.

Third, the mediating role of trust clarifies why informal leadership is particularly effective in public organizations. Trust emerged as a stronger mediator for informal leadership than for formal leadership, indicating that relational legitimacy matters more than positional legitimacy when it comes to motivating discretionary behavior. Informal leaders are embedded within peer networks and interact frequently with colleagues, allowing trust to develop through repeated, credible exchanges. In contrast, trust in formal leaders is often role-based and institutional, which may secure compliance but does not necessarily inspire voluntary contribution.

These findings contribute to leadership theory by reinforcing the distinction between authority and influence. While authority is conferred by organizational design, influence is earned through relational processes. In public organizations characterized by rigid rules and limited discretion, influence becomes particularly valuable because it enables coordination, sense-making, and motivation beyond formal prescriptions. By empirically separating these two leadership channels, the study advances public administration research beyond position-centric models.

The results also help explain a common paradox in public organizations: stable staffing and formal compliance often coexist with low innovation, limited initiative, and declining engagement. Traditional leadership assessments may conclude that leadership is effective because rules are followed and outputs are delivered. However, the presence of strong informal leadership networks suggests that actual influence may reside outside formal structures. When informal leaders are disengaged or marginalized, organizational performance may suffer even if formal leadership remains intact.

Importantly, this study does not suggest that formal leadership is unimportant. Rather, it highlights that effective leadership in public organizations requires alignment between authority and influence. When formal leaders recognize, support, and collaborate with informal leaders, leadership capacity is amplified. When they ignore or suppress informal influence, leadership systems risk becoming disconnected from everyday organizational reality.

Overall, the findings support a dual-leadership perspective in which formal and informal leadership coexist but serve different functions. Formal leadership ensures stability and accountability, while informal leadership enables engagement and discretionary behavior. Understanding this complementarity is essential for both theory development and practical governance in public organizations.

6. Practical Implications for Public Human Resource Management and Leadership Development

The findings of this study have important implications for public human resource management and leadership development practices. They suggest that leadership capacity in public organizations cannot be fully understood or developed by focusing exclusively on formally appointed managers.

First, public sector leadership systems should move beyond position-based assumptions and explicitly recognize informal leadership as a legitimate source of influence. Employees who are consistently consulted by peers for guidance and problem-solving play a critical role in sustaining engagement and organizational citizenship behavior. Ignoring these individuals risks misaligning formal authority with actual influence, thereby weakening leadership effectiveness.

Second, leadership development programs in public organizations should be redesigned to account for dual leadership structures. Traditional programs typically target formally appointed managers and emphasize administrative competence, rule enforcement, and procedural compliance. While these skills remain essential, the findings suggest that relational competencies such as trust-building, peer influence, and informal coordination are equally important. Leadership development initiatives should therefore include mechanisms to identify and support informal leaders, even when they do not hold managerial titles.

Third, public HR practices should leverage informal leaders as boundary spanners and change agents. Informal leaders often serve as translators between formal policies and everyday work practices. Involving them in policy implementation, digital transformation initiatives, or organizational change efforts can enhance legitimacy, reduce resistance, and improve employee engagement. Such involvement does not require altering formal hierarchies but does require recognizing influence where it exists.

Fourth, performance management systems should be recalibrated to avoid equating compliance with leadership effectiveness. Formal leaders may achieve high levels of procedural adherence while failing to foster engagement or discretionary behavior. Incorporating feedback mechanisms that capture trust, peer influence, and collaborative behaviors can provide a more accurate assessment of leadership impact.

Finally, public organizations should encourage alignment rather than competition between formal and informal leaders. When formal leaders acknowledge and collaborate with informal leaders, leadership capacity becomes distributed and resilient. When informal influence is perceived as a threat to authority, leadership effectiveness may be undermined. Creating an environment in which authority and influence reinforce rather than undermine one another is essential for sustainable public sector leadership.

7. Limitations and Future Research

Several limitations of this study should be acknowledged. First, the cross-sectional research design limits the ability to draw strong causal inferences. Although the proposed relationships are theoretically grounded and empirically supported, longitudinal studies would allow for a more precise examination of how formal and informal leadership dynamics evolve over time and how their effects on engagement and organizational citizenship behavior change.

Second, while the use of peer-nomination and social network analysis strengthens the measurement of informal leadership, network data capture influence at a specific point in time. Informal leadership may shift as organizational conditions, personnel, or task demands change. Future research could employ longitudinal network analysis to examine the stability and evolution of informal leadership roles.

Third, the study focuses on public organizations within a specific administrative context. Differences in national administrative traditions, cultural norms, and employment protection regimes may shape leadership dynamics in distinct ways. Comparative research across countries or between public, quasi-public, and nonprofit organizations would enhance the generalizability of the findings.

Future studies could also extend the model by examining additional mediators and moderators, such as psychological safety, ethical climate, or digitalization intensity. Investigating how formal

leaders can intentionally cultivate trust-based relationships with informal leaders represents another promising avenue for research. Finally, future work could explore potential downsides of informal leadership, such as exclusionary networks or informal power concentration, to provide a more balanced understanding of its role in public organizations.

8. Conclusion

This study demonstrates that leadership in public organizations cannot be adequately understood through formal authority alone. By empirically distinguishing between formal leadership and informal leadership, the findings reveal that influence often resides outside hierarchical positions and operates through trust-based relational networks.

While formal leaders play an essential role in ensuring compliance, coordination, and accountability, informal leaders exert a stronger influence on employee engagement and organizational citizenship behavior. These effects operate primarily through trust, highlighting the importance of relational legitimacy in bureaucratic settings.

The study contributes to public administration and organizational behavior literature by advancing a dual-leadership perspective that aligns theory with organizational reality. It challenges position-centric leadership models and underscores the need to recognize influence wherever it occurs.

For public organizations facing increasing complexity, resource constraints, and demands for responsiveness, understanding who truly leads is not a theoretical luxury but a practical necessity. Effective public leadership depends not only on authority, but on the ability to mobilize trust, engagement, and voluntary contribution across formal and informal structures.

References

- [1] Tarafdar, M., Tu, Q., & Ragu-Nathan, T. S. (2007). The impact of technostress on role stress and productivity. *Journal of Management Information Systems*, 24(1), 301–328.
<https://doi.org/10.2753/MIS0742-1222240109>
- [2] Ragu-Nathan, T. S., Tarafdar, M., Ragu-Nathan, B. S., & Tu, Q. (2008). The consequences of technostress for end users in organizations: Conceptual development and empirical validation. *Information Systems Research*, 19(4), 417–433. <https://doi.org/10.1287/isre.1070.0165>
- [3] Ayyagari, R., Grover, V., & Purvis, R. (2011). Technostress: Technological antecedents and implications. *MIS Quarterly*, 35(4), 831–858. <https://doi.org/10.2307/41409963>
- [4] Tarafdar, M., Cooper, C. L., & Stich, J.-F. (2019). The technostress trifecta: Techno eustress, techno distress and design. *Information Systems Journal*, 29(1), 6–42.
<https://doi.org/10.1111/isj.12170>
- [5] Tarafdar, M., Pullins, E. B., & Ragu-Nathan, T. S. (2015). Technostress: Negative effect on performance and possible mitigations. *Information Systems Journal*, 25(2), 103–132.
<https://doi.org/10.1111/isj.12042>
- [6] Fuglseth, A. M., & Sørrebø, Ø. (2014). The effects of technostress within the context of employee use of ICT. *Computers in Human Behavior*, 40, 161–170.
<https://doi.org/10.1016/j.chb.2014.07.040>

- [7] Hang, Y., Hussain, G., Amin, A., & Abdullah, M. I. (2022). The moderating effects of technostress inhibitors on techno-stressors and employee well-being. *Frontiers in Psychology*, 12, 821446. <https://doi.org/10.3389/fpsyg.2021.821446>
- [8] Li, L., Wang, X., & Xue, L. (2021). Technostress inhibitors and creators and their impacts on employee well-being and job performance: A research agenda. *AI & Society*, 36, 787–804. <https://doi.org/10.1007/s10111-020-00625-0>
- [9] Marsh, E., Vallejos, E. P., & Spence, A. (2022). The digital workplace and its dark side: An integrative review. *Computers in Human Behavior*, 128, 107118. <https://doi.org/10.1016/j.chb.2021.107118>
- [10] Dabbish, L. A., & Kraut, R. E. (2006). Email overload at work: An analysis of factors associated with email strain. *Proceedings of the 2006 ACM Conference on Computer Supported Cooperative Work*, 431–440. <https://doi.org/10.1145/1180875.1180941>
- [11] Soucek, R., & Moser, K. (2010). Coping with information overload in email communication: Evaluation of a training intervention. *Computers in Human Behavior*, 26, 1458–1466. <https://doi.org/10.1016/j.chb.2010.04.024>
- [12] Edmunds, A., & Morris, A. (2000). The problem of information overload in business organisations: A review of the literature. *International Journal of Information Management*, 20, 17–28. [https://doi.org/10.1016/S0268-4012\(99\)00051-1](https://doi.org/10.1016/S0268-4012(99)00051-1)
- [13] Kock, N. (2000). Information overload and worker performance: A process-centered view. *Knowledge and Process Management*, 7, 256–264. <https://doi.org/10.1002/1099-1441>
- [14] Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive Science*, 12, 257–285. https://doi.org/10.1207/s15516709cog1202_4
- [15] Paas, F. G. W. C., & Van Merriënboer, J. J. G. (1994). Instructional control of cognitive load in the training of complex cognitive tasks. *Perceptual and Motor Skills*, 79, 419–430. <https://doi.org/10.2466/pms.1994.79.1.419>
- [16] Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organizational Behavior*, 2, 99–113. <https://doi.org/10.1002/job.4030020205>
- [17] Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands–resources model of burnout. *Journal of Applied Psychology*, 86, 499–512. <https://doi.org/10.1037/0021-9010.86.3.499>
- [18] Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement. *Journal of Organizational Behavior*, 25, 293–315. <https://doi.org/10.1002/job.248>
- [19] Barber, L. K., & Santuzzi, A. M. (2015). Please respond ASAP: Workplace telepressure and employee recovery. *Journal of Occupational Health Psychology*, 20, 172–189. <https://doi.org/10.1037/a0038278>
- [20] Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44, 513–524. <https://doi.org/10.1037/0003-066X.44.3.513>



**22th International Conference on Modern Research in
Management,Economics,Accounting and Banking (ICMEAB 2026)**

www.icmeab.ir
info@icmeab.ir

17 March 2026 -TBILISI GEORGIA