

Psychological Empowerment as the Primary Catalyst of Innovative Work Behaviour in the Public Sector

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Abstract

This study examines the relationships of knowledge sharing and empowering leadership with innovative work behaviour, with psychological empowerment as a mediating mechanism in a government work environment. The population examined in this explanatory quantitative study included 1,205 Civil Servants (ASN) spread across 19 work units of the Financial Education and Training Agency (BPPK). The sample consisted of 265 respondents, determined through a purposive sampling approach with a proportional allocation method. Primary data were collected through the distribution of an online questionnaire utilizing a 5-point Likert scale, consisting of 41 instrument items. The collected data were subsequently analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) method, facilitated by SmartPLS 4 software. The empirical test results demonstrate that all proposed hypotheses are supported. All hypothesized paths were positive and statistically significant, but their magnitudes differed. Psychological empowerment showed the largest direct effect on innovative work behaviour ($\beta = 0.536$), whereas the direct effects of knowledge sharing and empowering leadership were smaller ($\beta = 0.157$ each). Additionally, psychological empowerment is proven to partially mediate the relationship between both independent variables and innovative work behaviour. These findings imply that organizations must primarily ensure the fulfillment of employees' sense of autonomy, competence, meaningfulness, and impact to foster the massive and sustainable growth of employees' intrinsic innovation initiatives.

Introduction

The environmental dynamics characterized by volatility, uncertainty, complexity, and ambiguity (VUCA) pressure every organizational model to implement innovative measures to survive (Nguyen et al., 2023). The provision of innovative services and products generates a need for effective innovation processes (Yadav et al., 2023), and within organizations, innovation does not arise by chance but stems from employees' innovative work behaviour (Ramamoorthy et al., 2005). Janssen (2000) defines innovative work behaviour as a sequence of actions beginning with idea generation, followed by building support, and culminating in the execution of the idea into real practice; De Jong and Den Hartog (2010) identify four dimensions, namely idea exploration, generation, championing, and implementation. An innovative work attitude becomes the primary foundation for building competitive advantage and ensuring organizational sustainability (Jada et al., 2019).

In Indonesia, cultivating innovative work behaviour remains a challenge. The Global Innovation Index (GII) 2025 report ranked Indonesia 55th of 139 countries, behind Malaysia (34th) and Singapore (5th). This lag indicates that innovation in Indonesia still requires strengthening, in both the public and private sectors; in the public sector, a failure to innovate

risks eroding public trust (Prabowo et al., 2022). The Ministry of Finance has undertaken various initiatives to strengthen an innovation culture, among them Minister of Finance Decree (KMK) Number 1005/KM.1/2022 on Innovation Management Guidelines, which regulates the Kemenkeu Sandbox, as well as the Innovation Competition initiated since 2018 (Rahmawati, 2019). However, as of 31 October 2025 the innovation catalogue recorded only 1,966 innovations, a relatively small figure compared with the total of 77,137 employees.

A similar condition is indicated at the Financial Education and Training Agency (BPPK), one of the Echelon I units of the Ministry of Finance responsible for delivering education, training, and competency certification in the field of state finance while also managing knowledge management. BPPK oversees 1,205 Civil Servants (ASN) spread across 19 work units in various regions of Indonesia (as of 31 October 2025). Unlike the private sector, innovative work behaviour at BPPK is not profit-oriented but focused on problem-solving and service improvement, ranging from improving learning methods and enhancing services to streamlining administrative business processes and digitalizing services. From 2016 to 31 October 2025, 188 innovations were recorded in the BPPK innovation catalogue.

Nevertheless, the quantity of innovations still fluctuates and remains inconsistent. After a slow initial phase in 2016–2020, there was a surge in 2021, peaking in 2022 with 76 innovations, then declining sharply in 2023–2024 (only 10 innovations in 2024), before rising again to 18 innovations as of 31 October 2025. Although the Innovation League continued to be held, the number of innovations in 2023 dropped by 47.37% compared with 2022. In terms of engagement, although 44.48% of employees had innovated, only 51.5% of innovators innovated repeatedly, so that BPPK faces a challenge of retaining innovative work behaviour. The idea catalogue also recorded 19 ideas in 2022–2023 that were not carried through to implementation. A preliminary survey of 30 employees from 19 work units further confirmed the variation in innovative work behaviour responses. This pattern indicates that innovation at BPPK remains a temporary initiative and has not yet become a consistent culture.

This phenomenon cannot be separated from the ecosystem of a government institution operating within a highly structured Management Control System. Referring to Simons' (1995) four levers of control, the diagnostic and boundary systems are constraining in nature because they demand compliance with Standard Operating Procedures, performance indicators, and hierarchy. This rigid control system often limits employees' autonomy, stifles creativity, and raises the fear of sanctions should an innovation fail, thereby conflicting with the demand to keep innovating. This tension between organizational control and the freedom to innovate is the root of why innovative work behaviour initiatives at BPPK remain temporary and fluctuating.

The literature identifies various determinants of innovative work behaviour. From the organizational side, knowledge sharing which encompasses knowledge donating and knowledge collecting (Van den Hooff and De Ridder, 2004) enriches perspectives and ideas and strengthens collaboration among employees (Hariyanti and Izzati, 2024; Marampa et al., 2025). At BPPK, this practice has been institutionalized through, among others, one day one information, Communities of Practice, and the Knowledge Management System, yet its effectiveness on innovative work behaviour has never been tested and its implementation remains uneven. Empirical evidence is also mixed: knowledge sharing is positively associated with innovative work behaviour among MSME actors (Marampa et al., 2025) but has not been able to enhance it comprehensively among nurses (Nurahmad et al., 2022) and affects only some dimensions among health workers (Hanafy et al., 2025).

In hierarchical public organizations, empowering leadership enables leaders to share power with their employees (Zhang and Bartol, 2010) through six dimensions (Konczak et al., 2000) and fosters the courage to innovate without fear of failure (Jain and Sharma, 2025). The practice of empowering leadership at BPPK is also perceived as uneven by employees. Empirical findings remain inconsistent: empowering leadership significantly affects innovative work behaviour in the information technology sector (Jain and Sharma, 2025) but is not significant among public junior high school teachers (Basar et al., 2024).

For employees to display extra-role behaviour such as innovating, an increase in intrinsic motivation in the form of psychological empowerment is required namely a mental state that makes individuals feel empowered in their work (Llorente-Alonso et al., 2024), comprising four cognitive dimensions: meaning, competence, self-determination, and impact (Spreitzer, 1995). Psychological empowerment is presumed to mediate the relationship of knowledge sharing and empowering leadership with innovative work behaviour (Yasir et al., 2023; Marampa et al., 2025), although findings regarding the knowledge sharing–psychological empowerment path also differ across studies (Yasir et al., 2023; Marampa et al., 2025).

Most previous studies were conducted in the private sector and MSMEs, which are relatively free from bureaucratic control (Marampa et al., 2025; Yasir et al., 2023; Jain and Sharma, 2025; Khatoon et al., 2024), so the generalization of their findings to government organizations still needs to be re-examined. There is a research gap concerning how psychological mechanisms drive innovation in public institutions operating under a structured Management Control System (Simons, 1995), and how empowering leadership serves as a mechanism to balance bureaucratic control an aspect that has not been widely tested empirically in the public-sector context.

To address this gap, this study proposes an integrated structural model that positions empowering leadership as a driver, knowledge sharing as a supporting variable (Barney, 1991), and psychological empowerment as a mediating mechanism toward innovative work behaviour, on the basis that innovative behaviour is driven only when the basic psychological needs for autonomy, competence, and relatedness are met (Ryan and Deci, 2000). The three grand theories Resource-Based View, Social Exchange Theory, and Self-Determination Theory complement one another in explaining the transformation of organizational resources and leadership relations into innovative work behaviour. The novelty of this research lies in the integration of the three theories within a single structural model in the context of government bureaucracy (theoretical aspect) and in the locus of civil servants managing financial education and training (contextual aspect). Based on this discussion, this study examines the effect of knowledge sharing and empowering leadership on innovative work behaviour with psychological empowerment as a mediating variable at the Financial Education and Training Agency of the Ministry of Finance.

Method

Research Design

This study employed a quantitative explanatory design to examine hypothesized relationships among the study variables through hypothesis testing (Sari et al., 2023). Primary data were collected through a survey of employees of the Financial Education and Training Agency (BPPK), and the relationships among knowledge sharing, empowering leadership, psychological empowerment, and innovative work behaviour were tested using path analysis within a Structural Equation Modeling (SEM) framework. The study was conducted from

October 2025 to April 2026 across 19 BPPK work units spread over various regions of Indonesia.

Population and Sample

The study population comprised all 1,205 BPPK employees with Civil Servant (ASN) status (BPPK, October 2025). Sampling used a non-probability technique, namely purposive sampling, with the criteria: (a) active ASN at BPPK; (b) a minimum tenure of one year; and (c) not currently on study leave entailing temporary release from office. Because the population was unevenly distributed across the 19 work units, proportional allocation was used to ensure coverage across units and to reduce overrepresentation of larger units. However, because respondent selection was non-probabilistic, the sample should not be interpreted as statistically representative of the entire BPPK population.

To evaluate sample size adequacy more rigorously than traditional rules of thumb (e.g., the 5:1 item-to-sample ratio), a sensitivity power analysis was conducted using G*Power 3.1. With a sample size of $N = 265$, $\alpha = 0.05$, a targeted statistical power of 0.80, and a maximum of three predictors directing toward an endogenous construct, the model can detect small effect sizes (approximately $f^2 = 0.04$). Furthermore, this sample size comfortably exceeds the minimum requirement recommended by Kock and Hadaya (2018) for PLS-SEM models using the inverse square root method to reliably estimate the model's using the inverse square root method to reliably estimator the model's minimum path coefficients ($\beta = 0.157$). Thus, the sample size of 265 provides adequate statistical power for structural model evaluation.

Research Instrument

The four variables were conceptualized as reflective constructs, since the indicators are manifestations of respondents' perceptions or behaviours. The instrument comprised 41 items adapted from established English-language scales: Innovative Work Behaviour, Knowledge Sharing, Empowering Leadership, and Psychological Empowerment. To rigorously adapt these instruments, a multi-step validation process was conducted. First, the original English items were translated into Indonesian. Second, although the original scales varied in their response formats (e.g., utilizing seven-point scales), all items were standardized into a uniform five-point Likert scale (1 = strongly disagree to 5 = strongly agree) upon the supervisor's recommendation to ensure measurement consistency and ease of response. The translated draft was then subjected to an expert review by the research supervisor to ensure conceptual equivalence and theoretical accuracy. Subsequently, a readability and terminology check was performed by a peer holding a master's degree in management to verify that the adapted phrasing was natural, appropriately tailored to the BPPK context, and easily comprehended by the target respondents. Finally, to minimize respondent fatigue and eliminate semantic redundancy, several items from the original scales were removed based on the supervisor's recommendation, yielding the concise 41-item final questionnaire. Data were collected through an electronic questionnaire distributed centrally via an Official Memorandum of the BPPK Secretary to all work units and disseminated through instant messaging applications.

Table 1. Summary of the Measurement Instrument

Variable	Dimensions	Number of Items	Adapted Source
Innovative Work Behaviour (Y)	Idea exploration, generation, championing, and implementation	10	De Jong & Den Hartog (2010)
Knowledge Sharing (X1)	Knowledge donating and knowledge collecting	6	Van den Hooff & De Ridder (2004)
Empowering Leadership (X2)	Delegation of authority, accountability for outcomes, encouragement of self-directed decision-making, information sharing, skill development, and coaching for innovation	15	Konczak et al. (2000)
Psychological Empowerment (M)	Meaning, competence, self-determination, and impact	10	Spreitzer (1995)
Total		41	

Source: processed by the authors (2026). All items were measured with a 1–5 Likert scale and adapted to the BPPK context.

Instrument Validity and Reliability Test

Prior to the main survey, a pilot test involving 35 respondents was conducted to evaluate item clarity and preliminary internal consistency. The initial results indicated that all 41 items were valid, as their calculated item-total correlations (r) exceeded the critical r -table value of 0.334 ($p < 0.05$). Additionally, all constructs demonstrated satisfactory preliminary reliability with Cronbach's Alpha values well above the 0.70 threshold: innovative work behaviour (0.916), knowledge sharing (0.835), empowering leadership (0.955), and psychological empowerment (0.846). However, given the limited sample size of the pilot study, these findings were treated strictly as preliminary. A comprehensive evaluation of construct reliability and validity was subsequently performed on the full sample ($N = 265$) using the PLS-SEM measurement model.

Data Analysis Technique

Data were analysed using PLS-SEM with the aid of SmartPLS version 4, given that the research objective is predictive of relationships among latent variables (Hair et al., 2022). The analysis began with descriptive statistics to describe respondent characteristics and data distribution. Evaluation of the reflective measurement model (outer model) covered convergent validity ($AVE \geq 0.50$ and outer loading ≥ 0.70 ; indicators with loadings of 0.40–0.70 were retained as long as AVE was met), discriminant validity (Fornell-Larcker criterion and HTMT), and reliability (Cronbach's Alpha and composite reliability ≥ 0.70). To rigorously assess discriminant validity, the HTMT inference criterion was applied by generating two-tailed 95% bootstrapped confidence intervals, where validity is established if the interval does not include 1 (Henseler et al., 2015).

Evaluation of the structural model (inner model) covered collinearity testing ($VIF < 5$, ideally < 3), the coefficient of determination R^2 (0.25; 0.50; 0.75 for weak, moderate, and strong, respectively), effect size f^2 (0.02; 0.15; 0.35 for low, medium, and high, respectively), predictive relevance Q^2 (> 0), and the significance of path coefficients through a bootstrapping procedure with 5,000 resamples. At the 5% significance level, an effect was declared significant if the t -value > 1.96 and the p -value < 0.05 . Additionally, the significance of specific

indirect effects (mediation) was evaluated using 95% bootstrapped confidence intervals; an indirect effect was considered statistically supported when its confidence interval excluded zero. The analysis covered direct effects and indirect effects (mediation), with mediation effects classified as full mediation, partial mediation, or no mediation (Hair et al., 2019). The research model tested seven hypotheses, namely the direct effects of knowledge sharing and empowering leadership on psychological empowerment (H3, H4) and on innovative work behaviour (H1, H2), the effect of psychological empowerment on innovative work behaviour (H5), and the indirect effects of knowledge sharing and empowering leadership on innovative work behaviour through psychological empowerment (H6, H7).

Result and Discussion

Respondent Characteristics

The electronic questionnaire was collected from 271 respondents; six of them did not meet the inclusion criteria, so the final sample comprised 265 eligible respondents distributed across all 19 BPPK work units. This broad work-unit coverage improves the contextual coverage of the sample; however, because purposive sampling was used, inference beyond the observed respondents should be made cautiously. The respondent profile is presented in Table 1.

Table 1. Respondent Profile

Characteristic	Category	Frequency	Percentage
Gender	Male	169	63.8%
	Female	96	36.2%
Age	≤ 30 years	25	9.4%
	31–45 years	171	64.5%
	46–60 years	68	25.7%
	> 60 years	1	0.4%
Latest Education	High School/Equivalent	6	2.3%
	D-I	4	1.5%
	D-III	31	11.7%
	D-IV/S-1	117	44.2%
	S-2	98	37.0%
	S-3	9	3.4%
Position	Administrator	9	3.4%
	Supervisor	18	6.8%
	Functional (all levels)	75	28.3%
	Staff (Executor)	163	61.5%
Length of Service	≤ 5 years	10	3.8%
	6–10 years	29	10.9%
	11–20 years	152	57.4%
	> 20 years	74	27.9%

Source: processed by the authors (2026).

Based on Table 1, respondents were dominated by male employees (63.8%); this composition represents the gender distribution at BPPK, given that as of February 2026 the employee population consisted of 67.44% men and 32.56% women. Most respondents were aged 31–45 years (64.5%); when combined with the 46–60-year group, more than 90% of respondents were employees who had passed the early stage of their careers. The level of education was relatively high (Diploma IV/Bachelor 44.2% and master's 37.0%), the majority held staff (executor) positions (61.5%) and had 11–20 years of work experience (57.4%).

Descriptive Statistics of Respondents' Answers

Table 2 presents the descriptive statistics of the total score of each variable, while Tables 3 to 6 present the frequency distribution of answers and the mean value per statement item.

Table 2. Descriptive Statistics of Respondents' Answers

Variable	N	Min	Max	Mean	Std. Deviation
Innovative Work Behaviour	265	18.00	50.00	42.34	6.41
Knowledge Sharing	265	19.00	30.00	27.23	2.64
Empowering Leadership	265	42.00	75.00	66.49	7.76
Psychological Empowerment	265	22.00	50.00	44.06	5.40

Source: processed by the authors (2026).

The innovative work behaviour variable had a mean of 42.34 (out of a maximum of 50) with a standard deviation of 6.41. At the item level, the highest mean (4.46) was on Y.3 (“I look for alternative methods or ways of working to improve work effectiveness”) and the lowest (4.08) on Y.6 (“I try to convince colleagues/superiors/team leaders of the importance of the innovative ideas I produce”). The highest concentration of “Strongly Agree” answers was in the idea exploration and generation dimensions (up to 52.5% on Y.3), then decreased to the 34%–38% range in the championing and implementation dimensions, accompanied by a surge in “Neutral” answers up to 19.6% on Y.6. This pattern shows that employees are relatively creative in generating ideas but more hesitant in communicating and executing them.

Table 3. Frequency Distribution of Answers and Mean of the Innovative Work Behaviour Variable

Code	SD (1)	D (2)	N (3)	A (4)	SA (5)	Mean
Idea Exploration Dimension						
Y.1	0 (0%)	4 (1.5%)	26 (9.8%)	121 (45.7%)	114 (43.0%)	4.30
Y.2	1 (0.4%)	1 (0.4%)	18 (6.8%)	117 (44.2%)	128 (48.3%)	4.40
Idea Generation Dimension						
Y.3	0 (0%)	2 (0.8%)	13 (4.9%)	111 (41.9%)	139 (52.5%)	4.46
Y.4	0 (0%)	4 (1.5%)	30 (11.3%)	111 (41.9%)	120 (45.3%)	4.31
Y.5	0 (0%)	5 (1.9%)	42 (15.8%)	111 (41.9%)	107 (40.4%)	4.21
Idea Championing Dimension						
Y.6	1 (0.4%)	7 (2.6%)	52 (19.6%)	115 (43.4%)	90 (34.0%)	4.08
Y.7	0 (0%)	8 (3.0%)	46 (17.4%)	114 (43.0%)	97 (36.6%)	4.13
Idea Implementation Dimension						
Y.8	1 (0.4%)	6 (2.3%)	46 (17.4%)	113 (42.6%)	99 (37.4%)	4.14

Y.9	1 (0.4%)	4 (1.5%)	48 (18.1%)	111 (41.9%)	101 (38.1%)	4.16
Y.10	2 (0.8%)	3 (1.1%)	41 (15.5%)	125 (47.2%)	94 (35.5%)	4.15

Source: processed by the authors (2026).

The knowledge sharing variable had a mean of 27.23 (out of a maximum of 30) with the smallest standard deviation (2.64), indicating that the knowledge-sharing culture has been strong and relatively even. The highest mean (4.67) was on X1.4 and X1.5 (knowledge collecting dimension), while the lowest (4.35) was on X1.1 (knowledge donating dimension). This finding shows that employees are more active as knowledge seekers than as spontaneous knowledge donors.

Table 4. Frequency Distribution of Answers and Mean of the Knowledge Sharing Variable

Code	SD (1)	D (2)	N (3)	A (4)	SA (5)	Mean
Knowledge Donating Dimension						
X1.1	1 (0.4%)	2 (0.8%)	18 (6.8%)	125 (47.2%)	119 (44.9%)	4.35
X1.2	0 (0%)	0 (0%)	7 (2.6%)	85 (32.1%)	173 (65.3%)	4.63
X1.3	0 (0%)	0 (0%)	14 (5.3%)	111 (41.9%)	140 (52.8%)	4.48
Knowledge Collecting Dimension						
X1.4	0 (0%)	1 (0.4%)	8 (3.0%)	69 (26.0%)	187 (70.6%)	4.67
X1.5	0 (0%)	0 (0%)	6 (2.3%)	75 (28.3%)	184 (69.4%)	4.67
X1.6	0 (0%)	1 (0.4%)	17 (6.4%)	112 (42.3%)	135 (50.9%)	4.44

Source: processed by the authors (2026).

The empowering leadership variable had a mean of 66.49 (out of a maximum of 75) with the largest standard deviation (7.76), confirming that employees' perceptions of empowering-leadership practices were the most varied. The highest mean (4.58) was on X2.4 (orientation toward stakeholder satisfaction) and the lowest (4.25) on X2.5 (superiors guiding employees to find their own solutions). The accumulation of hesitant and negative answers was concentrated in the coaching-for-innovation-development dimension ("Neutral" percentage 8.3%–10.9%), indicating that the superior's role as a coach still needs strengthening.

Table 5. Frequency Distribution of Answers and Mean of the Empowering Leadership Variable

Code	SD (1)	D (2)	N (3)	A (4)	SA (5)	Mean
Delegation of Authority Dimension						
X2.1	0 (0%)	2 (0.8%)	24 (9.1%)	100 (37.7%)	139 (52.5%)	4.42
X2.2	1 (0.4%)	0 (0%)	17 (6.4%)	105 (39.6%)	142 (53.6%)	4.46
Accountability for Outcomes Dimension						
X2.3	0 (0%)	2 (0.8%)	6 (2.3%)	106 (40.0%)	151 (57.0%)	4.53

X2.4	0 (0%)	0 (0%)	16 (6.0%)	80 (30.2%)	169 (63.8%)	4.58
Encouragement of Self-Directed Decision-Making Dimension						
X2.5	3 (1.1%)	8 (3.0%)	24 (9.1%)	116 (43.8%)	114 (43.0%)	4.25
X2.6	0 (0%)	2 (0.8%)	13 (4.9%)	96 (36.2%)	154 (58.1%)	4.52
X2.7	1 (0.4%)	3 (1.1%)	13 (4.9%)	110 (41.5%)	138 (52.1%)	4.44
Information Sharing Dimension						
X2.8	2 (0.8%)	1 (0.4%)	16 (6.0%)	100 (37.7%)	146 (55.1%)	4.46
X2.9	1 (0.4%)	2 (0.8%)	14 (5.3%)	102 (38.5%)	146 (55.1%)	4.47
Skill Development Dimension						
X2.10	2 (0.8%)	2 (0.8%)	29 (10.9%)	100 (37.7%)	132 (49.8%)	4.35
X2.11	0 (0%)	0 (0%)	17 (6.4%)	82 (30.9%)	166 (62.6%)	4.56
X2.12	0 (0%)	5 (1.9%)	15 (5.7%)	102 (38.5%)	143 (54.0%)	4.45
Coaching for Innovation Development Dimension						
X2.13	1 (0.4%)	4 (1.5%)	29 (10.9%)	111 (41.9%)	120 (45.3%)	4.30
X2.14	0 (0%)	6 (2.3%)	22 (8.3%)	121 (45.7%)	116 (43.8%)	4.31
X2.15	1 (0.4%)	3 (1.1%)	24 (9.1%)	97 (36.6%)	140 (52.8%)	4.40

Source: processed by the authors (2026).

The psychological empowerment variable had a mean of 44.06 (out of a maximum of 50) with a standard deviation of 5.40. The highest mean (4.53) was on M.3 (confidence in one's competence) with accumulated agreement reaching 95.1%, while the lowest (4.20) was on M.9 (impact dimension), which also received the most "Neutral" answers (13.6%). This pattern shows that employees feel competent and independent in performing their tasks, but some feel they have little influence on decision-making at the unit level.

Table 6. Frequency Distribution of Answers and Mean of the Psychological Empowerment Variable

Code	SD (1)	D (2)	N (3)	A (4)	SA (5)	Mean
Meaning Dimension						
M.1	1 (0.4%)	2 (0.8%)	17 (6.4%)	87 (32.8%)	158 (59.6%)	4.51
M.2	2 (0.8%)	5 (1.9%)	17 (6.4%)	91 (34.3%)	150 (56.6%)	4.44
Competence Dimension						
M.3	0 (0%)	2 (0.8%)	11 (4.2%)	97 (36.6%)	155 (58.5%)	4.53
M.4	1 (0.4%)	4 (1.5%)	12 (4.5%)	110 (41.5%)	138 (52.1%)	4.43

M.5	0 (0%)	5 (1.9%)	24 (9.1%)	126 (47.5%)	110 (41.5%)	4.29
Self-Determination Dimension						
M.6	0 (0%)	3 (1.1%)	18 (6.8%)	114 (43.0%)	130 (49.1%)	4.40
M.7	0 (0%)	3 (1.1%)	17 (6.4%)	108 (40.8%)	137 (51.7%)	4.43
M.8	0 (0%)	3 (1.1%)	18 (6.8%)	96 (36.2%)	148 (55.8%)	4.47
Impact Dimension						
M.9	1 (0.4%)	7 (2.6%)	36 (13.6%)	114 (43.0%)	107 (40.4%)	4.20
M.10	0 (0%)	2 (0.8%)	27 (10.2%)	110 (41.5%)	126 (47.5%)	4.36

Source: Processed by the researcher (2026).

Measurement Model Evaluation (Outer Model)

The four constructs were conceptualized as a reflective model. The result of the PLS algorithm processing is shown in Figure 1.

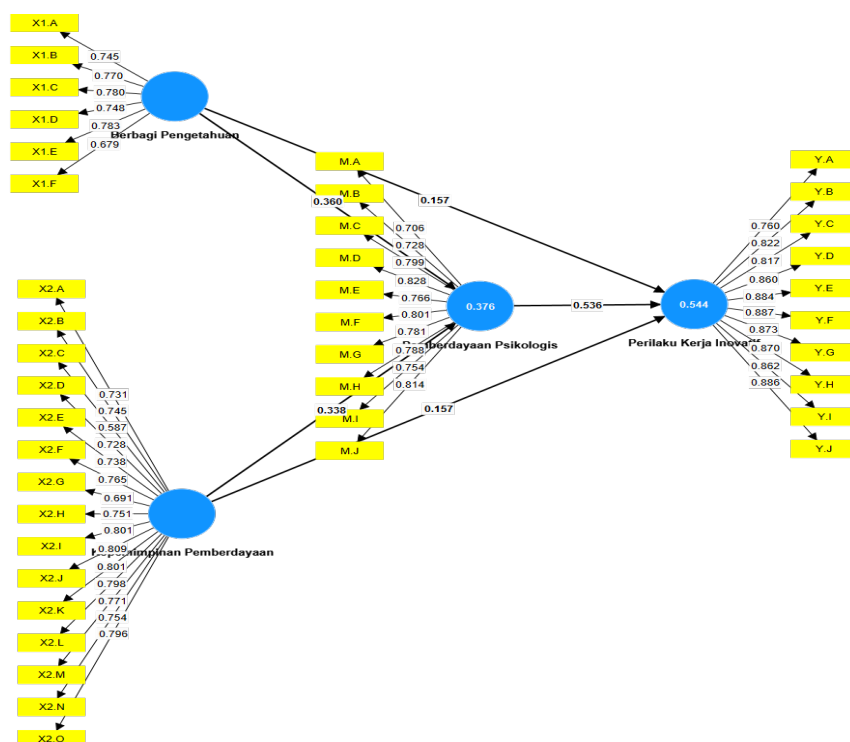


Figure 1. Visualization of the Measurement Model (PLS Algorithm Result)

Source: processed by the authors (2026).

The convergent validity test showed that all AVE values were above 0.50 and most outer loadings were ≥ 0.70 . Three indicators ($X1.6 = 0.679$; $X2.3 = 0.587$; $X2.7 = 0.691$) exhibited loadings below the 0.70 threshold. In accordance with Hair et al. (2022), indicators with loadings between 0.40 and 0.70 should only be considered for removal if their deletion leads to a substantial increase in AVE and composite reliability (CR) above the threshold values. A sensitivity analysis revealed that removing these indicators yielded only marginal

improvements in AVE and, in some instances, decreased the CR. Furthermore, retaining these items is crucial for preserving construct content validity. Specifically, indicator X2.3 is a foundational component of the 'Accountability' dimension within Empowering Leadership; its removal would restrict the dimension to a single item, substantially narrowing its theoretical coverage. Therefore, these three indicators were retained. The detailed sensitivity analysis and retention rationales are presented in Table 7. Overall reliability was established, with all Cronbach's Alpha and composite reliability values well above 0.70

Table 7. Sensitivity Analysis and Retention Rationale for Indicators with Loadings < 0.70

Indicator	Loading	AVE (Before - After)	CR (Before - After)	Theoretical & Statistical Rationale
X1.6	0.679	0.565 – 0.599	0.886 – 0.882	Deletion decreases composite reliability with only marginal AVE improvement. Retained to preserve comprehensive domain coverage of the construct.
X2.3	0.587	0.567 – 0.586	0.951 – 0.952	Negligible statistical improvement upon deletion. Critical retention to preserve the theoretical scope of the 'Accountability' dimension, avoiding a single-item measurement.
X2.7	0.691	0.567 – 0.579	0.951 – 0.950	Deletion slightly decreases composite reliability. Retained to maintain robust measurement and content validity of the construct.

The indicator assessment demonstrates that X1.6, X2.3, and For X1.6, deletion would only marginally improve AVE while decreasing composite reliability from 0.886 to 0.882; therefore, retaining the indicator is justified to ensure comprehensive coverage of the construct domain. Similarly, X2.7 was also retained because its deletion slightly reduced composite reliability from 0.951 to 0.950, despite a small increase in AVE. Overall, the decision to retain these indicators reflects a balance between statistical criteria and theoretical considerations, particularly content validity and comprehensive construct representation, rather than relying solely on loading thresholds.

Table 8. Outer Loading Test Results

Indicator Code	Outer Loading
Innovative Work Behaviour (Y)	
Y1	0.760
Y2	0.822
Y3	0.817
Y4	0.860
Y5	0.884
Y6	0.887
Y7	0.873
Y8	0.870
Y9	0.862

Y10	0.886
Knowledge Sharing (X1)	
X1.1	0.745
X1.2	0.770
X1.3	0.780
X1.4	0.748
X1.5	0.783
X1.6	0.679
Empowering Leadership (X2)	
X2.1	0.731
X2.2	0.745
X2.3	0.587
X2.4	0.728
X2.5	0.738
X2.6	0.765
X2.7	0.691
X2.8	0.751
X2.9	0.801
X2.10	0.809
X2.11	0.801
X2.12	0.798
X2.13	0.771
X2.14	0.754
X2.15	0.796
Psychological Empowerment (M)	
M1	0.706
M2	0.728
M3	0.799
M4	0.828
M5	0.766
M6	0.801
M7	0.781
M8	0.788
M9	0.754
M10	0.814

Source: processed by the authors (2026).

The outer loading results indicate that the measurement model demonstrates generally satisfactory indicator reliability across all constructs. For Innovative Work Behavior (Y), the outer loadings range from 0.760 to 0.887, indicating that all indicators provide strong contributions to the construct. Knowledge Sharing (X1) also shows acceptable loadings, ranging from 0.679 to 0.783; although X1.6 has a relatively lower loading of 0.679, it remains close to the commonly accepted threshold and may be retained when supported by theoretical considerations. For Empowering Leadership (X2), most indicators exhibit loadings above 0.70, ranging from 0.728 to 0.809, while X2.3 (0.587) and X2.7 (0.691) are comparatively lower but may still be retained based on the previous assessment of reliability and content validity. Meanwhile, Psychological Empowerment (M) demonstrates acceptable to strong outer loadings, ranging from 0.706 to 0.828. Overall, the findings suggest that the indicators comprehensively represent their respective latent constructs, with the relatively lower-loading

indicators requiring theoretical justification and consideration of convergent validity and composite reliability rather than being removed solely based on their individual loading values.

Table 9. AVE, Composite Reliability, and Cronbach's Alpha Test Results

Variable	AVE	CR (rho_c)	Cronbach's Alpha	Remarks
Innovative Work Behaviour	0.727	0.964	0.958	Valid & Reliable
Knowledge Sharing	0.565	0.886	0.846	Valid & Reliable
Empowering Leadership	0.567	0.951	0.945	Valid & Reliable
Psychological Empowerment	0.605	0.938	0.927	Valid & Reliable

Source: processed by the authors (2026).

Discriminant validity was tested using the Fornell-Larcker criterion (Table 9) and the Heterotrait-Monotrait Ratio (HTMT) (Table 10). The square root of the AVE of each construct exceeded its correlation with other constructs. Furthermore, HTMT inference was assessed via a bootstrapping procedure. As shown in Table 10, all HTMT values were below the 0.90 threshold (highest 0.743), and their respective 95% bootstrapped confidence intervals did not include the value of 1. Therefore, discriminant validity was robustly established.

Table 10. Discriminant Validity Test Results (Fornell-Larcker Criterion)

Indicator	KS	EL	PE	IWB
Knowledge Sharing (KS)	0.752	-	-	-
Empowering Leadership (EL)	0.541	0.753	-	-
Psychological Empowerment (PE)	0.543	0.533	0.778	-
Innovative Work Behaviour (IWB)	0.533	0.527	0.705	0.853

Source: processed by the authors (2026). The diagonal values (in bold) are the square roots of the AVE.

The discriminant validity results indicate that the four constructs demonstrate adequate distinction from one another based on the Fornell–Larcker criterion. The square roots of the AVE values, shown on the diagonal, are 0.752 for Knowledge Sharing (KS), 0.753 for Empowering Leadership (EL), 0.778 for Psychological Empowerment (PE), and 0.853 for Innovative Work Behavior (IWB). In each case, the diagonal value is higher than the corresponding correlations with the other constructs, with inter-construct correlations ranging from 0.527 to 0.705. The strongest association was observed between Psychological Empowerment and Innovative Work Behavior (0.705), indicating a relatively substantial relationship while remaining below the square root of AVE for both constructs. Overall, these results suggest that each construct captures a conceptually distinct phenomenon and that the measurement model satisfies the discriminant validity requirement.

Table 11. Heterotrait-Monotrait Ratio (HTMT) Test Results

Inter-construct Relationship	HTMT	Lower CI (2.5%)	Upper CI (97.5%)	Decision
Empowering Leadership ↔ Knowledge Sharing	0.593	0.464	0.716	Supported
Psychological Empowerment ↔ Knowledge Sharing	0.604	0.498	0.707	Supported
Psychological Empowerment ↔ Empowering Leadership	0.562	0.427	0.680	Supported
Innovative Work Behaviour ↔ Knowledge Sharing	0.589	0.475	0.694	Supported
Innovative Work Behaviour ↔ Empowering Leadership	0.544	0.437	0.638	Supported
Innovative Work Behaviour ↔ Psychological Empowerment	0.743	0.642	0.824	Supported

Source: processed by the authors (2026).

The Heterotrait–Monotrait Ratio (HTMT) results provide further evidence of adequate discriminant validity among all constructs in the measurement model. The HTMT values range from 0.544 to 0.743, which is below the commonly applied threshold of 0.85, indicating that the constructs are empirically distinct. In addition, the 95% confidence intervals for all inter-construct relationships do not include 1.00, with lower bounds ranging from 0.427 to 0.642 and upper bounds ranging from 0.638 to 0.824. The highest HTMT value is observed between Innovative Work Behavior and Psychological Empowerment (0.743), yet this remains below the recommended threshold, and its confidence interval remains clearly below 1.00. Therefore, all six construct relationships are supported, confirming that Knowledge Sharing, Empowering Leadership, Psychological Empowerment, and Innovative Work Behavior represent conceptually and empirically distinguishable constructs within the proposed measurement model.

Structural Model Evaluation (Inner Model)

The collinearity test showed that all VIF values were below 3 (Table 12), so the model is free from multicollinearity. The coefficient of determination and predictive relevance are presented in Table 13: innovative work behaviour had $R^2 = 0.544$ (moderate) and psychological empowerment $R^2 = 0.376$, with the Q^2 values of both endogenous variables above zero (0.388 and 0.221). Regarding the effect sizes (f^2) presented in Table 14, it is necessary to distinguish between statistical significance and substantive magnitude. Although the hypothesized paths were statistically significant, their substantive magnitudes differed. The direct effects of knowledge sharing and empowering leadership on innovative work behaviour were small ($f^2 = 0.033$ and 0.034 , respectively), and their effects on psychological empowerment were just below the medium threshold ($f^2 = 0.147$ and 0.130). In contrast, psychological empowerment showed a substantively large effect on innovative work behaviour ($f^2 = 0.394$).

Table 12. Collinearity Test Results (VIF)

Path	VIF
Knowledge Sharing → Psychological Empowerment	1.414
Knowledge Sharing → Innovative Work Behaviour	1.621
Empowering Leadership → Psychological Empowerment	1.414
Empowering Leadership → Innovative Work Behaviour	1.597
Psychological Empowerment → Innovative Work Behaviour	1.601

Source: processed by the authors (2026).

The Variance Inflation Factor (VIF) results indicate that multicollinearity is not a concern among the predictor constructs in the structural model. The VIF values range from 1.414 to 1.621, which is substantially below the commonly accepted threshold of 5.00 (and below the more conservative threshold of 3.00). The highest VIF is observed for the path from Knowledge Sharing to Innovative Work Behavior (1.621), followed by Psychological Empowerment to Innovative Work Behavior (1.601) and Empowering Leadership to Innovative Work Behavior (1.597). The VIF values for the predictors of Psychological Empowerment are both 1.414. These results demonstrate that the predictor variables do not exhibit problematic levels of linear intercorrelation, suggesting that the estimated path coefficients can be interpreted without substantial distortion caused by multicollinearity. Overall, the structural model satisfies the collinearity assessment requirement.

Table 13. Coefficient of Determination (R^2) and Predictive Relevance (Q^2) Test Results

Endogenous Variable	R^2	Q^2
Innovative Work Behaviour	0.544	0.388
Psychological Empowerment	0.376	0.221

Source: processed by the authors (2026).

The results of the coefficient of determination (R^2) and predictive relevance (Q^2) indicate that the structural model has meaningful explanatory and predictive capability for both endogenous constructs. Innovative Work Behavior has an R^2 value of 0.544, indicating that 54.4% of the variance in innovative work behavior is explained by the predictors included in the model, while the remaining 45.6% is attributable to other factors outside the model. Meanwhile, Psychological Empowerment has an R^2 value of 0.376, suggesting that 37.6% of its variance is explained by its predictor variables. The Q^2 values are 0.388 for Innovative Work Behavior and 0.221 for Psychological Empowerment, both clearly above zero, demonstrating that the model possesses predictive relevance for both endogenous constructs. Overall, these findings indicate that the proposed structural model provides a meaningful level of explanatory power and demonstrates adequate out-of-sample predictive relevance for the endogenous variables.

Table 14. Effect Size (f^2) Test Results

Path	f^2
Knowledge Sharing → Psychological Empowerment	0.147
Knowledge Sharing → Innovative Work Behaviour	0.033
Empowering Leadership → Psychological Empowerment	0.130
Empowering Leadership → Innovative Work Behaviour	0.034
Psychological Empowerment → Innovative Work Behaviour	0.394

Source: processed by the authors (2026).

The effect size (f^2) results indicate that the structural paths contribute to the endogenous constructs at varying levels of magnitude. Knowledge Sharing has an f^2 of 0.147 on Psychological Empowerment, while Empowering Leadership has an f^2 of 0.130, indicating moderate effects on Psychological Empowerment. In contrast, Knowledge Sharing and Empowering Leadership demonstrate relatively small effects on Innovative Work Behavior, with f^2 values of 0.033 and 0.034, respectively. The largest effect is observed for Psychological Empowerment $\rightarrow$ Innovative Work Behavior ($f^2 = 0.394$), indicating a comparatively substantial contribution of Psychological Empowerment to explaining Innovative Work Behavior. Overall, the findings suggest that Knowledge Sharing and Empowering Leadership are more influential in explaining Psychological Empowerment, whereas Psychological Empowerment represents the most substantial predictor of Innovative Work Behavior within the structural model.

Hypothesis Testing

Hypothesis testing was conducted using the bootstrapping procedure at the 5% significance level ($t > 1.96$ and $p < 0.05$). The visualization of the structural model significance test is shown in Figure 2.

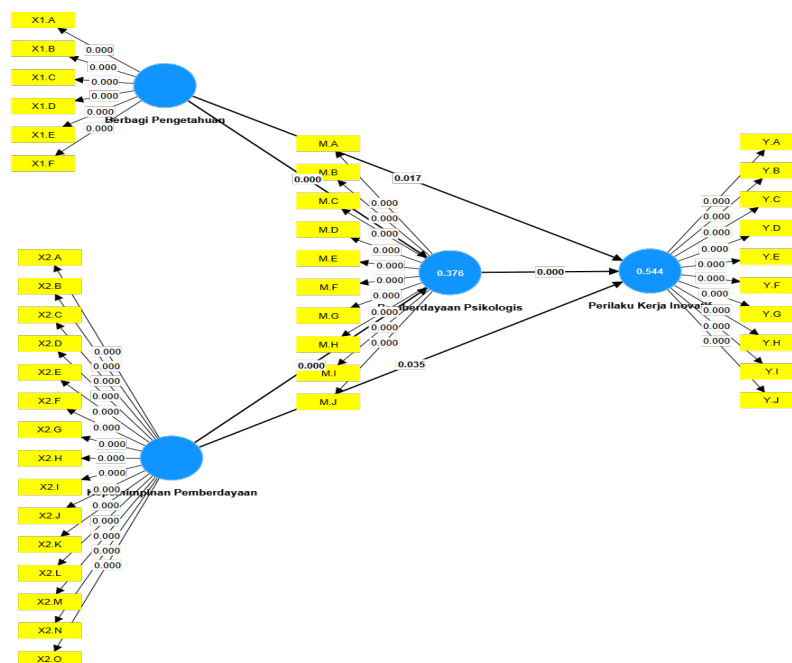


Figure 2. Visualization of the Structural Model Significance Test (Bootstrapping)

Source: processed by the authors (2026).

The direct effect analysis (Table 15) shows that all five hypothesized direct paths are statistically significant and positive. However, reflecting their substantive magnitudes, psychological empowerment demonstrated the largest direct effect among the predictors examined for innovative work behaviour ($\beta = 0.536$, $f^2 = 0.394$). In contrast, despite their statistical significance, the direct effects of knowledge sharing and empowering leadership on innovative work behaviour were substantively small (both exhibiting $\beta = 0.157$ with $f^2 = 0.033$ and 0.034 , respectively).

Table 15. Direct Effect Analysis Results

Path	β	t	Decision
Knowledge Sharing → Psychological Empowerment	0.360	5.367	H3 accepted
Knowledge Sharing → Innovative Work Behaviour	0.157	2.388	H1 accepted
Empowering Leadership → Psychological Empowerment	0.338	4.476	H4 accepted
Empowering Leadership → Innovative Work Behaviour	0.157	2.107	H2 accepted
Psychological Empowerment → Innovative Work Behaviour	0.536	7.677	H5 accepted

Source: processed by the authors (2026).

The indirect effect analysis (Table 16) supports that both mediation paths are positive and statistically significant, supported by 95% bootstrapped confidence intervals that exclude zero. Because the direct paths from the exogenous variables are also significant, psychological empowerment partially mediates these relationships. Going beyond the simple categorization of partial mediation, a comparison of effect magnitudes reveals the practical importance of the indirect mechanisms. For knowledge sharing, the indirect effect via psychological empowerment ($\beta = 0.193$) is larger than its direct effect ($\beta = 0.157$), accounting for approximately 55.14% of the total effect (0.350). Similarly, the indirect effect of empowering leadership ($\beta = 0.181$) outweighs its direct effect ($\beta = 0.157$), representing roughly 53.55% of the total effect (0.338). Descriptively, this indicates that the influence of both knowledge sharing and empowering leadership on innovative work behaviour operates to a slightly greater extent through the enhancement of employees' psychological empowerment than through direct pathways. In a highly bureaucratic setting, where formal procedures constrain discretion, this suggests that knowledge sharing and empowering leadership are more likely to be associated with innovative behaviour when they also strengthen employees' sense of competence, autonomy, meaning, and impact. Given the cross-sectional design, these patterns describe statistical associations rather than causal processes.

Table 16. Indirect Effect Analysis Results

Path	β	t	p	Lower CI (2.5%)	Upper CI (97.5%)	Decision
Knowledge Sharing → Psychological Empowerment → Innovative Work Behaviour	0.193	4.612	0.000	0,118	0,282	H6 accepted
Empowering Leadership → Psychological Empowerment → Innovative Work Behaviour	0.181	3.464	0.001	0,092	0,296	H7 accepted

Source: processed by the authors (2026).

The results show that Psychological Empowerment significantly mediates the relationship between Knowledge Sharing and Innovative Work Behaviour ($\beta = 0.193$, $t = 4.612$, $p = 0.000$,

CI = 0.118–0.282), supporting H6. Similarly, Psychological Empowerment significantly mediates the relationship between Empowering Leadership and Innovative Work Behaviour ($\beta = 0.181$, $t = 3.464$, $p = 0.001$, CI = 0.092–0.296), supporting H7. These findings indicate that greater knowledge sharing and empowering leadership enhance employees' psychological empowerment, which in turn promotes innovative work behaviour.

Table 17. Total Effect Analysis Results

Path	β	t	p
Knowledge Sharing → Psychological Empowerment	0.360	5.367	0.000
Knowledge Sharing → Innovative Work Behaviour	0.350	5.007	0.000
Empowering Leadership → Psychological Empowerment	0.338	4.476	0.000
Empowering Leadership → Innovative Work Behaviour	0.338	4.957	0.000
Psychological Empowerment → Innovative Work Behaviour	0.536	7.677	0.000

Source: processed by the authors (2026).

The results show that all hypothesized direct relationships are positive and significant. Knowledge Sharing significantly affects Psychological Empowerment ($\beta = 0.360$, $t = 5.367$, $p = 0.000$) and Innovative Work Behaviour ($\beta = 0.350$, $t = 5.007$, $p = 0.000$). Empowering Leadership also significantly affects Psychological Empowerment ($\beta = 0.338$, $t = 4.476$, $p = 0.000$) and Innovative Work Behaviour ($\beta = 0.338$, $t = 4.957$, $p = 0.000$). Furthermore, Psychological Empowerment has a significant positive effect on Innovative Work Behaviour ($\beta = 0.536$, $t = 7.677$, $p = 0.000$). These findings indicate that knowledge sharing, empowering leadership, and psychological empowerment all contribute positively to employees' innovative work behaviour.

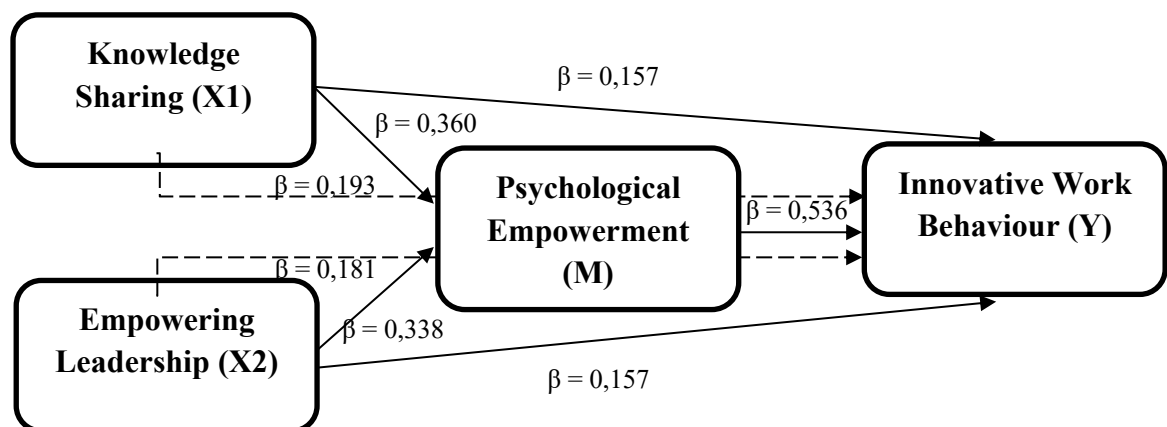


Figure 3. Visualization of the Total Effect of the Structural Model

Source: processed by the authors (2026).

Overall, all seven hypotheses were statistically supported. However, effect-size evidence indicates that the magnitude of the relationships varied substantially, with psychological empowerment showing the largest direct effect on innovative work behaviour, while the direct

effects of knowledge sharing and empowering leadership on innovative work behaviour were small.

The Effect of Knowledge Sharing on Innovative Work Behaviour

Knowledge sharing had a statistically significant, positive, yet substantively small direct effect on innovative work behaviour ($\beta = 0.157$; $t = 2.388$; $p = 0.017$; $f^2 = 0.033$). The statistical significance of this finding supports previous studies, such as Vandavasi et al. (2020), Na-Nan and Arunyaphum (2021), Yasir et al. (2023), Aristana et al. (2024), Hariyanti and Izzati (2024), Marampa et al. (2025). From the Resource-Based View perspective, tacit knowledge among BPPK employees is a strategic intangible asset. However, the small substantive magnitude of this effect necessitates careful contextual interpretation. In the BPPK context, while shared knowledge provides critical informational resources for idea generation, strict formal procedures and hierarchical accountability limit the extent to which such knowledge can be translated directly into innovative action. This bureaucratic constraint helps explain why the direct relationship is statistically detectable but substantively modest. Interestingly, similar limitations are evident in other highly regulated sectors; for instance, Nurahmad et al. (2022) found that among public hospital nurses—a profession strictly bound by medical protocols—knowledge sharing yielded a positive but non-significant direct effect on innovative work behaviour.

The Effect of Empowering Leadership on Innovative Work Behaviour

Empowering leadership had a statistically significant, positive, yet substantively small direct effect on innovative work behaviour ($\beta = 0.157$; $t = 2.107$; $p = 0.035$; $f^2 = 0.034$). The statistical significance of this finding is consistent with Na-Nan and Arunyaphum (2021), Yadav et al. (2023), Jain and Sharma (2025), Marampa et al. (2025), and Hanafy et al. (2025); conversely, it differs from Basar et al. (2024), who found a negative and non-significant relationship. According to Social Exchange Theory, the trust, autonomy, and support given by leaders should ideally be reciprocated by employees through exploring, generating, championing, and implementing new ideas. However, the small substantive effect size indicates that this direct exchange is constrained within the BPPK context. In a highly structured public organization, delegated authority may not translate directly into innovative action because civil servants continue to operate within formal procedures, hierarchical accountability, and defined decision boundaries. Leadership support may therefore become more consequential when employees internalize that support as psychological empowerment.

The Effect of Knowledge Sharing on Psychological Empowerment

Knowledge sharing had a direct, positive, and significant effect on psychological empowerment ($\beta = 0.360$; $t = 5.367$; $p = 0.000$; $f^2 = 0.147$). This finding is consistent with Tripathi et al. (2021) and Yasir et al. (2023), who obtained a coefficient of 0.39 ($t = 8.297 > 1.96$; $p < 0.01$); conversely, it differs from Marampa et al. (2025), who found a non-significant effect (coefficient 0.10; $p = 0.15$). From the Social Exchange Theory perspective, the interaction of knowledge sharing creates a reciprocal relationship: an employee who shares expertise receives a “social reward” in the form of recognition and appreciation, while the knowledge recipient feels professionally supported. This interaction strengthens self-confidence (competence) and the belief in the benefit of one’s contribution (impact), thereby cumulatively strengthening the four dimensions of psychological empowerment: meaning, competence, self-determination, and impact. Particularly within a bureaucratic context like BPPK, knowledge sharing provides essential access to informational resources and social validation. Crucially, however, the mere exchange of information is not enough; it is only when

these shared resources are internalized into a strong sense of competence, impact, and self-determination that they transform into discretionary innovative action. This highlights that psychological empowerment does not merely stand as a separate outcome, but functions as the necessary internal mechanism bridging knowledge exchange with the courage to innovate.

The Effect of Empowering Leadership on Psychological Empowerment

Empowering leadership had a direct, positive, and significant effect on psychological empowerment ($\beta = 0.338$; $t = 4.476$; $p = 0.000$; $f^2 = 0.130$). This finding is consistent with Alotaibi et al. (2020), Schermuly et al. (2022), Yadav et al. (2023), Khatoon et al. (2024) who obtained a coefficient of 0.49 ($t = 10.88 > 1.96$; $p < 0.01$), Marampa et al. (2025), and Hanafy et al. (2025). Through the process of sharing power, information, and responsibility including delegation of authority, provision of relevant information, and skill development employees gain a deeper perspective on their role and contribution. Theoretically, this mechanism is consistent with Self-Determination Theory: empowering leadership acts as a support provider that meets the basic psychological needs for autonomy (through delegation) and competence (through coaching), so that employees' motivation transforms from external to internal and a sense of ownership over their work grows. In a strictly regulated public sector environment where risk aversion is common, this internal transformation is particularly vital. Formal delegation alone may not inspire action; empowering leadership is essential precisely because it cultivates the psychological safety and bounded autonomy civil servants need to eventually engage in innovative behaviours.

The Effect of Psychological Empowerment on Innovative Work Behaviour

Psychological empowerment had a direct, positive, and significant effect on innovative work behaviour ($\beta = 0.536$; $t = 7.677$; $p = 0.000$). Within the structural model, it emerged as the most substantively prominent predictor, exhibiting the largest effect size ($f^2 = 0.394$). This finding is consistent with Suryani et al. (2020), Garg et al. (2022), Yadav et al. (2023), Yasir et al. (2023), Nguyen et al. (2023), Hariyanti and Izzati (2024), Aristana et al. (2024) who obtained a coefficient of 0.378 ($t = 5.889 > 1.96$; $p = 0.000$), and Hanafy et al. (2025). In accordance with Self-Determination Theory (Ryan and Deci, 2000), the fulfilment of the needs for autonomy and competence transforms external motivation into intrinsic motivation; external encouragement will not be optimal if employees feel powerless. Consequently, this pattern suggests that BPPK employees' perceptions of meaning, competence, self-determination, and impact are closely related to their innovative behaviour. However, while psychological empowerment is clearly a critical correlate, causal claims regarding the absolute effectiveness of specific empowerment interventions would require future longitudinal or experimental evidence.

The Mediating Role of Psychological Empowerment in the Relationship between Knowledge Sharing and Innovative Work Behaviour

There was a positive and significant indirect effect of knowledge sharing on innovative work behaviour through psychological empowerment ($\beta = 0.193$; $t = 4.612$; $p = 0.000$; CI 0.118, 0.282). This finding validates Yasir et al. (2023) and Marampa et al. (2025), who obtained an indirect coefficient of 0.25 ($p = 0.02$). Moving beyond a simple categorization of partial mediation, a comparison of effect magnitudes reveals that the indirect effect of knowledge sharing via psychological empowerment ($\beta = 0.193$) is slightly larger than its direct effect ($\beta = 0.157$). This pattern suggests two complementary mechanisms at play within BPPK: knowledge sharing can directly supply informational resources for innovation, while psychological empowerment reflects the internal process through which those resources are

converted into confidence, autonomy, and perceived impact. Consequently, when employees feel empowered, the knowledge obtained from colleagues is not merely absorbed but actively processed into value-adding new ideas. The precision of this mediation estimate is robustly supported by a 95% bootstrapped confidence interval that excludes zero.

The Mediating Role of Psychological Empowerment in the Relationship between Empowering Leadership and Innovative Work Behaviour

There was a positive and significant indirect effect of empowering leadership on innovative work behaviour through psychological empowerment ($\beta = 0.181$; $t = 3.464$; $p = 0.001$; CI 0.092, 0.296). The precision of this mediation estimate is established by a 95% bootstrapped confidence interval that excludes zero. This finding validates previous studies such as Yadav et al. (2023), who obtained an indirect coefficient of 0.206 ($p = 0.008$), Marampa et al. (2025), and Hanafy et al. (2025). Moving beyond a basic assessment of partial mediation, a comparison of the effect magnitudes reveals that the indirect pathway through psychological empowerment ($\beta = 0.181$) was slightly larger than the direct pathway from empowering leadership to innovative work behaviour ($\beta = 0.157$). This indicates that a substantial part of the modeled relationship operates through employees' psychological experience of empowerment.

In a bureaucratic setting such as BPPK, empowering leadership influences innovative behaviour through two complementary routes. The direct route is relatively small, while the indirect route through psychological empowerment is slightly larger. In accordance with Self-Determination Theory, leadership practices that grant discretion, provide information, and develop competence become far more consequential when employees internalize these practices to fulfill their basic psychological needs. A superior's encouragement to innovate will not be effective if it remains an empty formal instruction. Therefore, psychological empowerment should be interpreted as a critical internal mechanism linking leadership support to innovative behaviour, rather than as a factor that unrealistically "multiplies" the effect of leadership. Leadership support only translates into discretionary action when it successfully touches the psychological side of subordinates by reinforcing their sense of meaning, competence, self-determination, and impact.

Overall, the findings on the seven hypotheses affirm the central position of psychological empowerment within the structural model. Taken together, these findings suggest that bureaucratic control and employee empowerment need not be treated as mutually exclusive. In public organizations like BPPK, formal procedures, performance accountability, and organizational boundaries define the permissible space for action. However, empowering leadership and knowledge sharing can support employees in exercising discretion safely within that space. Psychological empowerment may therefore be interpreted as a mechanism of bounded autonomy: employees remain accountable to formal controls but experience sufficient meaning, competence, self-determination, and impact to initiate and implement improvements. This control–empowerment balance which aligns with the levers of control framework (Simons, 1995) represents a much more specific theoretical contribution to public sector management than the generic conclusion that psychological empowerment merely acts as a mediator.

Conclusion

This study concludes that the seven proposed hypotheses are empirically supported. Psychological empowerment showed the largest direct relationship with innovative work behaviour ($\beta = 0.536$). For knowledge sharing, the estimated direct, indirect, and total effects on innovative work behaviour were 0.157, 0.193, and 0.350, respectively. For empowering

leadership, the corresponding estimates were 0.157, 0.181, and 0.338. These results indicate complementary direct and mediated pathways rather than an effect that is simply "multiplied" by psychological empowerment. Thus, psychological empowerment occupies a central position as a direct driver and a critical internal mechanism linking external resources and leadership support to innovative outcomes.

The theoretical contribution lies in showing how psychological empowerment can function as an internal mechanism through which external organizational resources and leadership support are translated into innovative behaviour under bureaucratic constraints. Rather than eliminating formal control, empowerment enables employees to exercise bounded autonomy within established organizational limits. This interpretation effectively connects Self-Determination Theory (Ryan and Deci, 2000) with the levers-of-control perspective (Simons, 1995) in a public-sector setting, confirming that the effect of external organizational factors on individual work outcomes is indirect and heavily dependent on the cognitive-affective internalization of the employees.

Practically, the findings suggest that efforts to support innovative work behaviour should consider both employees' psychological empowerment and the control environment in which innovation occurs. Organizations cannot rely solely on technical training or top-down instructions; human resource management policies should foster a psychologically supportive work atmosphere where employees feel their opinions are valued, their contributions have an impact, and they have sufficient autonomy. Such a transformation should ideally be accompanied by adjustments to the Management Control System. Referring to the levers of control framework, public institutions are advised to balance rigid diagnostic control systems with interactive control systems and clear boundary systems. This ensures a safe space for employees to innovate, so that the bounded autonomy arising from empowering leadership produces directed and meaningful innovation rather than administrative chaos.

Finally, several limitations of this study should be considered, opening opportunities for further research. First, the purposive non-probability sampling strategy limits statistical generalization beyond the observed respondents at BPPK. Second, the cross-sectional design does not establish temporal ordering or causal effects among the constructs. Third, the use of self-reported measures collected within the same survey may introduce common-method bias. Fourth, the instrument validation relied on a pilot test of 35 respondents, which serves as a preliminary assessment rather than a definitive psychometric evaluation. Furthermore, the model explains 37.6% of the variance in psychological empowerment, indicating that a substantial portion of influencing factors remains unexamined. Future studies may use probability-based sampling, longitudinal designs, multi-source data, or experimental approaches to strengthen external and causal validity, as well as test this structural model in a broader public-institution context.

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