

The Role of Innovative Work Behavior in Management of Public Transportation in Indonesia

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Abstract

This study examines the low performance of state civil servants related (ASN) to the management of public transportation at the Directorate of Road Transport (DRT), Ministry of Transportation, Indonesia. This study surveyed 103 ASNs, using a quantitative approach using the Amos SEM software. The results showed that Knowledge Sharing (KS) and Work Engagement (WE) directly influenced Innovative Work Behavior (IWB) as well as Job Performance (JP). Meanwhile, IWB had a significant, direct effect on JP and acts as a full mediator in the effect of KS and WE on JP. The descriptive data obtained also showed that respondents' statements based on gender have differences related to the IWB variable, where on average, women were better than men. However, for other variables (JP, KS, and WE), the data showed that, on average, the statements of male respondents were better than women. This study recommends that the DRT pay attention to IWB as a key factor mediating KS and WE towards increasing JP by maintaining the best indicators and improving the weakest indicators. Furthermore, this study recommends that future research refine these results by adding the variables of gender and educational level of the respondents.

Keywords: Job Performance, Innovative Work Behavior, Knowledge Sharing, Work Engagement, Directorate of Road Transport

JEL Classification Code: D18, M12, O15

1. Introduction

Transportation is a significant element of human life, as almost all human activities cannot be separated from using transportation facilities. In Indonesia, transportation arrangements are generally regulated by the Ministry of Transportation (Widyaparaga et al., 2017). As a public organization, innovation is required to improve performance in serving the community's wishes (Anuntarumporn & Sorhsaruht, 2022). One of the important indicators in evaluating the successful performance of regulatory

authorities in public transportation is the Urban Transport Connectivity Ratio (Sdoukopoulos et al., 2019). In Indonesia, the Urban Transport Connectivity Ratio in 2020 only reached the target of 63%, and in 2021 reached 65% (Irsal et al., 2022). Therefore, it can be concluded that the performance of the Directorate of Road Transport of Indonesia in 2020 and 2021 failed to achieve the target.

Low organizational performance is an indication of low employee performance. According to Chitale et al. (2019), the main key to attaining organizational performance is the achievement of Job Performance (JP). Furthermore, Austin (2013) observed that the performance of employees in that organization determines the performance of an organization. Hutajulu et al. (2021) stated that JP is the achievement of targets by employees based on job quality, quantity, and time. Therefore, the Directorate of Road Transport of Indonesia in 2020 and 2021 illustrates the low performance of employees in the organization, as determined by job quality, quantity, and time.

A previous study examined the relationship between Knowledge Sharing (KS) and JP, where KS affected JP through Innovative Work Behavior (IWB) (Kim & Park, 2017). Meanwhile, Elidemir et al. (2020) observed that Work Engagement (WE) affects JP through the mediation of

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IWB. In contrast, Wang and Chen (2020) discovered that JP is directly influenced by WE, which was also supported by another study (Guan & Frenkel, 2018; Kooij et al., 2017; Yongxing et al., 2017) that the better employee WE in an organization, the better the JP. This was also different from the observations of other experts, which stated that KS is a factor that directly affects JP (Imamoglu et al., 2019; Rese et al., 2020; Tran, 2021).

Differences in opinion have been observed regarding the factors that affect JP. Consequently, this study uses a relatively new model to ascertain if IWB is a mediator of KS and WE on JP. The results will constitute practical recommendations for organizations to improve the performance of the Directorate of Road Transport of Indonesia. It will also enhance further studies to be developed as theoretical literature related to factors that affect JP in transportation management authority organizations.

2. Literature Review

The *Resource-based View* (RBV) is a theoretical concept that is believed to provide answers in terms of creating a *competitive advantage* for an organization (McGahan, 2021). As competition increases, problems become socially complex, and the knowledge base and capabilities are heterogeneous among companies, the RBV theory becomes increasingly connected to the *Knowledge-Based View* (KBV) theory proposed by Grant (1996). The KBV theory states that knowledge is the most strategically significant organizational resource. The nature of these knowledge-based resources, intangible and dynamic, renders it possible to develop the basis of enterprise knowledge-based performance creation mechanisms, specifically through path dependence and causal ambiguity (Nguyen & Nguyen, 2022).

According to McGahan (2021), the global centrality of knowledge enhanced the development of a knowledge-based view (KBV) of the firm. Therefore, KBV is a social constructionist approach to knowledge, and the multilevel nature of the process enables a more comprehensive, useful theory of knowledge-based global strategy. Furthermore, improving the performance of knowledge-based organizations can be achieved when IWB is optimum and KS (KS) between colleagues occurs correctly. Therefore, the important factors adopted from the KBV theory to improve employee performance (JP) are KS (KS) as an independent variable and IWB as a mediating variable. Another study added WE as an affecting variable (Guan & Frenkel, 2018; Kooij et al., 2017; Yongxing et al., 2017).

To build concepts in a model based on similarities and differences from previous theories and opinions of experts,

the equation concept of the effect between variables into hypotheses was formed during the analysis.

2.1. Knowledge Sharing Affects Job Performance

According to Swanson et al. (2020), KS affects JP in an organization. The higher the level of KS, the higher the JP (Imamoglu et al., 2019; Rese et al., 2020; Tran, 2021). Previous research showed that KS has a positive and significant effect on JP. Based on the results of these empirical studies, hypothesis 1.

H1: states that KS has a positive and significant effect on JP.

2.2. Work Engagement Affects Job Performance

According to Wang and Chen (2020), employee JP is affected by WE in an organization. This is supported by Guan and Frenkel (2018), Kooij et al. (2017), and Yongxing et al. (2017), who stated that the higher the level of WE, the higher the employee performance. Based on the results of these empirical studies, hypothesis 2.

H2: states that WE has a positive and significant effect on JP.

2.3. Knowledge Sharing Affects Innovative Work Behaviour

According to Abukhait et al. (2019), KS creates IWB in a team or organization. Akram et al. (2018), Asurakkody and Kim (2020), and Kmiecik (2021) empirically proved that KS positively and significantly influences IWB. Based on the results of these empirical studies, hypothesis 3.

H3: states that KS has a positive and significant effect on IWB.

2.4. Work Engagement Affects Innovative Work Behaviour

Jason (2021) stated that WE has a strong effect on creating Innovative Work Behaviour in an organization. Another study by Kang and Lee (2017), Kwon and Kim (2020), and Montani et al. (2020) showed that WE have a positive and significant effect on IWB. Based on the results of these empirical studies, hypothesis 4.

H4: states that WE has a positive and significant effect on IWB.

2.5. Innovative Work Behaviour Affects Job Performance

Hughes et al. (2018) concluded that the main factor that affects JP is the level of IWB. This is in line with Tran (2021), Wang et al. (2021), and Xerri and Reid (2018), which empirically showed that IWB has a positive, significant effect on JP. Based on the results of these empirical studies, hypothesis 5.

H5: States that IWB has a positive and significant effect on JP.

2.6. Innovative Work Behavior as a Mediating Effect of Knowledge Sharing on Job Performance

The relationship between KS on JP was analyzed by Kim and Park (2017), where IWB mediated the effect of KS on JP. Furthermore, Lam et al. (2021) observed that KS has a positive and significant effect on JP with the mediation of IWB. Based on the results of these empirical studies, hypothesis 6.

H6: States that KS has a positive and significant effect on JP through the mediation of IWB.

2.7. Innovative Work Behavior as Mediation on the Effect of Work Engagement on Job Performance

The results of a study by Kim and Koo (2017), supported by Schmitt et al. (2016), observed that WE has a positive and significant effect on JP mediated by IWB. Based on the results of these empirical studies, hypothesis 7.

H7: States that WE has a positive and significant effect on JP through IWB.

3. Research Methods

3.1. Study Model

Based on the effective relationship between the variables described above, the study model was developed as shown in Figure 1 below:

3.2. Study Method

The Amos Structural Equation Modeling (SEM) was used to prove this model by analyzing data from 103 State Civil Apparatus as respondents. Furthermore, 5-point Likert scale with statement items was adopted from the previous study, as shown in Table 1.

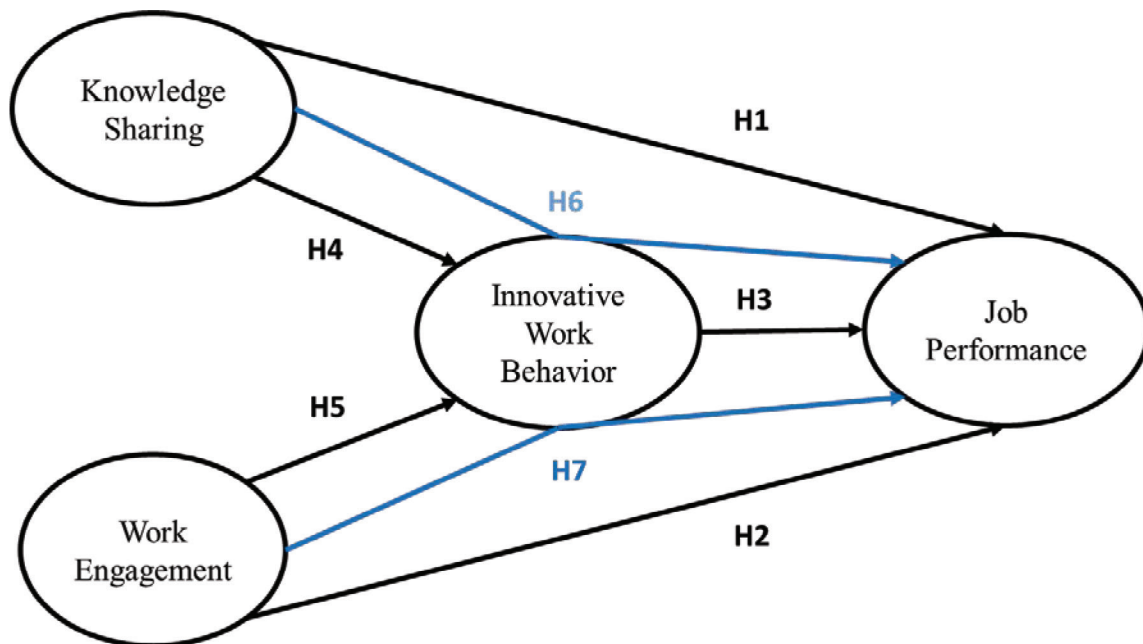


Figure 1: Study Hypothesis Model

Table 1: Study Instruments

No	Variable	Indicator	Item Statement	Code	Source Adaptation
1	Job Performance	Job Quality	My staff carry out tasks correctly	JP1	(Na-Nan et al., 2018)
2			My staff work with methods according to set criteria	JP2	
3			My staff conducts quality checks of the work before it is reported.	JP3	
4		Job Quantity	My staff completes work according to the number of items assigned	JP4	
5			My staff carries out work appropriate to the set budget.	JP5	
6			My staff carries out services appropriate to the set number	JP6	
7		Job Time	My staff completes work according to the schedule	JP7	
8			My staff provides reports within the stipulated time.	JP8	
9			My staff handle problems promptly	JP9	
10	KS	Willingness to share knowledge	I share my experience with my coworkers	KS1	(Zhao et al., 2020)
11			I am willing to share my new ideas with coworkers	KS2	
12			I have time to plan for knowledge and information exchange.	KS3	
13		Willingness to use the knowledge that has been shared	I spend a lot of time to understand the experiences that coworkers share	KS4	
14			I use the knowledge that I have gained from my coworkers in completing my work	KS5	
15			I am happy to accept new ideas from my coworkers.	KS6	
16	Work Engagement	Vigor	I work full of energy	WE1	(Willmer et al., 2019)
17			I am strong at working on target	WE2	
18			I have a passion for working every day.	WE3	
19		Dedication	I am enthusiastic about completing my work	WE4	
20			Work is an inspiration to me	WE5	
21			I'm proud of the work I do.	WE6	
22		Absorption	I enjoy working intensely	WE7	
23			I am at one with the work atmosphere in the organization	WE8	
24			I follow the direction of the organization.	WE9	
25	Innovative Work Behavior	Idea Exploration	I find ideas in solving a problem.	IWB1	(Caniëls & Veld, 2019)
26			I introduce innovative ideas into work practice.	IWB2	
27		Idea Generation	I develop innovative ideas by providing new ideas	IWB3	
28			I put effort into the development of new things	IWB4	
29		Idea Championing	I encourage the implementation of new innovative ideas	IWB5	
30			I often try to convince people to support an innovative idea	IWB6	
31		Idea Implementation	I dare to implement new ideas into actual work processes.	IWB7	
32			I contribute to the implementation of new ideas	IWB8	

4. Results

4.1. Model Feasibility Test Results

Model feasibility testing was conducted with SEM analysis of the test stage to meet the model fit criteria. The initial model built in this study is shown in Table 2:

Based on Table 2, the P (*Probability*) value of 0.00 failed to meet the model fit criteria of ≥ 0.05 . Therefore, the model

Table 2: Initial Conditions of the Study Model

Description	Criteria	Result	Description
Probability (P)	≥ 0.05	0.000	Not Fit
RMSEA	≤ 0.08	0.048	Fit
GFI	≥ 0.90	0.930	Fit
AGFI	≥ 0.90	0.909	Fit
CMIN / DF	≤ 2.00	1.884	Fit
TLI	≥ 0.90	0.971	Fit
CFI	≥ 0.90	0.975	Fit

is declared not fit due to unfulfilled criteria. To meet these criteria, *modification indices* are performed to gradually eliminate the highest error items.

After the error items are gradually eliminated until the value of $p = 0.086 > 0.05$, the model was declared fit for full model analysis. Therefore, this study model leaves 15 indicators, namely *KS* with items KS1, KS2, K4, and KS6, *WE* with items WE3, WE5, WE6, and WE8, *IWB* with items IWB1, IWB3, IWB5, and IWB7, *JP* with items JP3, JP5, and JP7.

The full model construct obtained after going through the modification indices process is shown in Figure 2 below:

Figure 2 above is an SEM with a full model that has met the criteria as a fit model after going through the *modification indices* process, as shown in Table 3 below.

Table 3 above shows that all model fit criteria were eventually met, and some improved. Therefore, the full model of this study is now ready for analysis in the next stage.

4.2. Factor Loading

The analysis determined the highest factor loading of statement items as the best reflection of the instrument for

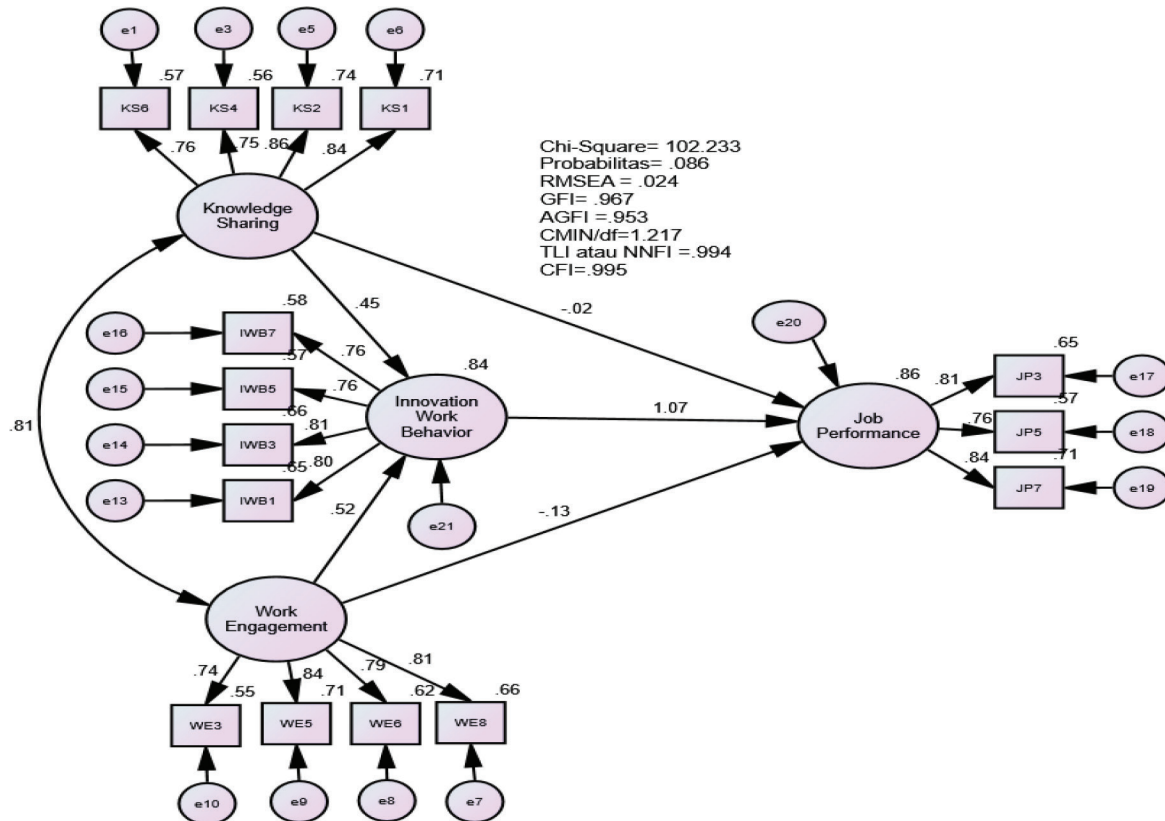


Figure 2: SEM Full Model

Table 3: Results of the Modification Indices Process

Description	Initial Model			Full Model	
	Criteria	Result	Description	Result	Description
Probability (P)	≥ 0.05	0.000	Not Fit	0.086	Fit
RMSEA	≤ 0.08	0.048	Fit	0.024	Fit
GFI	≥ 0.90	0.930	Fit	0.967	Fit
AGFI	≥ 0.90	0.909	Fit	0.953	Fit
CMIN / DF	≤ 2.00	1.884	Fit	1.217	Fit
TLI	≥ 0.90	0.971	Fit	0.994	Fit
CFI	≥ 0.90	0.975	Fit	0.995	Fit

Table 4: Factor Loading Instruments

Variables	Highest			Lowest		
	Indicator		Factor Loading Value	Indicator		Factor Loading Value
JP	JP7	My staff completes work according to the schedule	0.842	JP5	My staff performs work according to the established budget	0.757
IWB	IWB3	I develop innovative ideas by providing new ideas	0.812	IWB5	I encourage the implementation of new innovative ideas	0.756
KS	KS2	I am willing to share my new ideas with colleagues	0.863	KS4	I spend a lot of time understanding the experiences shared by colleagues	0.749
WE	WE5	Work is an inspiration for me	0.840	WE3	I have a spirit to work every day	0.741

measuring each variable. It also showed the lowest factor loading of statement items recommended for improvement. The factor loading values for each variable are shown in Table 4.

Based on Table 4 above, the *JP* variable had the highest factor loading value of 0.842 on indicator JP7: My staff completes work according to schedule. Meanwhile, the lowest factor loading value was 0.757 in indicator JP5: My staff performs work according to the established budget. This result shows that JP7 is the best reflection as an implication of the *JP* variable, while JP5 is the lowest and requires improved attention.

The *IWB* variable had the highest factor loading value of 0.812, found in indicator IWB3: “I develop innovative ideas by providing new ideas.” In contrast, the lowest factor loading value was in IWB5 with a value of 0.756: I encourage implementing new innovative ideas. Therefore, IWB3 is the best reflection as an implication of the *IWB* variable, while IWB5 is the lowest indicator that requires improved attention.

The variable of *KS* had the highest factor loading value of 0.863, observed in the KS2 indicator: I am willing to share my new ideas with colleagues. In contrast, the indicator with the lowest factor loading value of 0.749 was KS4: I spent a lot of time understanding the experiences shared by colleagues. Therefore, KS2 is the best reflection as an implication of the *KS* variable, while KS4 is the lowest indicator needing improvement.

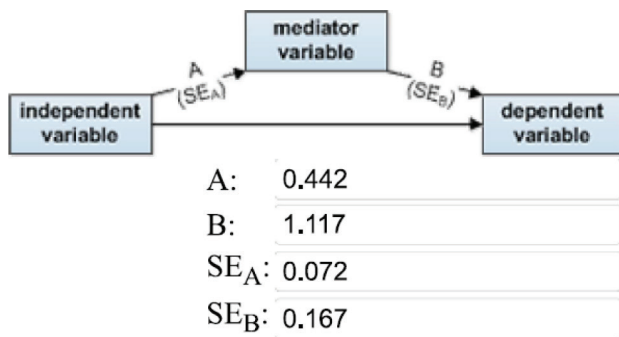
The variable of *WE* had the highest factor loading value of 0.840, found in the WE5 indicator: “Work is an inspiration for me. Simultaneously, the indicator with the lowest factor loading value of 0.741 was WE3: I have the spirit to work every day. This result shows that WE5 is the best reflection as an implication of the *WE* variable, while WE3 is the lowest indicator needing improvement.

4.3. Hypothesis Testing Results

The hypotheses were tested after the model achieved *the Goodness of Fit* calculated using the Amos SEM software.

Table 5: The Direct Effect Hypothesis Test Results

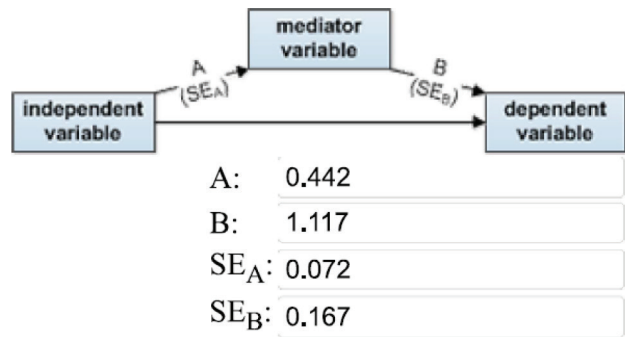
Hypothesis		Estimation	SE.	C.R. > 1.96	p	Conclusion
H1	Job Performance ← Knowledge Sharing	-0.026	0.107	-0.239	0.811	Rejected
H2	Job Performance ← Work Engagement	-0.136	0.116	-1.172	0.241	Rejected
H3	Job Performance ← Innovative Work Behavior	1.117	0.167	6.669	***	Accepted
H4	Innovative Work Behavior ← Knowledge Sharing	0.442	0.072	6.117	***	Accepted
H5	Innovative Work Behavior ← Work Engagement	0.498	0.07	7.097	***	Accepted



Calculate!

Sobel test statistic: 4.52272939
 One-tailed probability: 0.00000305
 Two-tailed probability: 0.00000610

Figure 3: Sobel Mediation Test on Hypothesis 6 (H6)



Calculate!

Sobel test statistic: 4.52272939
 One-tailed probability: 0.00000305
 Two-tailed probability: 0.00000610

Figure 4: Sobel Mediation Test on Hypothesis 7 (H7)

Table 5 shows the results of the direct effect hypothesis test.

To test hypothesis 6 (H6), namely the mediating role of IWB on the effect of KS on JP, this study used the Sobel Test Calculator, as shown in Figure 3.

The data input in the *Sobel test calculator* shown in Figure 3 referred to the coefficient values (A and B) and the Standard Error values (SE_A and SE_B) obtained from the *Unstandardized Estimates of the Goodness of Fit Model*. After the data input, the *Sobel test calculator* showed that the CR for H6 (the effect of KS on JP through IWB) is 4.522, greater than 1.96. Therefore, hypothesis H6 was accepted, meaning that IWB plays a fully mediating role in the effect of KS on JP.

The testing of hypothesis 7 (H7) as the mediating role of IWB in the effect of WE on JP applied the *Sobel test* with the Calculator, as shown in Figure 4.

The data input in the *Sobel test calculator* shown in Figure 4 refers to the coefficient values (A and B) and the Standard Error values (SE_A and SE_B) obtained from the

Unstandardized Estimates of the Goodness of Fit Model. After the data input, the calculation showed that the CR for H7 (the effect of WE on JP through IWB) is 6.659, greater than 1.96. Therefore, hypothesis H7 was accepted, meaning that IWB plays a fully mediating role in the effect of WE on JP.

Based on the direct and indirect effect hypothesis tests described above, which refer to Hair et al. (2014), the test decisions can be accepted with the criteria $CR > 1.96$. The conclusion of the overall hypothesis test is shown in Table 6.

5. Discussion

The theoretical benefits contribute to the knowledge of the model of JP improvement associated with IWB. This study showed that IWB plays an important role in mediating the effect of KS and WE, which cannot directly affect JP's improvement. Therefore, KS and WE cannot stand alone as exogenous variables affecting the endogenous but require full mediation by IWB.

Table 6: Hypothesis Test Results

	Hypothesis	CR > 1.96	Conclusion
Direct Effect	H1	-0.239	Insignificant (H1 Rejected)
	H2	-1.172	Insignificant (H1 Rejected)
	H3	6.669	Significant (H3 Accepted)
	H4	6.117	Significant (H4 Accepted)
	H5	7.097	Significant (H5 Accepted)
Effect By Mediation	H6	4.522	H6 Accepted as Full Mediation
	H7	6.659	H7 Accepted as Full Mediation

5.1. Knowledge Sharing Has No Significant Effect on Job Performance

This study empirically proves that *KS* has no significant effect on *JP* among Civil Servants at the Road Transportation Directorate of the Ministry of Transportation. This contradicts Swanson et al. (2020) that *KS* can impact *JP* in an organization. Similarly, the results differ from other research, which emphasizes that the higher the level of *KS*, the higher the *JP* (Imamoglu et al., 2019; Rese et al., 2020; Tran, 2021).

Based on the factor loading, the indicator “I am willing to share my new ideas with my colleagues” is the best reflection in explaining *KS*, and the indicator “I spend a lot of time understanding the experiences shared by my colleagues” is the weakest. Therefore, efforts are needed to improve it, to enhance the effect of *KS* on *JP*.

5.2. Work Engagement Has No Significant Effect on Job Performance

According to Wang and Chen (2020), employee *JP* is affected by *WE* within an organization. This is supported by Guan and Frenkel (2018), Kooij et al. (2017), and Yongxing et al. (2017), that the higher the level of *WE*, the higher the employee's performance. However, this view is at odds with the empirical results of this study, where *engagement* had no significant effect on the *JP* of Civil Servant employees in the Road Transportation Directorate of the Ministry of Transportation.

According to the factor loading, the indicator “My job is an inspiration for me” is the best reflection in explaining

the *WE* variable, while the indicator “I have the enthusiasm to work every day” is the weakest. Therefore, efforts are needed to enhance the effect of *WE* on *JP*.

5.3. Innovative Work Behavior Has Significant Effect on Job Performance

Abukhait et al. (2019) stated that the main factor affecting *JP* is the level of *IWB*. Similarly, Akram et al. (2018), Asurakkody and Kim (2020), and Kmiecik (2021) empirically proved that *Innovative Work Behaviour* has a positive and significant effect on *JP*.

Empirically, these experts' opinions align with the results of this study that *Innovative Work Behaviour* has a positive, significant impact on the *JP* of Civil Servants at the Directorate of Road Transport in the Ministry of Transportation.

Based on the factor loading, the indicator “I develop innovative ideas by providing new suggestions” is the best reflection in explaining the *Innovative Work Behaviour* variable, while the indicator “I encourage the implementation of new innovative ideas” is the weakest. Therefore, efforts are needed to enhance the effect of *IWB* on *JP*.

5.4. Knowledge Sharing has a Significant Effect on Innovative Work Behavior

This empirical study showed that *KS* positively and significantly affects *IWB* among Civil Servants in the Road Transportation Directorate of the Ministry of Transportation. This is consistent with Jason (2021), *KS* creates *IWB* within a team or organization. Furthermore, Kang and Lee (2017), Kwon and Kim (2020), and Montani et al. (2020) empirically proved that *KS* has a positive and significant effect on *IWB*.

Based on factor loading, the indicator “I am willing to share my new ideas with my coworkers” is the best reflection in explaining the *knowledge-sharing* variable, while the indicator “I spend a lot of time understanding the experiences shared by my coworkers” is the weakest. Therefore, further efforts will be required to enhance the effect of *KS* on *JP* if needed.

5.5. Work Engagement Has a Significant Effect on Innovative Work Behavior

This study empirically showed that *WE* has a positive, significant effect on *IWB* among Civil Servants in the Road Transportation Directorate of the Ministry of Transportation. This is in line with Hughes et al. (2018) that *WE* significantly influence *IWB* in an organization. Other studies (Tran, 2021; Wang et al., 2021; Xerri & Reid, 2018) supported this by proving that *WE* has a positive and significant effect on *IWB*.

Based on the factor loading, the indicator “Work is an inspiration for me” is the best reflection in explaining the *WE*

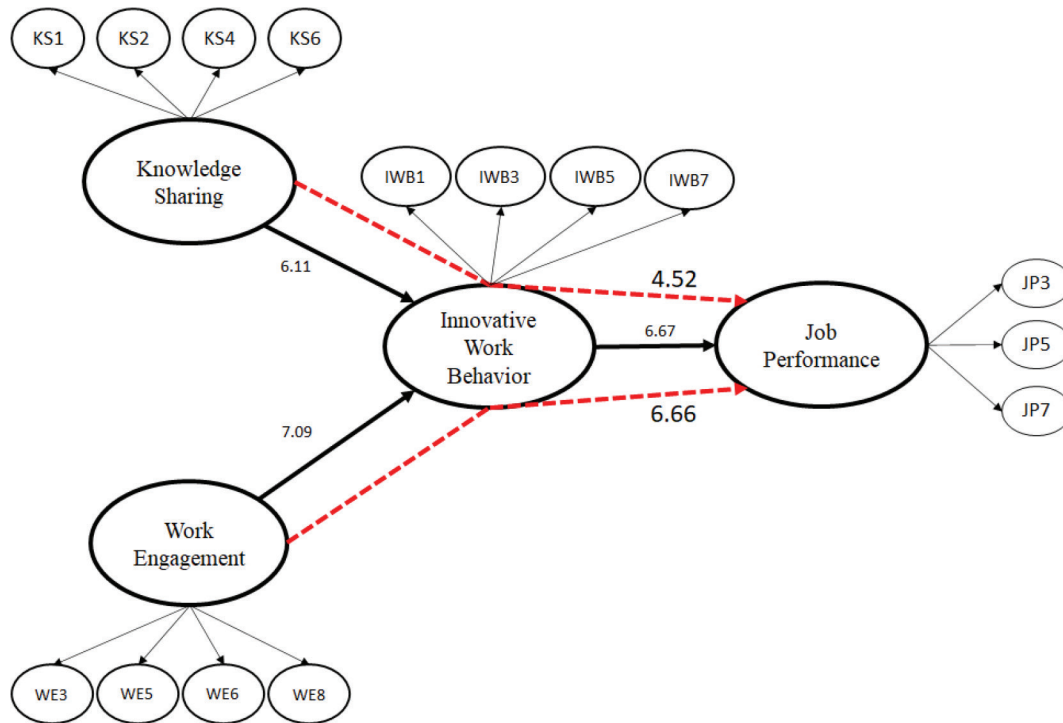


Figure 5: Novelty Studies

variable, while the indicator “I have the enthusiasm to work every day” is the weakest. Therefore, efforts are needed to enhance the effect of *WE* on *JP*.

5.6. Innovative Work Behavior Mediates the Effect of Knowledge Sharing on Job Performance

The relationship between *KS* on *JP* and the mediation of *IWB* was examined by Kim and Park (2017). *IWB* played a mediative role in *KS*, which positively affected *JP*. This is in line with Lam et al. (2021) that *KS* has a positive and significant effect on *JP* through the mediation of *IWB*. These observations are consistent with the results of this study. Empirically, these results showed that *KS* has a significant effect on *JP* mediated by *IWB* in State Civil Servants at the Directorate of Road Transport, Ministry of Transportation of Indonesia. *IWB* was fully mediative, as, without *IWB*, *KS* has no significant effect on *JP*.

Based on the factor loading, the indicator “I develop innovative ideas by providing new ideas” is the best reflection in explaining the *IWB* variable, while the indicator “I encourage the implementation of new innovative ideas” is the weakest. Therefore, efforts are needed to improve it, which shows that *IWB* has a superior mediative effect of *KS* on *JP*.

5.7. Innovative Work Behavior Mediates the Effect of Work Engagement on Job Performance

The results of Kim and Koo (2017) were supported by other research. Schmitt et al. (2016) concluded that *WE* positively and significantly affect *JP* through *IWB*. Empirically, these opinions are consistent with the results of this study. These results showed that *WE* significantly affect *JP* mediated by *IWB* in State Civil Servants at the Directorate of Road Transport, Ministry of Transportation, Indonesia. Furthermore, *IWB* is fully mediative, as, without *IWB*, *WE* has no significant effect on *JP*.

These results also highlight the novelty of the model used in this study, as shown in Figure 5.

6. Conclusion and Suggestions for Future Studies

These results will constitute literature and significant information in the development of science, especially in terms of human resource management and the development of *JP* theories in similar organizations. Furthermore, this study is expected to be used as a reference for subsequent studies on the effect of gender variables and employee education levels associated with *JP*.

If subsequent studies wish to apply the same variable, it is necessary to improve quality by perfecting the results of this and previous studies. This will ensure more varied results through qualitative study methods to determine the cause of KS and WE variables lacking a direct effect on JP. Moreover, this will add broad insights for future, in-depth theory development in this field.

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