




Exploring three-mediation paths of transformational leadership and innovative work behavior

 Udin Udin^{1*}

 Radyan Dananjoyo²

^{1,2}Department of Management, Universitas Muhammadiyah Yogyakarta,
Yogyakarta, Indonesia.

¹Email: udin@umy.ac.id

²Email: radyan.dananjoyo@umy.ac.id



(+ Corresponding author)

ABSTRACT

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The main goals of this in-depth study are to look at how transformational leadership (TL) affects psychological empowerment (PE), knowledge sharing (KS), work passion (WP), and innovative work behaviour (IWB), and how PE, KS, and WP affect the relationship between TL and IWB. The samples in this study were obtained by purposive sampling. This study employed quantitative data, which were collected through questionnaires distributed online to the respondents from functional staff and line managers working in the stone milling company in Indonesia. The 193 respondents' data were subsequently analyzed via Structural Equation Modeling (SEM), utilizing SmartPLS 3.0 as the analytical tool. This study's results concluded that TL directly had no significant effect on IWB. In contrast, this study proved that TL significantly affected PE, KS, and WP. In addition, this study also revealed that there was a significant effect of PE, KS, and WP on IWB. According to the obtained findings, TL often empowers employees by fostering a sense of competence and autonomy, creating an environment where knowledge sharing is valued, and inspiring employees to have a deep sense of passion for their work. This, in turn, may lead to the exchange of new ideas and insights, contributing to innovative work behavior within the organization.

Contribution/Originality: This study, in particular, provides insight into TL's role in PE, KS, and WP, contributing to the improvement of IWB. Practically, this study's results highlight the importance of applying TL to improve employee work innovation and organizational productivity.

1. INTRODUCTION

Speedy technological advances increasingly encourage organizations to appear more adaptive and innovative to face highly competitive competition (Smith & Tushman, 2005). One of the main factors influencing an organization's long-term success is the innovative work that its employees produce (Mytelka & Smith, 2002; Purnama, Tjahjono, Elqadri, & Prajogo, 2020).

To increase employee work innovation in the context of economic and knowledge-based innovation, the role of leadership styles, for example, empowering leadership and inclusive leadership (Javed, Naqvi, Khan, Arjoon, & Tayyeb, 2019), entrepreneurial leadership (Akbari, Bagheri, Imani, & Asadnezhad, 2021), and spiritual leadership (Yang, Chang, Chen, Zhou, & Zhang, 2021), authentic and transformational leadership (TL) (Grošelj, Černe, Penger, & Grah, 2021) become the main foundation. Numerous studies have shown that organizational leaders,

particularly transformational leaders, are able to encourage and enhance employees' capacity to exhibit innovative work behavior (IWB) (Piccolo & Colquitt, 2006; Wang, Law, Hackett, Wang, & Chen, 2005).

However, in the view of Jung, Chow, and Wu (2003), the association between TL and IWB still needs to be studied. In fact, the results of existing research still show contradictory findings regarding the relationship between these variables. Qing, Rashid, Dalowar, and Hou (2020) uncovered that TL significantly affected IWB, while Messmann, Evers, and Kreijns (2022) proved that TL had no significant impact on IWB. Imran and Anis-ul-Haque (2011) even stressed that TL directly does not significantly impact IWB, but it may go through mediator variables (such as organizational climate).

Based on the gap research, this study tries to test and re-explore the relationship between TL and IWB by adding three new variables: work passion (WP), knowledge sharing (KS), and psychological empowerment (PE). WP also acts as a link between these variables. The study of Ashfaq, Abid, Ilyas, and Hasnain (2021) found that PE mediates the link between TL and IWB. Transformational leaders create a supportive climate and empower and engage employees independently, leading to IWB. Also, Al-Husseini, El Beltagi, and Moizer (2021) and Suhana, Suharnomo, Masud, and Udin (2019) revealed that KS becomes the main mediator of TL on IWB.

Given the facts, the objective of this research is to thoroughly scrutinize the impact of (1) TL on PE, KS, WP, and IWB; (2) PE, KS and WP on IWB; and (3) PE, KS, and WP in mediating the association between TL and IWB. This study, from a theoretical standpoint, contributes to the existing body of literature concerning the interrelation of TL, PE, KS, and WP with IWB. Relevant stakeholders may use the study's practical insights to improve the sustainability and effectiveness of their organizations.

2. LITERATURE REVIEW

2.1. Transformational Leadership

Transformational leadership (TL) is a style of leadership that focuses on inspiring, motivating, and empowering followers in order to realize their potential and go beyond their expectations. Bass (1999) explains that transformational leaders provoke, motivate, and inspire workers to perform work behaviors positively within the organization. TL drives and triggers followers to work beyond their own values and interests for the betterment of the organization (Udin, Dharma, Dananjoyo, & Shaikh, 2023). Transformational leaders inspire followers by articulating a vision that is capable of providing energy and challenging goals, thereby moving followers forward to higher levels of morality and motivation (Burns, 1978).

Bass (1985) developed the work of Burns (1978) by justifying the TL's four dimensions, namely (1) Idealized influence is described as the leader's ability to portray as respected, admired, and trusted role models; (2) Intellectual stimulation is the leader's ability to inspire followers to tackle challenging tasks and question decisions; (3) Individualized consideration is the leader's ability to provide personal attention and growth, and to link followers' needs with the organization's mission through ongoing coaching and feedback; and (4) Inspirational motivation is the leader's ability to inspire, encourage, and motivate followers to believe in their ability to achieve compelling visions and goals.

2.2. Psychological Empowerment

Psychological empowerment (PE) is a motivational process in which individuals freely control their lives and work. It is the perception of individuals regarding power and autonomy that can trigger innovative and new positive changes (Ramamoorthy, Flood, Slattery, & Sardesai, 2005). PE emphasizes employee beliefs to be empowered (Lee & Koh, 2001; Spreitzer, 1995) and stresses how individuals are intrinsically motivated to carry out their roles and responsibilities in order to have a significant influence on performance (Chen, Kirkman, Kanfer, Allen, & Rosen, 2007; Mathieu, Gilson, & Ruddy, 2006).

Thomas and Velthouse (1990) and Spreitzer (1995) describe PE as a motivational construct with four dimensions: competence, meaning, self-determination, and impact. Meaning is an individual's value in the role of work on the basis of his standards or ideals (Thomas & Velthouse, 1990). Competence is a feeling of self-efficacy or hope that encourages a person to believe in his abilities when carrying out activities (Özaralli, 2003). The impact is how far an individual can influence an organization's achievement (Ashforth & Mael, 1996). Meanwhile, self-determination is defined as autonomy in doing and deciding things related to work (Coccia, 2018; Deci, Connell, & Ryan, 1989).

2.3. Knowledge Sharing

Knowledge sharing (KS) is the process of exchanging expertise, knowledge, and skills between individuals or groups to increase collective knowledge in organizations. The KS concept is one of the key processes in knowledge management. It is seen as a behavior (operation or process) in which people exchange knowledge related to skills, expertise, and information (Mirzaee & Ghaffari, 2018; Van Den Hooff & De Ridder, 2004). In the organizational context, KS among workers encompasses explicit and implicit knowledge, leading to the creation of new knowledge and developing organizational knowledge that can provide benefits to the organization. Therefore, KS can increase innovation at the individual level (Kim & Park, 2017) as well as the organization (Michna, 2018; Pittino, Barroso Martínez, Chirico, & Sanguino Galván, 2018).

Organizations that can encourage KS within and beyond the organization's boundaries are highly likely to foster innovation and enhance their performance (Howell & Annansingh, 2013; Zhou & Li, 2012). There are 2 active processes in KS: knowledge donating and knowledge collecting. Knowledge donating (carrying or disseminating) is broadcasting one's intellectual resources to others, while knowledge collecting (receiving or acquiring) means the behavior of consulting others to learn what they know (De Vries, Van den Hooff, & De Ridder, 2006; Van Den Hooff & De Ridder, 2004).

2.4. Work Passion

Work passion (WP) refers to a strong emotional attachment to work where individuals are highly committed and enthusiastic about completing tasks and finding meaningful values in work. WP reflects the extent to which individuals like their jobs and derive pleasure from investing time and energy in those work activities (Baum & Locke, 2004). Vallerand, Houliort, and Fores (2003) define WP as a strong tendency towards a job that is liked, considered vital, and profound in which a person dedicates time, energy, and thought to the job. WP is seen as a psychological factor that strengthens commitment and dedication to work in the long term (Robertson, 2018), which also goes beyond work involvement. WP is able to stimulate a sense of optimism (Zigarmi, Galloway, & Roberts, 2018) and high job satisfaction in employees. The concept of WP, according to Vallerand, Houliort, et al. (2003), is divided into two categories: harmonious and obsessive passion. Harmonious passion arises from an autonomous internalization process where individuals have the freedom to choose and spend their time at work. People who have a harmonious passion do their jobs out of a sense of love for them (Vallerand, Houliort, & Forest, 2014), and they are also able to create harmony with other activities or non-work (Vallerand, Houliort, et al., 2003).

Obsessive passion is a controlled internalization of work (Vallerand, Paquet, Philippe, & Charest, 2010), in which individuals invest a lot of time into their work passionately because they like it and consider it important. Individuals with obsessive passions spend time in their work activities at the expense of other aspects of their lives (Vallerand et al., 2010), and as a result, they often experience conflicts in work and other aspects of life.

2.5. Innovative Work Behavior

Innovative work behavior (IWB) refers to an individual's ability to generate and implement innovative ideas to promote work processes, services, and products. IWB is a set of behaviors required to develop, initiate, and apply

new ideas to improve individual and organizational performance (De Jong & Den Hartog, 2007). IWB is also the creation, introduction, and application of new ideas that provide benefits for individual, group, or organizational performance (De Jong & Den Hartog, 2010; Janssen, 2000).

IWB includes three things: the generation of an idea, i.e., constructing new ideas; the promotion of the idea, which is getting support from external parties; and idea application, which is to produce a prototype or model of an idea. According to Spanuth and Wald (2017), IWB is a complex concept, including exploring, generating, promoting, and implementing ideas. The scope of IWB includes innovation in services, products, and work processes. Nonaka (1994) and Quintane, Casselman, Reiche, and Nylund (2011) assert that individuals who engage in IWB must continue to manage knowledge, in particular, elaborating, recombining, translating, and disseminating tacit knowledge.

3. HYPOTHESES DEVELOPMENT

3.1. TL on IWB, PE, KS, and WP

TL create a conducive work environment to encourage IW (Houghton & Yoho, 2005; Khan, Ismail, Hussain, & Alghazali, 2020; Kuo et al., 2022; Stanescu, Zbucnea, & Pinzaru, 2021; Suhana, Udin, Suharnomo, & Mas' ud, 2019; Wat & Shaffer, 2005). Often, they highlight teamwork, the completion of a collective task, and encouraging the employee's participation in creating and implementing new ideas. TL with high intellectual stimulation are able to encourage employees to think creatively about work problems and explore innovative solutions for their work success (Azim, Fan, Uddin, Abdul Kader Jilani, & Begum, 2019; Korku & Kaya, 2023; Kuo et al., 2022; Schmitt, Den Hartog, & Belschak, 2016; Thanh, Quang, & Anh, 2022). Thus,

H₁: TL positively and significantly affects IWB.

TL fosters a good work environment where workers feel competent and motivated by experiencing internal empowerment (Attari, 2013; Bose, Patnaik, & Mohanty, 2021; Mahmood, Uddin, & Fan, 2019; Özaralli, 2003). They delegate authority and urge participatory decision-making, thereby causing workers to feel encouraged to do their duties (Jung & Sosik, 2002). TL also frequently changes the organizational systems and processes to accomplish a better future, delegate authority to workers to move forward, and acknowledge responsibility. and facilitate them to achieve higher commitment levels by giving them the flexibility to decide their work context. By providing employees with personal consideration, TL can empower them psychologically. Therefore,

H₂: TL positively and significantly affects PE.

TL has been shown to influence the individual employee's attitudes, behavior, and development positively (Berraies & Zine El Abidine, 2019; Dvir, Eden, Avolio, & Shamir, 2002; Wu & Lee, 2020). TL plays a vital role in encouraging KS behavior through inspirational motivation (Bryant, 2003; Li, Shang, Liu, & Xi, 2014; Suhana, Udin, et al., 2019). Through the dimensions of intellectual stimulation and inspirational motivation, TL is able to change attitudes and behaviors, grow values, and enhance the professional growth of followers to share knowledge with other members of the group; thus, they can collaborate to change the status quo and accomplish a better organizational future (Carmeli, Sheaffer, Binyamin, Reiter-Palmon, & Shimoni, 2014; Yin, Ma, Yu, Jia, & Liao, 2019). Thus,

H₃: TL positively and significantly affects KS.

TL concentrates on the organization's sustainable development over the long term and aims to promote the integration of individual values and organizational values so that individuals are moved and motivated to complete their work (Alamri, 2023; Robertson, 2018; Shah, Shahjehan, & Afsar, 2022; Udin et al., 2023). TL is able to encourage and motivate employees to show extra behavior in the organization while still having a harmonious work passion. Li, Xue, Li, Chen, and Wang (2020) and Peng, Chen, Zou, and Nie (2021) found that TL can increase WP, both harmonious and obsessive passion. Therefore,

H₄: TL positively and significantly affects WP.

3.2. PE on IWB

When workers are encouraged in an organization, they tend to disclose IWB since they are able to discover meaning and value in their work roles (Jung & Sosik, 2002). Psychologically empowered employees feel comfortable with the work they do and find it meaningful and challenging. Workers who feel encouraged and discover meaning in their job tend to be intrinsically motivated to make a positive contribution to the organization, promoting IWB and better job attainment (Boudrias, Gaudreau, & Laschinger, 2004; Coccia, 2019a; Krishnan, 2012; Raihan & Uddin, 2023). Therefore, psychologically empowered employees display innovative work behaviors by positioning personal goals with the goals of an organization (Jha, 2014; Qing et al., 2020; Singh & Sarkar, 2019). Thus,

H₅: PE positively and significantly affects IWB.

3.3. KS on IWB

KS is the most fundamental mechanism for making the flow of knowledge, information, and stimulation of new ideas explored and exploited in organizations. KS also encourages social interaction, which can provide useful resources for individuals to generate innovation in their work (Hansen, 1999).

KS is a very important behavior that affects the increase in IWB either at the level of organization (Michna, 2018; Pittino et al., 2018) or at the level of the individual (Jada, Mukhopadhyay, & Titiyal, 2019; Wahyudi, 2019). KS concerning past events and solutions can become the foundation as well as a stimulus for producing new solutions. By sharing knowledge among employees, the employees' knowledge base increases, and the opportunities for the development of IWB also increase. Thus,

H₆: KS positively and significantly affects IWB.

3.4. WP on IWB

WP is a psychological state characterized by strong positive emotions between individuals and their work (Ho, Kong, Lee, Dubreuil, & Forest, 2018; Pollack, Ho, O'Boyle, & Kirkman, 2020). Individuals who have a high WP are able to appreciate their duties and work, enjoy it by being totally involved in the task, and do it regularly (Vallerand, et al., 2003), thus promoting IWB. Luu (2019) found that WP is able to increase IWB. Therefore, this study proposes the following hypothesis see Figure 1.

H₇: WP positively and significantly affects IWB.

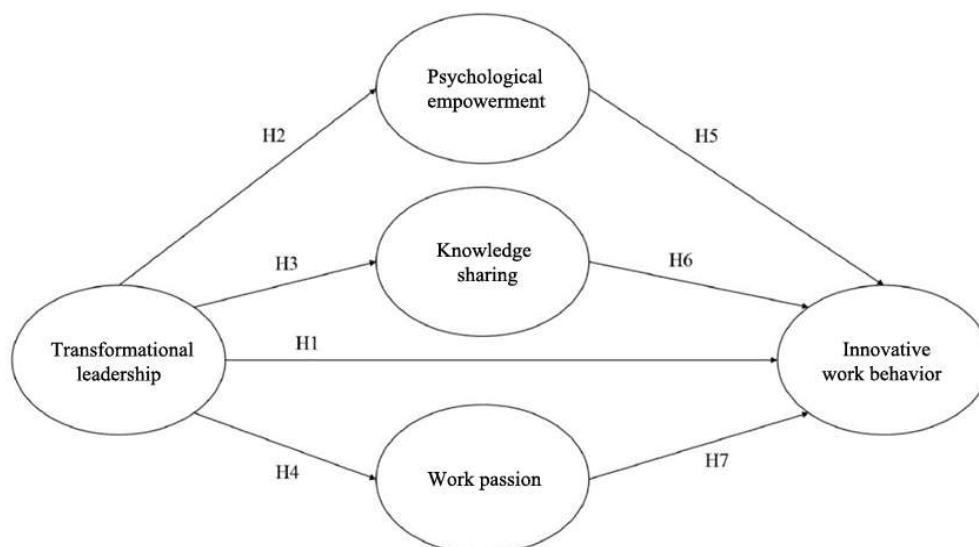


Figure 1. Conceptual framework.

4. METHODOLOGY

4.1. Design of the Study

In this study, a quantitative design was used. The data were obtained by sending online questionnaires to the respondents. The distributed questionnaires employed a Likert scale, with 1 (strongly disagree) to 5 (strongly agree) scores, which respondents then chose as research samples, signifying their agreement with certain questions.

4.2. Sample and Data

The participants of this investigation encompass both functional staff and line managers employed at the stone milling company located in Central Java, Indonesia. The samples are obtained by purposive sampling. Hair, Black, Babin, Anderson, and Tahtam (2006) said there are no general formulas or rules that are able to give the right solution to find out the number of observations required in SEM; thus, the researchers have the freedom to decide the necessary sample size for obtaining dependable results. Nonetheless, researchers typically establish and determine the size of research samples by calculating the number of indicators multiplied by 5 to 10 (Nicolaou & Masoner, 2013). Hence, in this study, the sampling technique used was purposive sampling with the criteria: (a) owning a minimum work experience of three years; (b) being actively engaged within the organization.

Of the 193 employees who filled out the research questionnaire, the profile showed that 96% of respondents were male and 4% were female. In addition, the profile shows that 84% of respondents have a high school graduate qualification, and the remaining 16% are undergraduates. The respondents' average age is 38 years, with an average work experience of more than six years.

4.3. Measures

The measurement of TL comprises a set of 8 indicators derived from Bass, Avolio, Jung, and Berson (2003) and Carless, Wearing, and Mann (2000). The measurement of PE comprises 6 indicators sourced from Menon (2001) and Spreitzer (1996). KS measurement comprises 4 indicators modified from Lu, Leung, and Koch (2006) and De Vries et al. (2006). The measurement of WP comprises 4 indicators derived from Ho et al. (2018) and Vallerand, et al. (2003). The IWB's measurement comprises 6 indicators adapted from De Jong and Den Hartog (2010) and Spanuth and Wald (2017).

4.4. Data Analysis Procedure

In order to analyze the obtained data in this study, partial least squares structural equation modeling (PLS-SEM) was done using SmartPLS 3.0 software. This approach was chosen because it is based on feature data/samples and the mediation and moderation analysis as well as because it has gained many advantages in the study of human resource management (Min et al., 2020). PLS-SEM, which evaluates both the inner and outer models, is regarded as the best method for measuring direct and indirect pathways since it is able to assess challenging and unobservable constructs.

5. RESULTS AND DISCUSSION

The data gained in this investigation was then statistically processed utilizing SEM with the SmartPLS 3.0 software package. SEM analysis technique is beneficial for extending theories to provide a better comprehension of relationships among investigated variables.

Table 1. Testing the validity.

Items	Transformational leadership	Innovative work behavior	Psychological empowerment	Knowledge sharing	Work passion
TL1	0.610				
TL2	0.819				
TL3	0.596				
TL4	0.229*				
TL5	0.827				
TL6	0.593				
TL7	0.571				
TL8	0.431*				
IWB1		0.850			
IWB2		0.843			
IWB3		0.557			
IWB4		0.473*			
IWB5		0.521			
IWB6		0.449*			
PE1			0.653		
PE2			0.704		
PE3			0.686		
PE4			0.647		
PE5			0.375*		
PE6			0.742		
KS1				0.587	
KS2				0.754	
KS3				0.579	
KS4				0.722	
WP1					0.935
WP2					0.941
WP3					0.569
WP4					0.607

Note: * not valid item.

This study assesses each latent variable's indicators to ensure the discriminant validity of these variables. When the indicator value is 0.50 or greater, it has the capacity to account for a minimum of 50% of the variability among the items (Black & Babin, 2019). As seen in Table 1, each variable exhibited indicator values exceeding 0.50, indicating the values are within an acceptable range, since Hair, Ringle, and Sarstedt (2013) have considered that the factor loadings between 0.5 and 0.7 could be justified. To put it another way, each variable's loading values (except IWB4 and IWB6 from IWB; PE5 from PE; TL4 and TL8 from TL) were within the range required (> 0.50). It implies that both the loading values and discriminant validity of each variable meet the established criteria for the measurement model in this study.

Table 2. Reliability testing.

Main variables	Composite reliability	Cronbach's alpha	AVE
Transformational leadership	0.814	0.758	0.375
Psychological empowerment	0.806	0.713	0.418
Knowledge sharing	0.758	0.573	0.443
Work passion	0.858	0.813	0.614
Innovative work behavior	0.793	0.695	0.407

In general, Cronbach alpha and composite reliability are employed to assess internal consistency and reliability. In the context of PLS-SEM analysis, it is essential that both composite reliability and Cronbach's alpha attain a minimum value exceeding 0.50. As presented in Table 2, the results for Cronbach's alpha and composite reliability all surpass the 0.50 threshold. These findings indicate that the internal consistency and reliability of all indicators

for each variable are deemed acceptable. In addition, the values of average variance extracted (AVE) for TL, PE, KS, and IWB are 0.375, 0.418, 0.443, and 0.407, respectively. This indicates that most of the AVE values in this study are less than 0.50, which, according to Fornell and Larcker (1981), is also acceptable for predicting convergent validity. However, most researchers recommend that the minimum AVE value is 0.5.

Table 3. Goodness of fit.

Fit indices	Estimated model	Saturated model
SRMR	0.049	0.040
d_ ULS	1.723	1.539
d_ G	0.641	0.610
Chi-square	353.014	339.085
NFI	0.468	0.489

Table 3 shows a structured equation model employing 5000 bootstraps. For a sample size greater than 100 in the PLS-SEM analysis, according to Cho, Hwang, Sarstedt, and Ringle (2020), the SRMR (standardized root mean residual) value should be smaller than 0.08, and the NFI (normed fit index) value should be between 0 and 1 (Cho et al., 2020). Thus, this study found a significant model fit of SRMR (0.040) and NFI (0.489).

Table 4. R-square.

Main variables	R square
Transformational leadership	
Knowledge sharing	0.458
Psychological empowerment	0.458
Work passion	0.058
Innovative work behavior	0.683

Hair et al. (2006) highlighted the significance of evaluating the path coefficient of the structural model and the coefficient of determination (R^2). A higher R^2 value indicates a stronger capacity of the independent variables to elucidate the changes in the dependent latent variable. The classification of R^2 values is as follows: 0.67 (significant), 0.33 (moderate), and 0.19 (weak) (Di Bucchianico, 2008). Based on Table 4, TL affects PE and KS by 0.458 and WP by 0.058. Furthermore, TL, WP, KS, and WP simultaneously affect IWB by 0.683, which indicates a substantial effect.

Table 5. Path coefficients.

Hypotheses	β	SD	SE	T statistics	Results
Transformational leadership \rightarrow Innovative work behavior	0.117	0.088	0.088	1.326	Rejected
Transformational leadership \rightarrow Psychological empowerment	0.676	0.042	0.042	16.111*	Supported
Transformational leadership \rightarrow Knowledge sharing	0.677	0.046	0.046	14.513*	Supported
Transformational leadership \rightarrow Work passion	0.242	0.093	0.093	2.601*	Supported
Psychological empowerment \rightarrow Innovative work behavior	0.585	0.117	0.117	4.983*	Supported
Knowledge sharing \rightarrow Innovative work behavior	0.269	0.124	0.124	2.170*	Supported
Work passion \rightarrow Innovative work behavior	0.246	0.125	0.125	1.954*	Supported

Note: * $p < 0.05$, SD = Standard deviation, SE = Standard error.

The study results in Table 5 confirm that TL does not directly impact IWB ($\beta = 0.117$, $T = 1.326$). On the other hand, this study reveals that TL significantly affects PE ($\beta = 0.676$, $T = 16.111$), KS ($\beta = 0.677$, $T = 14.513$), and WP ($\beta = 0.242$, $T = 2.601$). In addition, this study also substantiates the noteworthy influence of PE on IWB ($\beta = 0.585$, $T = 4.983$), KS on IWB ($\beta = 0.269$, $T = 2.170$), and WP on IWB ($\beta = 0.246$, $T = 1.954$).

Leadership is very important in promoting IWB. TL qualities, i.e., giving intellectual stimulation and inspiring followers by establishing an attractive vision and higher expectations to encourage and maintain organizational effectiveness. In addition, the motivational aspect of TL functioning as role models greatly influences employee performance. Because they are oriented towards a better vision and future, transformational leaders are able to recognize the expectations and needs of employees and initiate them to exert all efforts and higher performance for mutual progress (Abasilim, Gberevbie, & Osibanjo, 2019; Astuty & Udin, 2020; Bass & Riggio, 2006; Genevičiūtė-Janonienė & Endriulaitienė, 2010; Škudienė, Augutytė-Kvedaravičienė, Demeško, & Suchockis, 2018).

Knezović and Drkić (2021) have revealed that TL inspires followers by expressing a shared vision and values and engaging in constructing employee capabilities through training to encourage employee's IWB. In particular, TL has been considered an appropriate leadership style because it seeks to encourage employees to initiate new ideas by challenging the status quo as well as old ways of getting things done (Bass, 2000). Besides, the TL style demands positioning between the employees' desires and needs and organization, encouraging employees to work extra by showing creativity and IWB. However, this study's findings prove that TL does not directly have a significant impact on IWB. This is due to the power distance and the too-far relationship between the organization, leaders, and employees. The presence and behavior of transformative leaders are indeed very important, especially in respecting, inspiring, and encouraging employees to be proactively involved in their work and make sense of their existence in their organization, thereby contributing to innovative performance improvements. Miller and Miller (2020) assert that high-quality relationships between leaders and employees can positively affect work engagement and commitment, as well as employees' ability to produce innovative ideas in their work.

The results of this study prove that TL significantly affects PE. Transformational leaders become the primary motivators for employees to establish workplace autonomy in order to meet their psychological desires for self-determination (Ekowati & Supriyanto, 2022; Kovjanic, Schuh, Jonas, Quaquebeke, & van Dick, 2012). Also, PE significantly affects the IWB of employees. Psychologically empowered employees perceive themselves as competent people who can influence their work environment and work, resulting in proactive work behavior (Parker, Bindl, & Strauss, 2010). Using the can-do slogan, psychologically empowered employees perform better at making superior work initiatives (Schneider & George, 2011). Self-determination theory (SDT) can be employed to describe the association between PE and IWB. Apart from intrinsic motivation, PE can also be an active motivational orientation (Coccia, 2019b; Kang, Lee, & Kim, 2017), which is very important in encouraging proactive work behavior (Seibert, Wang, & Courtright, 2011). Psychologically empowered employees have the intention and ability to take better initiatives to enhance their job and organizational performance (Kang et al., 2017). Psychologically empowered employees also perform challenging tasks because they have faith in their autonomy and competence to complete essential work (Coehoorn, 2017).

This study's results prove that KS significantly affected the employees' IWB. KS has also been exposed to improve the innovation and performance of individuals and groups in a research and development (R&D) context (Montani & Staglianò, 2022). Employees who share their knowledge tend to engage in developing and implementing beneficial and new ideas for their work (Kim & Park, 2017; Radaelli, Lettieri, Mura, & Spiller, 2014). KS also contributes significantly to generating and implementing innovative ideas for successful work (Udin, 2022; Wang, Yang, & Xue, 2017). In addition, Van Wijk, Jansen, and Lyles (2008) showed that KS enhances organizational innovation. By sharing knowledge, people can study and incorporate different, useful, and valuable knowledge, facilitating IWB.

The results of this study prove that WP significantly affects employees' IWB. On the basis of the dualistic model of passion (i.e., obsessive and harmonious) introduced by Vallerand, et al. (2003), with a harmonious work passion, employees are able to manage their time, mind, and energy for activities while balancing them with other activities so as to produce positive results. Employees with a harmonious work passion can enjoy what they do by demonstrating an autonomous work internalization process to improve IWB. Harmonious work passion encourages

employees to be free to engage in various activities and jobs, and they develop new ideas to achieve innovative work results. In addition, empirical findings have shown that harmonious work passion can increase employee creativity and IWB (Liu, Chen, & Yao, 2011; Luu, 2019; Salas-Vallina, Pozo, & Fernandez-Guerrero, 2020; Warnick, Kier, LaFrance, & Cuttler, 2021). With positive work passion, employees have a higher drive and power to set challenging targets and achieve work success. It is also much easier to find solutions to overcome various obstacles in their work.

6. CONCLUSION

This study's results denoted that, on the one hand, TL had no significant direct impact on IWB. On the other hand, this study proves that TL significantly affects PE, KS, and WP. In addition, this research also reveals that there was a significant impact of PE, KS, and WP on IWB. Thus, this study's results conclude that PE, KS, and WP mediate the relationship between TL and IWB.

This study's results have several theoretical implications in the field of human resource development, specifically in the stone milling industry. In particular, this study provides insight into TL's role in PE, KS, and WP, contributing to the improvement of IWB. By understanding the mediation mechanisms, organizations can develop TL to foster innovative work behavior, which ultimately leads to improved organizational competitiveness.

6.1. Practical Implications

Based on the findings, there are some practical implications for organizational growth and success: First, transformational leaders inspire employees by setting high standards, having a clear vision and common goals, and providing a sense of purpose to increase productivity and innovative work behavior among employees. Also, transformational leaders create a culture of trust and respect where employees feel valued and supported, leading to greater levels of collaboration, WP, and KS among employees. Second, in terms of the self-determination theory (SDT) (Coccia, 2018), transformational leaders who create a shared and supportive vision, as well as an empowering work environment, can help satisfy their employees' psychological needs for autonomy, competence, and relatedness. By doing so, they can increase their employees' motivation, engagement, and WP to contribute to the success of the organization as a whole. Third, by inspiring and motivating employees while fulfilling their basic psychological needs, transformational leaders allow them to take the ownership of their work and provide opportunities to develop their skills to promote IWB.

6.2. Limitations and Future Research Direction

Apart from the theoretical and practical contributions offered, some areas for improvement in this research exist. First, data were collected using self-reported questionnaires distributed online to employees. This also affects the data's bias, validity, and quality because the researchers did not directly witness or see the respondents involved in the study. Second, as an antecedent variable, this research is limited to TL style. That is, there are also other potential leadership styles that should be covered in this study. Third, this study highlights TL's role in stimulating IWB at the individual level. So, for future research, the authors suggest a longitudinal study design that uses questionnaires graded in a way that is typical for self-report and pays more attention to how IWB works at the team and organisational levels. Finally, like all studies, the statistical analysis of AVE values for TL, PE, KS, and IWB in this study is 0.375, 0.418, 0.443, and 0.407, respectively, indicating less than 0.50, which, according to Fornell and Larcker (1981), is also acceptable for predicting convergent validity. However, Hair et al. (2013) suggested that the AVE value for all constructs should be greater than 0.50, implying good convergent validity.

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Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

Data Availability Statement: The corresponding author can provide the supporting data of this study upon a reasonable request.

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