

“The nexus between boundary-spanning leadership, proactive behavior, corporate governance, and employee performance through work engagement”

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THE NEXUS BETWEEN BOUNDARY- SPANNING LEADERSHIP, PROACTIVE BEHAVIOR, CORPORATE GOVERNANCE, AND EMPLOYEE PERFORMANCE THROUGH WORK ENGAGEMENT

Abstract

Employee performance is a key factor determining a company's sustainability and competitiveness. Therefore, this study aims to explore the role of work engagement in mediating the influence of boundary-spanning leadership, proactive behavior, and corporate governance on employee performance. The study used a survey method via a Likert-scale questionnaire, involving 485 participants from companies in Indonesia engaged in trade, services, finance, and investment in 2025. Data analysis used structural equation modeling supported by descriptive and correlational analysis. The results showed that boundary-spanning leadership, proactive behavior, corporate governance, and work engagement were associated with employee performance ($\beta = 0.242, 0.160, 0.186, 0.276; p < 0.05$). Then, boundary-spanning leadership, proactive behavior, and corporate governance also correlated with employee work engagement ($\beta = 0.227, 0.414, 0.160; p < 0.05$). In addition, boundary-spanning leadership, proactive behavior, and corporate governance are linked to employee performance through work engagement ($\beta = 0.063, 0.114, 0.044; p < 0.05$). With these findings, this study offers a new empirical model of the relationship between boundary-spanning leadership, proactive behavior, corporate governance, and employee performance, mediated by work engagement. This model contributes to organizational behavior and human resource management research and provides practitioners with insights into how boundary-spanning leadership, proactive behavior, and corporate governance can improve employee performance, with work engagement as the crucial mediating factor.

Keywords

boundary-spanning leadership, proactive behavior,
corporate governance, engagement, performance

JEL Classification

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INTRODUCTION

Modern organizations are increasingly fragmented, digitized, and interconnected across functional and institutional boundaries. These dynamics require organizations to rely not only on internal resources but also on the ability to bridge boundaries between external units, stakeholders, and ecosystems to maintain sustainable performance. However, in practice, many employees, as key resources and determinants of organizational survival, competitiveness, and success, are unable to demonstrate their optimal performance for various reasons, both external and internal. Therefore, the study of employee performance remains both interesting and necessary, especially for exploring the factors related to it. One important related factor is boundary-spanning leadership (B-SL). This leadership is oriented toward the leader's ability to build external connectivity, integrate information across units, and facilitate collaboration between stakeholders to cre-

ate shared value. Empirical evidence shows that B-SL is significantly related to employee task and contextual performance (Kim et al., 2025; Setiadi & Widodo, 2024). Thus, B-SL has the potential to link employee performance. The next relevant factor is proactive behavior, which involves taking initiative, anticipating change, and actively shaping one's work environment. Prior studies have demonstrated a strong correlation between proactive behavior and performance (Liu et al., 2025). In addition, corporate governance also plays a crucial role in supporting employee performance. Effective governance practices impact company performance on a macro level and also affect individual behavior and performance within the organization (Willy et al., 2026; Wahyudi et al., 2026). This shows that employees' perceptions and feelings toward corporate governance practices are related to their performance. Work engagement also links to performance. High work engagement directly improves employee performance (Pham & Alang, 2026). From the perspective of job demands, work engagement acts as a motivational mechanism that transforms personal and organizational resources into optimal performance (Bakker, 2022). However, work engagement may be influenced by leadership (Gao et al., 2026; Krasniqi & Hoxha, 2025), proactive behavior (Mayfield & O'Donnell, 2025), and corporate governance (Elamer & Kato, 2025).

Although there are some conflicting findings, the mainstream of prior research indicates that work engagement can mediate the relationship between B-SL, proactive behavior, corporate governance, and job performance. However, it has been relatively difficult to find prior research that specifically, comprehensively, and integratively examines the link between B-SL, proactive behavior, corporate governance, and job performance via work engagement. Some studies examine the relationship between leadership (transformational, ambidextrous, empowering) and performance, with work engagement as a mediator (Huang et al., 2025; Javeid, 2025; Desta & Mulie, 2024), but they do not specifically address the B-SL construct. Therefore, it is important and urgent to investigate this issue to develop a reliable empirical model that improves employee performance, thereby enhancing competitiveness and sustainable company performance.

Moreover, other empirical findings reveal contradictions, particularly regarding the correlation between corporate governance and performance, where no significant direct influence was identified (Nadia et al., 2020). Furthermore, the relationship between proactive behavior and performance is inverse, with performance influencing proactive behavior (Wang et al., 2025). Hakanen and Kaltainen (2026) also revealed that proactive behavior is a consequence of work engagement. This inconsistency requires scientific clarification to establish that work engagement serves as an intervening variable (mediator) in the causal relationships among B-SL, proactive behavior, corporate governance, and employee job performance.

1. LITERATURE REVIEW AND HYPOTHESES

Job performance is generally understood as a behavioral construct focused on an individual's contribution to the organization's goals. Conceptually, performance is defined as observable behavior under the individual's control that directly contributes to achieving organizational goals (Hngoi et al., 2024). This definition emphasizes that job performance is oriented toward work actions or behaviors relevant to the role or the organization's goals. Thus, according to Aguinis (2024), the following metrics can be used to evaluate job performance:

- the capacity to actively promote collaboration and support coworkers,
- the willingness to take on extra responsibilities outside of the job description,
- the tenacity and zeal to put in extra effort to accomplish tasks successfully,
- compliance with company policies and procedures, and
- support for the achievement of organizational goals.

In this context, job performance is a complex of behaviors that manifest in collaboration, compliance, and individual strategic contributions in supporting the organization's success in a sustainable manner. Widyastuti (2025) shows that employee performance significantly contributes to organizational sustainability. Other studies also show that HRM practices, as a proxy for employee performance, positively affect organizational performance and product competitiveness (Shahzad et al., 2023; Martini et al., 2024). This emphasizes that employee performance is an important and vital modality for the organization. Empirically, employee performance can be influenced by boundary-spanning leadership (B-SL), proactive behavior, corporate governance, and work engagement.

B-SL is an important predictor of improved job performance (Gunawan & Widodo, 2022; Zheng & Ahmed, 2024). B-SL is a leadership behavior in which leaders interact with external parties to explore and acquire resources and information outside the organization, then distribute those resources and information internally to subordinates to support the achievement of organizational goals. This definition reflects the function of a "bridge" or "linking pin" that connects the external environment and the internal components of an organization to provide the resources needed to achieve a common goal, particularly in the context of changing environments and the creation of organizational performance (Xue & Woo, 2022). B-SL refers to leaders' ability to bridge the internal and external boundaries of the organization, build collaborative networks, and integrate resources across units to support organizational effectiveness (Gunawan & Widodo, 2022; Zhang et al., 2023). This leadership style emphasizes cross-functional coordination, stakeholder relationship management, and strategic information exchange to enable organizations to respond adaptively to environmental dynamics. Leaders who can do boundary spanning provide access to resources, social support, and development opportunities that ultimately improve employee task performance (Kim et al., 2025). It can be measured using the following indicators: collaboration across functions, employee empowerment at all levels, and the development of cross-organizational learning capabilities (Yip et al., 2016). Empirically, leadership that encourages collaboration and

knowledge exchange increases work engagement, which ultimately impacts performance (Hayat et al., 2025). In complex modern organizations, leaders' ability to manage cross-border relationships is crucial for fostering cooperation, synergizing teams, and improving performance.

Ali and Muhammad (2021), Gunawan and Widodo (2022), and Shen and Abe (2023) prove that job performance is influenced by proactive behavior. Proactive behavior is an important concept in the study of organizational behavior because it involves individuals actively changing and improving work situations. In general, it is defined as employees' tendency to take initiative, anticipate problems, and drive positive change in the work environment (Zhang et al., 2025; Wang et al., 2025). Proactive work behaviors are self-starting, future-focused, and change-oriented aspects. This kind of behavior shows the individual's initiative to act before external instructions or pressures arise, to create change or improvement in the work environment (Lai & Frimpong, 2025). Proactive behavior has several dimensions that can serve as measurement parameters, namely taking charge, voice, problem prevention, and individual innovation (Parker & Collins, 2010). This dimension reflects employees' courage to make constructive changes, convey ideas or suggestions for improvement, prevent work problems, and create individual innovations that add value to the organization. From the job demands-resources perspective, proactive behavior enables individuals to make more optimal use of work resources, thereby improving performance (Mehmood et al., 2025; Bakker, 2022). In addition, proactive behavior is also related to increasing work engagement, which ultimately strengthens employee contributions to work outcomes (Ali et al., 2025; Hakanen & Keltiainen, 2026) and the achievement of organizational goals (Shen & Abe, 2023; Kumar et al., 2026) as a manifestation of employee performance. In practice, an individual's performance is influenced not only by technical ability but also by initiative and active work involvement. Employees who exhibit proactive behavior tend to perform well on tasks because they anticipate challenges and develop solutions before problems arise (Setiadi & Widodo, 2024). In addition, employees who actively take initiative, convey ideas for improvement, prevent potential work obsta-

cles, and produce individual innovations tend to achieve more optimal and sustainable work results (Annisa et al., 2026; Prajadiredja et al., 2026).

Recent empirical studies also demonstrate that corporate governance affects job performance (Willy et al., 2026; Parwani et al., 2026; Munmun et al., 2025). Corporate governance is a fundamental concept in management and organizational studies because it is directly related to the systems of control, supervision, and accountability that guide organizational behavior in line with the organization's strategic goals. In general, corporate governance is defined as a set of mechanisms, processes, and structures used to direct and control an organization to ensure transparency, accountability, responsibility, and fairness in corporate management (Nadia et al., 2020; Touratier-Muller & Cournac, 2026). Corporate governance functions as both a formal regulation and a structural mechanism that governs the interactions among management, the board of directors, shareholders, and other stakeholders, ensuring that organizational activities are conducted in an accountable, transparent, and equitable manner, aligned with the company's long-term objectives (Abudu & Salman, 2025). This definition reflects a more comprehensive view (involving various parties) rather than focusing solely on shareholders' interests. To achieve effective corporate governance, several indicators are needed: accountability, transparency, independence, responsibility, and fairness (Svärd, 2017). These indicators reflect information disclosure, transparency of accountability, compliance with regulations and ethics, independence in decision-making, and fair treatment of all stakeholders. The application of these five principles can strengthen the supervisory system and improve the overall quality of corporate governance (Koeswayo et al., 2024; Kamthornphiphatthanakul et al., 2024).

At the individual level, employees' perceptions of good corporate governance practices will foster happiness, which in turn stimulates their performance. Hence, the implementation of transparency, accountability, responsibility, independence, and fairness indicators not only affects macro-organizational governance but also shapes disciplined work behavior, adherence to procedures, and an orientation toward achieving results. A

transparent and fair work environment encourages clarity of roles, increases a sense of responsibility, and strengthens individual commitment to organizational goals (Windrati et al., 2023; Annisa et al., 2026). Thus, integrated corporate governance will significantly improve job performance in the organization.

Several research results show that job performance is also influenced by work engagement (Annisa et al., 2026; Namirah et al., 2026; Prajadiredja et al., 2026). Work engagement is a fundamental concept in organizational behavior because it is directly related to positive psychological conditions that encourage individuals to fully engage in their work. Conceptually, work engagement is defined as a positive, satisfying affective-motivational state reflected in energy, engagement, and full concentration at work (Bakker, 2022; Hakanen & Keltiainen, 2026). Furthermore, work engagement denotes a positive, gratifying, and work-related psychological condition characterized by three primary dimensions: vigor (high energy and endurance), dedication (sense of significance, enthusiasm, and profound involvement), and absorption (complete immersion in work, leading to a perception of time passing swiftly) (Sypniewska et al., 2023; Schaufeli & Bakker, 2010; Sonnentag, 2017). This work attachment develops through the support of work resources, such as empowering leadership, a supportive organizational culture, and effective human resource management practices (Dwidienawati et al., 2025). Therefore, work engagement improves the quality of individual and organizational performance (Joseph, 2026; Gao et al., 2026). At the individual level, work engagement shows the extent to which employees devote their physical, cognitive, and emotional energy to carrying out tasks. Employees who have high levels of vigor, dedication, and absorption tend to show enthusiasm, perseverance, and deep involvement in their work (Schaufeli & Bakker, 2010; Bakker, 2022). This condition encourages individuals to display more optimal work performance, both in terms of quantity and quality of work results (Shen & Abe, 2023). In addition, strong work attachment increases employees' tendency to exhibit proactive behavior, help colleagues, and contribute more to organizational goals, ultimately improving job performance

(Xue & Woo, 2022). Thus, work engagement is an important psychological factor that encourages continuous improvement of job performance.

Empirically, besides influencing job performance, work engagement is also influenced by B-SL, proactive behavior, and corporate governance. Ali et al. (2025) and Khan et al. (2025) demonstrated that B-SL actually increases employee engagement at work. In practice, through cross-functional coordination activities and relationship management with various stakeholders, boundary-spanning-oriented leaders provide access to resources, social support, and learning opportunities that enrich employees' work experiences. These factors encourage the emergence of energy, dedication, and active involvement in work (Mehmood et al., 2025; Bakker, 2022). In addition, leadership that opens up access to external networks and strengthens internal collaboration creates a sense of meaning and belonging to work, which is the main foundation of work engagement (Hakanen & Keltiainen, 2026; Gao et al., 2026). Beyond that, leaders who actively bridge organizational boundaries also strengthen employees' psychological empowerment and confidence in performing their duties (Setiadi & Widodo, 2024; Kim et al., 2025). Leadership behaviors that promote cooperation and knowledge sharing also dramatically boost employee engagement (Ali et al., 2025; Dwidienawati et al., 2025). By creating an open, supportive, and resource-rich work environment, B-SL builds psychological conditions that allow employees to be fully engaged in their work.

Proactive activity significantly influences work engagement (Dai & Wang, 2025; Mayfield & O'Donnell, 2025). Essential aspects of proactive behavior, such as taking charge, voice, and continuous improvement initiatives, allow individuals to shape their work environment more meaningfully and increase their sense of control and competence (Liu et al., 2025; Zhang et al., 2025). Proactive behavior also serves as a personal resource, strengthening energy, dedication, and deep engagement in work (Bakker, 2022; Hakanen & Keltiainen, 2026). Employees who actively anticipate problems, voice ideas, and initiate change tend to experience higher

levels of vigor, dedication, and absorption, driven by increased self-efficacy and work meaning (Dai & Wang, 2025).

Empirical evidence also indicates that corporate governance has a significant impact on work engagement (Elamer & Kato, 2025; Balilah et al., 2025). By implementing corporate governance principles, organizations can establish a fair, reliable structure that strengthens employee trust and commitment (Mufid & Gusniarti, 2025; Wahyudi et al., 2026). Strong corporate governance practices also clarify roles, expectations, and oversight mechanisms, thereby providing a sense of security and job certainty that employees need to be fully engaged in their work (Elamer & Kato, 2025). In addition, effective governance encourages employee participation and voice in organizational processes, which ultimately reinforces a sense of belonging and commitment to the company's goals (Bartosch et al., 2026).

According to the aforementioned empirical data, work engagement can act as a mediator in the causal linkages between proactive behavior, corporate governance, job performance, and B-SL. As evidenced in several previous studies, work engagement not only affects job performance (Annisa et al., 2026; Namirah et al., 2026) but is also influenced by B-SL (Ali et al., 2025; Khan et al., 2025), proactive behavior (Dai & Wang, 2025; Song et al., 2023), and corporate governance (Elamer & Kato, 2025; Balilah et al., 2025). This mediation perspective offers a more comprehensive understanding of the causal relationship between B-SL, proactive behavior, corporate governance, work engagement, and job performance. However, prior research on the impact of B-SL, proactive behavior, and corporate governance on job performance via work engagement remains limited; therefore, a new empirical study is warranted. Therefore, this study aims to investigate the role of work engagement in mediating the correlations between B-SL, proactive behavior, corporate governance, and employee job performance. To achieve this goal, the following hypotheses are proposed:

H₁: Boundary-spanning leadership directly correlates with job performance.

- H_2 : Proactive behavior directly correlates with job performance.
- H_3 : Corporate governance directly correlates with job performance.
- H_4 : Work engagement directly correlates with job performance.
- H_5 : Boundary-spanning leadership directly correlates with work engagement.
- H_6 : Proactive behavior directly correlates with work engagement.
- H_7 : Corporate governance directly correlates with work engagement.
- H_8 : Work engagement mediates the correlation between boundary-spanning leadership and job performance.
- H_9 : Work engagement mediates the correlation between proactive behavior and performance.
- H_{10} : Work engagement mediates the correlation between corporate governance and job performance.

Table 1. Participant profile

Profile	Amount	Percentage (%)
Gender		
Female	250	51.55
Male	235	48.46
Age		
20 – 25 years	245	50.52
26 – 35 years	159	32.78
36 – 45 years	55	11.34
46 – 55 years	23	4.74
> 56 years	3	0.62
Education		
Senior High School	220	45.36
Diploma (D3)	65	13.40
Bachelor (S1)	176	36.29
Postgraduate (S2)	24	4.95
Marital Status		
Married	185	38.14
Unmarried	300	61.86
Job Experience		
< 5 years	300	61.86
6 – 10 years	127	26.19
11 – 15 years	36	7.42
> 16 years	22	4.54
Position		
Staff	294	60.62
Supervisor	191	39.38
Employment Status		
Contract	240	49.48
Permanent	245	50.52

2. METHOD

This study employs a quantitative methodology based on the analysis of numerical data collected from a survey conducted from October to December 2025 of 485 employees (participants). They are located across the six provinces of East Java (14.43%), Central Java (15.87%), Yogyakarta (13.81%), West Java (17.11%), Banten (15.51%), and Jakarta (21.23%), and are engaged by companies in the financial (24.35%), investment (18.43%), services (26.52%), and commerce (30.70%) sectors of Java Island, the epicenter of Indonesian industry and trade. Participants were selected through incidental sampling, contingent on their readiness to complete the entire questionnaire throughout the study. They are mostly female (51.55%), between the ages of 20 and 25 (50.52%), high school graduates (45.36%), unmarried (61.86%), have less than five years of work experience (61.86%), are staff (60.62%), and permanent workers (50.52%), as seen in Table 1.

A Likert-scale questionnaire was utilized to collect study data, featuring five response options: strongly agree (score 5), agree (score 4), neutral (score 3), disagree (score 2), and strongly disagree (score 1). We constructed the questionnaire by consulting recommendations from experts in various literary sources. The survey was created using Google Forms and disseminated by email and WhatsApp. To prevent duplicate responses, the Google Form questionnaire was set to allow respondents to complete it only once. The B-SL indicator includes all levels of employee empowerment, interdisciplinary collaboration, and the improvement of inter-organizational learning capacity (Yip et al., 2016). Proactive behavior includes taking the initiative, speaking up, preventing problems, and being innovative on one's own (Parker & Collins, 2010). Corporate governance includes independence, responsibility, openness, accountability, and fairness (Svärd, 2017). Work engagement comprises vigor, dedication, and absorption (Schaufeli & Bakker, 2010; Sonnentag, 2017). Job performance

comprises enthusiastically putting in extra effort to finish the task; willingly taking on extra work beyond the job description; actively encouraging teamwork and supporting coworkers; following company policies and procedures; and supporting business goals (Aguinis, 2024).

As presented in Table A1, corporate governance and job performance comprised 10 items each, proactive behavior comprised 12 items, and work engagement and the B-SL questionnaire comprised nine items each. Before implementation, we assessed the questionnaire's validity and reliability using 30 pilot samples. Pearson's product-moment correlation was used for validity assessment, whereas Cronbach's alpha was used for reliability assessment. Alpha coefficients ranged from 0.820 to 0.889 (> 0.7), while correlation coefficient values for all items for all variables fell between 0.422 and 0.889 (> 0.361). This suggests that all surveys are appropriate for the study because they are valid and dependable.

Partial least squares structural equation modeling (SEM-PLS) is the analytical method, supported by descriptive and correlational statistical analyses. The conditions of individual variables and their relationships are described through descriptive and correlational analyses, while hypotheses are tested and model adequacy is evaluated using SEM-PLS. Descriptive and correlational studies employ SPSS version 27, whereas SEM-PLS employs SmartPLS 4.0.

3. RESULTS

The descriptive, skewness, kurtosis, and correlation analysis results are shown in Table 2. B-SL recorded mean scores of 38.062 (SD = 4.830) for B-SL, 52.507 (SD = 5.232) for proactive behavior, 41.744 (SD = 5.092) for corporate governance, 39.309 (SD = 4.302) for work engagement,

and 41.171 (SD = 5.203) for job performance. The skewness and kurtosis values range from -0.957 to -0.003 and from -0.240 to 1.676 , respectively, indicating that the data distribution falls within acceptable normality thresholds. Correlation analysis shows that all variables are positively and significantly associated. B-SL is moderately correlated with proactive behavior ($r = 0.422$), corporate governance ($r = 0.479$), work engagement ($r = 0.478$), and job performance ($r = 0.530$). Proactive behavior demonstrates strong correlations with corporate governance ($r = 0.659$) and work engagement ($r = 0.610$), and a moderate relationship with job performance ($r = 0.555$). Corporate governance exhibits a favorable correlation with work engagement ($r = 0.543$) and job performance ($r = 0.557$). Ultimately, work engagement exhibits a significant positive link with job performance ($r = 0.587$). Overall, the positive correlations among variables provide preliminary support for the proposed research model and indicate the absence of multicollinearity concerns.

The validity and reliability of each variable's indicators were evaluated by the outer-model measurement test. Convergent validity is evidenced by the indicator measurement model via the correlation between the construct and the indicator score. According to Hair et al. (2022), the loading factor, Cronbach's Alpha (CA), and Composite Reliability (RA) must all be above 0.7, while the Average Variance Extracted (AVE) should surpass 0.5. As presented in Table 3, each indicator's loading factor values, ranging from 0.780 to 0.927 across all variables, meet the requirements for convergent validity. All variables have AVE values > 0.5 (0.706–0.841), and CA and CR values > 0.7 (0.819–0.918 and 0.892–0.941), respectively. All of the latent variables in the estimation model are therefore shown to have convergent validity (Hair et al., 2022).

Table 2. Descriptive, skewness, kurtosis, and correlation analysis

Variables	Mean	SD	Skewness	Kurtosis	1	2	3	4	5
1. Boundary-spanning leadership	38.062	4.830	−0.659	0.419	1.000				
2. Proactive behavior	52.507	5.232	−0.957	1.676	0.422	1.000			
3. Corporate governance	41.744	5.092	−0.257	0.069	0.479	0.659	1.000		
4. Work engagement	39.309	4.302	−0.803	0.959	0.478	0.610	0.543	1.000	
5. Job performance	41.171	5.203	−0.003	−0.240	0.530	0.555	0.557	0.587	1.000

Note: ** $p < 0.01$.

Table 3. Result of the measurement model

Variables	Indicators	Factor Loading	CA	CR	AVE
Boundary-spanning leadership	Collaboration across functions	0.888	0.819	0.892	0.735
	Empowering employees at all levels	0.883			
	Developing cross-organizational learning capabilities	0.797			
Proactive behavior	Taking charge	0.846	0.890	0.924	0.753
	Voice	0.863			
	Problem prevention	0.899			
	Individual innovation	0.861			
Corporate governance	Transparency	0.780	0.895	0.923	0.706
	Accountability	0.804			
	Responsibility	0.880			
	Independence	0.871			
	Fairness	0.863			
Work engagement	Vigor	0.912	0.905	0.941	0.841
	Dedication	0.927			
	Absorption	0.911			
Job performance	Persevere enthusiastically with extra effort to complete the task successfully	0.841	0.918	0.938	0.753
	Voluntarily carry out additional tasks beyond the job description	0.910			
	Actively foster cooperation and help colleagues	0.898			
	Work according to company rules and procedures	0.875			
	Support the achievement of company objectives	0.811			

The model fit was assessed using three fit indices: the normed fit index (NFI), the chi-square test, and the standardized root mean square residual (SRMR). An NFI rating of roughly 1 denotes a good match; values range from 0 to 1. The SRMR is less than 0.08 and the Chi-square value is higher than 0.9 ($\chi^2 > 0.9$) (Hair et al., 2022). An SRMR value of 0.052 (< 0.08), an NFI value of 0.799 (near 1), and a Chi-square value of 1588,996 (higher than 0.9) are the findings of the model fit test. These findings demonstrate that the model correlates remarkably with the data. This signifies that the theoretical framework articulated in this study corresponds with the data-driven empirical methodology.

Table 4 presents the findings of the discriminant validity evaluation utilizing the Heterotrait-Monotrait Ratio (HTMT) and the Fornell-Larcker criterion. The Fornell-Larcker criteria stipulate that discriminant validity is confirmed when the square root of each construct's Average Variance Extracted (AVE) exceeds its correlation with other constructs. The findings demonstrate that the corporate governance (0.841), job performance (0.868), work engagement (0.917), proactive behavior (0.858), and B-SL (0.857) diagonal values are all

greater than the corresponding correlation values, hence satisfying the discriminant validity requirements. Additionally, the HTMT test revealed that every AVE value was below the 0.90 cutoff (Hair et al., 2022). The association between proactive conduct and corporate governance had the highest HTMT value (0.741), which is still within an acceptable range. This suggests that all of the model's constructs have sufficient discrimination and do not display conceptual multicollinearity. Thus, according to both methods, the measuring model satisfies the criteria for discriminant validity and we can move on to the testing phase of the structural model. Additionally, all VIF values were below the 3.3 threshold, removing any problems with multicollinearity (Hair et al., 2022).

The common method bias (CMB) test is also included in the study. A cross-sectional survey utilizing self-report questionnaires is believed to induce CMB difficulties. Bastian and Widodo (2024) assert that the variance of the common technique leads to a divergence between the perceived relationship and the true correlation, resulting in errors in CMB measurements. Kock (2021) stated that if Herman's single-factor calculation is below the 0.5 tolerance threshold, the research data

Table 4. Results of HTMT, Fornell–Larcker, and VIF

Variables	1	2	3	4	5
1. Boundary-spanning leadership	0.857	0.505*	0.561*	0.556* (1.346)	0.612* (1.440)
2. Proactive behavior	0.435	0.868	0.741*	0.687* (1.839)	0.615* (2.152)
3. Corporate governance	0.483	0.663	0.841	0.603* (1.945)	0.615* (1.992)
4. Work engagement	0.484	0.618	0.544	0.917	0.644* (1.827)
5. Job performance	0.535	0.558	0.558	0.593	0.868

Note: * HTMT (VIF).

are not biased. The CMB values recorded in this study varied from 0.488, which is less than 0.5. Consequently, it may be inferred that the data in this study are devoid of bias.

Based on SEM-PLS analysis, the results of hypothesis testing are shown in Table 5. According to the test results, each hypothesis in this investigation, H_1 – H_{10} , has statistical support. When it comes to the direct correlate to job performance, B-SL has a significant and positive correlation (path coefficient (β) = 0.242; t = 4.999; p = 0.000), as does proactive behavior (β = 0.160; t = 2.380; p = 0.017), and corporate governance (β = 0.186; t = 2.654; p = 0.008). The strongest correlation of job performance is work engagement (β = 0.276; t = 5.195; p = 0.001). Additionally, as a mediating variable, B-SL significantly correlates with work engagement (β = 0.227; t = 4.717; p = 0.001), with proactive behavior having the strongest correla-

tion (β = 0.414; t = 5.532; p = 0.001) and corporate governance having a significant correlation (β = 0.160; t = 2.282; p = 0.023). The indirect correlation was considerable for all mediation channels through work engagement. Job performance (β = 0.063; p = 0.002), proactive behavior (β = 0.114; p = 0.001), and corporate governance (β = 0.044; p = 0.036) were all indirectly correlated by BS-L. The findings demonstrate that work engagement is a crucial mediator of the association between exogenous factors (B-SL, proactive behavior, and corporate governance) and job performance. Thus, the structural model in this study has adequate explanatory power and predictive relevance and supports all of the proposed hypotheses.

In addition, the effect size (f^2) for job performance indicates a small effect, with the largest contribution coming from work engagement (f^2 = 0.081). Further, the effect size for work engagement indi-

Table 5. Hypothesis testing results

Hypotheses	β	t-value	p-value	Decision	f^2	R^2	Q^2
H_1 : Boundary-spanning leadership correlates with job performance	0.242	4.999	0.000	Supported	0.079	0.486	0.426
H_2 : Proactive behavior correlates with job performance	0.160	2.38	0.017	Supported	0.023		
H_3 : Corporate governance correlates with job performance	0.186	2.654	0.008	Supported	0.034		
H_4 : Work engagement correlates with job performance	0.276	5.195	0.000	Supported	0.081		
H_5 : Boundary-spanning leadership correlates with work engagement	0.227	4.717	0.000	Supported	0.070	0.453	0.437
H_6 : Proactive behavior correlates with work engagement	0.414	5.532	0.000	Supported	0.170		
H_7 : Corporate governance correlates with work engagement	0.160	2.282	0.023	Supported	0.024		
H_8 : Boundary-spanning leadership correlates with job performance through work engagement	0.063	3.133	0.002	Supported			
H_9 : Proactive behavior correlates with job performance through work engagement	0.114	3.879	0.000	Supported			
H_{10} : Corporate governance correlates with job performance through work engagement	0.044	2.098	0.036	Supported			

Note: * p < 0.05.

cates a small to moderate effect, with the largest contribution coming from proactive behavior ($f^2 = 0.170$) (Hair et al., 2022).

B-SL, proactive behavior, and corporate governance account for 45.3% of the variance, according to the work engagement's R Squared (R^2) value of 0.453. The remaining 54.7% was explained by other variables that could affect work engagement but were not included in this study. Job performance has an R^2 score of 0.486. It showed that other factors not included in this study accounted for the remaining 51.4% of the variance in job performance, with the model explaining 48.6% of the variance. Additionally, job performance and work engagement had Q Squared (Q^2) values of 0.426 and 0.437, respectively. It suggests that the model's predictive relevance is high.

4. DISCUSSION

This study offers new empirical data on the function of work engagement in mediating the relationship of boundary-spanning leadership (B-SL), proactive behavior, corporate governance, and employee job performance. The mediating role is established, and, as a consequence, the relation of two structural paths: the link between B-SL, proactive behavior, corporate governance, and work engagement, as well as the nexus of B-SL, proactive behavior, corporate governance, work engagement, and employee performance. From these two paths, work engagement is associated with B-SL, proactive behavior, corporate governance, and employee performance, so it can serve as a mediator.

Overall, B-SL is significantly and positively related to job performance. Enhancing B-SL circumstances may be linked to employee performance because these results demonstrate that B-SL is a reliable indicator of worker performance. For example, developing collaboration and learning capabilities across organizational functions can help employees collaborate to support the achievement of company goals. These findings align with previous studies demonstrating that B-SL has a significant effect on performance (Gunawan & Widodo, 2022; Zheng & Ahmed, 2024).

In addition, proactive behavior is significantly related to employee job performance. It indicates

that proactive behavior is a predisposition for employee performance, so improving employees' proactive behavior will have positive consequences for their performance. To illustrate, encouraging employees to be more courageous in taking on difficult tasks or preventing new problems can motivate them to put in extra effort to complete tasks successfully, thereby helping achieve company goals. These findings align with other research indicating that proactive conduct enhances employee effectiveness (e.g., Gunawan & Widodo, 2022; Shen & Abe, 2023) and differ from the conflicting results reported by Wang et al. (2025).

Additional data indicate that corporate governance is substantially related to employee job performance. This empirical evidence confirms that corporate governance is a determinant of employee performance. Corporate governance improves job performance by creating a clear, accountable, and structured work system. Widespread implementation of transparency, accountability, responsibility, independence, and fairness can shape disciplined work behavior, compliance with procedures and rules, and an orientation toward achieving results. A work environment that ensures transparency and fairness can clarify roles, increase a sense of responsibility, and strengthen employee commitment in realizing organizational goals (Windrati et al., 2023; Annisa et al., 2026). Thus, these findings are in line with recent studies that conclusively demonstrate the role of corporate governance in improving employee performance (Willy et al., 2026; Parwani et al., 2026; Munmun et al., 2025) and differ from other studies that claim corporate governance does not affect performance (Nadia et al., 2020).

This study also uncovers further empirical evidence indicating the substantial correlation between work engagement and employee performance. These findings confirm that individual internal factors, such as work engagement, positively link to employee performance. This means that when work engagement is developed seriously, it leads to increased employee performance. In practice, work engagement shows the extent to which employees devote their physical, cognitive, and emotional energy to carrying out tasks. Employees with high levels of vigor, dedication, and absorption tend to show enthusiasm, per-

severance, and deep involvement in their work (Bakker, 2022). This condition then stimulates employees to perform at their best (Shen & Abe, 2023). Consequently, these findings support earlier studies that have clearly shown the importance of work engagement in sustainably enhancing job performance (Annisa et al., 2026; Namirah et al., 2026; Prajadiredja et al., 2026).

Another interesting finding is the significant role of B-SL, proactive behavior, and corporate governance in the correlation with work engagement. Partially, B-SL is significantly linked to employee work engagement. This empirical fact confirms that B-SL, as an external factor, is an antecedent of employee work engagement. Accordingly, when business executives put B-SL elements like cross-functional cooperation, employee empowerment, and the development of cross-organizational learning skills into practice, it can inspire employees' passion and commitment to improve. These findings are in line with the studies by Ali et al. (2025) and Khan et al. (2025), which show that B-SL makes a real contribution to employee work engagement.

Like B-SL, proactive behavior is also correlated with work engagement. These findings demonstrate that aspects of proactive behavior, such as taking control of work, voicing new ideas, implementing preventive initiatives, and introducing innovations, can stimulate employee enthusiasm, dedication, and absorption of new ideas emerging in the company. As a result, proactive conduct may be an antecedent of employee engagement at work. These results support earlier research showing a strong correlation between proactive conduct and job satisfaction (Dai & Wang, 2025; Mayfield & O'Donnell, 2025) and differ from Hakanen and Keltiainen's (2026) claim that proactive behavior is a consequence of work engagement.

Corporate governance has also been linked to employee work engagement. It means that em-

ployee perception of transparency, accountability, responsibility, independence, and fairness, as a proxy for corporate governance, can trigger work engagement, which in daily company life can manifest in work spirit and dedication. Thus, improving the implementation of corporate governance offers a significant opportunity to enhance positive perceptions among employees, thereby potentially stimulating their work engagement. The research findings of Balilah et al. (2025) and Elamer and Kato (2025), which show that corporate governance significantly affects work engagement, are in line with our empirical study.

This study established a novel empirical model illustrating the mediating role of work engagement in the relationship between B-SL, proactive behavior, corporate governance, and employee performance within Indonesia's trade, services, finance, and investment sectors. This model is consistent with previous studies that are relevant and serves as a basis for developing hypotheses and constructing a conceptual framework for research. However, it differs from conflicting research results and introduces a new empirical model that integrates B-SL, proactive behavior, corporate governance, work engagement, and employee performance in a structural model package of the role of work engagement in mediating the link between B-SL, proactive behavior, corporate governance, and employee job performance.

This model theoretically advances management science, particularly HRM and organizational behavior and also offers scholars and researchers new perspectives on the findings of this study. Researchers, for example, can adopt the model in its entirety, adapt it in part, or modify it by adding new variables or indicators. The model has practical implications for corporate management by enhancing employee performance through the lenses of B-SL, proactive behavior, and corporate governance, utilizing work engagement as a mediating tool.

CONCLUSION

This study aims to investigate the mediating role of work engagement in the correlations between boundary-spanning leadership, proactive behavior, corporate governance, and employee job performance. The study's results provide empirical support for this goal. Boundary-spanning leadership, pro-

active behavior, and corporate governance have a positive and significant correlation with employee job performance through the mediation of work engagement. This partial mediation evidence is supported by other findings. First, boundary-spanning leadership, proactive behavior, and corporate governance are significantly related to employee work engagement. Second, boundary-spanning leadership, proactive behavior, corporate governance, and work engagement are positively linked to employee performance. These results confirm that boundary-spanning leadership, proactive behavior, and corporate governance are important predictors of employee work engagement and performance, and that their development needs to be sustained.

These findings can be implemented by management practitioners, for example, through training activities or workshops, with full company support, including preparing instructors who are truly experts in their fields, relevant and high-quality materials, adequate learning facilities and media, and appropriate training methods. Moreover, researchers can contribute through subsequent investigations by addressing certain limitations of this study. For instance, the research sample is relatively restricted, encompassing only the Island of Java and a select few industrial sectors. It fails to incorporate all theoretical indicators present in the literature, does not employ qualitative analysis, and neglects to account for control variables that may influence the research outcomes. Early anticipation of these various limitations will provide additional insights useful for the future development of employee performance concepts.

AUTHOR CONTRIBUTIONS

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APPENDIX A

Table A1. Variables, indicators, and items

Variables	Indicators	Items	
Boundary-spanning leadership	Collaboration across functions	Leaders actively coordinate across management functions (sections, divisions, departments).	
		Leadership facilitates the building of cross-unit work teams.	
		Leaders encourage cross-functional strategic decision-making processes.	
	Empowering employees at all levels	Leaders maximize employees' potential.	
		Leadership facilitates the development of employee competencies (skills) through training programs and workshops.	
		Leaders support employees to continue their studies at a higher level.	
	Developing cross-organizational learning capabilities	Leaders encourage employees to conduct comparative studies with other companies.	
		Leaders facilitate employees in carrying out strategic analysis by considering the company's internal and external conditions.	
		Leadership encourages the company to become a modern learning organization that enables employees to learn from one another continuously.	
Proactive Behavior	Taking charge	I introduce new work methods that are more effective for completing work.	
		I offer more efficient work procedures.	
		I use alternative solutions to solve problems at work.	
	Voice	I actively express views that differ from others'.	
		I easily express disagreement with other people's opinions.	
		I encourage colleagues to put forward ideas that help improve work.	
	Problem prevention	I actively explore the causes of various problems in the office.	
		I develop effective work systems to mitigate the emergence of new problems.	
		I create unique strategies to prevent recurring problems in the office.	
	Individual innovation	I actively provide new ideas to improve working conditions.	
		I actively seek new ways to help the company progress.	
		I actively advocate for original ideas to others.	
Corporate Governance	Transparency	Information about the actual condition of the company is easily accessible. The company informs employees about operational activities in detail.	
	Accountability	The company gives employees the flexibility to work according to their respective competencies. The company encourages employees to work in accordance with educational values.	
	Responsibility	The company provides opportunities for employees to openly account for their duties. The company encourages employees to work on the principle of prudence.	
	Independence	The head of the company makes decisions independently within his authority. The company provides employees with the flexibility to carry out their duties autonomously.	
	Fairness	Company leaders prioritize equality in managing the company. The head of the company treats employees fairly.	
		Work Engagement	Vigor
Dedication	I allocate most of my time to advancing the company. I am always enthusiastic about fighting for the achievement of the company's goals. I am actively involved in various company activities.		
	Absorption		
Job Performance			Persevere enthusiastically with extra effort to complete the task successfully
	Voluntarily carry out additional tasks beyond the job description		
			Actively foster cooperation and help colleagues
	Work according to company rules and procedures	I work in accordance with the applicable regulations in the company. I work to a high standard.	
		Support the achievement of company objectives	I put forward an alternative mindset to solve various complex problems in the company. I made changes to respond to the dynamics of actual developments outside the company.