

The Role of Transformational Leadership in Improving Innovative Employee Work Behaviour: Organizational Citizenship Behaviours as a Model of Mediation

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Abstract

For a company to succeed in dynamic circumstances, it is vital to have leaders who are actively involved and focused on effectively addressing the issues. This emphasizes the need of proficient leadership in the present intricate and constantly evolving planet. Evaluating the influence of "organizational citizenship behavior" on innovative work behaviors in two varieties of OCBs (OCBi and OCBo) is the primary objective of this research. Data from a sample of 103 randomly selected officers were analyzed using the smartPLS bootstrap method to evaluate the hypothesis. In addition, the study utilized the Upsilon statistical method to quantify the magnitude of the influence of mediation. To examine the effect of mediation on fostering innovative employee work behaviors and facilitating transformational leadership styles, these developments have produced two distinct categories of OCBs. According to the study results, the correlation between OCBi and OCBo was fully mediated. This article presents and analyzes the significance of the results obtained from the hypothesis test.

Keywords: Transformational leadership, Innovative working behavior; organizational citizenship behavior-i, organizational citizenship behavior-o

1. Introduction

Planned management change can help individuals, communities, organizations or communities to solve problems, learn from past and future experiences, adapt to environment and change, change existing perceptions, improve performance and influence future changes (Calder, 2013). In dynamic environments, having leaders who are fully engaged and focused on navigating the challenges is crucial for organizational success. It highlights the importance of effective leadership in today's complex and ever-changing world (Rožman & Štrukelj, 2021). It seems that transformational leadership is becoming increasingly relevant in the context of the transformation of the workplace, especially with the changes triggered by the Industrial Revolution 4.0 and the COVID-19 pandemic (M. C. C. Lee et al., 2024). Studies such as the importance of re-examining the role of transformative leadership today in responding to those changes. Understanding how transformational leadership can adapt and lead in ever-changing situations is crucial to the success of organizations in this dynamic era. The role of innovative human resources is crucial as agents of change contributing to performance and organizational innovation. The foundation of a high-performance organization lies in employees who have innovative behavior in the workplace (Scott & Bruce, 1994). Previous research has found that

leadership is a critical factor in influencing creativity and innovation in an organization. (Chughtai & Khan, 2024; M. J. Khan et al., 2012). Innovative work behavior (IWB) and organizational citizenship behavior (OCB) play crucial roles in enhancing employee productivity. IWB involves generating, introducing, and applying new ideas intentionally at work, contributing to organizational performance (Salahat et al., 2024). This research highlights the importance of understanding the role of leaders in encouraging organisational citizenship behaviour to counter the innovative behaviours of employees in order to improve overall organisational performance. OCB promotes a supportive work culture, boosts employee work spirit, and strengthens relationships between team members, all of which can positively affect productivity levels (Barkat et al., 2024; Salahat et al., 2024). OCBs, like helping colleagues, volunteering for additional tasks, and supporting organizational initiatives, can create a positive working environment and increase employee productivity (Purnomo et al., 2022; Sambung et al., 2012; Zhang et al., 2020). The knowledge that employees possess emphasizes skills in non-traditional problem-solving, combining divergence and convergence thinking (Prasetyaningtyas et al., 2021). Therefore, the research focuses on non-traditional factors that influence employee work behavior that enable innovation among employees. Although IWB staff is very important, the job innovation situation in government officials in Central Kalimantan, Indonesia is different from other organizations. Transformational leadership, which involves aspects such as idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration, can motivate followers to behave beyond their duties. In other words, transformational leadership can drive organizational citizenship behavior among employees (Barkat et al., 2024). Some of these studies show that transformational leadership is capable of driving employee OCB, thus affecting employee innovative work behavior (M. C. C. Lee et al., 2024; Purnomo et al., 2022; Sambung, 2011). However, this study attempted to test the relationship on two type OCB concepts, the individual OCB (OCB-I) and the organizational OCB, which differed from previous research. The aim of this study is to test the size effect of the OCB-O and OCB-I mediation variables on officials working in government offices.

2. Literature Review

The Broaden and Build theory (Fredrickson, 2004) states that employees who are fully engaged in their work will experience positive feelings such as interest, enthusiasm, and excitement. These positive emotions can enhance employees' knowledge in thinking and acting, as well as broaden their skills in innovating and creating. The social exchange theory emphasizes that the relationship between individuals and organizations is based on mutually beneficial exchanges. In the context of organizational citizenship behavior, employees make additional contributions to the organization in return for the support and benefits they receive from the organization.

2.1 Transformational Leadership and OCBs

Bass (1999) defines transformational leadership as “a leader who moves his followers beyond personal interests through ideal influence (charisma), inspiration, intellectual stimulation, or individual consideration.” (Avolio et al., 1999) memberikan deskripsi dimensi kepemimpinan

transformational sebagai berikut 1) Idealized Influence 2) Inspirational Motivation, 3) Intellectual Stimulation, 4) Individualized Consideration. Transformational leadership theory, as discussed in "Leadership: Theory and Practice" by Peter G. Northouse, (Northouse, 2021) focuses on how leaders can inspire and motivate followers to achieve extraordinary outcomes. This theory emphasizes the leader's ability to create a vision, foster innovation, and develop a strong sense of commitment among followers. Transformational leaders are known for their charisma, inspirational motivation, intellectual stimulation, and individualized consideration. Transformational leadership goes beyond transactional exchanges and aims to elevate followers' moral and ethical standards. It encourages followers to transcend self-interest and work towards collective goals. In contrast, pseudo-transformational leadership refers to leaders who prioritize personal gain over the common good, exhibiting exploitative and power-oriented behaviors.

The impact of transformational leadership on organizational citizenship behavior (OCB) has been examined within the framework of the inspectorate general of the Ministry of Education and Culture. The research findings indicate a strong and meaningful correlation between transformative leadership and organizational citizenship behavior (OCB) (S. Braun et al., 2013; T. Braun et al., 2013; Hartati et al., 2023; Purnomo et al., 2022; Sambung et al., 2021). Research has demonstrated that transformational leadership directly and positively influences organizational citizenship behavior (OCB), suggesting that improved transformational leadership results in increased levels of OCB among employees. Previous research has demonstrated a positive association between heightened employee Organizational Citizenship Behavior (OCB) and the practice of transformational leadership. However, this study employs OCB-I and OCB-O as contexts for Organizational Citizenship Behavior (OCB) (Sambung, 2011; Sambung et al., 2012). The hypothesis is as follows:

Hypothesis 1a: Transformational leadership increases Organizational Citizenship Behavior -I
Hypothesis 1b: Transformational leadership increases Organizational Citizenship Behavior -O

2.2 Transformational Leadership and innovative work behavior

Transformational leaders are sometimes referred to as motivational, influential, and inspiring leaders (M. J. Khan et al., 2012). In this form of leadership, leaders inspire their followers to utilize their skills and cultivate novel ideas and concepts within the organization (Avolio et al., 1999) Bass and Riggio, 2006). In a research conducted by (M. A. Khan et al., 2020), it was shown that transformational leadership has a positive impact on innovative work behavior among department heads in higher education institutions in Pakistan. The study conducted by (Gemeda & Lee, 2020) revealed a substantial and favorable association between transformative leadership and the innovative working behavior of information and communication technology professionals in Ethiopia and South Korea. Additional studies indicate that the employees' transformational leadership in large retail banks in Accra, Ghana, has a direct and significant impact on the innovative work behavior conducted by (Susomrith & Amankwaa, 2020). According Ferdinan & Lindawati, (2021) revealed that transformational leadership had a negative effect on innovative work behavior among 204 lecturers at three Catholic universities

in Surabaya. Similarly, the Shaikh study (2022) involving 201 employees of a stone milling company in Central Java, Indonesia, found that transformational leadership did not directly influence innovative working behavior significantly. However, transformative leadership had a significant and positive impact on innovative work behaviors, which was mediated by the sharing of knowledge and work spirit.

The hypothesis is as follows:

Hypothesis 2: Transformational leadership increases innovative work behavior

2.3 Organizational citizenship behavior an innovative work behavior

Williams & Anderson, (1991) distinguishes OCB into two dimensions: OCB-O and OCB -I. OCB-O are behaviors that benefit an organization in general such as giving notice before a barrier is present at the workplace, adhering to informal organizational rules in order to maintain organizational order. OCB-I is behavior that benefits a particular individual and indirectly contributes to an organization such as helping a barred colleague present and paying personal attention to other employees. K. Lee & Allen, (2002) also divided the OCB into two dimensions, namely the organization and the individual. OCB-O (organization) is more likely to be a direct function than what employees think about the characteristics of their work. On the contrary, the OCB-I (individual), especially those that relate to helping individuals in the workplace, seems to have only indirect implications, but it is very good to maintain balance in the organization. Such behavior may indeed reflect the natural expression of employee influence in the workplace rather than the employee's deliberate effort to restore balance with the organization. This categorization into two (organizations and individuals) is perceived as the most comprehensive categorization for the OCB dimension by researchers like (N. P. Podsakoff et al., 2009) on the grounds that all OCB research can be included in these two categories. Therefore, the current research follows much of this OCB conceptualization because these two dimensions can capture the meaning of all the other dimensions. OCB-O has indicators of Sportmanship, Civic Virtue, Conscientiousness, while OCB -I indicators are Altruism, Courtesy, Peacekeeping, Cheerleading (Sambung, 2011; Williams & Anderson, 1991).

Studies of the influence of transformative leadership on innovative work behavior have a negative impact on innovative working behaviors. This means that transformational leadership does not positively influence innovative work conduct among lecturers (Ferdinan & Lindawati, 2021). According M. A. Khan et al., (2020) OCB acts as a moderator in the connection between transformational leadership styles and innovative working behavior. OCB and innovative work behaviors are typically interconnected and mutually impact one another due to their voluntary nature.

Based on prior research, it has been determined that Organizational Citizenship Behaviors (OCBs) have the potential to enhance employees' innovative behavior. Therefore, the hypothesis for this study is as follows:

Hypothesis 3a: Organizational citizenship behavior-i increase innovative work behavior

Hypothesis 3b: Organizational citizenship behavior-o increase innovative work behavior

In addition to direct testing, the study also tested the influence of OCBs in mediating the relationship between transformational leadership and innovative employee work behaviour. So the hypothesis is:

Hypothesis 4a: Organizational citizenship behavior-i mediates the influence of transformational leadership on employee innovation work behaviors.

Hypothesis 4b: Organizational citizenship behavior-o mediates the influence of transformational leadership on employee innovation work behaviors.

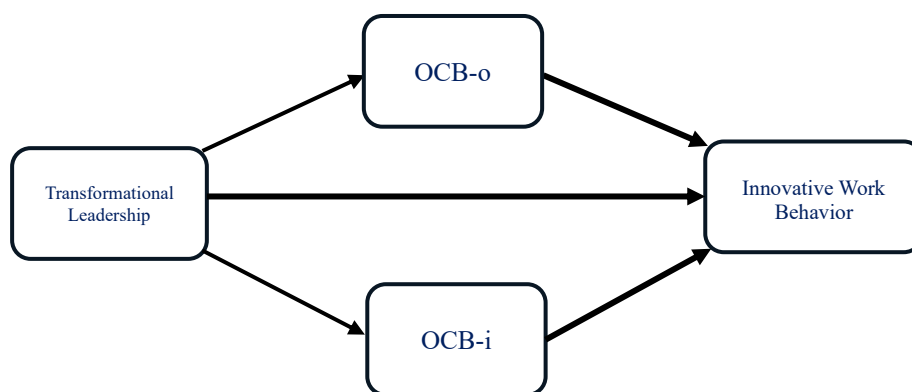


Figure 1. Research framework

3. Research Method

This study adopted a quantitative research design with the survey method, as it was more effective in investigating the relationship between variables and the generalization of findings (Hair et al., 2020). Between January 2024 and April 2024 The survey was carried out to gather data from civilian state officials with the Eselon department working in the Central Kalimantan province government office, with the number of respondents answering questionnaires as many as 103 officials. This research adopted quantitative research designs with the surveillance method, because it is more effective to investigate the relation between variable and generalized findings. The research used random sampling methods to obtain samples of echelon 3 officials.

Participants and procedures. Data was collected from employees working in micro and small businesses in Central Kalimantan, Indonesia. A total of 103 online questionnaires filled out by echelon 3 officials who work in the Central Kalimantan provincial government's regional organizational unit were used for statistical analysis using Smart PLS 4.0. Respondents consisted of 56 (54,4%) male and 47 (45,6%) female, with an educational level of 9 (8,74%) high school, 68 (66,02%) under graduate, 26 (25,24%) postgraduate. The work experience of 12 (11,7%) was 1-5 years, 17 (16,5) 6-10 years, 34 (33%) 11-15 years, and 40 (38,8%) over 15 years. Age of respondents: 31 (30,1%) 25-30 years, 46 (44,75) 36-45 years, 23 (22,3%) 46-55 years, 3 (2,9%) >55 years.

Measurement. Transformational leadership. Transformational leaders who concentrate on long-term issues and future requirements, and are considered useful, humanistic, and inspirational from a complete perspective (Bass & Riggio, 2006), using 4 statement items from The

Transformational Leadership Inventory developed by P. M. Podsakoff et al., (1990) provides a measure of transformational leadership With four indicators of influence of idealism, motivation of inspiration, intellectual stimulation, individual consideration. On a scale of 1 to 5, that's very disagreeable to disagreement.

Organizational citizenship behaviors. OCB into two dimensions: OCB-O and OCB -I. OCB-O are behaviors that benefit an organization in general such as giving notice before a barrier is present at the workplace, adhering to informal organizational rules in order to maintain organizational order. OCB-I is behavior that benefits a particular individual and indirectly contributes to an organization such as helping a barred colleague present and paying personal attention to other employees. K. Lee & Allen, (2002) also divided the OCB into two dimensions, namely the organization and the individual. OCB-O (organization) is more likely to be a direct function than what employees think about the characteristics of their work. On the contrary, the OCD-I (individual), especially those that relate to helping individuals in the workplace, seems to have only indirect implications, but it is very good to maintain balance in the organization. Williams & Anderson, (1991) classified OCB into two categories: OCB-I and OCB-O, with nine items consisting of four items on OCB -I and five items on OCB-O. Indicators used to measure OCBI -I are: Altruism, Courtesy, Peacekeeping, and Cheerleading. While the indicators for measuring OCB -O are Conscientiousness, Civic Virtue and Sportsmanship. Each statement consists of a five-point scale, namely scale 1 for the statement "very disagree" and scale 5 for the declaration "very agree".

Innovative work behavior. Janssen (2000) defines innovative behavior as the deliberate creation, introduction, and application of new ideas in a job, group, or organization to gain from the performance of a work, group, or organization. We are using nine items to measure innovative work behavior with indicators. 1) Generate ideas 2) Promote ideas. 3) Idea realization Each statement consists of a five-point scale, namely scale 1 for the statement "not agree" and scale 5 for the declaration "very agree." The innovative work behavior variable in this study was measured using a second-order reflective model based on Amankwaa et al. (2019). The results showed that all the items were reliable, with an average internal consistency measure of 0.83 and an AVE value of 0.593.

Statistical Strategy. The author uses PLS-SEM to evaluate the study hypothesis (Hair et al., 2017). PLS-SEM is commonly used in a wide range of scientific fields, including human resources management, marketing, strategic management, and hospitality (Hair et al., 2014; Ringle et al., 2018). SEM PLS is a multivariate statistical analysis to estimate the influence between variables performed simultaneously with reference to the study of exploration/prediction/ development of structural models. This is because the algorithm built in the SEM PLS is to maximize the value of the R square of endogenous variables. On the basis of such an algorithm then the SEM pls is called SEM with the flow of study of exploration/prediction/development of structural models or SEM based on variance.

4. Finding and Discussion

Model evaluation in PLS is carried out using a two step approach, namely two steps where evaluating the measurement model to obtain adequate requirements and continuing with structural model evaluation to evaluating model quality. Hasil pengujian outer model shown at table 1:

Table 1. Result of model constructs

Construct	Indicator	Item reliability	Convergent validity		
		Loadings	CR	Alpha	AVE
Transformasional Leadership	IM	0,897			
	IS	0,885	0,850	0,872	0,767
	Ideal	0,846			
Organizational Citizeship Behavior-i	OCBi1	0,789			
	OCBi2	0,848	0,845	0,836	0,669
	OCBi3	0,824			
	OCBi4	0,810			
Organizational Citizeship Behavior-o	OCBo1	0,741			
	OCBo2	0,736			
	OCBo3	0,734	0,815	0,812	0,570
	OCBo6	0,774			
	OCBo7	0,790			
Innovative Work Behavior	IWB1	0,852			
	IWB2	0,810			
	IWB3	0,850			
	IWB4	0,874			
	IWB5	0,807	0,953	0,951	0,720
	IWB6	0,832			
	IWB7	0,868			
	IWB8	0,868			
	IWB9	0,871			

Note: CR = Composite Reliability; AVE = average variance extracted

Loading Factor (LF) or outer loading is the correlation between each measurement item and a variable. Rule of thumb, (Hair Jr et al., 2022), (Henseler et al., 2015) use $LF \geq 0,70$ as acceptable. The LF research results are all above 0,7. Internal consistency reliability shown by composite reliability (CR) is all with a value greater than 0,7. Apart from Composite Reliability, other measures that describe the level of reliability or internal consistency of reliability are Cronbach's Alpha and Rho A. The research results all have values above 0.7. Average variance extracted (AVE) is the average variation of each measurement item contained by the variable. How far as a whole the variables can explain variations in measurement items, research results show an AVE value $\geq 0,50$.

Tabel 2. Discriminant Validity of Constructs

Variables	IWB	OCBi	OCBo	TL
Discriminant Validity: Fornnel–Larcker Criterion				
IWB	0,860			
OCBi	0,533	0,818		
OCBo	0,697	0,619	0,755	
TL	0,406	0,370	0,505	0,876
Heterotrait–Monotrait Criterion (HTMT)				
IWB				
OCBi	0,582			
OCBo	0,785	0,743		
TL	0,435	0,429	0,594	

Note: IWB= Innovative Work Behavior, OCBi = Organizational Citizenship Behavior-i, OCBo = Organizational Citizenship Behavior-o, TL=Transformational Leadership.

We also report discriminative validity (DV) based on the Fornell-Larcker criterion and the Heterotrait-Monotrait criterion. The Fornell-Larcker criterion indicates that the square root of the AVE of each construct is higher than the highest correlation of the construct with other constructs in the model. The results show that the correlation between constructs has a greater value than other constructs. Compared with the Heterotrait-Monotrait (HTMT) correlation criterion ratio, it is better than the traditional approach on discriminative validity assessment due to much lower values of both the Fornel-Larcker criterion and cross-loading using 0.85 as the appropriate threshold level (Hair et al., 2017).

Although this method is often used in applied research, it does not allow to reliably detect discriminative validity problems (Hair et al., 2017)that the HTMT measure is better used than the Fornell and lacker criterion methods in detecting discriminant validity. Therefore, Discriminant Validity (DV) is better assessed using HTMT (Henseler et al., 2015). DV is used to measure how other constructs differ using empirical standards (Hair et al., 2017). To achieve a satisfactory level of DV, the results show that all constructs have HTMT scores <0.90, and the 97.5% bootstrap confidence interval shows all values are in good agreement, thus indicating that all research constructs (IWB, OCBi, OCBo, TL) are conceptually and empirically different from each other.

Table 3. Testing for Potential CMB Based on Full Collinearity

Construct	Inner VIF
OCBi → IWB	1,633
OCBo → IWB	1,892
TL → IWB	1,352
TL → OCBi	1,000
TL → OCBo	1,000

Note. VIF = variance inflation factor.

If inner VIF > 5 then there is suspicion of multicollinearity. However, in (Hair et al., 2017) a VIF value between 3-5 has the potential for multicollinearity to occur and the ideal is if VIF < 3. Multicollinearity examination in this study with a VIF value < 3 means there is no multicollinearity.

Assessment of Structural Modeling Path Coefficients

Table 4. Path Coefficients for Direct Effects.

Hypotheses	Original sample	T statistics	P values	Report
Transformational Leadership → OCBi	0,431	4,886	0,000**	Supported
Transformational Leadership → OCBo	0,533	8,660	0,000**	Supported
Transformational Leadership → Innovative work behavior	0,030	0,306	0,759	No Supported
OCBi → Innovative work behavior	0,243	2,906	0,004*	Supported
OCBo → Innovative work behavior	0,525	5,298	0,000**	Supported

Note P values** < 0,01, * < 0,05

The results in the table above show that 4 (four) path coefficient is significant and one path not significant. The results show that all paths are statistically significant. The structural paths of the remaining constructs were significant based on two-tailed tests at $p < 0,05$. In Hypothesis 1a, we predicted that TL has a positive effect on OCBi. As shown in the table above, this is statistically significant at ($t = 4,886$; $p < 0,000$). This shows that TL directly influences OCBi and the hypothesis is accepted. Hypothesis 1b also predicts that there is a positive and statistically significant relationship between TL and OCBo. This was also shown to be determined at ($t = 8,660$, $p < 0,000$) which supports the effect proposed in Hypothesis 1b; therefore, TL is able to increase the OCBo of the accepted hypothesis. Hypothesis 2 also predicted that is able to increase the IWB of the not accepted hypothesis. This was also shown to be determined at ($t = 0,306$, $p > 0,000$) which not supports the effect proposed in Hypothesis 2. Hypothesis 3a also predicts that there is a positive and statistically significant relationship between OCBi and IWB. As shown in the table above, this is statistically significant at ($t = 2,906$; $p < 0,004$). This shows that OCBi directly influences IWB and the hypothesis is

accepted. Hypothesis 3b also predicts that there is a positive and statistically significant relationship between OCBo and IWB. As shown in the table above, this is statistically significant at ($t = 5,298$; $p < 0,000$). This shows that OCBo directly influences IWB and the hypothesis is accepted.

Table 5. Path Coefficients for Indirect Effects.

Hypotheses	Original sample	T statistics	P values	Report
TL $\rightarrow$ OCBi $\rightarrow$ IWB	0,280	4,507	0,000	Supported
TL $\rightarrow$ OCBo $\rightarrow$ IWB	0,105	2,369	0,018	Supported

Note: P values $< 0,05$

Table 5 above shows that the t value and p value respectively ($t = 4,507$; $p < 0.000$); Therefore, the estimate that OCBi mediate the relationship between TL and IWB is proven to be positive and significant, this means that the hypothesis is accepted. The next result is $t = 2,369$; $p < 0,018$, therefore OCBo mediates the relationship between TL and IWB proven to be positive and significant, this means that the hypothesis is accepted. These results indicate that in this study it is called complementary partial mediation.

To see whether the influence of exogenous latent variables on endogenous latent variables has a mediating effect, namely with the value recommended by Cohen in (Ogbeibu et al., 2021) namely values of 0.175 (high mediation), 0.075 (medium mediation), and 0.01 (low mediation).

Table 6. Statistik upsilon (v)

No	Mediation	upsilon (v)	mediation effect
1.	TL $\rightarrow$ OCBi $\rightarrow$ IWB	0,011	Low mediation influence
2.	TL $\rightarrow$ OCBo $\rightarrow$ IWB	0,078	Medium mediation influence

Based on the mediation value above TL $\rightarrow$ OCBi $\rightarrow$ IWB with a value of 0.011 (mediation influence low), and TL $\rightarrow$ OCBo $\rightarrow$ IWB with a value of 0.078 (mediation influence leads to medium), According (Ogbeibu & Gaskin, 2023) is 0.01 (low mediation influence), 0.075 (medium mediation influence) and 0.175 (high mediation influence).

Evaluation of model quality can be seen from several measures, namely: R square, according to (Latan et al., 2017), R square values of 0.75, 0.50 and 0.25 mean substantive (high), moderate and weak influence. Another opinion is according to (Chin, 1998; Henseler et al., 2016) where the R square value is 0.67 (high), 0.33 (moderate), 0.19 (weak); The research results show that R square for IWB is 0.505 (50,5%) meaning that the influence moderate, R square for OCBi is 0.137 (13,7%) meaning that the influence weak, R square for OCBo is 0.255 (25,5%) meaning that the influence weak. Q square is how much the model's predictive accuracy (PLS path model's predictive accuracy) is described in Q Square redundancy or Q square, which is a measure that describes how well the model has predictive relevance. If Q square is greater than 0, it shows that the exogenous variable has predictive relevance to the constructed endogenous variable. This value is obtained through a procedure called the blindfolding procedure. The

results show that Q^2 for TL is 0,00, OCBi is 0,087, OCBo is 0,141 and IWB is 0,353. This means that TL, OCBi, OCBo have a low values, and IWB have moderate values. In Hair et al (2019), if Q square has a value of 0 (low), 0.25 (moderate), 0.50 (high) then the meaning of Q Square is predictive accuracy. F Square effect size measure, which describes how big the influence of the variables in the structural model is. The results showed that the influence of TL on OCBi was 0.158 (medium), TL on OCBo was 0.342 (medium), TL on IWB were 0,005 (low), OCBi to IWB were 0,031 (low), and OCBo to IWB were 0,344 (medium). The interpretation of the F Square effect size value in (Hair Jr et al., 2022) and (Henseler et al., 2015) is 0.02 (low) 0.15 (medium) 0.35 (large). The effect size value of F Square only explains the magnitude of the direct effect.

Based on the Standardized Root Mean Square Residual (SRMR), which is a tool for measuring model fit, the average value of all standardized residuals is $0.074 < 0.10$, meaning it has a good model fit value. The condition used is that an SRMR value below 0.08 indicates a fit model, while an SRMR value between 0.08 to 0.10 is still acceptable (Yamin, 2021).

Table 7. *PLS Predict*

Indicators	PLS- SEM RMSE	PLS- SEM MAE	LM RMSE	LM MAE
IWB1	0,655	0,522	0,661	0,538
IWB2	0,627	0,473	0,631	0,497
IWB3	0,584	0,475	0,590	0,493
IWB4	0,671	0,550	0,675	0,559
IWB5	0,626	0,510	0,638	0,513
IWB6	0,639	0,524	0,631	0,530
IWB7	0,684	0,561	0,672	0,567
IWB8	0,651	0,523	0,655	0,540
IWB9	0,669	0,535	0,683	0,546
OCBi1	0,756	0,568	0,768	0,574
OCBi2	0,651	0,469	0,664	0,475
OCBi3	0,766	0,612	0,772	0,630
OCBi4	0,661	0,487	0,668	0,506
OCBo1	0,743	0,601	0,759	0,607
OCBo2	0,752	0,603	0,769	0,615
OCBo3	0,654	0,536	0,665	0,547
OCBo6	0,856	0,698	0,858	0,701
OCBo7	0,692	0,583	0,710	0,597

The model has high predictive accuracy if all RMSE or MAE values of the PLS model are lower than the Naive LM (Linear Regression Model) comparison model. If most of the indicators' RMSE or MAE values for the PLS model are lower than the Naive LM (Linear Regression Model) comparison model, then it has medium predictive power. Overall, based on

data processing, for the most part (there are 16 measurements out of 28), the RMSE and MAE values of the PLS model are lower than the linear regression model, so the model has medium predictive power.

5. Conclusion

The study on transformational leadership, innovative work behavior, and organizational citizenship behaviors has yielded significant findings. Transformational leadership has a positive impact on both innovative work behavior and organizational citizenship behaviors among employees. Employees under transformational leaders are more motivated to engage in innovative work behaviors, such as generating new ideas and concepts within the organization. Organizational citizenship behaviors, both directed towards the organization (OCB-O) and individuals (OCB-I), contribute to enhancing innovative work behavior. The relationship between transformational leadership and organizational citizenship behaviors is crucial in driving employee engagement and performance. Creating a supportive work culture through transformational leadership and encouraging organizational citizenship behaviors can lead to improved productivity and organizational success. These findings underscore the importance of effective leadership practices, fostering a culture of innovation, and promoting behaviors that go beyond formal job requirements to drive organizational performance and employee engagement. The study highlighted the significant impact of transformational leadership on enhancing innovative work behaviors and organizational citizenship behaviors within organizations. The findings indicated that transformational leaders who focus on long-term goals and inspire their teams play a crucial role in fostering a culture of innovation and proactive organizational citizenship. Moreover, the research demonstrated that both organizational citizenship behavior directed towards the organization (OCB-O) and behavior directed towards individuals (OCB-I) positively influence innovative work behavior. Promoting a supportive and collaborative work environment that encourages employees to surpass their formal roles and contribute to the organization's success is crucial. Overall, the study emphasized the importance of effective leadership practices and a positive organizational culture in driving employee engagement, creativity, and overall performance. By nurturing transformational leadership qualities and fostering a culture that values organizational citizenship behaviors, companies can create a conducive environment for innovation and sustainable growth.

The research on transformational leadership, innovative work behavior, and organizational citizenship behaviors may include certain limitations.* A small sample size may have limited the study and impacted the generalizability of the findings to a larger population. The research focused on a specific region or organization, which may limit the applicability of the results to different industries or cultural contexts. Relying on self-reported data from surveys may introduce bias and affect the accuracy of the results. The study may face challenges in establishing causality between transformational leadership, organizational citizenship behaviors, and innovative work behavior. The research duration may have been limited, potentially impacting the depth of the analysis and the ability to capture the long-term effects of transformational leadership on employee behaviors. External Factors: Although the study did not fully account for them, external factors like economic conditions, industry trends, or

organizational changes could have influenced the outcomes. Addressing these limitations in future research can enhance the robustness and validity of the findings on the relationship between leadership styles, employee behaviors, and organizational outcomes.

Addressing these limitations in future research can enhance the robustness and validity of the findings on the relationship between leadership styles, employee behaviors, and organizational outcomes.

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