

INVIGORATING EMPLOYEE'S INNOVATIVE WORK BEHAVIOR: EXPLORING THE SEQUENTIAL MEDIATING ROLE OF ORGANIZATIONAL COMMITMENT AND KNOWLEDGE SHARING

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Abstract. Current research paper aimed to investigate determinants of employee's innovative work behavior in export SMEs. The general problem in some export SMEs was a lack of knowledge implementation and employee innovation to provide problem-solving. It employed a quantitative method with administered questionnaires distributed to 177 employees of the exporting SMEs. The research data were evaluated using SmartPLS 3.2.7. The result shows that transformational leadership was notably associated to organizational commitment, knowledge sharing, as well as innovative work behavior. Also, organizational commitment and knowledge sharing are double mediators between transformational leadership and innovative work behavior. There are some limitations of this research paper, such as the bias effects of using a self-assessment report. The possible implication is that managers need to understand the relationship between variables, particularly mediating mechanisms, to provide insightful information for enhancing positive leadership performance and innovation capability – the originality point toward a mediating linkage of transformational leadership and innovative work behavior. The research paper enrich to a body of knowledge where innovative work behavior was influenced by leadership style and behavior and predictors of organizational behavior.

Keywords: innovative work behavior, knowledge sharing, organizational commitment, transformational leadership.

JEL Classification: D23, O15, M51.

Introduction

Competitions between SMEs and large companies require a competitive advantage through business performance and organizational resources (Arsawan et al., 2020a; Pauli, 2016). From an export SME's perspective, competitive advantage is determined by productivity and knowledge (Ballestar et al., 2020), internal strengthening of research and development (Davicik et al., 2020), market intelligence, and also marketing capabilities (Falahat et al., 2020). Also, other aspects create the competitive advantage, including financial constraints (Trachenko et al., 2021; Tsimoshynska et al., 2021) and innovation (Bodlaj et al., 2020), export performance (Sinkovics et al., 2018), as well as optimization of leader knowledge (Afsar et al., 2019; Stoian et al., 2018). However, export SMEs are considered less innovative (Bodlaj et al., 2020) even though empirical evidence

shows that innovation improves performance (Oura et al., 2016; Prange & Pinho, 2017).

Many scholars have examined leadership styles for organizational success and innovative work behavior (Miller & Miller, 2020). Transformational considered as most popular leadership style (Afsar & Umrani, 2019; Choi et al., 2016). It is proven to be an essential trigger in building commitment (Mayowa-Adebara & Opeke, 2019; Saleem et al., 2019); employee efficiency (Dwivedi et al., 2020), knowledge sharing (Le & Lei, 2017; Yadav et al., 2019), organizational learning (Park & Kim, 2018), and increasing employee creativity (Mittal & Dhar, 2015). However, the research investigates transformational leadership, and innovative work behavior is still underdeveloped, albeit leadership is critical in dealing with environmental dynamics (Choi et al., 2016), particularly in SMEs.

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Furthermore, this leadership style facilitates employees to develop skills through knowledge and innovative behavior (Knezovic & Drkic, 2020).

This study was conducted to close the research gap. First, prior studies showed that transformational leadership was a predictor of organizational commitment in large companies (Dunn et al., 2012; Gillet & Vandenberghe, 2014; Joo et al., 2012). However, the effectiveness of SMEs on transformational leadership is not entirely clear. In contrast, the “best practice” approach shows that SMEs are simple organizations and do not require transformational leadership (Mintzberg, 1993). On the other hand, the “best-practice” approach asserts that this leadership type has a constructive psychological effect on employees (Jos et al., 2015). Therefore, this study expects this leadership style constructive impact on organizational commitment to the best practice approach.

Second, there is no agreement among different findings regarding transformational leadership and knowledge sharing impact (Abukhait et al., 2019; Kianto et al., 2019; Masadeh et al., 2016; Xiao et al., 2017). Meanwhile, a previous study on knowledge sharing also emphasizes the discussion on big businesses rather than the small ones like SMEs (Munir & Beh, 2019). Therefore, sharing knowledge requires serious attention to maintain the SMEs' competitive advantage. Third, the linkage of knowledge sharing and innovative work behavior has not been tested (Radaelli et al., 2014), especially in emergent nations (Jain et al., 2015). Compared to western countries, studies on knowledge sharing have not been extensively explored in the eastern countries (Nguyen et al., 2019). Furthermore, the study carried out by Yadav et al. (2019) reported that people are often reluctant to share knowledge. Thus, other factors are needed to mediate the relationship (Chunling Zhu, 2017; Koska, 2013; Mura et al., 2013). Consequently, this present study discussed the variables of transformational leadership, organizational commitment, and knowledge sharing, which influence innovative work behavior. Fourth, Indonesian society has a strong power distance culture (Hofstede, 1983), characterized by a valid hierarchical social status between leaders and employees. However, previous findings showed that transformational leadership character increases organizational commitment (Hassi, 2019; Saleem et al., 2019), knowledge sharing (Park & Kim, 2018), and innovative work behavior (Afsar & Umrani, 2019; Choi et al., 2016). However, not many studies examined the relationship between these findings in Indonesian society.

The present study was conducted in SME exports based on several reasons. First, SMEs are a source of work and income for people, especially in developing countries like Indonesia. Also, its exporters create more jobs and make a valuable contribution to the country. Therefore, SMEs need to increase employee commitment to maintain long-term competitiveness (Newman & Sheikh, 2012; Valaei & Rezaei, 2016). Second, export SMEs are required to compete in a dynamic environment and global economy, increasing the innovative capacity of SMEs. However,

innovative work behavior models are more widely used in large companies. There is not much research that examines this topic in the SMEs context (Stoffers et al., 2019). Third, there is a need of innovation development from the SME employees's perspective (Danyliuk et al., 2020). There is a general perception that the innovation process is in the entrepreneur's hands (Nolan & Garavan, 2016). Therefore, transformational leadership allows employees to interact directly with leaders and think resourcefully (Podsakoff et al., 1996; Knezovic & Drkic, 2020). Concerning these three reasons, the following are essential questions that require further investigation.

Research models are developed to link transformational leadership, organizational commitment, knowledge sharing, and innovative work behavior to close this gap. Current study seek to answer the following research questions:

- Q1. Does transformational leadership affect organizational commitment, knowledge sharing, innovative work behavior?
- Q2. Does organizational commitment affect knowledge sharing and innovative work behavior?
- Q3. Does knowledge sharing affect innovative work behavior?
- Q4. Does organizational commitment and knowledge share as mediators the relationship between transformational leadership and innovative work behavior?

This study is designed to investigate determinants of innovative work behavior and examine the function of organizational commitment and knowledge sharing as the mediating variables. Theoretically, these findings are expected to enrich the literature on organizational behavior while strengthening the “best-practice” approach. As a result, the transformational leadership theory can be applied to SMEs and fill the gap, particularly in the SMEs export in Indonesia as developing countries. In practice, the results provided a significant contribution to organizational commitment, knowledge sharing, and innovative work behavior in developing countries. Therefore, entrepreneurs practice and develop this leadership style to increase productivity.

Furthermore, the second section presents the literature review, including formulating research hypotheses. The third discuss the method, and the fourth describes the analysis. Finally, the last section consist of conclusions, implications, and suggestions.

1. Literature review and development of hypothesis

The literature review includes transformational leadership, organizational commitment, knowledge sharing, and innovative work behavior.

1.1. Transformational leadership

Previous research has revealed that transformational leaders show self-confidence, respect followers, and achieve

the organization's strategic plan (Hassi, 2019). In addition, transformational leadership is creative thinking, an innovator, and a motivator that presents an exchange of values, reciprocal growth, and mutually beneficial motives (Afsar & Umrani, 2019; Mayowa-Adebara & Opeke, 2019), particularly in changing personal orientation to the level of enthusiasm (Alblooshi et al., 2020).

According to Mittal and Dhar (2015) and Khaola and Coldwell (2019), transformational leadership was measured by four dimensions. The first consists of idealized influence, power, confidence, consistency, respect, role models, and high standards (Choi et al., 2016). Second, inspirational motivation shows leaders can understand employees with an understanding attitude through inspiration, persuasion, and motivation (Afsar & Umrani, 2019). Third, intellectual stimulation refers to problem-solving, work in detail, responsibility, facing challenges, and increasing organizational leadership capabilities (Dwivedi et al., 2020). The last, individualized consideration shows a leader's capability to understand subordinates, enhance motivation, and support employees (Al Dari et al., 2018; Hassi, 2019).

The critical role of transformational leadership has been tested by researchers, such as motivating employees to share knowledge (Dwivedi et al., 2020; Yin et al., 2019) and work innovation (Alblooshi et al., 2020). This relationship is since transformational leadership is a practical kind of leader. Moreover, this style leads to valuable relationships, motivation, commitment, and being a leader who has the qualities to influence subordinates (Miller & Miller, 2020).

1.2. Organizational commitment

Extensive research has been committed to examining the outcomes of organizational commitment for employees and their organizations (Hassi, 2019). Organizational commitment is a measure of an employee's belief in take up the goals and aspirations of the organization to survive (Nguyen et al., 2019). It is considered an emotional attachment between work and enthusiasm to keep up participating (Saleem et al., 2019). Besides, commitment creates employee dedication to achieving organizational goals by obeying the rules, regulations, and goals (Mayowa-Adebara & Opeke, 2019). Thus, the greater the fit between person and organizational goals, resulting in the higher the commitment to the organization (Rita et al., 2018; Rustiarini et al., 2021). It is related to measuring the individual's feelings that his values and goals suit the organization's (Nguyen et al., 2019).

According to Hakimian et al. (2016), managers must generate or maintain employee commitment, attitude, and behavior. Therefore, it plays a primary role in overcoming knowledge management difficulties that contribute to organizational development (Marques et al., 2019). Organizational commitment consists of three types, called affective, continuation, and normative commitment. Affective commitment refers to the desire for an employee's emotional attachment (Lombardi et al., 2019). At the same time, continuous commitment is an attachment to the

organization due to the satisfaction of needs (Ouakouak & Ouedraogo, 2019). The last type, normative commitment, reflects employees' loyalty or moral obligation towards their organization (Razzaq et al., 2019). Considering that organizational commitment becomes the key in predicting profitable work behavior (Curado & Vieira, 2019), an organization must build and maintain organizational commitment, especially in small organizations.

1.3. Knowledge sharing

Knowledge is defined as an exclusive organizational resource (Yadav et al., 2019). It is considered one of the main assets that need to be well managed (Arsawan et al., 2020a) and investigated as a source of competitive advantage (Soniewicki & Paliszkievicz, 2019). Knowledge sharing continues to receive attention from academics and businesses, and its relevance to organizational performance and innovative practices (Abukhait et al., 2019). However, transforming knowledge into a more innovative behavior is significantly challenging for innovation management because knowledge sharing has several qualifications in stimulating innovative behavior (Pian et al., 2019).

Knowledge sharing is disseminating ideas and information to exchange experiences, knowledge, and skills (Al Dari et al., 2018; Anser et al., 2020; Arain et al., 2019). Knowledge sharing also helps each other create new ideas and develop skills through sharing information, both formal and informal (Bencsik et al., 2019; Munir & Beh, 2019). Finally, knowledge sharing has implications for the innovative ability of organizations (Elrehail et al., 2018). On the other hand, some of the researchers define knowledge sharing as transforming knowledge and diffusion within an organization (Xiao et al., 2017).

1.4. Innovative work behavior

Innovative work behavior concept includes problem identification, generating ideas, disseminating and implementing ideas (Anser et al., 2020; Arain et al., 2019; Pian et al., 2019) to build sustainability and competitive advantage (Rao Jada et al., 2019). Various studies reveal that innovative work behavior is considered an organizational success factor (Parwita et al., 2021; Kmiecik, 2020). Innovative denotes several processes, including enhancement and application of ingenuity to create better processes or products (Abukhait et al., 2019). In addition, innovative work behavior refers to the capability of an employee to generate new and potential ideas helpful in work practices. Therefore, innovative work behavior can be explained as employee discoveries, recommendations, and execution of these ideas on the assignment beneficial to organizational performance (Afsar et al., 2019).

2. Hypothesis development

Transformational leaders have the quality of being creative thinkers, the innovators, and also motivators that present mutual exchanges of values, growth, and motives

(Afsar et al., 2019; Mayowa-Adebara & Opeke, 2019). Transformational leadership is measured using idealized influence (Al Dari et al., 2018), inspirational motivation (Hassi, 2019), intellectual stimulation (Khaola & Coldwell, 2019), and individual consideration (Mittal & Dhar, 2015). Also, it creates a conducive environment for subordinates in achieving the organizational vision, mission, and goals (Hassi, 2019; Mohammadi & Boroumand, 2016). In an SME setting, simple organizational structures allow managers to interact directly with employees. This condition promotes emotional attachment and subordinate involvement (Curado & Vieira, 2019; Khaola & Coldwell, 2019). Therefore, transformational leadership is an essential predictor of organizational commitment and the achievement of goals (Mayowa-Adebara & Opeke, 2019; Peachey et al., 2014; Saleem et al., 2019). Based on the provided descriptions above, the following formulated hypothesis is as follows:

H1: Transformational leadership positively affects organizational commitment.

Knowledge is an essential asset in creating unique values (Soniewicki & Paliszkiwicz, 2019). Theoretically, transformational leadership is an essential contributor in motivating employees to exchange knowledge (Petrova et al., 2020; Yin et al., 2019) and create work innovations (Alblooshi et al., 2020; Soniewicki & Paliszkiwicz, 2019). In the context of SMEs, managers motivate employees to share their knowledge about problem-solving, increasing opportunities and labor productivity, and less formal environment (Al Dari et al., 2018). Furthermore, transformational leaders inspire and provide physical and intellectual infrastructure to achieve progress (Yadav et al., 2019; Yin et al., 2019). The discussion thus far has resulted in the subsequent hypotheses being stated:

H2: Transformational leadership positively affects knowledge sharing.

Generally, SMEs have limited resources since leaders and employees are expected to possess creative ideas for business development. Since transformational leadership follows a values-based style (Brown & Treviño, 2006), this character inspires people to have creative thinking and develop avant-garde solutions. However, the absence of bureaucratic processes makes it easier for leaders to set formidable goals, establish brand new work practices, and enable employees towards innovative thinking (Amankwaa et al., 2019; Elrehail et al., 2018). From the above explanations, a hypothesis is formulated as follows:

H3: Transformational leadership positively affects innovative work behavior.

Organizational commitment is defined a psychological state that predicament employees continue. According to the "Three-Component Model" (Meyer et al., 1993; Meyer & Allen, 1991), organizational commitment accumulates three main components: affective, continuity, and normative. The higher the values of individual applicability and

goals, the higher the commitment is given to the organization (Rita et al., 2018). Besides, Ouakouak and Ouedraogo (2019) reported that organizational commitment influences the willingness of employees to give and receive knowledge as an important cultural part of sharing. When employees believe that knowledge sharing brings benefits to the development of SMEs, they perceive it as a moral obligation to share knowledge and participate in the achievement of organizational goals (Lombardi et al., 2019; Mayowa-Adebara & Opeke, 2019; Nguyen et al., 2019; Saleem et al., 2019). However, the fear that they will incur costs when leaving SMEs leads them to share their knowledge with work colleagues. From the above descriptions, a hypothesis is formulated as follows:

H4: Organizational commitment positively affects knowledge sharing.

Innovative behavior includes various combinations of new concepts to overcome problems and improve performance (Anser et al., 2020). It refers to the complexity of finding until implementing ideas to create new methods, processes, products, and services (Abukhait et al., 2019; Baklanova et al., 2020). Furthermore, innovative work behavior represents the individual' ability to promote original and potential ideas implemented in the practical world. Also, it defines employees' perspectives, advice, and ideas implementations on the job task, which are beneficial to the work performance (Afsar et al., 2019; Zhen et al., 2018). Commitment takes a crucial role in building innovative behavior through strong affiliations (Amankwaa et al., 2019). Meanwhile, employees committed to the organization tend to create innovations to meet the customers' needs (Nguyen et al., 2019). Considering SMEs have few resources (Petraakis et al., 2015), employees provide innovative thoughts and solutions as a moral responsibility and obligation (Lewicka & Krot, 2015; Meyer & Allen, 1991). An employee's commitment to keeping a career in SMEs while implementing ideas in achieving long-term success (Arain et al., 2019; Rao Jada et al., 2019). From the above descriptions, the formulated hypothesis is as follows:

H5: Organizational commitment positively affects innovative work behavior.

Knowledge is an exclusive organizational resource (Yadav et al., 2019) is one of the main assets recognized and investigated for competitive advantage (Soniewicki & Paliszkiwicz, 2019). It is relevant to organizational performance and innovative practices, which eventually receive significant attention from academicians and business actors (Abukhait et al., 2019). Transferring and using knowledge encourages individuals to solve problems and face new challenges (Phung et al., 2019). Based on the individual perspective, knowledge transfer is significant to achieve insight, innovation, productivity, and performance (Arsawan et al., 2018a, 2018b). Besides, active employee empowerment creates and promotes knowledge sharing between the employees leading to innovative behavior in

the workplace (Rao Jada et al., 2019). Therefore, knowledge sharing is a powerful instrument in stimulating critical thinking and translating ideas into innovations (Asurakkody & Kim, 2020; Mura et al., 2013). Also, knowledge sharing increases innovation, creativity, and performance in an organization (Bencsik et al., 2019; Elrehail et al., 2018; Mohammadi & Boroumand, 2016) because knowledge sharing is considered a source of innovation for organizations (Usmanova et al., 2020).

Accordingly, the following hypotheses are proposed:

H6: Knowledge sharing positively affects innovative work behavior.

In the current study, we argue that it is essential to identify how transformational leaders influence employees' intention to share knowledge (Yadav et al., 2019) in achieving performance and understand the mechanisms used by transformational leaders to facilitate organizational commitment to creating knowledge sharing. Given the critical role of transformational leaders in shaping employee commitment (Mohammadi & Boroumand, 2016; Saleem et al., 2019). Transformational leadership is supposedly giving impact to employee behavior and knowledge sharing intention through increasing employee perspectives of their commitment to the organization. It indicates that the critical role of organizational commitment as a mediating variable is critical for leaders to influence subordinates in sharing knowledge (Chunling Zhu, 2017; Koska, 2013; Mura et al., 2013). Leaders that instill trust, maintain comfortable conditions for expressing opinions, and qualified ideas will escalate the aspiration to share knowledge as a part of the opinion expressed (Aristana et al., 2022). The discussion thus far has resulted in the subsequent hypotheses being stated:

H7: Organizational commitment mediates the relationship between transformational leadership and knowledge sharing.

This study reveals organizational commitment as a mediating variable of transformational leadership and innovative work behavior. Although several experts have discussed the impact of organizational commitment on innovative work behavior, only few have assessed the function of organizational commitment as a mediating variable. However, although some experts have discussed the impact of organizational commitment on innovative work behavior, they have not yet examined the function of organizational commitment as a mediating variable.

This current study refers to prior research that demonstrated an indirect linkage between transformational leadership and innovative work behavior to provide theoretical support for this mode of mediation. Peachey et al. (2014) argue that transformational leadership affects employee organizational commitment, determining innovative work behavior (Hakimian et al., 2016). Likewise, Pian et al. (2019) found transformational leadership to be an innovative work behavior antecedent, whereas Marques et al. (2014) found the strategic function of organizational

commitment in building employee innovative work behavior. Based on the aforementioned arguments, our study proposes that the relationship between transformational leadership and innovative work behavior is mediated by employee commitment. The leader's capability to increase commitment is essential for forming innovative work behavior to increase innovation and encourage performance (Arsawan et al., 2020b). The discussion thus far has resulted in the subsequent hypotheses being stated:

H8: Organizational commitment mediates transformational leadership and innovative work behavior.

The terms knowledge sharing indicates that an employee performs a share of knowledge activities in an organization (Phung et al., 2019). In reverse, innovative work behavior indicates that employees arrange, encourage, and apply new quality perspectives in teamwork or organization (Akhavan et al., 2015). Previous research has produced relevant evidence linking knowledge sharing and innovative work behavior. Research investigating how employee's knowledge sharing affects their innovative work behavior in organizations shows that employees that intend to share knowledge are more involved in the process of innovation in a comprehensive way (Radaelli et al., 2014). To increase employee innovative work behavior, transformational leadership must be an example by motivating and increasing participation in sharing ideas, ideas, and knowledge with employees (Dwivedi et al., 2020). Furthermore, knowledge sharing oriented towards organizational success positively impacts innovative behavior (Pian et al., 2019). Thus, increasing innovative work behavior can be achieved with a quality leadership pattern (Miller & Miller, 2020) through a share of knowledge (Choi et al., 2016). From the descriptions, the formulated hypothesis is as follows:

H9: Knowledge sharing mediates transformational leadership and innovative work behavior.

Various empirical studies have investigated organizational efforts to increase the function of employees to share knowledge (Lombardi et al., 2019). Employees who share their knowledge are active in the learning process, continuous improvement, and change management (Mura et al., 2013), especially building innovative work behavior (Phung et al., 2019). Employees must trust and commit to sharing ideas/knowledge (Curado & Vieira, 2019) and knowledge utilization (Ouakouak & Ouedraogo, 2019). Organizational commitment increases employee engagement as a trigger for knowledge donating (Yadav et al., 2019), expanding employee innovation visions, innovation opportunities identification, and arranging and implementing innovative ideas (Pian et al., 2019). From the descriptions, the formulated hypothesis is as follows:

H10: Knowledge sharing mediates the organizational commitment and innovative work behavior.

The research framework presented in Figure 1.

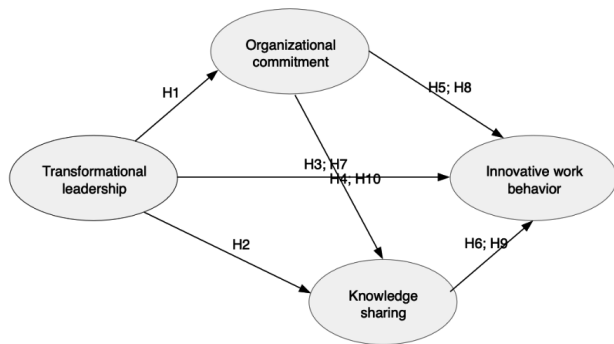


Figure 1. Framework

3. Methodology

3.1. Sampling and demographics

The current research was carried out on SMEs that existed in Indonesia, particularly in 9 regencies of Bali Province. These SMEs are active in conducting active transactions to major world markets such as European Union countries, South Asia, the Middle East, and America. Several considerations underlie the selection of research sites. First, the international market requires products and services that have value-added, quality, and international standards. Therefore, SME operational activities require continuous innovation to create these advantages. Second, innovation is also needed to improve the ability to adapt to market turbulence and environmental uncertainty. Third, the development of innovation requires knowledge and creativity. Therefore, export SMEs need strategic leadership and knowledge sharing to create innovation.

The population was 69 export SMEs that consisted of into six business fields. They were fashion designers and manufacturers (26), furniture and interior design (22), spa and aroma products (1), specialty products (9), accessories and jewelry (4), and services (7). Using the formula Krejcie and Morgan (1970) proposed, 59 SMEs were selected as the sampling frame. This selection is accomplished by using random sampling technique. Respondents were

selected by recruiting three employees for each SME. The selection was based on the assumption that employees require innovative performance behaviors in performing their routine work. Thus, 177 respondents participated in this study. The distribution of the questionnaire was conducted by email and manual delivery when visiting SMEs. The research was conducted in March–October 2020. The respondents were presented in Table 1.

In the mail survey method, the questionnaire is sent by email. Respondents get an automatic reminder weekly to fill out the questionnaire. The survey process via email is accompanied by a cover letter to ensure the confidentiality of respondents' answers. Also, the researcher informed that this agenda only for research purposes, thus strictly confidential. The researcher was arranged a meeting with the human resources manager for permission-seeking in order to conduct the research and respondents are anonymity. Testing the validity and reliability of respondents was carried out by distributing questionnaires to the first 30 respondents using SPSS 25.0.

3.2. Measurement

This research involves four main variables called transformational leadership, organizational commitment, knowledge sharing, and innovative work behavior. This study applied a seven-point Likert scale (1 strongly disagrees to 7 strongly agrees) to assess these main variables. Transformational leadership is measured by four dimensions with 20-items adopted from previous studies (Afsar & Umrani, 2019), namely:

- 1) Idealized influence refers to strength, confidence, belief, consistency, and ideas, has respect, as role models, and maintains high qualifications (Choi et al., 2016)
- 2) Inspirational motivation refers to understanding subordinates through revelation, persuading, and high intention of motivation (Afsar & Umrani, 2019),
- 3) Intellectual stimulation refers to problem-solving, work in detail, responsibility, facing challenges, and improving leadership capabilities (Dwivedi et al., 2020).
- 4) Individualized consideration shows a leader's capability to understand, stimulate motivation, courage, and support subordinates (Al Dari et al., 2018; Hassi, 2019).

There are three dimensions with 16 items adopted from Sang et al. (2019) to assess organizational commitment, namely:

- 1) Affective commitment indicates the employee's emotional feeling, identification, and contribution to the company.
- 2) Continuous commitment shows the personal cognition of the disadvantage associated when leaving the company.
- 3) Normative commitment indicates the perceived employee's responsibility for staying longer in the company.

Table 1. Respondent's profile

Criteria	Data	Frequency	Percentage
Gender	Male	119	67.12
	Female	58	32.88
Age	21–30	32	17.97
	31–40	74	41.69
	41–50	48	27.46
	51–60	23	12.88
Educational level	Bachelor	162	91.53
	Master	15	7.79
Experiences in export	<5 years	39	22.03
	6–10 years	97	54.92
	>10 years or more	41	23.05
Department	Cargo	27	15.25
	Sales	40	22.89
	Operations	58	32.86
	Human resources	32	17.94
	Administration	20	11.06

There are two dimensions with ten items adopted from Sang et al. (2019) to examine knowledge sharing, namely:

- 1) Explicit is how to change new knowledge from another employee, and create new knowledge, whether individuals, teams, and organizations.
- 2) The knowledge creation mechanism, Tacit, is the primary model often used in the SECI model that focuses primarily on the tacit knowledge exchange (Nonaka & Takeuchi, 1995).

Innovative work behavior measured by three dimensions with nine items adopted from Vandavasi et al. (2020) were used, namely:

- 1) Idea generation is a set of free-flowing processes for identifying and shaping by improving a new information set.
- 2) Idea promotion refers to processes to create a concept and look for support, colleagues, and money to analyze the concept.
- 3) Realization refers to the cultivation of sufficient information and leads time to perform new concepts.

4. Data analysis and findings

4.1. Measurement of outer model

The initial analysis was conducted to examine the data quality using the outer model measurement. First, convergent validity is indicated by the outer loading values above 0.60. Second, a discriminant validity test was used to measure the indicator’s validity by comparing the value of the square root coefficient of variance extracted (\sqrt{AVE}) with other constructs. The AVE value is more significant than 0.50. The results showed that the outer loading value and AVE value greater than 0.60 and 0.50. The test results are shown in Tables 2 and 3.

Meanwhile, the third step calculated the value between construct indicators with composite reliability measurement (Chin, 1998) that Cronbach’s alpha was more significant than 0.70. The findings showed that the values of composite reliability range 0.871 to 0.984 (>0.70), and the Cronbach’s Alpha value was between 0.709–0.977 (greater than 0.70) (see Table 3). Therefore, this result was considered free from random error problems.

Table 2. Correlation of the constructs

Constructs	AVE	\sqrt{AVE}	Correlations*			
			TL	OC	KS	IWB
Transformational leadership (TL)	0.690	0.830	1.000			
Organizational commitment (OC)	0.896	0.946	0.643	1.000		
Knowledge sharing (KS)	0.893	0.944	0.691	0.738	1.000	
Innovative work behavior (IWB)	0.878	0.937	0.760	0.642	0.844	1.000

Table 3. Instruments reliability test

Constructs	Dimensions	Cronbach’s Alpha	rho_A	Composite Reliability	Average Variance Extracted
Transformational leadership (TL)	Transformational leadership		1.000		
	Idealized infl	0.834	0.884	0.881	0.601
	Inspirational motv	0.871	0.884	0.913	0.727
	Intellectual stiml.	0.827	0.857	0.884	0.660
	Individualized cons.	0.896	0.889	0.928	0.767
Organizational commitment (OC)	Organizational commitment		1.000		
	Affective	0.918	0.918	0.948	0.859
	Continuous	0.926	0.933	0.952	0.871
	Normative	0.977	0.977	0.984	0.956
Knowledge sharing (KS)	Knowledge sharing		1.000		
	Explicit	0.908	0.908	0.956	0.916
	Tacit	0.906	0.910	0.954	0.913
Innovative work behavior (IWB)	Innovative work behavior		1.000		
	Idea generation	0.709	0.739	0.871	0.772
	Idea promotion	0.926	0.926	0.964	0.931
	Realization	0.826	0.837	0.919	0.851

4.2. Measurement of inner model

Following the discovery of the outer model criteria, the next was examining the inner model. First, using R^2 analysis to assess the feasibility of the research model and unveiled the relationship between independent and dependent variables. According to Gentle et al. (2012), the R^2 values of 0.67, 0.33, and 0.19 were categorized into a robust, moderate, and weak model, respectively (Chin, 1998). The test results are presented in Table 4.

Table 4. Research model's feasibility

Constructs	R^2	R^2 Adjusted
Organizational commitment (OC)	0.776	0.774
Knowledge sharing (KS)	0.751	0.746
Innovative work behavior (IWB)	0.824	0.819
Average	0.783	0.779

Table 4 showed that the R^2 values of the three models were more significant than 0.67. The study model is relatively strong (Chin, 1998). Furthermore, the average value (0.783) showed that the linkage between constructs was 78.3 percent, and another 21.7 percent was illustrate by other variables that were not included in the current study. According to Hair et al. (2013), the adjusted R^2 values were increased by including the other construct in the future.

Table 5. Analysis of effect size

Variables	β	Mean	Deviation	T Statistics	p-Values
TL and KS	0.103	0.133	0.087	1.181	0.238
TL and IWB	0.747	0.792	0.130	5.759	0.000
TL and IWB	0.263	0.289	0.123	2.141	0.033
OC and IWB	0.188	0.208	0.104	1.810	0.071
Average	0.325				

Notes: TL: Transformational Leadership; OC: Organizational Commitment; KS: Knowledge Sharing; IWB: Innovative Work Behavior.

The second stage was measuring the predictive ability of the research framework through the quadratic predictive relevance (Q^2). According to Stone (1974), the closer to 1, the better the model's predictive. The value of Q^2 is 0.9902 (very good). Therefore, it can be concluded that this research framework had excellent observation capability. Thus, this model might explain the linkage between constructs by 99.02% and 0.98% remaining was error factor. The Goodness of Fit (GoF) value is 0.648. This figure showed that the model's overall measurement accuracy was very good. According to Härdle (2011), this model was categorized into GoF Large with a value of 0.648 greater than 0.36. The test result is displayed in Table 5.

The fourth stage examined the effect size (f^2), purposed to provide detailed prediction between exogenous and endogenous variables (Cohen et al., 1998). According to Härdle (2011) and Chin (1998) there were three classification for effect size (f^2) namely; weak (range 0.02–0.15), moderate (range 0.15–0.35), and strong (range > 0.35). Based on the findings analysis shown in Table 5, the mean value of the original sample was 0.325. It can be predicted that the pattern of mediation relationships that are moderate (Cohen et al., 1998).

4.3. Hypotheses testing

The final test is investigated direct and indirect effects. The hypothesis finding is shown in Table 6.

Table 6 shows that the relationship between transformational leadership and organizational commitment is positively significant with a path coefficient of 0.327 with a t-statistic of 3.482 greater than 1.96. It indicates that hypothesis 1 was accepted. These results confirmed that transformational leadership had an essential role in building employees organizational commitment, and it supported the previous studies (Hassi, 2019; Jain et al., 2019; Khaola & Coldwell, 2019; Mayowa-Adebara & Opeke, 2019; Mohammadi & Boroumand, 2016; Park & Kim, 2018; Peachey et al., 2014; Saleem et al., 2019).

Besides, the testing results showed that transformational leadership and knowledge sharing showed a positive relationship. A path coefficient of 0.570 and t-statistics of 9.560 are more significant than 1.96. Hypothesis 2 was accepted. Also, analysis supported the previous studies,

Table 6. The direct relationship between variable

Relationship Variable	β	Mean	Deviation	T Statistics	p-Values	Supported?
TL \rightarrow OC	0.327	0.310	0.093	3.482	0.000	Yes
TL \rightarrow KS	0.570	0.585	0.059	9.560	0.001	Yes
TL \rightarrow IWB	0.303	0.298	0.129	2.306	0.005	Yes
OC \rightarrow KS	0.250	0.246	0.103	1.757	0.078	No
OC \rightarrow IWB	0.272	0.275	0.109	2.466	0.003	Yes
KS \rightarrow IWB	0.591	0.596	0.101	5.888	0.000	Yes

Notes: TL: Transformational Leadership; OC: Organizational Commitment; KS: Knowledge Sharing; IWB: Innovative Work Behavior.

stating that shared knowledge helps in solving problems (Afsar et al., 2019), increasing opportunities (Al Dari et al., 2018), and labor productivity (Yin et al., 2019). However, these results contradict the findings obtained by Masadeh et al. (2016) that transformational leadership could not encourage knowledge-sharing practices.

Transformational leadership and innovative work behavior also showed a positive relationship. This result indicated that path coefficient 0.303 with the t-statistics of 2.306 was more significant than 1.96, and hypothesis 3 was accepted. This result also supported a few previous studies that illuminate innovative behavior promoted by leaders that implement transformational leadership dimensions (Afsar & Umrani, 2019; Choi et al., 2016) by developing a creative work environment (Mittal & Dhar, 2015). The present study also findings new theoretical lenses on implementing transformational leadership in Asia, mainly Indonesian society. Besides, the result adds the body of knowledge in leadership studies and organizational behavior.

Moreover, the relationship between organizational commitment and knowledge sharing was positively insignificant by path coefficient 0.250 with the t-statistics of 1.757 greater than 1.96, and hypothesis 4 was rejected. This test supported the study conducted by Mohammadi and Boroumand (2016) that organizational commitment did not influence knowledge sharing. Contrary, the study conducted by Lombardi et al. (2019) was not supported. Therefore, employees felt they did not have any obligation to share knowledge since no trust was given or were afraid of competing with the other colleague (Arsawan et al., 2020b) and became the reason for hiding knowledge.

Furthermore, organizational commitment positively affects innovative work behavior. It was reported by a coefficient value of 0.272 with the t-statistics of 2.466. Hypothesis 5 was accepted. Previous studies supported these findings that organizational commitment strengthened innovative work behavior (Amankwaa et al., 2019; Hakimian et al., 2016; Marques et al., 2014; Nguyen et al., 2019).

Knowledge sharing also positively affects innovative work behavior, supporting hypothesis 6. The path coefficient of 0.591 with the t-statistics of 5.888 is more significant than 1.96. The result supported previous studies (Anser et al., 2020; Asurakkody & Kim, 2020; Munir & Beh, 2019; Mura et al., 2013; Phung et al., 2019; Rao Jada et al., 2019; Wang et al., 2017). However, the present study contradicts Usmanova et al. (2020) research that concluded knowledge sharing practices had not been a determinant of innovative work behavior.

After examining the direct relationship among variables, the next stage investigates the mediation mechanism in the structural equation modeling (SEM). In our research framework, four mediation pathways are tested. The method used is Variance Accounted For (VAF) (Hair et al., 2016) with three classifications, namely; no mediation (VAF < 0.20), partial mediation (VAF range 0.20–0.80), and complete mediation (VAF > 0.80). In addition, a non-parametric bootstrap was used in which

two mediating variables (i.e., organizational commitment and knowledge sharing). The mediation result is shown in Table 7.

Table 7. The indirect relationship between variable

Model	β	T Statistics	VAF	Remark
TL → OC OC → KS TL → KS	0.327 0.250 0.570	3.482 1.757 9.560	0.057	No mediation
TL → OC OC → IWB TL → IWB	0.327 0.272 0.303	3.482 2.466 2.306	0.326	Partial mediation
TL → KS KS → IWB TL → IWB	0.570 0.591 0.303	9.560 5.888 2.306	0.525	Partial mediation
OC → KS KS → IWB OC → IWB	0.250 0.591 0.272	1.757 5.888 2.466	0.147	No mediation

Notes: TL: Transformational Leadership; OC: Organizational Commitment; KS: Knowledge Sharing; IWB: Innovative Work Behavior.

We calculated variance accounted for (VAF) to justify the variable position as a mediator. There are four mediation pathways tested in our study (see Table 7). Firstly, we concluded that the organizational commitment does not intervene transformational leadership and knowledge sharing, and the VAF value was 0.057 (5.7%). Thus, hypothesis 7 was rejected. Secondly, we conclude that organizational commitment as a partial mediator links transformational leadership and innovative work behavior with a VAF value of 0.326 (32.6%). Thus, hypothesis 8 was accepted. Third, knowledge sharing as a partial mediator links transformational leadership and innovative work behavior with a VAF value of 0.525 (52.5%). Therefore, hypothesis 9 was also accepted. At the same time, we also examine that knowledge sharing did not mediate the linkage between organizational commitment and innovative work behavior with a VAF value of 0.147 (14.7%), which means that hypothesis 10 was rejected.

Conclusions

Export SMEs must increase productivity, export performance, and even internationalization in a competitive environment. Based on individual-level context, transformational leadership builds employee commitment and stimulates sharing knowledge among employees and teamwork. As our findings, transformational leadership has two critical roles. On the one hand, improve employee organizational commitment and build knowledge sharing behavior to support innovative work behavior. Furthermore, it stimulates how employees are more committed and increase knowledge, leading to innovative work behavior. The present study has several theoretical contributions. First, the result enriching transformational leadership literature mainly developed the second-order

construct through exploring a comprehensive research framework. Second, our research examines the mechanisms of transformational leadership affecting innovative work behavior. Third, the study proved bridging the prior research gap by unveiling when, how, and why transformational leadership might be associated with innovative work behavior. The mediation effect analysis found that organizational commitment and knowledge sharing as double mediators. Fourth, knowledge sharing is a crucial determinant of innovative work behavior, distinctly in the Indonesian SMEs sector.

Based on research findings, we suggest several managerial implications for managers and employee insights. First, managers must develop transformational leadership skills to produce innovative work behavior. Second, managers need to facilitate knowledge-sharing behavior to be innovative in completing their work, including rewards, group learning communities, training and development programs, and apprentice among employees. Third, a manager needs to give a high commitment to completing work and following rules that are aligned with organizational goals. Finally, from employee perspectives, sharing ideas can be a strategic pathway to enrich knowledge quality by absorbing added values of ability, competency, skills, and trust.

This study, however, has some limitations. First, the sample is limited to companies in Indonesia. The reproduction of this study in other developing nations may offer mixed findings with exciting results. A substantial sample size might also be beneficial. Second, this study centralized on transformational leadership, organizational commitment, and knowledge sharing as determinants of innovative work behavior. Other potential determinants, for instance another leadership style (i.e., transactional, spiritual, and servant), creativity, trust, and quality of knowledge, should be considered to reduce barriers to knowledge sharing in improving innovative behavior in future research. As previously discussed, technological advances was one of the drivers of innovative work behavior can be used as a moderating variable to strengthen the innovative work behavior to increase productivity. Third, although the present study has responded to calls on further systematic research on the function of transformational leadership towards innovative work behavior by following a causality approach, due to using self-assessment reports. It is still susceptible to bias effects; for that reason, further research is essential to conducting a longitudinal study.

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Author contributions

For research articles with several authors, a short paragraph specifying their individual contributions must be provided. The following statements should be used “Conceptualization, I. W. E. A. and V. K.; methodology, N. W. R. and N. M. K.; software, I. W. E. A. and V. K.; validation, V. K., N. W. R., and Y. S.; formal analysis, N. W. R. and V. K.; investigation, I. W. E., P. A. P. and Y. S.; resources, P. A. P., N. W. R. and V. K.; data curation, I. W. E. A. and P. A. P.; writing – original draft preparation, I. W. E. A. and N. M. K.; writing – review and editing, V. K., N. W. R. and Y. S.; visualization, N. M. K. and P. A. P.; supervision, I. W. E. A. and V. K. All authors have read and agreed to the published version of the manuscript.

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