

Success Factors to Promote Innovative Behavior in Organizations

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Abstract: Innovative behavior in organizations have been practiced in many countries but the success factors are not well established in Thailand. The primary objective of this study was to identify and confirm the success factors in Thailand. The sample included 500 peoples who were observed in automotive industry. Confirmatory factor analysis (CFA) indicates a good fit of a eight-factor model to the observed data. The CFA construct revealed eight success factors to promote organization's innovative behavior in Thailand, including Knowledge sharing (KS), Self-efficacy (SE), Problem-solving capacity (PS), Collaborative skill (CS), Innovation culture (IC), Organizational supportiveness (OS), Learning culture (LC), and Executive leadership (EL). The results show that Knowledge sharing, Organizational supportiveness, Innovation culture and Self-efficacy are statistically important as influencer to promote innovative behavior in organizations. This paper proposes guidelines for the promotion of organization's innovative behavior in relation to the Thailand context.

Keywords Knowledge sharing, Self-efficacy, Problem-solving capacity, Collaborative skill, Innovation culture, Organizational supportiveness, Learning culture, and Executive leadership

1. Introduction

At present, the most sustainable strategy to build organizational success is to develop people, nurture creativity, and foster innovation related to organizational capability, which is an important factor in organizational operation outcome (Porter, 1990). Particularly industries in Thailand, where the government has implemented the Thailand 4.0 policy, which has elevated the country to a 'value-based' and 'innovation-driven' economy. This change includes the process of 1) transitioning from producing commodities to inventive products, 2) transforming the country from an industry-led to technology, creativity, and innovation-driven economy, and 3) shifting the emphasis from the manufacturing sector to the service sector (Suwit Maesincee, 2016).

As previously discussed, it can be seen that the critical factor of implementing innovation begins with people who have knowledge, skills, and intellect (Chompukum, 2008) because the innovation implementation was initiated by humans. Innovative behavior is characterized by the use of creativity in the development of new products, services, and processes (Shankar, Acharia, & Baveja, 2009). Thus, innovative behavior is a procedure that will assist in the development of people's knowledge, abilities, comprehension, and positive mindset, resulting in improved individual work performance, as well as, professional and skill development. This innovative work behavior is constantly being studied in the manufacturing, service, and industrial sector, the majority of which are private overseas sectors. The study covers the topics of personal's innovation performance evaluation, innovative work behavior development, and so on. However, no studies have been conducted in Thailand to investigate this model for developing a personal's innovation performance evaluation system based on the human resources approach. This approach excels at developing people to be innovators in order to create new products that can potentially support advanced manufacturing technology, thereby propelling the country's economic development.

The above-mentioned importance of the innovative work behavior prompts the idea of managing human resources, which will impact organizational operation and performance efficiency development, by conducting a confirmatory factor analysis of innovative behavior in organizations. The analysis will demonstrate the degree of importance of the factor, which will be used as a tool to improve employee work performances, thereby stimulating effective innovation for organizations.

2. Aims of the study

This study aimed to identify success factors of innovative behavior in organizations. The results from the empirical study can be used to promote organization's innovative behavior in Thailand.

3. Literature Review

This review focuses on articles that report the success factors of innovative behavior (IB). The selected studies were relevant to promote innovative behavior in organizations. The reviewed articles reveal eight major factors to promote innovative behavior in organizations in Thailand: (1) Knowledge sharing (KS); (2) Self-efficacy (SE) (3) Problem-solving capacity (PS) (4) Collaborative skill (CS) (5) Innovation culture (IC) (6) Organizational supportiveness (OS) (7) Learning culture (LC) and (8) Executive leadership (EL). To begin, the author also perform factor synthesis and confirm the important points of each factor (see Table 1).

Table 1: Success factors of innovative behavior in organizations

Author	Internal factor				External factor			
	Knowledge sharing (KS)	Self-efficacy (SE)	Problem solving ability (PS)	Collaborative skill (CS)	Innovation culture (IC)	Organizational supportiveness (OS)	Learning culture (LC)	Executive leadership (EL)
Abukhait, Bani-Melhem, and Zeffane (2019)	●							
Aghdasi and Tehrani (2011)				●				
Bani-Melhem, Zeffane, and Albaity (2018b)				●				
Bednall, E. Rafferty, Shipton, Sanders, and J. Jackson (2018)	●							●
Birkinshaw (2001)	●			●	●	●	●	
Chatti, Klamma, Jarke, and Naeve (2007)	●						●	
Chen, Lee, Wang, and Tong (2008)				●		●	●	
Duradoni and Di Fabio (2019)		●						
Eppler and Sukowski (2000)	●	●				●	●	
Gavrilova and Andreeva (2012)	●			●				
Hoegl and Schulze (2005a)						●	●	
J., Yli-Luoma, and Naeve (2006)	●	●		●				
Kim, Choi, Sung, and Park (2018)			●					
Lee, Chen, and Tong (2008)			●				●	
Lindlof, Soderberg, and Persson (2012)							●	
Liu and Liu (2012)	●				●	●	●	
Nazir, Qun, Hui, and Shafi (2018)				●			●	●
Nimmolrat, Chakpitak, and Savino (2011)						●		
Park, Song, Yoon, and Kim (2014)				●			●	●
Purc and Laguna (2019)		●						
Reychav, Stein, Weisberg, and Glezer (2012)	●							
Roffeei, Kamarulzaman, and Yusop (2017)		●			●		●	
Schulze (2005)	●	●	●		●	●	●	
Shang, Li, Wu, and Hou (2011)	●			●			●	
Shankar et al. (2009)	●		●			●	●	
Shouxian and Peng (2011)		●	●	●				
Sofianti, Suryadi, Govindaraju, and Prihartono (2010)			●					
Uotila, Melkas, and Harmaakorpi (2005)	●	●			●	●	●	
Vaccaroa, Veloso, and Brusonic (2009)	●		●	●		●		
Wu and Wang (2008)	●			●				
Zhang and Hou (2011)	●			●				●
Total	16	8	7	13	5	10	15	4

Note: Selection was influenced by the most frequent factors, while similar statements were considered important.

3.1 Knowledge sharing (KS),

Knowledge sharing focuses on the transfer of data between individuals or groups to create mutual understanding and new wisdom. The findings from previous study indicate that empowering employees and promoting knowledge sharing are important to their enacting innovative behavior (Abukhait et al., 2019).

3.2 Self-efficacy (SE)

Self-efficacy is an individual's confidence in freely expressing oneself, taking one's own approach to dealing with problems, and not being easily manipulated by other people's opinions. The results from previous study suggested that self-efficacy (SE) is a major determinant of innovation if there is empowerment (Roffeei et al., 2017).

3.3 Problem-solving capacity (PS)

The ability to solve immediate problems while considering multiple methods for adjusting and improving solutions. This includes the ability to analyze the limitations of assigned tasks in order to avoid future problems and to plan necessary backup plans ahead of time. The results of previous study showed that problem solving ability positively influenced innovation behavior (Kim et al., 2018).

3.4 Collaborative skill (CS)

Individuals' participation in working processes, such as participating in a brainstorming session, is essential for achieving ultimate goals. Innovative behavior can be encouraged the organization from an effective collaborative environment among employees which innovative ideas can be discussed freely and openly (Bani-Melhem, Zeffane, & Albaity, 2018a).

3.5 Innovation culture (IC)

Innovation culture refers to an inclusive working environment in which all constructive opinions and criticisms are welcomed to encourage employees to take initiative, as well as to foster trust and freedom in the workplace. The results from previous study found that innovation culture positively and significantly influences innovative behaviour (Roffeei et al., 2017).

3.6 Organizational supportiveness (OS)

The organizational design provides a supportive working operation and environment to encourage new ideas and promote the importance and recognition of creative thinking and innovation in the workplace (Hoegl & Schulze, 2005b).

3.7 Learning culture (LC)

Learning culture is a culture that encourages the exchange of knowledge in order to constantly improve the skills and intellects of individuals at all levels, as well as to support the development of organizational training. Nazir et al. (2018) said that learning culture influences employee innovative behavior. However it has no impact on affective commitment.

3.8 Executive leadership (EL)

Executive leadership is the ability to build trust and support from individuals involved in the achievement of the organization's goals through management, transformation, and creativity. Previous results of reveal that there is relationship between transformational leadership and innovative behaviour (Nazir et al., 2018).

3.9 Innovative behavior

The behaviors that exhibit individual's attempts to generate new ideas, whether to create new products, services, or working procedures. The behaviors include solving problems, improving, developing, and adding value or practicality to existing materials.

4. Methodology

4.1 Participants

Participants were selected by using multistage sampling method. A sample of 500 people in automotive industry was selected. Multistage sampling method was selected as the hierarchical structure from business units. A different level was randomly sampled from a name list of companies based on department of specific business units. Hair, Black, Babin, and Anderson (2014) suggested the use of confirmatory analysis (CFA) to determine

sample size. The heuristic requires ten times the construct with the number of structural paths. This method indicated $10 \times 28 = 280$ as an adequate sample size. In this study using CFA, the first heuristic was considered. The usable sample size of 500 exceeded the suggested sample size of 280, so was determined to be adequate by the power calculations.

4.2 Procedure

The method research with quantitative approaches was selected. Quantitative survey were proceeded to examine the success factors relating to innovative behavior in organizations in Thailand. A literature review was conducted to explore the success factors relating to innovative behavior in organizations by selecting systematic reviews. A survey questionnaire was then created, containing 28 questions concerning the perceived importance level of the success factors. The questionnaire items were rated using a five-point Likert scale, ranging from 1 for the least important to 5 for the most important factors relating to: (1) Knowledge sharing (KS); (2) Self-efficacy (SE) (3) Problem-solving capacity (PS) (4) Collaborative skill (CS) (5) Innovation culture (IC) (6) Organizational supportiveness (OS) (7) Learning culture (LC) and (8) Executive leadership (EL). Confirmatory factor analysis was conducted using LISREL to examine the structure of the contextual factors (CFA model). Finally, a guideline for the promotion of innovative behavior in organizations was developed and proposed.

5. Results

5.1 Confirmatory Factor Analysis

Confirmatory factor analysis following the maximum-likelihood estimation method was conducted using LISREL (linear structural relations) to confirm the factor structure. Good model fit was evaluated by the Chi-square statistic which compared the tested model and the independent model with the saturated model (χ^2/df), comparative fit indexes (CFI), goodness of fit index (GFI), adjusted goodness of fit index (AGFI) root mean square error of approximation (RMSEA) and standardized root mean square residual (SRMR). According to Hair, Black, Babin, Anderson, and Tatham (2014) and Jöreskog and Sörbom (1996), χ^2/df values less than 2.00, CFI values more than 0.95, GFI values more than 0.95, AGFI values more than 0.90, RMSEA values less than 0.05 and SRMR values less than 0.05 indicate a good-fitting model. Results of fit indexes are provided in Table 2. The study model showed acceptable values ($\chi^2/df = 1.140$, CFI = 1.000, GFI = 0.960, AGFI = 0.940, RMSEA = 0.017, SRMR = 0.082) which indicated good fit to the observed data.

Table 2: Fit indexes for the model.

Fit indexes	Level of acceptable fit	Model	Result
χ^2/df	< 2.00	1.140	Pass
CFI	> 0.95	1.000	Pass
GFI	> 0.95	0.960	Pass
AGFI	> 0.90	0.940	Pass
RMSEA	< 0.05	0.017	Pass
SRMR	< 0.05	0.082	Pass

The CFA results confirm that the four-factor model was appropriate to promote innovative behavior in organizations in Thailand.

Figure 1 presents the CFA model with a eight-factor structure. Factor loadings ranged from 0.16 (Collaborative skill (CS) and Learning culture (LC)) to 0.99 (Knowledge sharing (KS)). The “Knowledge sharing (KS)” factor was the best indicator to promote innovative behavior in organizations, with “Organizational supportiveness (OS)” as the second most influential factor. Innovation culture (IC) was the third indicator while Collaborative skill (CS) and Learning culture (LC) showed less ability to promote innovative behavior in organizations.

The data confirmed the eight-factor model as a good fit to explain the observed data collected from survey. Among the factors, Knowledge sharing (KS) was more influential than other factors, while Collaborative skill (CS) and Learning culture (LC) showed less ability to promote innovative behavior in organizations.

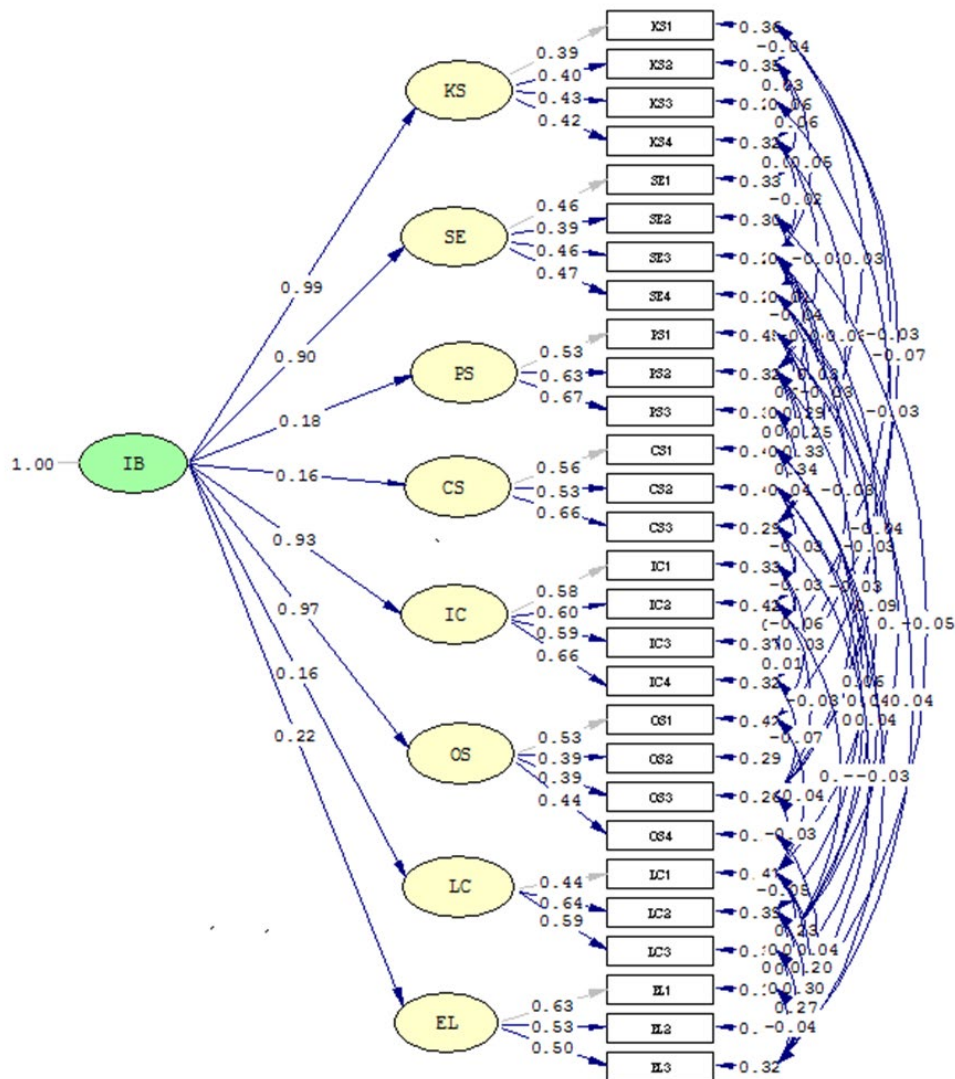


Figure 1: CFA model showing how the eight factors to promote innovative behavior in organizations
Chi-Square =313.45, df = 275, P-value = 0.05513, RMSEA = 0.017

6. Discussion and conclusion

The findings of this research can be adopted and practiced in Thai company to promote innovative behavior in organizations. This study confirmed that all proposed factors of innovative behavior are important in Thailand context and the results of this research are consistent with prior researches conducted in other countries (Collin, Lemmetty, & Riivari, 2020; Walker & Derbyshire, 2020) as well as mentioned in table 1. The internal factors contain knowledge sharing (KS), self-efficacy (SE), problem-solving capacity (PS), collaborative skill (CS) and the external factors contain innovation culture (IC), organizational supportiveness (OS), learning culture (LC), and executive leadership (EL). With these, the finding is related to literature review with innovative behaviour need to have internal and external factors for people development (Shi & Wu, 2017). The key emerging issues identified in this paper are that some factors which impact on innovative behaviour are more important than others. This paper has also drawn attention to the need to understand the size effects on the inter-factor relationships to innovative behaviour on an organisations in order to manage innovation properly.

Knowledge sharing ($\beta=0.99$), Organizational supportiveness ($\beta=0.97$), Innovation culture ($\beta=0.93$) and Self-efficacy ($\beta=0.90$) are found statistically important as influencer of innovative behavior. Therefore, both of internal factors named knowledge sharing with self-efficacy and external factors named organizational supportiveness with innovation culture can shape innovative behavior for people which are influent to them on how to promote their innovative behavior in organization. In practice, company can leverage the benefits of research finding by

developing the employee assessment system for innovative behavior. The assessment system can provide opportunities of staff recruitment and staff development.

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