ACCELERATING SOE's EMPLOYEE INNOVATIVE WORK BEHAVIOR: THE EFFECT OF TRANSFORMATIONAL LEADERSHIP AND PSYCHOLOGICAL CAPITAL WITH KNOWLEDGE SHARING AS INTERVENING VARIABLE

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Abstract

Innovation is essential in the current dynamic and competitive business environment. Therefore, the company must leverage innovative work behavior to all employees to continuously create new products/services and update the work process. Researchers and practitioners argue that proper leadership, positive psychological, and knowledge-sharing activities are relevant factors in encouraging and accelerating employees' innovative work behavior. In order to improve State-owned enterprise (SOE) employees' innovative work behavior and bear up previous research gaps, this study investigates whether transformational leadership and psychological capital encourage innovative work behavior in SOE employees, directly and indirectly, using knowledge-sharing as an intervening variable. The researcher processed clean data from 303 respondents who completed online questionnaires using the Structural Equation Modeling method. The result found that transformational leadership and psychological capital positively affected the innovative work behavior of SOE employees, both directly and through knowledge-sharing activities. However, the magnitude of psychological capital toward the innovative behavior of SOE employees directly and through knowledge-sharing activities is more substantial than transformational leadership. Furthermore, theoretical and practical implications are discussed. Furthermore, theoretical and practical implications are discussed. Lastly, the company can use the results to intervene in relevant factors to increase employee innovation.

Keywords: Innovative Work Behavior; Transformational Leadership; Psychological Capital; Knowledge Sharing; State-Owned Enterprises.

JEL Classification: J24, O30, M54, M12, M14

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INTRODUCTION

Innovation is a compulsion to deal with a dynamic and challenging business environment. Companies must continuously find new methods to design, produce, and promote new products or services and update internal workflows and processes since defending obsolete ways will be a shortcut to failure Phan (2019). One of the best ways to be more innovative is that a company should not depend on the research and development division but

leverage innovative work behavior to all employees (Sudibjo & Prameswari, 2021). Innovative work behavior is the behavior of employees to create, introduce, and apply new ideas at work to improve individual and organizational performance (Janssen, 2000). This behavior plays a crucial role in providing a competitive advantage for companies (Dong, 2016). Siregar (2019) reveals that the application of innovative work behavior in a modern work context can be in the form of providing helpful new ideas in the form of work processes, products, or procedures in the work environment, new routines, simplification of work processes, use of new tools, or improvements-internal and external coordination of the organization. World Economic Forum also reported that innovation skills will be one of the most needed skills in 2025 future jobs (Li, 2022).

In the Indonesian business context, innovative work behavior should be encouraged in state-owned enterprises (SOE) employees. As stated in Laws of the Republic of Indonesia Number 19 of 2003, SOEs have an essential role in implementing the national economy to achieve prosperity for the public (Rusli et al., 2020). The total consolidated assets of SOE in 2021 reached IDR 8,978 trillion, which has increased since 2019, as shown in Figure 1. The fiscal contribution of SOE to the Indonesian economy will get IDR 2,259 trillion, with a tax proportion of 60%, non-tax state revenue (PNBP) of 29%, and dividends of 11% (MSOE, 2022). With their significant total assets and strategic role as development agents and locomotives for the Indonesian economy, SOEs need to be equipped with many employees who think and behave innovatively to exist in the future and have global competitiveness. The lack of SOE innovation in products and internal business processes has caused Indonesia's competitiveness to be low in recent years (Sedyowidodo, 2021). Innovative employees are expected to increase Indonesia's Global Innovation Index and support SOEs, becoming the Forbes Most Innovative Company equivalent with Tesla, Unilever Indonesia, ASML Holding, and Sun Pharmaceuticals Industries (Forbes, 2023).

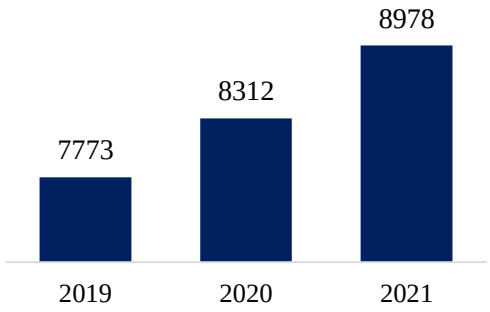

Figure 1. Total SOE Assets 2019-2021 in IDR trillion
(Source: Ministry of SOE Annual Report)

Additionally, to encourage innovative work behavior effectively, previous studies suggest combining individual and organizational factors is the best way to gain innovative work behavior outcomes (Zuraik et al., 2020). Firstly, in organizational factors, leadership is fundamental in developing and shaping employee behavior to encourage innovative organizational processes. Researchers found that transformational leadership is the type of leadership that is the most closely related to the innovation process. It would stimulate employees' innovative behavior, provide space for team members to make changes and new things, and foster employee confidence to improve work engagement and innovative behavior (Ariyani & Hidayati, 2018). This kind of leadership is appropriate to advance SOE employees' confidence to initiate and create new ideas due to the space to initiate and implement new ideas in SOEs with its business complexities, various stakeholders, and much regulation to comply is not flexible as other business entities.

Research has been conducted on the relationship between transformational leadership and innovative work behavior

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widely. However, the results were so mixed that it became a potential gap to be clarified further. For example, Rafique et al. (2022) and Afsar et al. (2019) found that transformational leadership directly impacts transformational leadership. Meanwhile, Sudibjo and Prameswari (2021), Udin and Shaikh (2022), and Sharif et al. (2021) gain another conclusion that transformational leadership does not have a direct positive effect on innovative work behavior. However, it needs to be mediated by knowledge-sharing activities.

Secondly, innovation activities are sometimes followed by risks and complications that require internal encouragement as a personal factor from employees to behave innovatively (Chen et al., 2021). In organizational psychology, there is psychological capital as an internal drive to force positive behavior on the individual. It becomes individual factors that encourage someone to be innovative in work. Knowing that psychological capital influences innovation significantly, some public companies recruit employees with the criteria of prospective employees who have superior psychological capital to improve company performance (Amber et al., 2022). Employee psychological capital has a beneficial impact on innovative work behavior, organizational commitment, workplace well-being, employee engagement, and performance (Al Kahtani & M. M, 2022; Kumar et al., 2022; Luo et al., 2022). In addition, there is also a knowledge-sharing activity that can accelerate an employee's innovative behavior at work (Almulhim, 2020; Nguyen et al., 2019). Sharing knowledge is knowledge and information exchange through discussions to generate new ideas and create innovation in the workplace. It mediates the relationship between transformational leadership and psychological capital with innovative work behavior (Sudibjo & Prameswari, 2021).

Based on the disclosed background, this research was conducted to confirm the effect of transformational leadership and psychological capital on the innovative work behavior of SOEs Employees directly and through knowledge-sharing activities as an intervening variable. This study contributes to enriching the literature on innovative work behavior, focusing on SOE employees via integrating organizational and personal factors and involving respondents representing many SOE industries as a progression of prior research gaps (Zuberi & Khattak, 2021) and Volery and Tarabashkina (2021). These research findings have managerial implications, especially recommendations for SOE human resource managers and regulators to intervene in the appropriate factors to encourage and accelerate innovative work behavior. Furthermore, in an academic's view, it can inspire further research.

LITERATURE REVIEW

Innovative Work Behavior

Innovative work behavior is critical for companies to gain a competitive advantage in a dynamic and competitive environment (Sulistiawan et al., 2017). It starts from recognizing a problem, then continuing to look for an idea or solution to solve the problem that can be either a novelty or adoption was first developed and measured by Scott &; Bruce in 1994 (Srirahayu et al., 2023). Innovative work behavior is a behavior to create, introduce, and use new ideas for working in a team or organization that contribute to performance (AlEssa & Durugbo, 2021). The innovative work behavior of individual employees is essential for the success of an organization (Jong & Hartog, 2010). It is an effort given by employees to initiate and implement new ideas and help achieve individual, team, and organizational goals (Mubarak et al., 2021).

Factors influencing innovative work behavior have been widely developed and divided into three categories, personal, organizational, and external factor

(Srirahayu et al., 2023). A literary study by AlEssa and Durugbo (2021) divides it into individual and organizational factors. In organizational factors, proper leadership and knowledge-sharing activities encourage someone to behave in innovative work. Specifically, some studies found that transformational leadership significantly encourages innovative work behavior (AlEssa & Durugbo, 2021). This type of leadership can establish good relationships with subordinates as role models and stimulate an individual to behave creatively and innovatively. In addition, leaders empower employees to bring creativity, modernization, and excellent work that affects additional productivity, profitability, and customer satisfaction (Almulhim, 2020).

The human dimension factors influencing innovative work behavior are the individual, and the leader, focusing on performance, meaningful work, creative self-efficacy, and superior-subordinate relationships. Based on Zuraik et al. (2020), the results of previous research suggest that one of the best ways to explain the significant factor of innovative work behavior is to combine individual and organizational factors.

Transformational Leadership, Knowledge Sharing, and Innovative Work Behavior

In organizations, leadership has a significant role in motivating, directing, and shaping employee behavior to be innovative (Sudibjo & Prameswari, 2021). Transformational leadership inspires enthusiastic employees to go beyond their means for a dignified organization. This leadership motivates employees to create creative methods to deal with various conditions encountered in doing work (Rafique et al., 2022). Transformational leadership can support change and reform employees to think critically and innovatively (Sudibjo & Prameswari, 2021). This type of leadership effect significantly a radical innovation. If mediated by knowledge management, transformational leadership also supports the capability to innovate (Nguyen et al., 2019). The impact of transformational leadership has become a research concern in recent years. It can positively influence employees to be innovative, based on Rafique et al. (2022)), Afsar et al. (2019), and Sudibjo and Prameswari (2021)'s research results. The company also must provide transformational leadership since it can create a climate of knowledge-sharing for innovation in products and processes (Le & Lei, 2019).

H_1: Transformational Leadership has a positive effect on Innovative Work Behavior.

H_3: Transformational Leadership has a positive effect on Knowledge Sharing.

Psychological Capital, Knowledge Sharing, and Innovative Work Behavior

Innovation activities are often accompanied by risk and complexity. In carrying out innovation activities, it is possible to experience failure, rejection, or criticism from other members of the organization. Only a though internal drive can help employees' resilience in innovating until the end process (Chen et al., 2021). Psychological Capital is the framework of positive psychology based on the development and growth experience needed in innovation (Martínez et al., 2019).

Psychological capital is a positive psychological state and mental energy built during individual growth and development (Baron et al., 2013). It is a condition of positive internal characteristics and individual psychological states (Chen et al., 2021). The higher a person's psychological capital, the higher a person's confidence to behave innovatively and creatively. The Psychological Capital of logistics employyees positively affects innovative work behavior. Mutonyi, Slatten, and Lien

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(2021) tried to define four dimensions of psychological capital (1) self-efficacy, (2) optimism, (3) hope, and (4) resilience. In more detail, hope is a belief that determines one's goals and success in work roles. Self-efficacy is the belief that one can mobilize motivation and cognitive resources to succeed in performing tasks. At the same time, resilience is the ability to improvise and adapt in times of change. Finally, optimism is an individual's positive expectations about the future, where one strives for the best.

Mutonyi et al. (2021) found that psychological capital directly influences the innovative work behavior of workers in Norway. The higher individual self-cognition will affect internal motivation and the willingness to share knowledge bigger than the lower one. Psychological capital is also a factor that influences a person to collect and share knowledge. An individual with high psychological capital will have characteristics and behaviors that prefer to communicate between groups, which is the premise of knowledge-sharing activities (Chen et al., 2021).

H_2: Psychological capital has a positive effect on Innovative Work Behavior.

H_4: Psychological capital has a positive effect on Knowledge Sharing.

Knowledge Sharing Effects on Innovative Work Behavior and its Mediation Role

The company must utilize and manage existing knowledge optimally to create new knowledge. Knowledge is crucial for an organization to have a competitive advantage. Therefore, organizations must be able to manage organizational knowledge and make knowledge-sharing the norm for their employees (Rafique et al., 2022).

Existing knowledge is distributed differently between individuals or groups of workers. The knowledge-sharing activity consists of two main activities, knowledge collecting and knowledge donating. It will accumulate separate knowledge to be integrated. Knowledge sharing relates to employee creativity, the ability to innovate, and performance (Chen et al., 2021).

Knowledge collecting and knowledge donating positively affect the innovative work behavior of academic staff in the education sector (Rafique et al., 2022). The same result was found in the study of workers in three European industries. Knowledge sharing empowers workers psychologically by acquiring knowledge or information (Aldabbas et al., 2020). Knowledge sharing was also found to mediate the relationship between psychological capital on innovative work behavior (Chen et al., 2021; Dong, 2016). It also found that knowledge sharing mediates between transformational leadership and innovative work behavior (Sudibjo & Prameswari, 2021).

H_5: Knowledge Sharing has a positive effect on Innovative Work Behavior.
H_6: Knowledge Sharing acts as a mediator between Transformational Leadership and Innovative Work Behavior.
H_7: Knowledge Sharing acts as a mediator between psychological capital and Innovative Work Behavior.

Overall, this study used a combination of individual and organizational factors represented by psychological capital (PC), transformational leadership (TL), and knowledge sharing (KS) in the relationship with Innovative Work Behavior (IWB), with models' research shown in Figure 2.

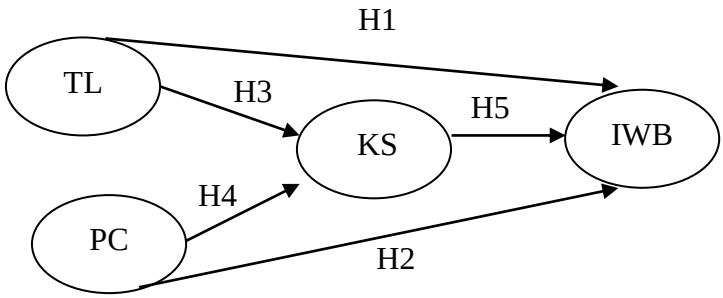

Figure 2. Conceptual Framework

RESEARCH METHODS

Study Design and Sample

The analytical method used in this research is descriptive analysis and Structural Equation Modeling (SEM) analysis using Lisrel software version 8.3. Descriptive analysis is to describe the characteristics of survey data. In contrast, SEM is used to answer the problem formulation to see the relationship between variables following the objectives of this study. In addition, an analysis was also carried out on the pretest data to measure the validity and reliability of the questionnaire. The pretest and main study were conducted in Jakarta from February to Mei 2023. The population in this study was SOE's employees. The data did not come from the entire population of SOE's employees but instead used sample data through a purposive convenience technique. Consideration of the number of samples refers to Hair et al. (2010) Multivariate analysis research uses SEM (Structural Equational Modeling) to obtain the goodness of fit of at least 200 respondents with the rule of thumb that the number of samples is at least five to ten times the number of indicators or questions. The target respondents in this study were at least 220 SOE employees.

Data Collecting and Measurement

This study used a questionnaire to collect research information from respondents. It consists of adaptation statements from previous research journals in the English language. The researcher translated the questionnaire and conducted a readability test on 2-3 respondents before pretesting. Pretesting involved 40 respondents to ensure the questionnaire had good reliability and validity. The questionnaire was designed with closed questions using Likert scale answers 1-7 (strongly disagree-strongly agree. Innovative work behavior variables were measured using six statements from Zuraik et al. (2020) research questionnaire adapted to the questions developed by Scott and Bruce in 1994. The transformational leadership variable was measured using seven questions from the (Rafique et al., 2022) research questionnaire. Psychological Capital was measured using PCQ-12 Luthans (2007) questions. Psychological capital has four dimensions, efficacy, hope, resilience, and optimism. Finally, knowledge sharing was measured using seven questions from (Rafique et al., 2022) research questionnaire adapted. Knowledge sharing also has two dimensions, knowledge donating and knowledge collecting.

Data Analysis

Firstly, the researcher conducted a pretest to analyze the validity and reliability of the questionnaire using SPSS statistical software. The Kaiser-Meyer-Olkin (KMO) values, Measure of Sampling Adequacy (MSA), Barlett's test of Sphericity, and Component Matrix are used as references for validity tests and reliability tests are carried out by analyzing Cronbach Alpha values. Secondly, descriptive

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analysis is used to describe the essential characteristics of the data and summarize the data so that the research data is more meaningful and easier to understand. Next, the clean data obtained through a valid and reliable questionnaire is processed using SEM (Structural Equational Modeling). The SEM method is a powerful and efficient statistical' s method to help researchers find relationships between several variables and identify the main paths of variables simultaneously (Hair et al., 2014).

SEM analysis generally consists of a 2-step approach: (1) measurement model analysis and (2) structural model analysis. Measurement model analysis using CFA (Confirmatory Factor Analysis) aims to see how far the significance of the relationship between latent variables (indicators/questions) is built from the existence of a fundamental theory of construct/latent variables in the research model. This study conducted two types of CFA: first-order CFA for unidimensional variables such as innovative work behavior and transformational leadership and second-order CFA for variables containing psychological capital and knowledge-sharing dimensions. In CFA, the loading factor value ≥ 0.5 indicates that the indicators/dimensions are significant and valid. Then, to see how far the reliability of the measuring instrument is, researchers will refer that if Construct Reliability ≥ 0.7 Variant Extracted ≥ 0.5 means good reliability. Additionally, the SEM method has several goodness-of-fit criteria references to evaluate model can be accepted or rejected (Dash & Paul, 2021). To state a model has good fit, 3-4 criteria of Goodness-of-Fit can be used, with at least one absolute fit, such as the Goodness-of-fit Index (GFI) > 0.90 and Root means square error of approximation (RSMEA) > 0.90, and one incremental indicator such as Normed Fit Index (NFI) > 0.9 and Comparative Fit Index (CFI) > 0.90 (Hair et al., 2010).

Lastly, this study tested the hypothesis using the t-statistic and p-value significance tests on structural model analysis. The direction of the variable relationship is seen from the original sample value to see a positive or negative relationship. If the t-statistic value is > 1.645, then the hypothesis is accepted, and if the original sample value is > 0.05 then the nature of the relationship is positive.

RESULT AND DISCUSSION

Result

The results of a preliminary test conducted on 40 respondents found that the questionnaire had good reliability and validity. Furthermore, the questionnaire was used for data collection on the main test. Three hundred twenty-two people (320) filled out questionnaires, 303 met the criteria as SOE's employees, and the researcher excluded 19 unfit respondents. Respondents come from different industries and fields of work, as shown in Table 1. It also shows the respondents' demography, the females are 34%, and the males are 64%. The highest level of respondents in the organization is at the staff level (38%), and the least is the senior managers' level at 26%.

The questionnaire was closed with an open-ended question, which found that the innovations made by 92 percent of respondents revealed that the innovations they made were related to the preparation of SOPs, work processes, or new work mechanisms. The remaining 8% of respondents answered that they produce new products and services for the company.

The researcher also conducted a descriptive analysis of the innovative work behavior variable to give an overview of the respondents' responses on evaluating the innovative work behavior they carried out in the company. Table 2 shows that the grand mean value of the variables is 5.657. It means that the response value to innovative work behavior is above average. The highest average value is in indicators related to IWB 1 ("I am looking for ideas regarding new technologies, processes, techniques and/or products" of 5.898.

While the lowest average response was in IWB 5 ("Devise an adequate plan and schedule for the implementation of new ideas") of 5.564.

In addition, researchers performed an ANOVA analysis to determine whether there were significant differences in innovative work behavior based on demographics. Gender and positions were the characteristics that indicated a significant difference at the 5% level. In comparison by gender, men have a mean value of 82.41%, a greater innovative work behavior rate than women at 78,03%. Based on the position, the senior manager has a higher IWB of 89,56% and differs from the other positions. The lowest is a staff position.

Measurement Model Analysis

Based on the first order Confirmatory Factor Analysis (CFA) processing results, all questioner indicators can measure transformational leadership and innovative work behavior variables due to having a loading factor value of > 0.5 and a t-value > t-table 1.645. In addition, the variables also met the requirements for and reliability, which are indicated by a value of Varian Extracted (VE) > 0.5, meaning that the model is valid, and a Construct Reliability (CR) value > 0.7, meaning that each latent variable was valid and reliable with measurement results as shown in Table 3.

The second-order CFA is carried out on psychological capital and knowledge-sharing variables because they consist of dimensions measured by indicators. Second-order CFA is measured by simplification through the latent variable score (LVS). The psychological capital variable is measured directly by its four indicators: efficacy, hope, resilience, and optimism. At the same time, knowledge sharing is measured directly by two dimensions: distributing knowledge and gathering knowledge as indicators.

Based on the processed CFA second-order data, Table 4 shows that all indicators and dimensions of psychological capital and knowledge-sharing variables have a Loading factor value of > 0.5. It means all indicators have been able to measure dimensions, then dimensions of psychological capital and knowledge-sharing have been able to measure latent variables. After all, indicators are valid, reliability testing is then carried out, which obtains all Variant Extracted (VE) values > 0.5 and Construct Reliability (CR) values > 0.7 latent variables that have fulfilled the reliability test requirements.

Table 1. Respondent Demographics

Subject	Category	Number of Respondents	Percentage
Gender	Male	193	64%
	Female	110	36%
Position in the Company	Staff	115	38%
	Supervisor	73	24%
	Manajer	89	29%
	Senior Manager	26	9%

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Table 1. Continue

Subject	Category	Number of Respondents	Percentage
Industry	Energy, Oil and Gas	47	16%
	Health Industry	36	12%
	Insurance and Pension Fund Services	13	4%
	Infrastructure Services	28	9%
	Financial Services	57	19%
	Logistics Services	29	10%
	Tourism and Support Services	12	4%
	Telecommunication and Media Services	29	10%
	Manufacturing	12	4%
	Minerals and Coal	7	2%
	Food and Fertilizer	12	4%
	Plantation and Forestry	21	16%
Field / work unit	Finance	50	17%
	Human Capital	94	31%
	Technology and Information	19	6%
	Research and Development	9	3%
	Operational/Engineering	25	8%
	Supply Chain	9	3%
	Marketing	21	7%
	Corporate Secretary	31	10%
	Legal and Compliance	7	2%
	Other	38	13%

Table 2. Descriptive Data of Innovative Work Behavior Variables

Indicator	Min	Max	Mean	Grand Mean
IWB1	1	7	5.898	5.657
IWB2	1	7	5.630	
IWB3	1	7	5.637	
IWB4	1	7	5.591	
IWB5	1	7	5.564	
IWB6	1	7	5.624	

Table 3. CFA First Order Validity and Reliability Results

Latent Variables	Indicators	Validity Test			Reliability Test		
		SLF	t-value	Conclusion	VE	CR	Conclusion
Transformational Leadership	TL1	0.855	32.001	Valid	0.835	0.973	Reliable
	TL2	0.911	34.026				
	TL3	0.950	37.765				
	TL4	0.914	36.550				
	TL5	0.942	24.133				
	TL6	0.907	33.383				
	TL7	0.918	36.155				

Table 3. Continue

Latent Variables	Indi-cators	Validity Test			Reliability Test		
		SLF	t-value	Conclusion	VE	CR	Conclusion
Innovative work behavior	IWB1	0.888	30.319	Valid	0.832	0.967	Reliable
	IWB2	0.930	32.019				
	IWB3	0.928	31.971				
	IWB4	0.923	28.163				
	IWB5	0.869	26.627				
	IWB6	0.932	31.790				

Note: SLF = Standardized Loading Factor, CR = Construct Reliability, VE = Variance Extracted

Table 4. CFA Second Order Validity and Reliability Results

Latent Variables	Indicators	Validity Test			Reliability Test		
		SLF	t-value	Conclusion	VE	CR	Conclusion
Efficacy	PC1	0.926	-	Valid	0.827	0.935	Reliable
	PC2	0.916	27.027				
	PC3	0.884	24.625				
Hope	PC4	0.851	-	Valid	0.653	0.882	Reliable
	PC5	0.757	14.222				
	PC6	0.841	18.222				
	PC7	0.783	16.208				
Resilience	PC8	0.825	-	Valid	0.695	0.872	Reliable
	PC9	0.759	14.677				
	PC10	0.908	17.125				
Optimism	PC11	0.868	-	Valid	0.761	0.865	Reliable
	PC12	0.877	19.970				
Knowledge Donating	KNS1	0.915	-	Valid	0.729	0.915	Reliable
	KNS2	0.933	22.628				
	KNS3	0.806	17.421				
	KNS4	0.747	15.489				
Knowledge Collecting	KNS5	0.883	-	Valid	0.779	0.934	Reliable
	KNS6	0.915	23.866				
	KNS7	0.821	19.129				
	KNS8	0.912	23.687				
Psychological capital	EF	0.886	17.372	Valid	0.883	0.968	Reliable
	HOP	0.959	17.101				
	RES	0.965	16.410				
	OPT	0.943	17.101				
Knowledge Sharing	KD	0.974	17.100	Valid	0.844	0.915	Reliable
	KC	0.859	14.534				

Note: SLF = Standardized Loading Factor, CR = Construct Reliability, VE = Variance Extracted

Structural Model Analysis

After each variable was valid and reliable, the researcher carried out subsequent measurements of the influence of each variable. First, a fit test of the structural model is carried out, as seen from goodness-of-fit. Based on the results of data processing presented in Table 5, the goodness of fit testing shows that Root means square error of approximation (RSMEA) criteria produce a value of 0.00, which means that the resulting model is a good fit. Another goodness-of-fit criteria, namely the Goodness-of-fit Index (GFI),

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Adjusted goodness-of-fit Index (AGFI), Normed Fit Index (NFI), and Comparative Fit Index (CFI), produce a value of > 0.90, which means that the resulting model meets the goodness of fit criteria. The model also has P-Value 0.90 (>0.50) with Chi-Square 107.25 and a degree of freedom 146. The results indicated the goodness of fit model so that the theory hypothesis could be tested. Then researchers conduct hypothesis analysis as shown in the graphic result in Figure 3. All hypotheses are significantly related due to having t-count values greater than t-table 1.645. The direction of the relationship is positive because it has path coefficient value greater than zero.

Hypothesis Testing Analysis

Figure 3 and Table 6 show the result of hypotheses testing based on t-value test. In more detail, the first hypothesis, the direct relationship between transformational leadership and innovative work behavior among employees, had a t-count value 9.928 greater than t-table 1.645. Therefore, the first hypothesis could be accepted. In other words, the more transformational leadership increases, the more innovative work behaviors of employees will also increase. It supports Rafique et al. (2022) and Afsar et al. (2019) results and is contrary to Sudibjo and Prameswari (2021), Udin and Shaikh (2022), and (Sharif et al., 2021). Then, the second hypothesis could be accepted. The direct relationship between psychological capital and employees' innovative work behavior also has a t-count value 7.182 greater than t-table 1.645. The more psychological capital a person increases, the more innovative work behavior employees will also exhibit. It supports Chen et al. (2021), who revealed that in the innovation process, employees will have the potential to face various challenges, rejections, or criticisms. It takes an internal drive factor to survive and succeed in innovative behavior.

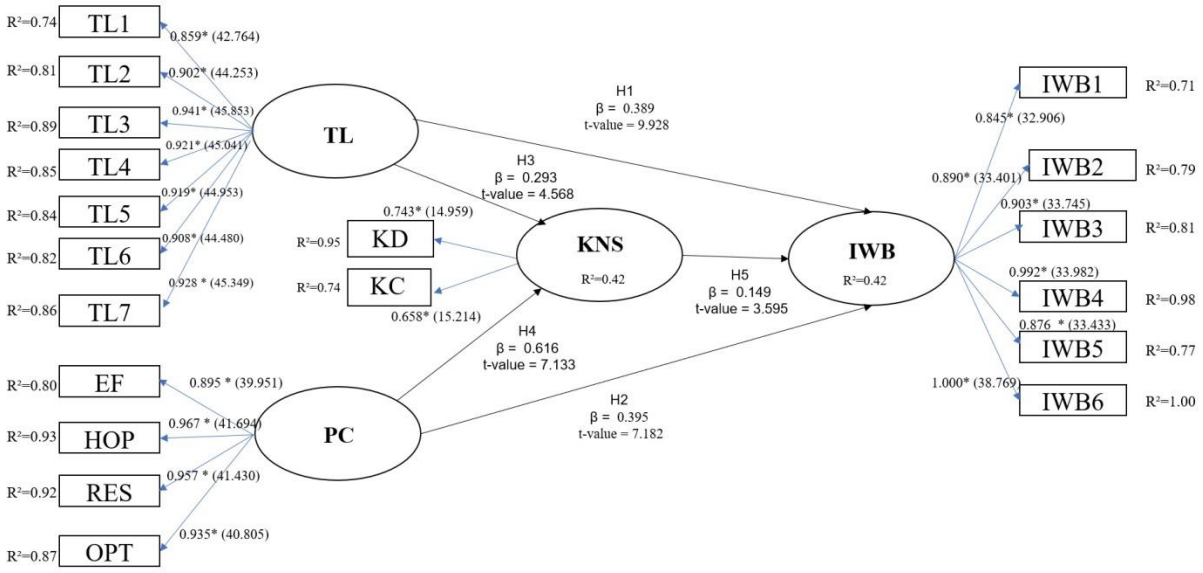
The following hypothesis is the direct relationship between transformational leadership and sharing knowledge. They have a t-count value 4.568 greater than t-table 1.645, meaning the third hypothesis can be accepted. Then, the fourth direct relationship between psychological capital and knowledge sharing also has a t-count value 7.133 greater than 1.645 (t-table), it indicated that psychological capital has a positive effect on knowledge sharing. The last direct relationship hypothesis is the relationship between knowledge sharing and innovative work behavior. It has a t-count value 3.595 greater than 1,645 (t-table). Sharing knowledge directly and positively affects innovative work behavior. The higher the knowledge-sharing activity, the more innovative the employees' work behavior will be.

The coefficient path value in Figure 3 shows that psychological capital encourages innovative work behavior more than transformational leadership. The association between psychological capital and information sharing has the highest direct relationship based on coefficient path value. Table 6 further shows that knowledge sharing plays a vital role as an intervening variable between transformational leadership (H6) and psychological capital to innovative work behavior (H7) as an endogenous variable. The psychological capital encouragement to innovative work behavior is more substantial when mediated by knowledge sharing than by transformational leadership.

The R-Square of the endogenous variable sharing knowledge is 42%. It means transformational leadership and psychological capital factor explain 42% of the knowledge-sharing diversity, and other factors explain the rest of the variation. The R-Square of the innovative work behavior variable is 42%, which means 42% transformational leadership, psychological capital, and knowledge sharing explain the innovative work behavior's diversity. Other factors explain the rest of the variety of innovative work behavior variables.

Table 5. Goodness of fit Test Results

Goodness-of-Fit	Cut-off-Value	Result	Conclusion
RMSEA	≤ 0.08	0.00	Good fit
P-value (Chi-Squares 107, 25)	> 0.05	> 0.90	Good fit
GFI	> 0.90	1.00	Good fit
AGFI	> 0.90	0.99	Good fit
IFI	> 0.90	1.00	Good fit
NFI	> 0.90	1.00	Good fit
CFI	> 0.90	1.00	Good fit



Note: *) path coefficient and bracket () t-value.

Figure 3. Graphic Result

Table 6. Hypothesis-testing Result

Hypothesis	Relationship	Path coefficient	t-value*	Conclusion
H1	(TL) → (IWB)	0.389	9.928	Hypothesis Accepted
H_2	(PC) → (IWB)	0.395	7.182	Hypothesis Accepted
H_3	(TL) → (KNS)	0.293	4.568	Hypothesis Accepted
H_4	(PC) → (KNS)	0.616	7.133	Hypothesis Accepted
H_5	(KNS) → (IWB)	0.149	3.595	Hypothesis Accepted
H6	(TL) → (KNS) → (IWB)	0.043	2.720	Hypothesis Accepted
H_7	(PC) → (KNS) → (IWB)	0.092	3.380	Hypothesis Accepted

*) t-count value > t-table 1.645 (5% significance level) means a significant effect

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Discussion

This research contributes a deeper look at factors that significantly encourage innovative work behavior in SOEs. It enriches references to accelerate innovative work behavior in SOE. Firstly, the types of innovation initiated by 303 respondents represented 92% of innovation processes. It is related to the fields of work of most respondents, which are HR, finance, and corporate secretary. In this type of working field, providing helpful new ideas in the form of work processes, procedures, new routines, simplifying work processes, or improvements internal and external coordination is commonly used in SOEs to respond to organizational needs and technological advances. This type of innovation is beneficial for improving the quality of work and reducing costs (YuSheng & Ibrahim, 2020).

Secondly, most of SOE's employees rated low on the stages of preparing resources, schedules, and funds for implementing innovations. According to Jong and Hartog (2010), implementing innovations is generally the most complex step. In the context of SOE, which has various stakeholders and regulations to comply with, it is imperative to have support from their direct supervisor in making employees more confident to promote and implement their innovation and have strong psychological capital. Overall, this research confirms previous research gap that combining organizational and individual factors to get the best results for employee innovative work behavior (Zuraik et al., 2020). Transformational leadership, knowledge sharing, and psychological capital have been proven to positively encourage SOE employees directly and through knowledge-sharing activities. The more direct supervisors in SOEs communicate vision and mission, develop subordinate, provide rewards and motivation, foster trust, involvement, and cooperation, think in new ways, have clear values, and be charismatic, the more their subordinates work innovatively. It supports Rafique et al. (2022) and Afsar et al. (2019) results and is contrary to Sudibjo and Prameswari (2021), Udin and Shaikh (2022), and (Sharif et al., 2021).

In SOEs, direct superiors have flexibility to motivate and gave their innovative subordinates appreciation. It is one the highest SLF affected SOE employee innovative work behavior. This leadership is a potential leadership to be developed in SOEs. Megawati (2017) revealed that transformational leadership can be improved through training that encourages practitioners to develop this type of leadership intended for leaders and prospective leaders in companies. In addition, based on employee rate characteristics, supervisors must motivate and enable more female employees to be more innovative and allow staff levels to develop and implement work creatively and innovatively.

In addition to leadership, psychological capital has stronger encouragement than transformational leadership. SOEs with its business complexities, various stakeholders, and much regulation to comply, innovation potentially face challenges, rejection, or criticism. Only SOE employees who have strong psychological capital will be confident to initiate, survive during difficulties in innovating, and be able to solve problems faced so as to encourage creative and innovative thinking. It supports Chen et al. (2021) argues that in order to survive and complete the innovation process as intended, positive internal driving factors are needed in the form of psychological capital. The results of testing the second hypothesis in the study support this. Psychological capital can encourage SOE employees to behave in innovative work. Psychological capital itself is built from 4 dimensions which are the essential criteria of a person (Al Kahtani & M. M, 2022). The dimensions of hope and resilience are the main

strengths of BUMN employees to complete the innovations they initiate.

Another thing added to this study is the existence of knowledge-sharing activities. SOEs already have core values that require employees to collaborate and keep learning. In line with Rafique et al. (2022), organizations must manage organizational knowledge and make knowledge-sharing activities the norm for their employees. This activity involves different individuals and can also be at different organizational levels, mutually exchanging implicit and explicit knowledge and combining them into one new knowledge (Nguyen et al., 2019).

Forming new knowledge and knowledge management is crucial for a company's competitive advantage. Through testing the second and fourth hypotheses, transformational leadership and psychological capital encourage employees to share knowledge. This activity also encourages them to behave more innovatively. Someone who gains new knowledge and succeeds in accumulating much knowledge, if he has a solid positive psychological mentality and is empowered by his superiors, will be able to produce highly innovative behavior. Sharing own knowledge is divided into 2 (two) dimensions, namely the activity of distributing knowledge possessed to other parties and the activity of collecting or receiving knowledge from other parties. The analysis found that for SOE employees, knowledge donating is a more substantial factor in encouraging innovative behavior than knowledge-sharing activities.

In the last discussions, the research results show a significant mediating role in knowledge-sharing activities, in the relationships between transformational leadership and psychological capital with innovative work behavior. The direct relationship has a higher relationship impact than the indirect relationship through knowledge-sharing activities.

CONCLUSION AND RECOMMENDATION

The result confirmed that transformational leadership as an organizational factor and psychological capital as an individual factor positively encourage SOE employees' innovative work behavior both directly and through knowledge-sharing activities. It can be a reference both in terms of theoretical and managerial implications. The first hypothesis found that transformational leadership can be developed for direct superiors in SOEs to encourage subordinates to be more innovative. The second result shows that to be innovative needs solid psychological capital. It suggests SOE considers substantial psychological capital as one of the employee selection process requirements. These two factors also encourage knowledge-sharing activities between employees intending to get ideas and solve problems at work. Knowledge-sharing activity is better to embedded in daily SOE's employees routinely. This activity also mediates the indirect relationship between transformational leadership and employees with solid psychological capital for progressive innovation.

In short, SOE can develop transformational leadership for the direct supervisor and uses psychological capital as a parameter for employee requirements selection. Knowledge sharing has become an activity continuously done in SOE.

Lastly, this study has some limitations. This study only uses a small part of organizational factors and individual factors. This research also only looks at one point of view to rate the innovative work behavior of the employees who are the respondents. Further research could explore more comprehensive variables that have significant increasing endogenous variables. Other studies can also explore other types of leadership, such as agile and digital leadership. The researcher also recommends that further studies can

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explore both views between supervisory and subordinate.

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