

The Effect of Transactional Leadership on Innovative Work Behavior: Testing the Role of Knowledge Sharing and Work Engagement as Mediation Variables



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ABSTRACT

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This study, in detail, aims to explore and examine the effect of (1) transactional leadership on knowledge sharing, work engagement, and innovative work behavior; (2) knowledge sharing on innovative work behavior; (3) work engagement on knowledge sharing and innovative work behavior; and (4) knowledge sharing and work engagement in mediating the relationship between transactional leadership and innovative work behavior. The population in this study includes line managers, supervisors, and functional staff working in four stone milling companies in Central Java, Indonesia. This research is quantitative in nature, where the research data that has been collected will be processed and analyzed using structural equation modeling (SEM) based on SmartPLS 3.0 version. By analyzing 107 respondents, the results of this study conclude that (1) transactional leadership has a significant effect on knowledge sharing and work engagement, but not on innovative work behavior; (2) work engagement not only has a significant effect on knowledge sharing but also on innovative work behavior; (3) knowledge sharing has a significant effect on innovative work behavior; and (4) knowledge sharing and work engagement fully mediates the relationship between transactional leadership and innovative work behavior. This study gives a comprehensive understanding that knowledge sharing and work engagement become essential variables in linking transactional leadership and innovative work behavior.

1. INTRODUCTION

The business environment is experiencing very tight competition along with globalization and technological advances. Therefore, organizations are always trying to adapt by increasing the competitiveness of the organization. Organizational leaders function as catalysts in bringing, nurturing, and encouraging innovation, i.e., not only at the individual level but also at the team level and the organization as a whole [1-3]. The role of leadership, according to [1, 4, 5], is very high in increasing and fostering innovation in organizations. In fact, transactional leadership style is one of the most commonly recognized constructs in leadership theory [6] which has an influence on various organizational outcomes and achievements [7]. Transactional leadership requires a strong relationship in which a leader rewards subordinates with service and terms of an agreement that must be fulfilled [8].

The results of research by Alrowwad et al. [9], Faraz et al. [10], Khan et al. [11], McCann and Sparks [12] prove that transactional leadership has a significant effect on innovative work behavior of employees, while the result of Sethibe and Steyn [13] found that transactional leadership had no effect on employees' innovative work behavior. Hansen and Pihl-Thingvad [14] add that only one dimension of transactional

leadership (namely management by exception) has no effect on employees' innovative work behavior. Even Afsar et al. [15], Pieterse et al. [16] found that transactional leadership negatively affects employees' innovative work behavior.

Based on the research gap related to the relationship between transactional leadership and innovative work behavior, this study seeks to explore these relationships further by adding knowledge sharing and work engagement variables as novelties in this study. In detail, this study aims to explore and examine the effect of (1) transactional leadership on knowledge sharing, work engagement, and innovative work behavior; (2) knowledge sharing on innovative work behavior; (3) work engagement on knowledge sharing and innovative work behavior; and (4) knowledge sharing and work engagement in mediating the relationship between transactional leadership and innovative work behavior.

Theoretically, this study develops a few pieces of literature related to the relationship between transactional leadership, knowledge sharing, and work engagement on innovative work behavior. Furthermore, this study can be used by related parties to increase organizational productivity and effectiveness in order to achieve organizational sustainability. Practically, this study can be used by all related parties to improve the innovative work behavior of employees and maintain a sustainable competitive edge.

2. LITERATURE REVIEW

2.1 Innovative work behavior

Innovation is indeed very important for organizations [17] to maintain excellence in a highly competitive environment. Afsar et al. [18] state that to increase innovation, organizations need to motivate employees to engage in innovative work behavior. Innovative work behavior among employees is seen as very important for the long-term survival and success of the organization [19-21]. For organizations, innovative behavior is useful for generating new ideas, which in turn improve organizational performance [22].

Innovative behavior is defined as an action to seek, develop, and implement new ideas and solutions in certain situations, especially in work [23]. According to Yuan and Woodman [24], innovative work behavior refers to the initiation, development, realization, and implementation of new ideas that can improve a product, service, process, and work method. Innovative work behavior is complex because it is not easy to generate practical, new, proactive, and realistic ideas.

2.2 Transactional leadership

Leadership is the ability to influence others to achieve goals [25, 26]. Transactional leadership is one of the leadership styles that was first identified by Burns [27] in the form of a multidimensional construct of leadership. The transactional leadership style is based on a series of exchanges between leaders and their followers [28]. The transactional leader clarifies the role of followers and what they must do to get the specified result. Transactional leaders are also well acquainted with the various needs of followers and how these needs will be exchanged through roles to achieve desired outcomes. Therefore, transactional leadership provides confidence and motivation to followers to achieve the desired performance.

According to Bass [28], transactional leadership includes two types of behavior, namely contingent reward and management-by-exception. Contingent reward, i.e., the leader gives a reward if the follower is able to work in accordance with the specified contract or effort, while management-by-exception, i.e., the leader avoids giving direction if the old way works and allows followers to continue to do their work until it is fulfilled as agreed.

Transactional leaders recognize followers' needs and reward them based on their level of effort and performance [29]. Transactional leadership implies a transactional relationship between leaders and followers to achieve the interests of both parties [30]. Therefore, transactional leaders try to control, monitor, and supervise employees through logical and economical ways [31], where these ways include situational rewards, punishments, feedback, and corrective coaching [32].

2.3 Knowledge sharing

Zhu and Zhang [33] view that knowledge sharing is one of the most important methods to acquire and create knowledge in the workplace. Knowledge sharing plays an important role [34] and is a way to exchange valuable ideas and information through communication and reciprocal interaction between employees in an organization [35].

According to Lin [36], knowledge sharing is a culture of social interaction, which involves the exchange of experiences, knowledge, and skills through a division or organization.

Knowledge sharing facilitates employees to exchange experiences, knowledge, and skills, which increases opportunities to engage in value-added activities and go beyond additional tasks [37, 38]. Knowledge sharing encourages positive attitudes of employees towards performance [39]. Knowledge sharing also shapes employee attitudes towards various extra-role activities in the organization [40].

2.4 Work engagement

Kahn [41] defines work engagement as the self-actualization of organizational members in their work roles where they express themselves physically, cognitively, and emotionally during work. The physical aspect of work engagement concerns the physical strength provided by employees to engage in work over a long period of time. The emotional aspect relates to employees' feelings about their work and the emotional sense that must be invested to fulfill the demands of their role, while the cognitive aspect reflects employees' attention and alertness to their work roles.

Schaufeli et al. [42] explain that work engagement is a positive psychological state associated with self-realization and work. Schaufeli et al. [43] define work engagement as a positive, satisfying, and work-related state of mind characterized by vigor, dedication, and absorption. Work engagement implies a state of energetic involvement with the work itself [44]. Work engagement has been expressed as a multidimensional construct with vigor (high levels of energy and mental resilience), dedication (strong involvement in work), and absorption (engagement in work) [43].

3. HYPOTHESES DEVELOPMENTS

3.1 Transactional leadership, knowledge sharing, work engagement, and innovative work behavior

The biggest challenge for leaders is developing employee capacity [45] by creating a conducive climate in which employees can acquire and share their knowledge. Leadership is the main key to improving organizational learning [46]. Leadership encourages employees to undertake radical exploration and learning within the organization. Leadership turn employee tacit knowledge into explicit knowledge by facilitating the sharing of work experiences and practices among them in their respective workplaces. The role of leadership is increasingly changing, namely not only stimulating information and knowledge on gatekeeping [47] but also knowledge creation and knowledge sharing for all employees [46, 48].

Transactional leaders may take on different roles, such as supervisor, coordinator, or director, depending on situational conditions [49], and may also emerge in part as a result of personal dispositions [31]. The transactional leaders and their subordinates have a reciprocal relationship in which economic, psychological, and political values are exchanged favorably in exchange for reaching predefined performance requirements [50]. Transactional leaders expect subordinates to accept, agree, and obey the leaders in exchange for prizes, praise, and suitable resources, or to abstain from punishment [51]. Leaders with a high transactional style always strive to meet employee needs regarding information and reciprocal exchange in the work context [52]. Transactional leaders

manage employees through rational and economical ways, namely stimulating extrinsic work motivation of employees through task-oriented management. When employees achieve organizational goals, transactional leaders reward employees with what the organization has promised, such as money and promotions. This award can encourage employees to be highly involved in their work [53, 54]. Thus,

H1: Transactional leadership has a positive and significant effect on knowledge sharing

H2: Transactional leadership has a positive and significant effect on work engagement

H3: Transactional leadership has a positive and significant effect on innovative work behavior

3.2 Knowledge sharing and innovative work behavior

Knowledge sharing is seen as providing information and knowledge to assist and collaborate with others to solve problems and develop new ideas [55]. Knowledge sharing facilitates employees to exchange skills, knowledge, information, and experiences, which increases their chances of generating innovative ideas in the execution of required tasks [38]. Knowledge sharing facilitates the acquisition of new knowledge received from other colleagues through the exchange of knowledge and information to increase work innovation [56, 57]. With a high level of knowledge sharing, employees can share useful information and knowledge, which is necessary for effective task completion and to enhance innovation in the workplace [40]. The highest level of knowledge appears in the existence of creativity and innovation, where employees can create new knowledge to expand and develop the knowledge they already know. Several recent studies have shown that knowledge sharing significantly increases employees' innovative work behavior [58-62]. Thus,

H4: Knowledge sharing has a positive and significant effect on innovative work behavior

3.3 Work engagement, knowledge sharing, and innovative work behavior

Grosser et al. [63] revealed that work engagement has an effect on employees' innovative work behavior, such as idea formation, idea promotion, and idea realization. Montani et al. [64], Pukkeeree et al. [65], Wang et al. [66], Wu and Wu [67] also prove that work engagement has an effect on innovative work behavior. Furthermore, Kim and Park [68], Rasheed et al. [69] found that work engagement has a positive effect on knowledge sharing. When employees share knowledge, they are not only limited to conveying information but are more likely to decipher, integrate, and translate that information to recipients [70]. In addition to knowledge and skills, demonstrating innovative work behavior requires intrinsic motivation and a certain level of encouragement to ensure that employees' innovative behavior can be stimulated in the face of challenges. Therefore, positive emotions change the way employees think and help them enjoy their work, which in turn inspires them to display innovative work behaviors [71]. Schaufeli et al. [43] asserted that employees with high work engagement have perseverance and really like challenging work. Zhang and Bartol [72] show that high work engagement encourages individuals to be flexible and diligent, seek new methods of problem-solving, and realize new ideas enthusiastically. Thus,

H5: Work engagement has a positive and significant effect

on knowledge sharing

H6: Work engagement has a positive and significant effect on innovative work behavior

4. METHODOLOGY

This research employs a quantitative method. The sort of study used in this context is explanatory research, which highlights the link between research variables by testing hypotheses [73]. The data collection methods employed in this study are as follows: (1) primary data collection is done by sending out online questionnaires to respondents. Respondents would complete out questionnaires on a Likert scale with a score of "1=strongly disagree" to "5=strongly agree" as research samples, expressing their agreement with various questions with answer choices ranging from strongly disagree to strongly agree; and (2) secondary data is gathered through a review of the literature, which includes information such as the number of people in the organization, internal structure, and so on.

The population in this study includes line managers, supervisors, and functional staff working in four stone milling companies in Central Java, Indonesia. The main reason that underlies the selection of the object of this research is the results of initial surveys and interviews that on the one hand, line managers, supervisors, and functional staff are the main drivers of the productivity of the stone milling organizations, and on the other hand, the performance of the stone milling organizations will be more effective if implemented a balanced transactional (exchange) system. This means that employees get rewards from the organization in accordance with the amount of their contribution to the organization. According to Hair et al. [74], there are no standard principles or formulas for determining the number of observations required in Structural Equation Modeling (SEM), therefore researchers are free to choose the sample size required to achieve reliable results. However, in general, researchers select research samples by multiplying the number of indicators by 5 to 10 [75]. As a result, in this study, the sampling approach was purposive sampling with the following criteria: (a) working for at least three years; (b) being actively involved in the organization.

4.1 Measures

The measurements of each variable are as follows. Transactional leadership measurement includes 6 indicators adapted from Avolio et al. [76], Ismail et al. [77]. The measurement of knowledge sharing includes 4 indicators adapted from Lu et al. [78], de Vries et al. [79]. Measurement of work engagement includes 6 indicators adapted from Schaufeli et al. [80], Schaufeli et al. [81]. The measurement of innovative work behavior includes 6 indicators adapted from De Jong and Den Hartog [82], Spanuth and Wald [83], Yuan and Woodman [24].

4.2 Technique of data analysis

The acquired data in this study were statistically analyzed using the Structural Equation Modeling (SEM) with SmartPLS 3.0 software package. PLS-SEM-based analytical approaches are highly valuable in establishing and expanding theories, especially when second-order and even third-order components help to grasp linkages that may not be obvious at

first [84].

5. RESULTS

The data collection technique in this study used a questionnaire distributed online. From 193 targeted sample of four stone milling companies in Central Java, Indonesia, there were 107 (reflecting a 55.4% response rate) respondents who filled out the research questionnaire and deserved to be analyzed. Of the 107 respondents involved in this study, 91 (85%) respondents were male and 16 (15%) respondents were female.

Table 1. Validity testing

Items	Innovative Work Behavior	Knowledge Sharing	Transactional Leadership	Work Engagement
IWB1	0.689			
IWB2	0.632			
IWB3	0.664			
IWB4	0.722			
IWB5	0.545			
IWB6	0.540			
KS1		0.626		
KS2		0.766		
KS3		0.564		
KS4		0.720		
TL1			0.550	
TL2			0.592	
TL3			0.656	
TL4			0.589	
TL5			0.635	
TL6			0.468	
TL7			0.560	
TL8			0.646	
WE1				0.819
WE2				0.803
WE3				0.521
WE4				0.545
WE5				0.554
WE6				0.609

The indicators of each latent variable are calculated to ensure that these variables are discriminantly valid [85]. According to Table 1, all variables have indicator values greater than 0.50. When the indicator value is 0.50 or higher, this indicates that the variable is able to explain at least 50% of the item variance [86]. In other words, the loading value of each variable (except TL6 of transactional leadership) was within the required range (> 0.50). This indicates that the loading value for each variable and discriminant validity has

met the criteria for the measurement model in this study.

Table 2. Reliability testing

Main Variables	Composite Reliability	Cronbach's Alpha
Transactional Leadership	0.809	0.736
Work Engagement	0.812	0.737
Knowledge Sharing	0.766	0.593
Innovative Work Behavior	0.801	0.711

Table 3. R square

Main Variables	R Square
Transactional Leadership	
Work Engagement	0.311
Knowledge Sharing	0.608
Innovative Work Behavior	0.581

Composite reliability and Cronbach alpha are often used to determine the reliability of internal consistency. It is used to determine and ensure the standard of the observed variables [87]. The minimum value of composite reliability and Cronbach's alpha in the PLS-SEM analysis must be greater than 0.50. Based on Table 2, the composite reliability and Cronbach alpha values in this study are all greater than 0.50. This shows that all indicators of each variable have satisfactory internal consistency reliability.

Hair et al. [87] suggested testing the coefficient of determination (R²) and the path coefficient of the structural model in the PLS-SEM analysis. R² measures the explained variance of the latent variable relative to its total variance. The larger R², the better the ability of the independent latent variable to explain the latent dependent variable. The categorization of R² values is 0.67 (substantial), 0.33 (moderate), and 0.19 (weak) [86, 88, 89]. Based on Table 3, transactional leadership affects work engagement by 0.311 and knowledge sharing by 0.608. Furthermore, transactional leadership, work engagement, and knowledge sharing simultaneously affect innovative work behavior by 0.581, which indicates a moderate effect.

The results in Table 4 confirm that transactional leadership significantly influences knowledge sharing ($\beta=0.373$, $T=4.648$) and work engagement ($\beta=0.553$, $T=9.059$). In contrast, this study reveals that transactional leadership directly does not influence innovative work behavior ($\beta=0.007$, $T=0.060$). Additionally, this study also proves that there is a significant influence from knowledge sharing on innovative work behavior ($\beta=0.581$, $T=5.522$), and work engagement on knowledge sharing ($\beta=0.516$, $T=7.558$) and innovative work behavior ($\beta=0.233$, $T=1.934$).

Table 4. Path coefficients

Hypotheses	β	Standard Deviation	Standard Error	T Statistics	Results
Transactional Leadership \rightarrow Knowledge Sharing	0.373	0.080	0.080	4.648	Supported
Transactional Leadership \rightarrow Work Engagement	0.553	0.061	0.061	9.059	Supported
Transactional Leadership \rightarrow Innovative Work Behavior	0.007	0.119	0.119	0.060	Rejected
Knowledge Sharing \rightarrow Innovative Work Behavior	0.581	0.105	0.105	5.522	Supported
Work Engagement \rightarrow Knowledge Sharing	0.516	0.068	0.068	7.558	Supported
Work Engagement \rightarrow Innovative Work Behavior	0.233	0.120	0.120	1.934	Supported

6. DISCUSSION

Leadership is seen as very important to encourage the

organization to run effectively. In influencing all members of the organization to work according to their roles, leaders need to inspire and increase employee motivation so that they are

totally involved in achieving organizational goals [90, 91].

Transactional leadership style involves an exchange process (between leader and followers) that results in total compliance with the leader's demands but is still weak in terms of commitment to achievement [92]. Transactional leadership is a constructive leadership style that includes contingent rewards and management-by-exception. Transactional leaders seek to set clear expectations and provide feedback and encourage employees to focus on completing the tasks listed in their job descriptions.

However, the results of this study prove that transactional leadership has no significant effect on innovative work behavior. This is caused by transactional leaders who are too focused on the immediate achievements of employees by monitoring performance excessively and not tolerating and correcting work errors effectively. When employees feel overly supervised, their innovative work becomes hampered and difficult to realize. The results of this study are in line with the findings of Gameda and Lee [93], Hayward [94] that transactional leadership has no significant effect on innovative work behavior.

On the other hand, the findings of this study prove that transactional leadership has a significant effect on knowledge sharing and work engagement. Transactional leadership is indeed very important to encourage knowledge-sharing behavior that is in accordance with organizational goals, to ensure efficiency and effectiveness of employees in order to produce higher work performance and to increase organizational productivity and profitability [95, 96]. Transactional leadership is also often closely related to the drive for total work engagement [97-99]. Because transactional leadership focuses on exchange relationships between leaders and followers, meeting needs and rewarding employees will further strengthen them to share knowledge and engage in work to achieve organizational goals [100-102].

The findings in this study also prove that knowledge sharing and work engagement have a significant effect on innovative work behavior. Knowledge sharing tends to result in higher job performance, increasing organizational productivity and profitability [103]. By sharing knowledge and exchanging relevant information among employees, they will be more easily involved in the work by developing new innovative ideas and implementing them in their work. Knowledge-sharing activities to achieve innovative performance can be carried out through academic discussions, conferences, joint research, symposia, and work reports/guidelines. The results of this study are in line with the findings of previous researchers [68, 104, 105] that knowledge sharing and work engagement have a significant effect on innovative work behavior.

The findings in this study also prove that work engagement has a significant effect on innovative work behavior. This is in line with the findings of previous studies [106-108]. Work engagement has been consistently shown to increase positive employee outcomes in terms of performance and organizational commitment [93, 109, 110]. Work engagement is a state of mind that is positive, happy, and enjoying work which is characterized by enthusiasm, dedication, and absorption in work [80]. Engaged employees tend to behave innovatively by activating various resources to face the challenges that exist in their work. Engaged employees, with positive feelings, are able to produce better performance compared to employees who are not engaged [111]. This is because they have positive emotions while at work, have better

abilities in terms of utilizing existing resources, are able to carry out work effectively and efficiently to achieve work goals, and enjoy support and involvement with others in their work environment [111-113].

7. CONCLUSION

The results of this study, in general, conclude that (1) transactional leadership has a significant effect on knowledge sharing and work engagement, but not on innovative work behavior; (2) work engagement not only has a significant effect on knowledge sharing but also on innovative work behavior; and (3) knowledge sharing has a significant effect on innovative work behavior.

This research is one of several studies examining the effect of transactional leadership on knowledge sharing, work engagement, and innovative work behavior in profit-oriented private organizations in Central Java - Indonesia. Therefore, this study enriches the existing scientific literature to test and further explore the relationship between these variables. Practically speaking, the results of this study provide insight into how employee attitudes and behaviors can be influenced by their leaders, particularly transactional leadership. In addition, this study also recommends profit-oriented private organizations focus more on the development of transactional leadership, knowledge sharing, work engagement in organizations in order to improve innovative work behavior.

There are some limitations that need to be explained in this study. First, this study uses a sample from private for-profit organizations (particularly stone mill organizations) to investigate the research hypotheses, which may limit the generalizability of the findings. Although the results of this study are consistent with many previous empirical studies, the results still need to be replicated using a larger sample size. Second, this study relies on data collected through distributing questionnaires to respondents, which may lead to bias. Therefore, future research needs to consider collecting data using different methods. Third, this study examines the relationship between research variables without controlling for respondent demographics. Therefore, future research should replicate this research in other contexts and by controlling for the variable demographic profile of the respondents.

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APPENDIX

The Measurement Instruments

Transactional Leadership

1. My leader always encourages followers' performance
2. My leader always judges the work of followers based on their work
3. My leader always gives appreciation for the success of the follower's work
4. My leader always determines the work standards of followers
5. My leader always assesses followers' work mistakes
6. My leader always reacts to followers' work problems
7. My leader always corrects followers' work mistakes

8. My leader always penalizes followers for misconduct

Knowledge Sharing

1. I always share with others about work experience and useful knowledge
2. I always tell what I know to my coworkers
3. I always take the initiative to provide work-related knowledge to coworkers
4. After learning new and useful knowledge, I promote it well for coworkers to learn it

Work Engagement

1. I always appear enthusiastic at work
2. I am always eager to work for a very long time
3. I am always proud of the work I do
4. I always find the best meaning and purpose in the work I do
5. My work is always challenging and inspiring
6. I am always carried away and immersed in my work

Innovative Work Behavior

1. I always introduce innovative ideas into work practice
2. I always try to develop new ideas
3. I always find new approaches in completing tasks
4. I always try to use new techniques, methods or ways of working
5. I always look for opportunities to improve my tasks
6. I always come up with original solutions to the problems