

The Role of Psychological Empowerment in Mediating the Impact of Transformational Leadership on Innovative Work Behavior

Darman¹, Flora Grace Putrianti², Siskawaty Yahya³, Sitti Husna Noviana Djou⁴, Maman Musa⁵

^{1,3,4,5}Universitas Bina Mandiri Gorontalo

²Universitas Sarjanawiyata Tamansiswa

Article Info

Article history:

Received June, 2025

Revised June, 2025

Accepted June, 2025

Keywords:

Transformational leadership,
psychological empowerment,
innovative work behavior,
SEM-PLS,
Indonesia

ABSTRACT

This study explores the mediating role of psychological empowerment in the relationship between transformational leadership and innovative work behavior (IWB) in Indonesia. Using a quantitative approach, data were collected from 165 employees across various sectors. Constructs were measured using a Likert scale (1–5) and analyzed through Structural Equation Modeling-Partial Least Squares (SEM-PLS 3). The results reveal that transformational leadership significantly influences both psychological empowerment and IWB. Furthermore, psychological empowerment mediates the relationship between transformational leadership and IWB, highlighting its critical role in fostering innovation. These findings emphasize the importance of leadership strategies that enhance psychological empowerment to drive innovation in the workplace. The study provides theoretical insights and practical recommendations for managers and policymakers aiming to cultivate innovative cultures within organizations.

This is an open access article under the [CC BY-SA](#) license.



Corresponding Author:

Name: Darman

Institution: Universitas Bina Mandiri Gorontalo

e-mail: darman@ubmg.ac.id

1. INTRODUCTION

Innovation is a critical determinant of organizational success in an increasingly competitive global marketplace, where innovative work behavior (IWB) among employees—defined as the intentional generation, promotion, and implementation of new ideas within a work role or organization—serves as a key driver of innovation. Encouraging employees to engage in IWB requires strategic leadership alignment and a supportive organizational environment, with transformational leadership emerging as a pivotal factor in fostering such behavior. This leadership style,

characterized by inspiring and motivating employees to transcend self-interest for collective goals, cultivates creativity, supports knowledge sharing, and promotes risk-taking, all of which contribute to an innovative climate [1], [2]. Transformational leaders influence organizational culture and enhance social collaboration by mechanisms such as intellectual stimulation, where employees are encouraged to think creatively and challenge norms [2]; inspirational motivation, in which leaders articulate a compelling vision to drive innovative goals [1]; and individualized consideration, which involves recognizing individual needs and

offering personalized support to boost engagement [1]. The effectiveness of transformational leadership in promoting IWB is further mediated by factors such as organizational support—including a climate conducive to innovation and access to resources [3], [4]—psychological empowerment that enhances self-efficacy and motivation (Ebrahim et al., 2023), and teamwork quality that fosters collaboration and idea exchange [3]. To harness these benefits, organizations should prioritize developing transformational leadership competencies through structured training [2] and leverage digital technologies to reinforce a culture of innovation [2].

Transformational leadership, characterized by vision, individualized consideration, intellectual stimulation, and idealized influence, focuses on elevating employees' aspirations and enabling them to achieve extraordinary outcomes, thereby serving as a powerful catalyst for fostering innovative work behavior (IWB). Leaders who embody these qualities can significantly influence employees' attitudes and behaviors, cultivating an environment that supports creative thinking and innovative action. However, the precise mechanisms through which transformational leadership translates into IWB remain an area requiring deeper exploration. These mechanisms include intellectual stimulation, where leaders encourage novel problem-solving approaches that empower employees to explore new ideas [5], [6]; individualized consideration, where leaders build trust and motivation by attending to employees' unique needs and aspirations (Nafal et al., 2024; Abbas et al., 2012); and the promotion of a supportive organizational culture that emphasizes open communication, trust, and collaboration—foundational to ongoing innovation [2], [3]. Furthermore, mediating factors such as psychological empowerment, employee motivation, and digital literacy enhance the relationship between transformational leadership and IWB by equipping employees with the confidence and resources to innovate [3], [7]. From a practical standpoint,

organizations can strengthen their innovation capacity by investing in training programs that develop transformational leadership skills [2] and by designing work environments that support idea-sharing and experimentation based on an understanding of these mediating mechanisms [7].

Psychological empowerment, defined by employees' perceptions of meaning, competence, self-determination, and impact in their work, plays a crucial mediating role in the relationship between transformational leadership and innovative work behavior (IWB), enhancing the effectiveness of leadership strategies by fostering an environment where employees feel motivated and capable of innovating. When employees feel empowered, they are more likely to take initiative, engage in creative problem-solving, and contribute novel ideas—behaviors essential to organizational innovation. Transformational leaders, through idealized influence and inspirational motivation, enhance employees' sense of meaning and competence, thereby reinforcing psychological empowerment [8]–[10]. This empowerment mediates the impact of transformational leadership by enabling employees to feel autonomous and confident in their innovative capacities [9]–[11]. Studies across various sectors affirm this relationship, including in banking, where transformational leadership enhanced IWB via psychological empowerment [10], and in the hospitality industry, where a similar mediating effect was observed [11], emphasizing the broad applicability of this mechanism in supporting innovation across different organizational contexts. Understanding this mediating role offers valuable insights into how leadership approaches can be strategically tailored to optimize innovation in the workplace.

This study aims to examine the mediating role of psychological empowerment in the relationship between transformational leadership and IWB in the Indonesian organizational context. With its unique cultural dynamics and evolving economic landscape, Indonesia provides a

compelling setting to investigate these relationships.

2. LITERATURE REVIEW

2.1 *Transformational Leadership*

Transformational leadership is a pivotal factor in fostering innovative work behavior (IWB) among employees by inspiring them to exceed their typical performance levels through a sense of purpose and motivation, with its core dimensions—idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration—creating an environment conducive to innovation. This leadership style enhances employees' intrinsic motivation and openness to new ideas, which are essential for engaging in IWB. Leaders who exhibit idealized influence and inspirational motivation serve as role models and articulate a compelling vision, encouraging alignment with organizational goals and pursuit of innovative solutions [1], while intellectual stimulation prompts employees to challenge norms and think creatively, fostering idea generation [3]. Through individualized consideration, leaders offer personalized support and developmental opportunities, building employee confidence and willingness to innovate [12]. However, the effectiveness of transformational leadership in promoting IWB is significantly influenced by mediating factors such as organizational support, which cultivates a culture that values innovation [3]; the perception of meaningful work, which strengthens the leadership-IWB link through purposeful job design [13]; and employee empowerment, which enhances initiative and creative engagement, thereby amplifying the leadership's innovative impact [3].

2.2 *Innovative Work Behavior (IWB)*

Innovative Work Behavior (IWB), which involves the generation, promotion, and implementation of novel ideas, is essential for organizational success and is significantly influenced by a combination of leadership style, psychological factors, and

organizational context. Transformational leadership, through its emphasis on intellectual stimulation and personalized support, is strongly linked to increased levels of IWB by encouraging employees to think creatively and take initiative [4], [14], while also inspiring them to exceed typical performance expectations through motivation and visionary guidance [15]. Psychological empowerment—encompassing feelings of competence, autonomy, and impact—further enhances IWB by enabling employees to feel more capable and motivated to innovate [4], [14]. A supportive organizational climate, marked by open communication and encouragement of risk-taking, provides a safe space for idea development and experimentation [15], [16]. Additionally, interpersonal dynamics such as leader-member exchange and knowledge sharing within social networks facilitate collaboration and idea exchange, while contextual elements like job characteristics and perceived organizational support provide critical resources that enable innovation [14], [17]. This synthesis highlights the interplay between transformational leadership, psychological empowerment, organizational climate, and contextual factors as a comprehensive framework for fostering IWB.

2.3 *Psychological Empowerment*

Psychological empowerment plays a crucial role in mediating and moderating the relationship between transformational leadership and innovative work behavior (IWB), as transformational leaders—through supportive, inspirational, and motivating behaviors—enhance employees' intrinsic motivation and foster a sense of self-determination, meaning, competence, and impact in their roles. Transformational leadership is positively associated with psychological empowerment by inspiring autonomy and competence in employees [9], [10], with leaders who exhibit idealized influence and inspirational motivation significantly enhancing this empowerment [8]. As a mediator, psychological empowerment strengthens the pathway from transformational leadership to IWB, enabling

empowered employees to more actively engage in innovation-related behaviors [9], [10], a relationship confirmed across sectors such as banking and hospitality [8], [10]. Furthermore, psychological empowerment also serves as a moderator, amplifying the positive impact of transformational leadership on IWB; employees with higher levels of empowerment are more receptive to transformational leadership and demonstrate greater innovative capabilities [18], [19], underscoring its critical importance in organizational contexts aiming to cultivate innovation.

2.4 The Mediating Role of Psychological Empowerment

The relationship between transformational leadership and innovative work behavior (IWB) is significantly mediated by psychological empowerment, as transformational leaders enhance employees' sense of purpose, competence, and autonomy, fostering the confidence and initiative needed for innovation [9], [10], [20]. Psychological empowerment acts as a vital bridge that translates transformational leadership into tangible innovative outcomes by enabling employees to explore new ideas [9], [10]. While transformational leadership directly influences IWB, its impact is amplified through this empowerment [11]. In collectivist and high-power distance cultures like Indonesia, cultural norms may shape how empowerment is perceived, influencing the strength of this mediation [20], [21]. This mediating role is evident across sectors and countries, such as India's banking industry and Indonesia's public sector [10], [21], though some contexts, like North Sumatera's public institutions, show that psychological empowerment does not always moderate this relationship, highlighting the role of other influencing factors [21].

2.5 Research Gap and Hypotheses Development

While existing literature highlights the importance of transformational leadership and psychological empowerment in driving innovation, studies on their interplay remain limited, particularly in the Indonesian

organizational context. The cultural dynamics of Indonesia, including high power distance and collectivist tendencies, may influence the effectiveness of leadership styles and empowerment strategies. This research aims to address these gaps by examining the mediating role of psychological empowerment in the relationship between transformational leadership and IWB in Indonesia. Based on the literature, the following hypotheses are proposed:

H1: Transformational leadership has a significant positive effect on IWB.

H2: Transformational leadership has a significant positive effect on psychological empowerment.

H3: Psychological empowerment has a significant positive effect on IWB.

H4: Psychological empowerment mediates the relationship between transformational leadership and IWB.

3. METHODS

This study employs a quantitative research design to examine the mediating role of psychological empowerment in the relationship between transformational leadership and innovative work behavior (IWB). A survey-based approach was used to collect data from employees across various sectors in Indonesia. Structural Equation Modeling-Partial Least Squares (SEM-PLS 3) was applied to analyze the data due to its strength in evaluating complex relationships and mediation effects. The study population consisted of employees from diverse industries, and the sample of 165 respondents was determined using the guidelines of Hair et al. (2017) to ensure adequacy for SEM-PLS analysis. Respondents were selected through purposive sampling, specifically targeting individuals who had direct experience with transformational leadership in their workplace. Data were collected via structured questionnaires distributed both electronically and in person, comprising four sections: demographic information, transformational leadership (adapted from Bass and Avolio's MLQ, 1995), psychological empowerment (based on Spreitzer's scale, 1995), and

innovative work behavior (using Janssen's IWB scale, 2000). All items were rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The data analysis using SEM-PLS 3 was conducted in several stages to ensure the validity and robustness of the results. First, descriptive statistics summarized the respondents' demographic characteristics. Next, the measurement model was evaluated to assess construct reliability and validity through convergent validity (using AVE and factor loadings), discriminant validity (Fornell-Larcker criterion and HTMT ratio), and reliability indices such as Composite Reliability (CR) and Cronbach's Alpha. Following this, the structural model was assessed by analyzing path coefficients, t-statistics, and p-values to test the hypothesized relationships, along with model fit indices like the Standardized Root Mean Square Residual (SRMR) to determine the overall fit. Finally, mediation analysis was performed to examine the role of psychological empowerment in mediating the effect of transformational leadership on IWB, using bootstrapping with 5,000 resamples to ensure statistical significance and accuracy of the indirect effects.

4. RESULTS AND DISCUSSION

4.1 Demographic Characteristics of the Respondents

The demographic characteristics of the 165 respondents in this study reflect a diverse representation of employees across various sectors in Indonesia. In terms of gender, 58% (96 respondents) were male and 42% (69 respondents) were female. The majority of respondents were aged 25–35 years (65%), followed by 20–24 years (15%), 36–45 years (15%), and above 45 years (5%). Regarding educational background, most held a bachelor's degree (70%), followed by master's degree holders (20%), while 5% had completed high school and another 5% held a doctorate. For work experience, 60% had worked for 3–7 years, 25% for 8–15 years, 10% for less than 2 years, and 5% for over 15 years.

Employment sectors included the private sector (65%), public sector (20%), non-governmental organizations (10%), and others (5%). In terms of job roles, 50% were mid-level employees, 30% entry-level, 15% senior-level or managerial, and 5% held executive or leadership positions.

4.2 Measurement Model Evaluation

The measurement model was evaluated to ensure its reliability, convergent validity, and discriminant validity. The evaluation focused on factor loadings, Composite Reliability (CR), Average Variance Extracted (AVE), Cronbach's Alpha, and discriminant validity metrics.

4.2.1 Factor Loadings and Convergent Validity

The results of the measurement model indicate that all factor loadings exceeded the acceptable threshold of 0.70, demonstrating strong item reliability across all constructs. Additionally, the Average Variance Extracted (AVE) values for transformational leadership (0.646), psychological empowerment (0.663), and innovative work behavior (0.687) were all above the recommended minimum of 0.50, confirming convergent validity. The constructs also demonstrated high internal consistency, with Composite Reliability (CR) values of 0.912 for transformational leadership, 0.927 for psychological empowerment, and 0.922 for innovative work behavior. Cronbach's Alpha values further supported this reliability, recorded at 0.881, 0.892, and 0.904 respectively, indicating excellent consistency across the measurement items.

4.2.2 Discriminant Validity

Discriminant validity was assessed using both the Fornell-Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio. The Fornell-Larcker criterion showed that the square root of the Average Variance Extracted (AVE) for each construct was greater than its correlations with other constructs, confirming adequate discriminant validity. Additionally, all HTMT ratios were below the recommended threshold of 0.85, further supporting the distinctiveness of the

constructs and validating the discriminant validity of the measurement model.

4.3 Structural Model Evaluation

4.3.1 Path Coefficients and Hypothesis Testing

Hypothesis	Path Coefficient (β)	T-Value	P-Value	Result
H1: TL \rightarrow IWB	0.412	6.134	0.000	Supported
H2: TL \rightarrow PE	0.563	8.247	0.000	Supported
H3: PE \rightarrow IWB	0.484	7.091	0.000	Supported
H4: TL \rightarrow PE \rightarrow IWB (indirect effect)	0.272	5.483	0.000	Supported

The hypothesis testing results indicate strong and statistically significant relationships among the constructs. Transformational leadership (TL) has a direct positive effect on innovative work behavior (IWB) with a path coefficient of 0.412 ($t = 6.134$, $p < 0.001$), supporting H1. TL also significantly influences psychological empowerment (PE) with a higher path coefficient of 0.563 ($t = 8.247$, $p < 0.001$), confirming H2. In turn, PE has a strong and significant effect on IWB ($\beta = 0.484$, $t = 7.091$, $p < 0.001$), supporting H3. Moreover, the indirect effect of TL on IWB through PE is also significant ($\beta = 0.272$, $t = 5.483$, $p < 0.001$), indicating that psychological empowerment plays a meaningful mediating role in the relationship between transformational leadership and innovative work behavior, thereby supporting H4 and highlighting the importance of empowering leadership in fostering innovation.

4.3.2 Effect Sizes (f^2)

The effect size (f^2) analysis was conducted to evaluate the magnitude of the relationships between constructs, with reference to Cohen's (1988) guidelines, where f^2 values of 0.02, 0.15, and 0.35 represent small, medium, and large effects, respectively. The relationship between transformational leadership (TL) and innovative work behavior (IWB) showed a medium effect size ($f^2 = 0.180$), indicating a moderate influence. The effect of TL on psychological empowerment (PE) was substantial, with a large effect size ($f^2 = 0.320$), highlighting the strong impact of

The relationships between transformational leadership (TL), psychological empowerment (PE), and innovative work behavior (IWB) were tested.

leadership on employee empowerment. Meanwhile, the influence of PE on IWB also demonstrated a medium effect size ($f^2 = 0.250$), suggesting that psychological empowerment plays a meaningful role in promoting innovation within the workplace.

4.3.3 Model Fit

The overall fit of the model was evaluated using the Standardized Root Mean Square Residual (SRMR), which yielded a value of 0.042—well below the acceptable threshold of 0.08—indicating a good model fit. Additionally, the coefficient of determination (R^2) values showed that transformational leadership explained 31.7% of the variance in psychological empowerment, which is considered a moderate level, while the combined influence of transformational leadership and psychological empowerment explained 53.2% of the variance in innovative work behavior, indicating a substantial explanatory power.

DISCUSSION

The findings of this study provide valuable insights into the relationships between transformational leadership, psychological empowerment, and innovative work behavior (IWB) within the Indonesian organizational context. The discussion elaborates on the implications of these relationships and contextualizes them with respect to Indonesia's cultural characteristics, which include high power distance and collectivism. These cultural dimensions influence how leadership is perceived and

how empowerment and innovation are enacted in the workplace.

The results demonstrate that transformational leadership has a significant and positive direct effect on IWB, underscoring its critical role in fostering an environment that supports innovation. Through inspirational motivation, intellectual stimulation, and individualized consideration, transformational leaders encourage employees to generate, promote, and implement new ideas. This finding is consistent with previous studies [22], [23] that highlight the role of transformational leadership in enhancing creativity and innovation. In Indonesia, where hierarchical leadership is still dominant, the adoption of transformational practices marks a shift towards participative and empowering leadership models, which are essential for promoting innovation.

Furthermore, psychological empowerment was found to significantly mediate the relationship between transformational leadership and IWB, emphasizing the importance of internal psychological states in converting leadership influence into innovative behavior. Transformational leaders contribute to employees' sense of meaning, competence, self-determination, and impact—key components of empowerment that enable individuals to take initiative and solve problems creatively. This supports prior research [24]–[26] and highlights empowerment as a motivational mechanism linking leadership to innovation. Within the Indonesian context, psychological empowerment also serves as a bridge between traditional hierarchical norms and the growing need for workplace innovation. While high power distance may pose challenges, Indonesia's collectivist culture may enhance the impact of transformational leadership by reinforcing shared goals and mutual commitment, suggesting the need for culturally sensitive leadership strategies that promote empowerment while respecting organizational hierarchy.

Practical Implications

The study offers practical recommendations for organizations aiming to enhance innovative work behavior (IWB). First, leadership development programs should focus on cultivating transformational leadership qualities such as vision, inspiration, and intellectual stimulation to foster a culture of innovation. Second, organizations need to implement employee empowerment initiatives by providing greater autonomy, designing meaningful work, and recognizing individual achievements to strengthen psychological empowerment. Lastly, leadership strategies should be culturally sensitive and aligned with Indonesia's values, particularly its high power distance and collectivist orientation, while gradually encouraging more participative and empowering organizational practices.

Theoretical Contributions

This study contributes to the literature on leadership and innovation by empirically demonstrating the mediating role of psychological empowerment in the relationship between transformational leadership and IWB. It also extends the understanding of these dynamics within the Indonesian cultural context, providing a nuanced perspective on how cultural factors influence the effectiveness of leadership styles.

5. CONCLUSION

This study confirms the significant impact of transformational leadership on innovative work behavior (IWB), with psychological empowerment serving as a crucial mediating factor. Transformational leadership, through intellectual stimulation, individualized support, and visionary guidance, directly enhances employees' willingness and ability to engage in innovation. Psychological empowerment acts as a motivational bridge, translating leadership influence into meaningful and proactive innovation outcomes. The findings also underscore the importance of cultural

context, particularly in Indonesia, where high power distance and collectivism influence how leadership and empowerment are perceived. In such settings, fostering innovation requires balancing respect for hierarchical norms with efforts to cultivate autonomy and creativity among employees.

From a practical standpoint, organizations should prioritize leadership development programs that emphasize transformational qualities and design workplace initiatives that strengthen psychological empowerment—such as offering meaningful work, increasing job autonomy, and acknowledging employee achievements. Aligning leadership strategies

with empowerment-oriented practices can create a conducive environment for innovation and long-term organizational success. Theoretically, this study advances the understanding of how leadership influences innovation by demonstrating the mediating role of psychological empowerment. It also provides actionable insights for fostering an innovation-driven culture within Indonesian organizations. Future research could expand on these findings by exploring additional mediators or moderators—such as organizational climate, employee engagement, or digital readiness—to further illuminate the pathways between leadership and innovation.

REFERENCES

- [1] D. I. Jung, C. Chow, and A. Wu, "The role of transformational leadership in enhancing organizational innovation: Hypotheses and some preliminary findings," *Leadersh. Q.*, vol. 14, no. 4–5, pp. 525–544, 2003.
- [2] Q. F. Zhang, *Economic rewards to political office-holding in a marketizing economy: The case of rural China*. Yale University, 2004.
- [3] S. Sueb and S. Sopiah, "Exploring the Relationship between Transformational Leadership and Innovative Work Behavior: A Systematic Literature Review," *J. Visi Manaj.*, vol. 9, no. 2, pp. 62–83, 2023.
- [4] Z. B. Ebrahim, I. Ismail, and E. S. Kassim, "A conceptual review of the determinants of employee innovative work behavior," *Inf. Manag. Bus. Rev.*, vol. 15, no. 4, pp. 239–257, 2023.
- [5] Q. Nafal, B. Maunah, and A. Patoni, "Hakikat Kepemimpinan Transformasional," *IHSANIKAJ. Pendidik. Agama Islam*, vol. 2, no. 3, pp. 45–58, 2024.
- [6] G. Abbas, J. Iqbal, A. Waheed, and M. Naveed Riaz, "Relationship between transformational leadership style and innovative work behavior in educational institutions," *J. Behav. Sci.*, vol. 22, no. 3, 2012.
- [7] H. Khalifa Alhitmi *et al.*, "Marketing from leadership to innovation: A mediated moderation model investigating how transformational leadership impacts employees' innovative behavior," *Sustainability*, vol. 15, no. 22, p. 16087, 2023.
- [8] A. Helalat, H. Sharari, R. Qawasmeh, A. Bani-Mustafa, and Z. Alkhazali, "Revisiting the relationship between transformational leadership and employee psychological empowerment: A more holistic view using organisational culture," *Cogent Bus. Manag.*, vol. 10, no. 3, p. 2254023, 2023.
- [9] D. F. Stanescu, A. Zbucnea, and F. Pinzaru, "Transformational leadership and innovative work behaviour: the mediating role of psychological empowerment," *Kybernetes*, vol. 50, no. 5, pp. 1041–1057, 2021.
- [10] V. Garg, A. K. Attree, and V. Kumar, "The mediating role of psychological empowerment on the transformational Leadership-Innovative work behaviour relationship: A study of Indian banking sector," *South Asian J. Hum. Resour. Manag.*, vol. 10, no. 1, pp. 130–151, 2023.
- [11] F. Arslan, "The Mediating Role of Psychological Empowerment on the Relationship between Innovative Work Behavior and Transformational Leadership: A Research for Food and Beverage Employees of 5 Star Hotel Workes in Antalya," *J. Glob. Tour. Technol. Res.*, vol. 3, no. 1, pp. 68–83, 2022.
- [12] K. N. Desy, "The Influence of Transformational Leadership on Nurses' Performances in Indonesia".
- [13] A. C. A. Zahra and A. Etikariena, "The role of transformational leadership on innovative work behavior: A moderated-mediation study," *J. Psikol.*, vol. 23, no. 1, pp. 81–96.
- [14] R. Jain, "Employee innovative behavior: A conceptual framework," *Indian J. Ind. Relat.*, pp. 1–16, 2015.
- [15] N. Hill, "The Influence of Innovative Work Climate and Leadership Behavior on Employees' IWB." University of Twente, 2017.
- [16] R. Rachmawati, "How internal and organizational factors influence employees' innovative behavior," in *Understanding Digital Industry*, Routledge, 2020, pp. 90–93.
- [17] H. S. AlEsa and C. M. Durugbo, "Systematic review of innovative work behavior concepts and contributions," *Manag. Rev. Q.*, vol. 72, no. 4, pp. 1171–1208, 2022.
- [18] M. Grošelj, M. Černe, S. Penger, and B. Grah, "Authentic and transformational leadership and innovative work behaviour: the moderating role of psychological empowerment," *Eur. J. Innov. Manag.*, vol. 24, no. 3, pp. 677–706, 2021.
- [19] M. A. I. Mansor and S. Hosen, "The impact of transformational leadership effects on innovative work behavior by the moderating role of psychological empowerment," *J. Rev. Glob. Econ.*, vol. 8, pp. 925–938, 2019.

- [20] U. Udin and R. Dananjoyo, "Exploring three-mediation paths of transformational leadership and innovative work behavior," *J. Soc. Econ. Res.*, vol. 11, no. 2, pp. 126–142, 2024.
- [21] P. Lumbanraja, I. Sadalia, and A. S. Silalahi, "Transformational leadership, psychological empowerment, and innovative work behavior of frontline employees in the public sectors: Empirical evidence from North Sumatera, Indonesia," in *Journal of International Conference Proceedings*, Association of International Business and Professional Management, 2020, pp. 1–9.
- [22] J. Nasir *et al.*, "The effects of transformational leadership, organizational innovation, work stressors, and creativity on employee performance in SMEs," *Front. Psychol.*, vol. 13, p. 772104, 2022.
- [23] T. Mujeeb, N. U. Khan, A. Obaid, G. Yue, H. A. Bazkiaei, and N. A. Samsudin, "Do servant leadership self-efficacy and benevolence values predict employee performance within the banking industry in the post-covid-19 era: using a serial mediation approach," *Adm. Sci.*, vol. 11, no. 4, p. 114, 2021.
- [24] S. Setia, D. Furtner, M. Bendahmane, and M. Tichy, "Success4life Youth Empowerment for Promoting Well-being and Boosting Mental Health: Protocol for an Experimental Study," *JMIR Res. Protoc.*, vol. 11, no. 9, 2022, doi: 10.2196/38463.
- [25] S. Yang and E. Oh, "Study on the Development and Influencing Factors of Psychological Empowerment," *Int. J. Soc. Sci. Public Adm.*, vol. 4, pp. 177–191, Oct. 2024, doi: 10.62051/ijsspa.v4n3.23.
- [26] P. Kumar Singh and K. Singh, "Financial Inclusion- a Front Wheel for Womens Empowerment," *Int. J. Adv. Res.*, vol. 11, no. 05, pp. 1586–1598, 2023, doi: 10.21474/ijar01/17027.