"Unveiling the effect of proactive work behavior on task performance through boundary-spanning leadership and psychological empowerment"

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UNVEILING THE EFFECT OF PROACTIVE WORK BEHAVIOR ON TASK PERFORMANCE THROUGH BOUNDARY-SPANNING LEADERSHIP AND PSYCHOLOGICAL EMPOWERMENT

Abstract

Task performance is essential for organizations, so it continues to attract the attention of researchers, practitioners, and academics. Therefore, the purpose of this study is to explore the effect of boundary-spanning leadership and psychological empowerment on the task performance of employees in Indonesian companies through the mediation mechanism of proactive work behavior. Research data were obtained from 455 employees of companies in the financial, trade, service, and investment sectors in Indonesia. The paper employed accidental sampling using a Likert-scale questionnaire and structural equation modeling. The results show that boundary-spanning leadership, psychological empowerment, and proactive work behavior significantly affect task performance. Boundary-spanning leadership and psychological empowerment significantly affect proactive work behavior. Proactive work behavior mediated the causal relationship between boundary-spanning leadership and psychological empowerment with task performance. These findings encourage a new empirical model regarding the critical role of proactive work behavior in transmitting boundary-spanning leadership and psychological empowerment to task performance. This model can be used by scholars, researchers, and practitioners to investigate worker task performance more thoroughly and deeply from the perspectives of boundary-spanning leadership, psychological empowerment, and proactive work behavior. It can serve as a credo for corporate management professionals seeking to maximize proactive work behavior, psychological empowerment, and boundary-spanning leadership in order to enhance employee task performance. In the interim, scholars and researchers can utilize it as a guide for next task performance investigations.

Keywords	boundary-spanning leadership, psychological empowerment, proactive work behavior, task performance
JEL Classification	D23, D91, M12

INTRODUCTION

Individual (employee) performance never recedes into an interesting hot issue because of its enormous contribution to the organization. Empirically, individual performance enhances competitive advantage (Kauppila et al., 2018) and organizational performance (Nyathi & Kekwaletswe, 2023). It reflects the value of employee work behavior positively contributing to achieving organizational goals (Ivancevich et al., 2023; Colquitt et al., 2023), so it is crucial for organizations' success and sustainability. Moreover, employees should build career success and improve welfare. Performance is a series of tasks dedicated to achieving organizational goals (Colquitt et al., 2023). Task performance is one of the essential proxies of performance, which refers to how well and effectively workers complete their tasks according to

the company's formal and informal requirements (Mom et al., 2015). It concerns the effectiveness and efficiency with which staff members carry out their duties (Aslan et al., 2022), reflects the effectiveness of employees' work in completing core work or fulfilling role-based responsibilities (Singh, 2019), and highlights how important performance is to organizational objectives (Kalia & Bhardwaj, 2019). Following organizational processes to meet formal job criteria is one example of in-role behavior that reflects task performance (Hussain et al., 2022). This can be seen from three factors: the amount of work, quality of work, and time limits (Adekiya, 2024).

However, many employees are still unable to convert organizational resources into superior products or services, so they cannot optimally contribute to the effectiveness and efficiency of their organization.

Empirically, task performance is affected by boundary-spanning leadership (Zhang et al., 2023a; Xue & Woo, 2022), psychological empowerment (Pacheco et al., 2023; Sahadev et al., 2024; Yao et al., 2024), and proactive work behavior (Saihood & Al-Jader, 2021). Additionally, proactive work behavior, which impacts task performance, is affected by boundary-spanning leadership (Kim et al., 2022) and psychological empowerment (Nwanzu & Babalola, 2024; Gerçek, 2023). Proactive work behavior can mediate the effect of boundary-spanning leadership and psychological empowerment on task performance. However, scarce research has specifically investigated the mediating role of proactive work behavior in the causal relationship between boundary-spanning leadership and psychological empowerment with task performance. Therefore, it is an urgency that needs to be responded to through new research, mainly when other research is found with contradictory results. For instance, Matsuo (2024) demonstrated the effect of high-performance work systems on proactive behavior, while Gultom et al. (2022) proved the influence of proactive work behavior on psychological empowerment. Zhang et al. (2024) also found that performance pressure influences boundary-spanning leadership. These research discrepancies create research gaps that scientific research needs to clarify.

1. LITERATURE REVIEW AND HYPOTHESES

Empirically, boundary-spanning leadership influences task performance (Gunawan & Widodo, 2023; Xue & Woo, 2022; Zhang et al., 2023a). Boundary-spanning activities can improve performance (Ariwibowo et al., 2024; Zhang & Xie, 2024). Conceptually, boundary-spanning leadership refers to the behaviors of managers/leaders who cooperate and engage with people outside of their organizational (team) boundaries in order to uphold internal organizational solidarity and safeguard internal interests from outside uncertainty (Kwon & Woo, 2019).

According to Nazarzadeh and Khorasgani (2022), boundary-spanning leadership is divided into multiple areas, including cognitive, relational, and professional skills. Additionally, it includes ways to manage boundaries, establish common boundaries, and discover new boundaries. It can also mean having the capacity to inspire commitment, direction, and alignment across national boundaries in order to realize business missions or goals (Ernst & Yip, 2009; Ernst & Chrobot-Mason, 2010). Boundary-spanning leadership helps the organization realize its goals by sharing knowledge (Takanashi & Lee, 2019), plays a crucial role in the cooperative procedures used to carry out public infrastructure projects (Satheesh et al., 2023), and fosters innovative behavior (Liu et al., 2022). The three indicators of boundary-spanning leadership are empowering employees, developing cross-organizational learning capabilities, and collaborating across functions (Yip et al., 2016). It addresses a nuanced leader behavior of cooperation and active involvement with people outside the organization's boundaries to uphold the organization's internal solidarity and solidity to safeguard internal interests from external pressures of uncertainty through employee empowerment, cross-functional collaboration, and the development of cross-organizational learning capabilities. This indicates that boundary-spanning leadership is a crucial factor in determining task performance; thus, if business leadership adopts boundary-spanning leadership more widely, it will promote employee task performance.

Psychological empowerment, a concept that has gained significant attention in human resource management and organizational behavior, is a key factor influencing task performance (Juyumaya, 2022; Messmann, 2023; Pacheco et al., 2023; Gao et al., 2023; Zhang et al., 2023b). This intrinsic motivation is a reflection of an individual's orientation toward the job role and how well employees meet the needs of the position (Spreitzer, 1995). It also pertains to how much employees believe they have control over their work environment, skills, importance of their jobs, and perceived autonomy in their work (Robbins & Judge, 2022). According to Aiyer et al. (2015), the idea of empowerment originates from giving workers the skills, resources, power, chances, and incentives they need while simultaneously holding them responsible for the output of their labor. Consequently, the foundation of psychological empowerment is the development of personal ideas about the significance, autonomy, influence, and competency of work-related tasks, all of which are expected to boost creative performance more (Sahadev et al., 2024). The enduring popularity of psychological empowerment is due to its far-reaching effects on individuals and organizations. It has been identified as a predictor of job satisfaction (Mathew & Nair, 2022), innovative work behavior (Rahmawati et al., 2024), well-being (Tran Pham, 2024), and organizational outcomes (Khattak et al., 2022). It also influences organizational commitment (Ibrahim et al., 2024), career satisfaction (Aziz et al., 2024), and organizational outcomes (Llorente-Alonso et al., 2024).

Spreitzer (1995) has conceptualized psychological empowerment using four indicators: meaning, self-determination, impact, and competency. Meaning refers to the employee's perception of the job's importance and meaningfulness, which involves a fit between the job's requirements and the employee's beliefs, values, and behavior. The concept of self-determination pertains to an employee's sense of independence in beginning work-related activities and making choices on work techniques, pace, and effort. Impact describes how much a person can affect operational, administrative, or strategic outcomes at work. Competency reflects the employee's belief in their capability to perform job activities with skills, also known as self-efficacy (Nguyen-Viet et al., 2024). If adequate and stable conditions exist, these indicators can

stimulate employee task performance, which can have implications for achieving organizational goals. Therefore, psychological empowerment is crucial for employees and organizations.

Task performance is also affected by proactive work behavior. Saihood and Al-Jader (2021) indicated that proactive work behavior significantly influences task performance. In practice, every organization requires proactive work behavior from employees, especially profit-oriented businesses that are faced with the challenges of competition and uncertainty in an increasingly unpredictable future. Empirical evidence also proves that employees' proactive work behavior is critical in forming solid connections with individual, work-related, and team outcomes (Pratama et al., 2023). It also stimulates career satisfaction (Smithikrai, 2022) and increases motivation, competency, and performance (Ying et al., 2022; Bark et al., 2022; Gunawan & Widodo, 2023). Proactive work behavior is an individual's proactive engagement in work, making necessary adjustments based on actual workplace conditions. This multifaceted phenomenon includes self-initiative, anticipatory actions, and proactive measures such as leading, voicing ideas, innovating independently, and problem prevention (Boonyarit, 2023). Proactive work behavior comprises workplace efforts and behaviors starting with an individual adopted by other staff members to overcome obstacles and achieve objectives (Hou & Huang, 2021). According to Li (2020), proactive work behavior includes two traits: consciously adjusting employees' surroundings and engaging in deliberate action planning, consisting of deciding on, modifying, and achieving the intended outcome. Additionally, proactive work behavior comprises several indicators, such as problem prevention, individual innovation, taking charge, and voice (Parker & Collins, 2010). If in the highest conditions, it can drive employee task performance, which can help increase organizations' efficiency and effectiveness. Hence, proactive work behavior is essential for employees and organizations and needs more attention.

Empirically, proactive work behavior not only influences task performance but is also impacted by boundary-spanning leadership. Lee et al. (2023) and Kim et al. (2022) convincingly show that boundary-spanning leadership significantly con-

tributes to proactive work behavior. Wang (2024) found that empowering leadership impacts proactive work behavior. This confirms that boundary-spanning leadership is an effective predictor of proactive work behavior. Therefore, improving boundary-spanning leadership practices in companies can be a crucial stimulus for increasing proactive work behavior. Collaboration across functions, for example, can prevent problems from arising. Apart from that, employee empowerment can encourage them to be more courageous in taking over neglected work or carrying out innovations that benefit the company's progress.

Proactive work behavior is also influenced by psychological empowerment. Scholars found that psychological empowerment links to innovative behavior as a proxy of proactive work behavior (Gerçek, 2023; Öztırak & Güney, 2022; Stanescu et al., 2021). Psychological empowerment is related to job crafting and knowledge sharing as a proxy of proactive behavior (Wang et al., 2024). This indicates that psychological empowerment is a determinant of proactive work behavior, so if the escalation of psychological empowerment is increased, it has the opportunity to encourage an increase in employee proactive work behavior. As an illustration, highly competent employees tend to anticipate the emergence of new problems and can even carry out innovative behavior that is beneficial for the company's development.

Several previous findings show that boundary-spanning leadership and psychological empowerment influence proactive work behavior (Kim et al., 2022; Lee et al., 2023; Gerçek, 2023; Öztırak & Güney, 2022), while proactive work behavior impacts task performance (Saihood & Al-Jader, 2021). This present empirical evidence demonstrates the mediating function of proactive work behavior in the complex causal linkages that link psychological empowerment and boundary-spanning leadership with task performance. However, finding research results that specifically investigate the influence of boundary-spanning leadership and psychological empowerment on task performance with proactive work behavior mediation is still a challenge, so new research is essential and urgent to find novelty beneficial for developing science and business practice.

Based on previous studies, boundary-spanning leadership, psychological empowerment, and proactive work behavior affect task performance, along with proactive work behavior that influences task performance. However, research results regarding the influence of boundary-spanning leadership and psychological empowerment on task performance via the proactive work behavior mediation still need to be found.

Thus, this study aims to close the knowledge gap and provide new empirical evidence about the mediating role of proactive work behavior in the intricate causal links between boundary-spanning leadership and psychological empowerment with task performance. Several hypotheses can be proposed to achieve this goal, as follows:

H1: Boundary-spanning leadership directly affects employees' task performance.

H2: Psychological empowerment directly affects employees' task performance.

H3: Proactive work behavior directly affects employees' task performance.

H4: Boundary-spanning leadership directly affects employees' proactive work behavior.

H5: Psychological empowerment directly affects employees' proactive work behavior.

H6: Boundary-spanning leadership indirectly affects employees' task performance through proactive work behavior.

H7: Psychological empowerment indirectly affects employees' task performance through proactive work behavior.

2. METHOD

Participants are 455 companies' employees in the trade, services, finance, and investment sectors, providing diverse representation. These four business sectors are dominant and have large capitalization on Java Island, which is the center of Indonesian business and industry and is spread across six provinces: Jakarta, West, Central, East

Java, Banten, and Yogyakarta. Adopting an accidental sampling approach, participants voluntarily completed the questionnaire without compensation (Widodo, 2021) and approved data for the material of research and publication. As presented in Table 1, the majority were females (52.1%), 56.5% were aged 20 to 25, 51.6% high school or its equivalent, 66.6% unmarried, 61.5% worked for less than five years, and 81.3% held staff positions.

Table 1. Profile of the research participants

Profile	Amount	Percentage
Gender		
Male	218	47.9
Female	237	52.1
Age		
20-25 years	257	56.5
26-35 years	132	29.0
36-45 years	35	7.7
46-55 years	25	5.5
> 56 years	6	1.3
Education		
High School/Equivalent	234	51.6
Diploma (D3)	75	16.5
Bachelor (S1)	102	22.4
Postgraduate (S2)	41	9.0
Doctoral (S3)	3	0.6
Status		
Married	152	33.4
Unmarried	303	66.6
Job Experience		
< 5 years	280	61.5
6-10 years	123	27.2
11-15 years	33	7.2
> 16 years	19	4.1
Position		
Staff	370	81.3
Supervisor	54	11.9
Manager	31	6.8

This paper adopted a survey method, which required the distribution of questionnaires among participants (sample), with responses measured on a Likert scale ranging from strongly disagree or never (score = 1) to strongly agree or always (score = 5). Google Forms were used to conduct the online poll, and the results were shared through WhatsApp and email. The questionnaire development was guided by using the theoretical indicator of experts. The indicators of boundary-spanning leadership included collaboration across functions, empowering employees at all levels, and developing cross-organizational learning capabilities (Yip et al., 2016). Psychological empowerment indica-

tors comprised four categories, namely meaning, self-determination, impact, and competency (Spreitzer, 1995). The indicators of proactive work behavior were grouped into four categories, namely taking charge, voice, problem prevention, and individual innovation (Parker & Collins, 2010). Task performance was measured using indicators grouped into three categories, such as transforming raw materials into goods and services, helping organizational effectiveness, and encouraging organizational efficiency (Aguinis, 2024).

Before data collection, the questionnaire, as presented in Appendix A, was tested for validity and reliability using 30 trial samples. The validity and reliability were assessed using the Product Moment Pearson formula and Cronbach's Alpha (Widodo, 2021). The data were processed using the SPSS version 26 application, and the results showed absolute reliability for the twelve items measuring boundary-spanning leadership, with an alpha coefficient of .909 and a corrected item-total correlation coefficient ranging from .527 to .874. Similarly, the psychological empowerment test, consisting of twelve items, showed high reliability with an alpha coefficient of .944 and corrected item-total correlation values ranging from .451 to .885. The twelve items constituting proactive work behavior measurement showed an alpha coefficient of .887, with corrected item-total correlation values ranging from .379 to .778. Task performance measurement, comprising nine items, showed an alpha coefficient of .901, and the adjusted corrected item-total correlation ranged from .396 to .882. The results confirmed the questionnaire's validity and reliability, as all variables had an alpha coefficient greater than .70 and an adjusted corrected item-total correlation that exceeded .361 (Widodo, 2021). It indicated that all questionnaires as research instruments are suitable for collecting data.

Additionally, this study employed statistical processes, including the correlation matrix and the Harman single-factor test, to confirm the integrity of the data through the common method bias (CMB) test. The findings indicate that the total variance recovered by the Harman single-factor is 48.9%, which is less than the recommended threshold of 50%, and that the correlation coefficient between a construct (variable) is less than .90.

This suggests that the CMB phenomenon is not present in the research data (Tehseen et al., 2017; Kock, 2021; Widodo et al., 2023). The rigorous application of these tests provides reassurance about the reliability of the data, enhancing the credibility of the research.

This study uses CMB, descriptive, and correlational analysis to support structural equation modeling (SEM) analysis. The Sobel (Z) test was used to assess the significance of the indirect effect (mediation), while the Student test (t) was used to test the significance of the direct effect. CMB, descriptive, and correlational analyses were carried out with SPSS version 26, while SEM analyses were employed by LISREL version 8.80.

3. RESULTS

The results of descriptive analysis show standard deviation values within the range of 1.739 to 3.008, less than the mean values of 10.54 to 13.35. It produced a distinctive data pattern that required further investigation. Additionally, the correlation coefficient values were in the range of .24 to .80. The significance of the results, comprising all constructs (variables), was established at $p < .01$, depicting a mutual dependence among the constructs. Despite this mutual dependence, the correlation coefficient obtained was less than .8, showing the absence of features used to characterize multicollinearity.

The estimated measurement model uses confirmatory factor analysis (CFA), as presented in Table 2. CFA results offer valuable insights when evaluating the validity and reliability of measures. According to Hair et al. (2022), all indicators constitute latent variables, as shown by the factor loading values in the range of .42 to .91. However, only one indicator was below .60, indicating relatively strong validity. The reliability indicators, such as Cronbach's alpha (CA), composite reliability (CR), and average variance extracted (AVE), were also considered. The acceptable values include AVE, CA, and CR greater than .50 and .70, respectively (Hair et al., 2022). The CFA results for CA and CR ranged from .887 to .944 and .738 to .924, respectively, while AVE was within .502 to .754. The results showed adequate convergence and strong reliability.

The results of the goodness-of-fit (GOF) test indicated that nine of the eleven indices were considered good (GFI, RMSEA, PNFI, Normed chi-square, RFI, CFI, AGFI, NNFI, and NFI). The other two, namely chi-square and sig. probability indices did not meet the desired criteria. According to Hair et al. (2022), the chi-square test is very vulnerable (sensitive) to large sample sizes (>200), as in this study involving 455 employees, so the chi-square test value is invalid (poor). Since the other nine criteria that were looked at matched the necessary requirements, this model was accepted (fit). This indicates that, depending on the research sample, the theoretical model fits the empirical facts.

Table 2. Results of the measurement model

| Variables	Indicators	Factor Loading	CA	CR	AVE
Boundary-spanning leadership (X_1)	Collaboration across functions	.69	.909	.812	.591
	Empowering employees at all levels	.81			
	Developing cross-organizational learning capabilities	.80			
Psychological empowerment (X_2)	Meaning	.68	.944	.880	.650
	Self-determination	.87			
	Impact	.86			
	Competency	.80			
Proactive work behavior (Y_1)	Taking charge	.81	.887	.924	.754
	Voice	.86			
	Problem prevention	.91			
	Individual innovation	.89			
Task performance (Y_2)	Transforming raw materials into goods and services	.84	.901	.738	.502
	Helping organizational effectiveness	.79			
	Encouraging organizational efficiency	.42			

Table 3. Hypothesis testing results

Hypothesis	γ/β	T/Z-value	Decision
H_1: Boundary-spanning leadership (X_1) on task performance (Y_2)	.20**	2.55	Supported
H_2: Psychological empowerment (X_2) on task performance (Y_2)	.17*	2.28	Supported
H_3: Proactive work behavior (Y_1) on task performance (Y_2)	.46**	7.56	Supported
H_4: Boundary-spanning leadership (X_1) on proactive work behavior (Y_1)	.33**	4.41	Supported
H_5: Psychological empowerment (X_2) on proactive work behavior (Y_1)	.34**	4.69	Supported
H_6: Boundary-spanning leadership (X_1) on task performance (Y_2) through proactive work behavior (Y_1)	.16**	9.50	Supported
H_7: Psychological empowerment (X_2) on task performance (Y_2) through proactive work behavior (Y_1)	.15**	9.86	Supported

*Note*: * $p < .05$, ** $p < .01$.

The hypotheses testing results are summarized in Table 3 and displayed in Figures 1 and 2. All hypotheses, ranging from H_1 to H_7, showed significant results (supported), with t-values above the t-table at $\alpha = .05$ and .01. Boundary-spanning leadership directly affects task performance ($\gamma = .20$, $p < .01$), as well as psychological empowerment ($\gamma = .17$, $p < .05$) and proactive work behavior ($\beta = .46$, $p < .01$). Additionally, boundary-spanning leadership and psychological empowerment directly influence proactive work behavior, respectively ($\gamma = .33$, $\gamma = .34$, $p < .01$). Finally, boundary-spanning leadership and psychological empowerment indirectly influence task performance through proactive work behavior, with Z-values = 9.50 and 9.86, respectively, greater than Z-table

(1.96). Specifically, boundary-spanning leadership indirectly affects task performance through proactive work behavior with $\beta = .16$ and $p < .01$; meanwhile, psychological empowerment indirectly influences task performance via proactive work behavior with $\beta = .15$ and $p < .01$. Proactive work behavior has the most decisive influence on task performance compared to the others, so it then plays a mediating role in the influence of boundary-spanning leadership and psychological empowerment on task performance. However, boundary-spanning leadership has a slightly stronger influence ($\beta = .16$) than psychological empowerment ($\beta = .15$). This confirms that external factors tend to have a better influence than individual internal factors.
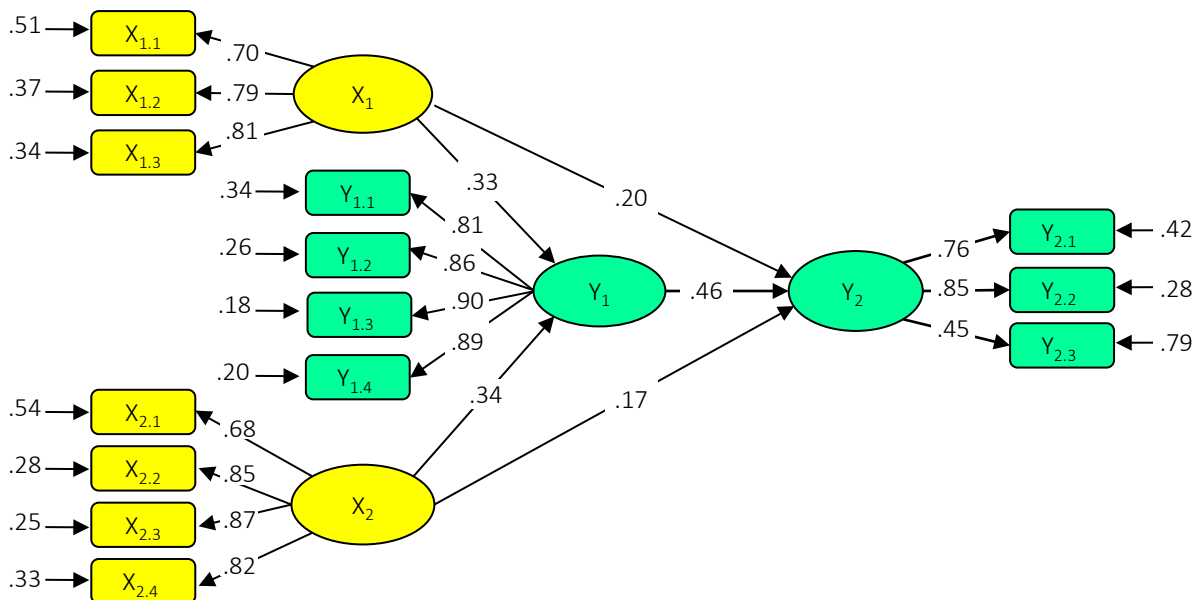
Note: Chi-Square = 228.87, df = 71, *P*-value = .00000, RMSEA = .070; X_1 = Boundary-spanning leadership, X_2 = Psychological empowerment, Y_1 = Proactive work behavior, Y_2 = Task performance.

Figure 1. Standardized structural model
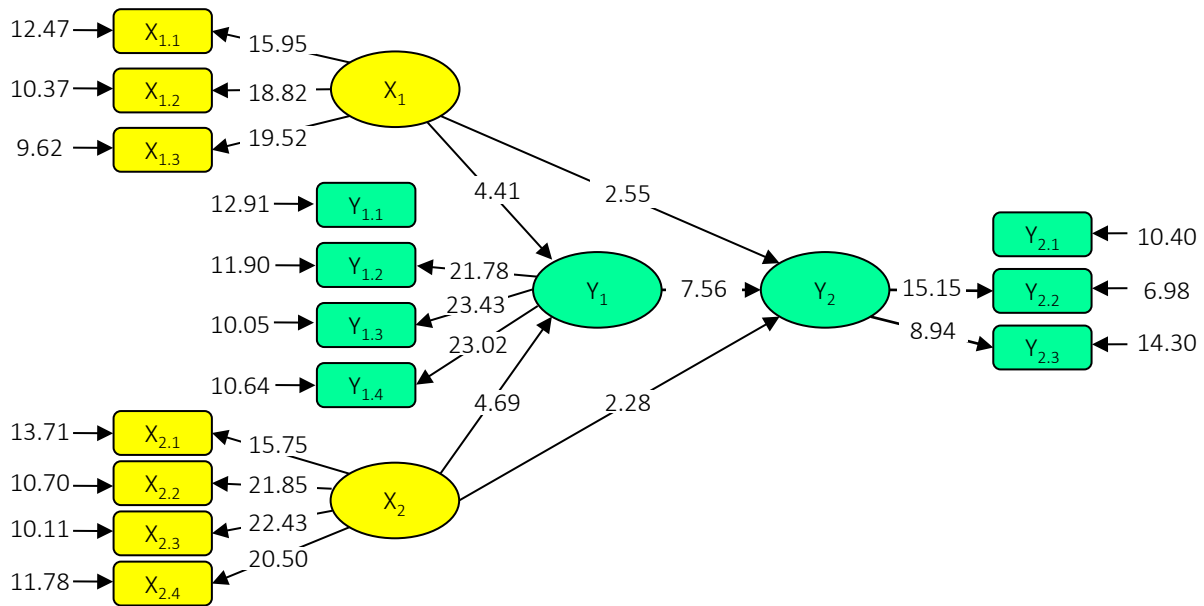
Note: Chi-Square = 228.87, df = 71, P-value = .00000, RMSEA=.070; X_1 = Boundary-spanning leadership, X_2 = Psychological empowerment, Y_1 = Proactive work behavior, Y_2 = Task performance.

Figure 2. T-value structural model

4. DISCUSSION

This study found that boundary-spanning leadership, psychological empowerment, and proactive work behavior had a significant effect on task performance; boundary-spanning leadership and psychological empowerment significantly affect proactive work behavior, and proactive work behavior mediates the effect of boundary-spanning leadership and psychological empowerment on task performance. In detail, the significant influence of boundary-spanning leadership on task performance shows that boundary-spanning leadership is an essential antecedent for task performance. Consequently, if boundary-spanning leadership practices are improved intensively, task performance will increase. For example, cross-functional collaboration can help organizational (company) effectiveness and efficiency. Likewise, employee empowerment at all levels can also encourage increased production or service quality. These results support and validate previous research, which proves a significant impact of boundary-spanning leadership on task performance (Gunawan & Widodo, 2023; Xue & Woo, 2022; Zhang et al., 2023a). Furthermore, the strong relationship between psychological empowerment and task performance shows empirical evidence that psychological empowerment is a crucial pre-

dictor of task performance. This implies that improving psychological empowerment among staff members may lead to an improvement in their work performance. As an illustration, increasing employee competency can stimulate enhanced work production or the quality of company services, which has implications for the effectiveness and efficiency of the organization. This empirical evidence affirms prior studies proving that psychological empowerment affects task performance (Juyumaya, 2022; Messmann, 2023; Pacheco et al., 2023; Gao et al., 2023).

Likewise, the significant impact of proactive work behavior on task performance confirms its strong tendency to be an essential antecedent of task performance. This means that an increase in employee proactive work behavior will follow an enhancement in their task performance. For example, employee courage to take over work that is delayed in completion can clearly help the effectiveness and efficiency of the organization. Likewise, employee innovation will help employees to be more alert and agile in turning raw materials into finished goods or turning organizational resources into excellent services. This empirical fact is consistent with and supports previous studies, which revealed that proactive work behavior influences task performance (Saihood & Al-Jader, 2021)

and ignores conflicting research results (Matsuo, 2024). Thus, there is no need to doubt the significant link between proactive work behavior and task performance.

This study also highlights the positive influence of boundary-spanning leadership and psychological empowerment on proactive work behavior. It confirms the empirical reality that boundary-spanning leadership and psychological empowerment are two important components determining employee proactive work behavior. This finding has major implications for companies; as boundary-spanning leadership and psychological empowerment are developed adequately and consistently, their proactive work behavior can increase. Therefore, the development of boundary-spanning leadership and psychological empowerment is not just theoretical but a practical need for employees to increase their proactive work behavior. This empirical finding links and strengthens relevant previous research, which proves that boundary-spanning leadership and psychological empowerment are positively correlated with proactive work

behavior (Gerçek, 2023; Lee et al., 2023; Kim et al., 2022) and negates the conflicting results of previous research (Gultom et al., 2022).

Finally, this paper presents novel empirical evidence on how proactive work behavior mediates the effect of boundary-spanning leadership and psychological empowerment on employee task performance. These findings suggest that proactive work behavior can transmit the functions of boundary-spanning leadership and psychological empowerment in influencing employee task performance. It implies that high employee proactive work behavior has the mediating potential to link boundary-spanning leadership and psychological empowerment with task performance. This empirical evidence not only refutes other conflicting research findings and validates the prior research's results, which formed the basis for developing the theoretical model and hypotheses of this study, but also introduces a novelty of the model of boundary-spanning leadership and psychological empowerment affecting task performance through proactive work behavior.

CONCLUSION

This study aims to uncover employees' task performance based on boundary-spanning leadership and psychological empowerment through proactive work behavior. The results show that boundary-spanning leadership and psychological empowerment impact task performance, both directly and indirectly, through proactive work behavior. These findings encourage a new empirical model of proactive work behavior in transmitting boundary-spanning leadership and psychological empowerment to task performance. Therefore, researchers, academics, and practitioners can utilize this model to explore employee task performance more in-depth and comprehensively based on boundary-spanning leadership, psychological empowerment, and proactive work behavior perspectives.

For company management practitioners, it can be used as "ammunition" to improve employee task performance through boundary-spanning leadership, psychological empowerment, and proactive work behavior perspectives, which, among other things, can be followed up through independent training, workshops, or literacy activities. For the record, proactive work behavior has a more dominant role in improving employee task performance compared to others, so its existence needs to receive more attention. Meanwhile, for researchers and academics, this model can be used as a reference in task performance studies.

However, researchers should use the model carefully without ignoring research limitations. For example, the analysis only covers a few dimensions/indicators of all the variables contained in the literature. The study only uses a quantitative approach, so it cannot reveal the qualitative facts behind the link between constructs. Moreover, the research participants were limited to employees of services, commerce, investment, and finance industrial firms on Java Island. Therefore, future research that adopts or modifies this model needs to use indicators not involved in this paper, utilize a more comprehensive research approach (mixed methods), and expand the number of research samples outside Java Island.

AUTHOR CONTRIBUTIONS

Conceptualization: Hadi Setiadi, Widodo Widodo.
Data curation: Hadi Setiadi, Widodo Widodo.
Formal analysis: Widodo Widodo.
Funding acquisition: Hadi Setiadi.
Investigation: Hadi Setiadi, Widodo Widodo.
Methodology: Widodo Widodo.
Project administration: Hadi Setiadi.
Resources: Hadi Setiadi, Widodo Widodo.
Software: Widodo Widodo.
Supervision: Widodo Widodo.
Validation: Hadi Setiadi, Widodo Widodo.
Visualization: Widodo Widodo.
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Writing – review & editing: Widodo Widodo.

REFERENCES

1. Adekiya, A. (2024). Perceived job insecurity and task performance: what aspect of performance is related to which facet of job insecurity. *Current Psychology, 43*(2), 1340-1358. https://doi.org/10.1007/s12144-023-04408-4

2. Aguinis, H. (2024). *Performance management* (5th ed.). Chicago Business Press.

3. Aiyer, S. M., Zimmerman, M. A., Morrel-Samuels, S., & Reischl, T. M. (2015). From broken windows to busy streets: A community empowerment perspective. *Health Education & Behavior, 42*(2), 137-147. https://doi.org/10.1177/1090198114558590

4. Ariwibowo, A., Afiff, A., Rachmawati, R., & Kusumastuti, R. (2024). The impact of boundary spanning activities and research orchestration in improving performance of Indonesian state-owned bank branches. *Humanities and Social Sciences Communications, 11*(1), Article 493. http://dx.doi.org/10.1057/s41599-024-02831-x

5. Aslan, M., Yaman, F., Aksu, A., & Güngör, H. (2022). Task performance and job satisfaction under the effect of remote working: Call center evidence. *Economics & Sociology, 15*(1), 285-297. https://doi.org/10.14254/2071-789X.2022/15-1/18

6. Aziz, N. M. A., Abdul Wahab, S. R., Shaari, R., Sarip, A., & Mohd Arif, L. S. (2024). The effect of psychological empowerment on the relationship between perceived organizational support and career satisfaction at manufacturing sector in Johor. *Sage Open, 14*(1). https://doi.org/10.1177/21582440231221131

7. Bark, A. S. H., Seliverstova, K., & Ohly, S. (2022). Getting credit for proactivity? The effects of gender. *Journal of Applied Social Psychology, 52*(8), 660-675. https://doi.org/10.1111/jasp.12833

8. Boonyarit, I. (2023). Linking self-leadership to proactive work behavior: A network analysis. *Cogent Business & Management, 10*(1), Article 2163563. https://doi.org/10.1080/23311975.2022.2163563

9. Colquitt, J. A., Lepine, J. A., & Wesson, M. J. (2023). *Organizational behavior: Improving performance and commitment in the Workplace* (8th ed.). McGraw-Hill Company, Inc.

10. Ernst, C., & Chrobot-Mason, D. (2010). *Boundary spanning leadership: Six practices for solving problems, driving innovation, and transforming organizations*. McGraw-Hill Professional.

11. Ernst, C., & Yip, J. (2009). Boundary spanning leadership: Tactics to bridge social identity groups in organizations. In T. L. Pittinsky (Ed.), *Crossing the divide: Intergroup leadership in a world of difference* (pp. 89-99). Harvard Business School Press.

12. Gao, Q., Xu, J., Wang, Q., & Wu, C.-S. (2023). The use of the analytic hierarchy process in improving psychological empowerment and employee performance. *Journal of Organizational and End User Computing, 35*(3), 1-22. https://doi.org/10.4018/JOEUC.321171

13. Gerçek, M. (2023). The impact of organizational empowerment on contextual and adaptive performance: The mediating role of innovative work behavior. *International Journal of Management Economics and Business, 19*(2), 243-259. https://doi.org/10.17130/ijmeb.1240152

14. Gultom, L., Hatiningsi, K. N., & Palindangan, L. K. (2022). Factors that influence innovative work behavior of Y generation employees at the Indonesia financial services authority. *Journal of World Science, 1*(8), 570-577. https://doi.org/10.36418/jws.v1i8.78

15. Gunawan, R. M. B., & Widodo, W. (2023). How boundary-spanning leadership affects employees' contextual performance: A mediation mechanism perspective.

Quality Access to Success, 24(196), 285-294. https://doi.org/10.47750/QAS/24.196.35

16. Hou, X., & Huang, R. (2021). The literature review of proactive behavior at work. *Proceedings of the 2021 International Conference on Modern Education and Humanities Science (ICMEHS 2021).* https://doi.org/10.2991/assehr.k.210208.030

17. Hussain, Z., Farid, H., Liu, X., & Abbass Shaheen, W. (2022). Unveiling the effects of stressors on task performance: The role of thriving at work and resilience. *Frontiers in Psychology, 13,* 896505. https://doi.org/10.3389/fpsyg.2022.896505

18. Ibrahim, N., Farinordin, F. A., Mohamad, N. I., Lee, U. H. M. S., & Ismail, A. (2024). Psychological empowerment link using employee performance and organizational commitment on the generation gap: PLS-MGA analysis. *Gadjah Mada International Journal of Business, 26*(1), 23-53. http://dx.doi.org/10.22146/gamaijb.65657

19. Ivancevich, J. M., Konopaske, R., & Matteson, M. T. (2023). *Organizational behavior and management* (12th ed.). McGraw-Hill Education.

20. Juyumaya, J. (2022). How psychological empowerment impacts task performance: The mediation role of work engagement and moderating role of age. *Frontiers in Psychology, 13.* https://doi.org/10.3389/fpsyg.2022.889936

21. Kalia, N., & Bhardwaj, B. (2019). Contextual and task performance: Do demographic and organizational variables matter?" *Rajagiri Management Journal, 13*(2), 30-42. https://doi.org/10.1108/RAMJ-09-2019-0017

22. Kauppila, O. P., Bizzi, L., & Obstfeld, D. (2018). Connecting and creating: Tertius iungens, individual creativity, and strategic decision processes. *Strategic Management Journal, 39*(3), 697-719. https://doi.org/10.1002/smj.2728

23. Khan, N. A. (2021). Determinants of proactive work behavior of employees during the Covid-19 crisis. A perspective on toxic leadership in the virtual work setting. *European Journal of Psychology Open, 80*(1-2), 77-87. https://doi.org/10.1024/2673-8627/a000007

24. Khattak, S. I., Rizvi, T. H., & Khan, M. A. (2022). Unwrapping software projects success in Asia: Assessing the role of authentic leadership, psychological empowerment, and job engagement in project success using a serial-mediation approach. *SAGE Open, 12*(2). http://dx.doi.org/10.1177/21582440221097918

25. Kim, S. L., Lee, D., & Yun, S. (2022). Leader boundary-spanning behavior and creative behavior: The role of need for status and creative self-efficacy. *Leadership & Organization Development Journal, 43*(6), 835-846. https://doi.org/10.1108/LODJ-05-2021-0235

26. Kock, N. (2021). Harman's single factor test in PLS-SEM: Checking for common method bias. *Data Analysis Perspectives Journal, 2*(2), 1-6. Retrieved from https://bit.ly/3ATTu95

27. Kwon, J. E., & Woo, H. R. (2019). The effect of boundary-spanning leadership on self-efficacy, extra-role behavior, and absorptive capacity. *Knowledge Management Research, 20*(1), 133-153. https://doi.org/10.15813/kmr.2019.20.1.006

28. Lee, J., Choi, D., & Cheong, M. (2023). Leader boundary-spanning behavior and employee voice behavior: The job demands-resources perspective. *Behavioral Sciences, 13*(2), Article 146. https://doi.org/10.3390/bs13020146

29. Li, X. (2020). The preliminary literature review of proactive behavior. *American Journal of Industrial and Business Management, 10*(5), 915-919. https://doi.org/10.4236/ajibm.2020.105061

30. Liu, X., Yu, Y., Zhao, X., & Zhang, N. (2022). Top management team boundary-spanning leadership: Measurement development and its impact on innovative behavior. *Frontier in Psychology, 13.* https://doi.org/10.3389/fpsyg.2022.988771

31. Llorente-Alonso, M., García-Ael, C., & Topa, G. (2024). Meta-analysis of psychological empowerment: Antecedents, organizational outcomes, and moderating variables. *Current Psychology, 43,* 1759-1784. https://doi.org/10.1007/s12144-023-04369-8

32. Mathew, J., & Nair, S. (2022). Psychological empowerment and job satisfaction: A meta-analytic review. *Vision, 26*(4), 431-440. http://dx.doi.org/10.1177/0972262921994350

33. Matsuo, M. (2024). High-performance work systems and proactive behavior: The mediating role of customer-oriented behavior. *Employee Relations, 46*(1), 1-18. https://doi.org/10.1108/ER-07-2022-0317

34. Messmann, G. (2023). Fostering proactive behaviour: The role of work-related reflection, psychological empowerment, and participative safety for innovative behaviour and job crafting. *International Journal of Training and Development, 27*(1), 99-116. https://doi.org/10.1111/ijtd.12286

35. Mom, T. J. M., Fourne, S. P. L., & Jansen, J. J. P. (2015). Managers' work experience, ambidexterity, and performance: The contingency role of the work context. *Human Resource Management, 54*(S1), 133-153. https://doi.org/10.1002/hrm.21663

36. Nazarzadeh, Z. M., & Khorasgani, M. S. G. (2022). Boundary-spanning leadership as a necessity for academic administrators. *International Journal of Educational Management, 36*(4), 527-540. https://doi.org/10.1108/IJEM-09-2021-0384

37. Nguyen-Viet, B., Nham, T. C., & Dang, H. P. (2024). Antecedents of innovative behaviour: The moderating role of psychological empowerment. *International Journal of Work Innovation, 5*(2), 122-142. http://dx.doi.org/10.1504/IJWI.2023.10058737

38. Nwanzu, C. L., & Babalola, S. S. (2024). Psychological empowerment as moderator of the relationship between core self-evaluation and proactive work behaviour. *Cogent Business & Management, 11*(1), Article 2297461. https://doi.org/10.1080/23311975.2023.2297461

39. Nyathi, M., & Kekwaletswe, R. (2023). Realizing employee and organizational performance gains through electronic human resource management use in developing countries. *African Journal of Economic and Management Studies, 14*(1), 121-134. https://doi.org/10.1108/AJEMS-11-2021-0489

40. Öztırak, M., & Güney, S. (2022). The mediator role of proactive personality in the effect of psychological empowerment on self-leadership: A study for the aviation industry. *Journal of Aviation, 6*(3), 318-324. https://doi.org/10.30518/jav.1104838

41. Pacheco, P. O., Coello-Montecel, D., & Tello, M. (2023). Psychological empowerment and job performance: Examining serial mediation effects of self-efficacy and affective commitment. *Administrative Sciences, 13*(3), Article 76. https://doi.org/10.3390/admsci13030076

42. Parker, S. K., & Collins, C. G. (2010). Taking stock: Integrating and differentiating multiple proactive behaviors. *Journal of Management, 36*(3), 633-662. https://doi.org/10.1177/0149206308321554

43. Pratama, A. S., Sridadi, A. R., Eliyana, A., Anggraini, R. D., & Kamil, N. L. M. (2023). A systematic review of proactive work behavior: Future research recommendation. *The Journal of Behavioral Science, 18*(2), 136-151. Retrieved from https://so06.tci-thaijo.org/index.php/IJBS/article/view/260647

44. Rahmawati, W., Nurmaya, E., Sutanto, A., & Hidayat, A. (2024). Predicting innovative work behavior through the perspective of knowledge sharing, perceived organizational support, and psychological empowerment (Study at The National Narcotics Agency for The Special Region of Yogyakarta). *Indonesian Interdisciplinary Journal of Sharia Economics (IIJSE), 7*(1), 501-545. Retrieved from https://e-journal.uac.ac.id/index.php/iijse/article/view/4352

45. Robbins, S. P., & Judge, T. A. (2022). *Organizational behavior* (19th ed.). Pearson.

46. Sahadev, S., Chang, K., Malhotra, N., J-H., K., Ahmed, T., & Kitchen, P. (2024). Psychological empowerment and creative performance: Mediating role of thriving and moderating role of competitive psychological climate. *Journal of Business Research, 170,* Article 114310. https://doi.org/10.1016/j.jbusres.2023.114310

47. Saihood, A. Q., & Al-Jader, S. A. (2021). The effect of proactive work behavior on entrepreneurial performance. *International Journal of Research in Social Sciences & Humanities, 11*(2), 275-298. https://doi.org/10.37648/ijrssh.v11i02.015

48. Satheesh, S. A., Verweij, S., Meerkerk, I., Busscher, T., & Arts, J. (2023). The impact of boundary spanning by public managers on collaboration and infrastructure project performance. *Public Performance & Management Review, 46*(2), 418-444. https://doi.org/10.1080/15309576.2022.2137212

49. Singh, S. K. (2019). Territoriality, task performance, and workplace deviance: Empirical evidence on role of knowledge hiding. *Journal of Business Research, 97,* 10-19. https://doi.org/10.1016/j.jbusres.2018.12.034

50. Smithikrai, C. (2022). Antecedents and consequences of proactive work behavior among Thai employees. *The Journal of Behavioral Science, 17*(1), 43-57. Retrieved from https://so06.tci-thaijo.org/index.php/IJBS/article/view/254132

51. Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal, 38*(5), 1442-1465. Retrieved from https://webuser.bus.umich.edu/spreitze/Pdfs/PsychEmpowerment.pdf

52. Stanescu, D. F., Zbuchea, A., & Pinzaru, F. (2021). Transformational leadership and innovative work behaviour: The mediating role of psychological empowerment. *Kybernetes, 50*(5), 1041-1057. https://doi.org/10.1108/K-07-2019-0491

53. Takanashi, C., & Lee, K.-J. (2019). Boundary spanning leadership, resource mobilisation, and performance of university-industry R&D projects: A study in a Japanese university. *Technology Analysis & Strategy Management, 31*(2), 140-154. https://doi.org/10.1080/09537325.2018.1490397

54. Tehseen, S., Ramayah, T., & Sajilan, S. (2017). Testing and controlling for common method variance: A review of available methods. *Journal of Management Sciences, 4*(2), 142-168. Retrieved from https://ideas.repec.org/a/gei/journl/v4y2017i2p146-175.html

55. Tran Pham, T. K. (2024). Empowering leadership and employee well-being: The role of psychological empowerment and time pressure. *International Journal of Public Leadership, 20*(1), 36-50. https://doi.org/10.1108/IJPL-09-2023-0066

56. Wang, C. J. (2024). From empowering leadership to proactive work behavior in hospitality: A study of multiple cross-level mediation processes. *Journal of Hospitality and Tourism Insights, 7*(1), 371-393. https://doi.org/10.1108/JHTI-11-2022-0547

57. Wang, J., Kim, H. R., & Tran, T. B. H. (2024). Can shared leadership stimulate team members' proactive behaviour? Exploring through the bridge of psychological empowerment. *Tourism & Management Studies, 20*(2), 67-79. http://dx.doi.org/10.18089/tms.20240206

58. Widodo, W. (2021). *Metodologi penelitian populer & praktis [Popular & practical research methodologies].* Rajawali Pers. (In Indonesian).

59. Widodo, W., Gustari, I., & Permana, R. (2023). A mediation model of the effect of visionary leadership on employee' organizational citizenship behavior. *International Journal of Learning, Teaching and Educational Research, 22*(4), 104-123. https://doi.org/10.26803/ijlter.22.4.7

60. Xue, R., & Woo, H. R. (2022). Influences of boundary-spanning leadership on job performance: A moderated mediating role of job crafting and positive psychologi-

cal capital. *International Journal of Environmental Research and Public Health, 19*(19), Article 12725. https://doi.org/10.3390/ijerph191912725

61. Yao, J. H., Xiang, X. T., & Shen, L. (2024). The impact of teachers' organizational silence on job performance: A serial mediation effect of psychological empowerment and organizational affective commitment. *Asia Pacific Journal of Education, 44*(2), 355-373. http://dx.doi.org/10.1080/02188791.2022.2031869

62. Ying, Z., Jinyun, D., Fuxi, W., Jinzhao, Q., & Xiongliang, P. (2022). Attraction of the like": How does coworkers' proactive behavior stimulate employees'

motivation and job performance? *Acta Psychologica Sinica, 54*(4), 516-528. https://doi.org/10.3724/SP.J.1041.2022.00516

63. Yip, J., Ernst, C., & Campbell, M. (2016). *Boundary spanning leadership mission critical perspectives from the executive suite*. Center for Creative Leadership.

64. Zhang, H., Liu, J., & Chen, J. (2024). The double-edged sword effect of performance pressure on employee boundary-spanning behavior. *Journal of Chinese Human Resources Management, 15*(3), 86-103. https://doi.org/10.47297/wspchrmWSP2040-800507.20241503

65. Zhang, H., Tan, X., Liu, C., & Chen, M. (2023a). Do team boundary-spanning activities

affect innovation performance? *Sustainability, 15*(13), Article 10605. https://doi.org/10.3390/su151310605

66. Zhang, L., Kim, D., & Ding, S. (2023b). Cultivating organizational performance through the performance measurement systems: Role of psychological empowerment and creativity. *Frontiers in Psychology, 14*. https://doi.org/10.3389/fpsyg.2023.1116617

67. Zhang, Z., & Xie, J. (2024). How and when does boundary spanning behavior influence employees' creative performance? The roles of meaning of work and team Chaxu climate. *Current Psychology, 43*(24), 1-11. http://dx.doi.org/10.1007/s12144-024-05911-y

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 utilize employee potential to the maximum.
		Leadership facilitates the development of employee competencies (skills) through training programs and workshops.
		Leaders support employees in continuing their studies at a higher level.
	Developing cross-organizational learning capabilities	Leaders encourage employees to conduct comparative studies with other companies.
		Leaders help employees carry out strategic analyses by considering the company's internal and external conditions.
		Leadership encourages the company to become a modern learning organization that allows employees to learn from each other continuously.
Psychological empowerment	Meaning	My work is meaningful to my life.
		My job is suitable for my educational background.
		My work is in harmony with the life values that I adhere to.
	Self-determination	I determine how to work according to my own wishes.
		I set the time to complete tasks independently.
		I complete assignments independently.
	Imp	My influence in the office is huge.
		I have strong control over the working atmosphere in the office.
		I have a high level of dominance over my colleagues at work.
	Competency	I am confident that I can complete the work according to the target.
		My competence is sufficient to solve various work problems.
		My capacity is sufficient to complete complex work.
Proactive work 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 those of others.
		I easily express disagreement with other people's opinions.
		I encourage colleagues to dare to put forward ideas that are useful for improving 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 problems in the office from recurring.
	Individual innovation	I actively provide new ideas to improve working conditions.
		I actively find new ways that can help the company progress.
		I actively advocate for original ideas to others.
Task performance	Transforming raw materials into goods and services	I use company resources to produce the best services
		I use various tools to support the optimal implementation of work.
		I make optimal use of company resources to produce quality output.
	Helping organizational effectiveness	I actively help the realization of company goals more quickly.
		I am actively completing hampered company work programs.
		I am proactive in building the company's competitiveness.
	Encouraging organizational efficiency	I only use company facilities for work purposes.
		I support the companies' budget savings.
		I support companies to work more time-saving.