

## Creative Self-Efficacy, Innovative Work Behaviour and Job Performance Among Selected Manufacturing Employees

**Nor Hazana Abdullah\***

Faculty of Technology Management and Business Universiti Tun Hussein Onn Malaysia, Malaysia

**Eta Wahab**

Faculty of Technology Management and Business Universiti Tun Hussein Onn Malaysia, Malaysia

**Alina Shamsuddin**

Faculty of Technology Management and Business Universiti Tun Hussein Onn Malaysia, Malaysia

### Abstract

Organizations worldwide strive to achieve superior organizational performance through innovativeness. Consequently, job performance and innovative work behaviour are the pillars of organizational performance. Although the empirical evidence on the effect of creative self-efficacy (CSE) on innovative work behaviour (IWB) and job performance (JP) is consistent, there is lack of study on the direct relationship between IWB and JP. Therefore, this study explores the effect of creative self-efficacy (CSE) on innovative work behaviour (IWB) and job performance (JP) and the relationship between IWB and JP. This study used multilevel data where CSE and IWB were self-assessed by 186 employees while their respective JPs were assessed by their immediate superiors. Partial Least Square SEM was used to assess the measurement models and the path analysis. CSE is found to be a significant predictor of both IWB and JP while there is no significant relationship between IWB and JP. This finding has significant managerial implication in the context of human resource management. Integrated HR strategies are required to ensure that both JP and IWB could work in tandem by improving employees' creative self-efficacy.

**Keywords:** Creative self-efficacy; Innovative work behaviour; Creativity; Innovation; job performance.



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### 1. Introduction

Campbell and Wiernik (2015), claimed that a nation's economy is driven by cumulative individual job performance in each organization. Job performance (JP) is typically conceptualized as an action and behaviour that are under individuals' control which contributed to the accomplishment of organizational goals (Rotundo and Sackett, 2002). The improvement of employees' performance is one of the crucial factors that can affect organization's overall productivity and development (Khan *et al.*, 2014). This improvement could only be possible if the employees are being innovative (Dorner, 2012). In fact, organizational studies have provided empirical support that organizational innovativeness would lead to superior organizational performance (Gunday *et al.*, 2011; Subramanian and Nilakanta, 1996). This is especially crucial in the existing dynamic business environment where technologies and innovations have become the driving force for organizational sustainability and competitiveness (García-Sánchez *et al.*, 2018). Notably, Getz and Robinson (2003) discovered that employees' innovativeness contribute for approximately 80% of new ideas. However, studies on the direct link between innovative work behaviour (IWB) and job performance have been inconclusive. Mumford *et al.* (2002), claimed that innovative work behaviour and job performance are conceptually different from each other especially for those who worked in innovative sectors. Leong and Rasli (2014) further claimed that employees' job descriptions often disregard personal innovative or creative contributions which in turn would not motivate them to generate and promote new ideas for job improvements.

On the hand, previous studies have showed that creative self-efficacy (CSE) has positive impact on both innovative work behaviour and job performance. Creative self-efficacy refers to the belief that one has the knowledge and skills to produce innovative outcomes (Tierney and Farmer, 2002;2011) and it appears to deliver such force in the difficult task (Choi, 2004; Gong *et al.*, 2009; Tierney and Farmer, 2002). Thus, this study attempts to elucidate whether creative self-efficacy affect both innovative work behaviour and job performance and whether innovative work behaviour could influence job performance through creative self-efficacy.

By examining these issues, this study makes significant theoretical and practical contributions to the literature. Theoretically, understanding and exploring the dynamics of CSE-IWB-JP could provide the missing link on how innovative work behaviour could directly enhance employees' performance. At present, most studies (for example Muhtadi *et al.* (2013) have been focusing on innovative work behaviour and job performance as separate entities which undermine their importance. This also has led to fragmented human resource management strategies in aligning the employees' performance and reward system. As most organizations have been focusing on improving employees' performance, the shift of attention in academic literatures on innovative work behaviour without clear linkage to job performance is indeed paradoxical. Moreover, this study could improve our understanding on the

\*Corresponding Author

effects of creative self-efficacy on both IWB and JP. This has important managerial implications as selection tools and training programs could be devised to improve employees' creative self-efficacy and organizational supports could be strengthened.

## 2. Literature Review

Majority of researchers concurred that job performance is essentially a multi-dimensional construct (Campbell, 1990; Sonnentag *et al.*, 2008). Campbell (1990), proposed eight components of job performance which include "job-specific task proficiency, non-job-specific task proficiency, written and oral communication task proficiency, demonstration of effort, maintenance of personal discipline, facilitation of peer and team performance, supervision or leadership, and management or administration". Campbell *et al.* (1996), in his subsequent studies delineated these components into two broad facets of job performance: namely 'job-specific' which consists of technical and specific competencies and 'non-job-specific' which refers to broad competencies required across jobs.

Very similar with Campbell's job specific versus nonspecific competencies, Borman and Motowidlo (1993), categorized job performance into task and contextual performance. Task performance refers to an individual's expertise and activities that contributed to the organization's technical core while contextual performance refers to actions that enables the employees to achieve the organizational goals including decisions to make improvements (Sonnentag and Frese, 2005b). The innovative work behaviour could occur under both task performance and contextual performance as employees' inclination to generate ideas, promote solutions, and implement improvements are applicable in both instances.

Definitions of innovative work behaviour, despite slight variations, maintain similar substances which regard IWB as multi-dimensional construct that centred on either process of ideas generation and implementation (Carmeli *et al.*, 2006; De and Den, 2008; Dorenbosch *et al.*, 2005) or creation of product, service, idea, procedure, or process (Spreitzer, 1995). Yuan (2005) cite some examples of innovative work behaviour which include inventing novel technologies and techniques, recommending different ways to achieve goals, proposing work tasks alternatives, and hastening the implementation of changes (Yuan, 2005).

Existing literatures on variables affecting both innovative work behaviour and job performance have been plentiful and overlapping. For example, leadership styles (Miao *et al.*, 2018; Tse and Chiu, 2014); organizational culture (e.g. Naranjo-Valencia *et al.*, 2017; Shahzad, 2014), organizational learning (e.g. Jiménez-Jiménez and Sanz-Valle, 2011; Lin and Lee, 2017) are found to be significant predictors of both job performance and innovative behaviour. These empirical supports imply the importance of both constructs for organizational performance and competitiveness. Similarly, self-efficacy have been claimed to influence both IWB and JP. According to Bandura's Social Cognitive Theory, self-efficacy represents the core of cognitive processes that affect human behaviours at workplaces. It refers to individual beliefs about ones capabilities while creative self-efficacy focus on "the belief or self-assurance that reflects one's self-confidence in his or her abilities to produce creative outcomes" (Tierney and Farmer, 2002). Studies on the effect of CSE on IWB and JP also revealed consistent findings on its predictive influence (Kim and Park, 2015; Newman *et al.*, 2018a; Peng, 2016).

### 2.1. Creative Self-Efficacy and Innovative Work Behaviour

As mentioned earlier, Social Cognitive Theory provides a theoretical linkage between CSE and IWB. Creative self-efficacy elicits one's initial decision to engage in innovative work behaviour, their degree of persistence and effort while facing difficulties, and their optimal use of capabilities (Dorner, 2012). Employees with high creative self-efficacy tend to display more IWB as they are confident on their abilities (knowledge and skills) to generate ideas and put those ideas to work (Jiang and Gu, 2017). They would then put in extra efforts to seek supports for new ideas, create prototypes and devote time on creative cognitive processes in problem recognition and solutions. Moreover, employees with high creative self-efficacy would perceive themselves as capable and better equipped to address arising challenges in innovation processes (Richter *et al.*, 2012). A study by Dorner (2012) revealed that employees with innovative self-efficacy are confident when engaging various innovation activities and as a result, they tend to demonstrate IWB. Conversely, employees with low innovative self-efficacy believe that innovative work behaviour are beyond their abilities and tend avoid them. Hsu *et al.* (2011) found that besides creative self-efficacy, optimism play an important role when facing uncertainties and failures in the innovation development.

Although some argue that creative self-efficacy is particularly critical for idea generation (one of IWM components), (Ng and Lucianetti, 2015) maintain that innovative behaviour also involves idea dissemination and implementation. Employees demonstrates increasing amounts of these behaviours when the individuals are progressively confident in their abilities to be creative, persuade others, and successfully handle change (Ng and Lucianetti, 2015).

Several studies provide the link between creative self-efficacy with IWB through mediators such as leadership styles Newman *et al.* (2018b), Peng (2016) and innovative organizational culture (Kim and Park, 2015) while there several others that focused on multitude of effects of several variables such as Hsu *et al.* (2011), and Dorner (2012).

Notably, substantial empirical studies of creative self-efficacy and innovative work behaviour revealed positive significant relationship except for Lemons (2010). He found that 21% of participating student sample reported high levels of creative self-efficacy but low levels of creative behaviour. However, Lemons (2010) used a self-reported open-ended survey in his study, which might not be standardized. Based on these empirical findings, it is hypothesized that creative self-efficacy positively affects innovative work behaviour (H<sub>1</sub>).

## 2.2. Creative Self-Efficacy and Job Performance

Self-efficacy has been claimed to improve employee's performance (Carter *et al.*, 2016). However, the influence of creative self-efficacy on job performance has been limited. Hypothesis on their relationship is based on conventional wisdom that creativity is key ingredient for better performance (Gong *et al.*, 2004). In fact, Oldham and Cummings (1996) claimed that supervisor-rated job performance is influenced by employee's creative ideas in the forms of new products, services, or improvements in current procedures or processes. Discovery of efficient and effective alternative solutions for carrying out tasks could also enhance the creation of new ideas (Zhou and Shalley, 2003). Janssen *et al.* (2004) further argue that individual's ability to adapt well to the job by making changes to themselves or fit with the work environment would improve performance. This means that employees who are innovative and creative tend to perform better by adapting to their works. Jiménez-Jiménez and Sanz-Valle (2011); (Kickul and Gundry, 2002) found that employees who take personal initiatives and new ideas contribute directly to effective performance in organizations. Accordingly, this study hypothesized that creative self-efficacy would have similar effect on job performance ( $H_2$ ).

## 2.3. Innovative Work Behaviour and Job Performance

Majority of studies have been focusing on IWB and job performance as desirable organizational outcomes (e.g. Muhtadi *et al.* (2013). Such understanding is paradoxical knowing that one's superior performance is contingent to innovative work behaviour. Furthermore, focusing on IWB and JP separately would result in fragmented human resource strategies. Theory of Job Demand argues that employees either improve their competencies (skills and knowledge) or modify their tasks in terms of goals, working procedures to cope with the job demands. Those modifications require the employees to be creative and innovative in order to achieve their task performance. (Yuan and Woodman, 2010) explained that expected positive job performance and perceived image lead to IWB. Employees incline to demonstrate IWB only when they perceive such behaviour would improve their performance and boost their images. In this regard, innovative work behaviour is indispensable for superior job performance which leads to the third hypothesis ( $H_3$ ). This hypothesis is supported by previous studies done by Kim and Koo (2017) and Balkar (2015).

## 3. Methodology

The current study employed a cross-sectional survey design using convenience sampling for selecting willing manufacturing companies. Only eight manufacturing companies agreed to participate with 186 employees agreed to answer the questionnaires method.

The questionnaires comprises four sections of demographic details, creative self-efficacy measures adopted Dorner (2012), innovative work behaviors by De and Den (2008) and job performance by Wayne and Liden (1995). Responses were measured based on 5-points scale (ranging from 1 for strongly disagree to 5 for strongly agree). There were a total of ten items for creative-self efficacy, 10 items for innovative work behaviour and seven items for job performance. Adoption of these scales was based on validated studies done previously by respective researchers.

The demographic data was analysed descriptively using the IBM SPSS Statistics Version 23.0 while testing of hypotheses were done using the Smart Partial Least Square (PLS) 3.0 Software (Ringle *et al.*, 2015). The use of Smart PLS was desirable as this study attempted to simultaneously examine the impacts of creative self-efficacy and innovative work behaviour on job performance.

## 4. Analysis and Findings

In terms of demographic details, majority of the respondents were males (57%), 21 to 30 years old (38.2%), and had been working between 1 to 5 years (46.8%). This indicates the majority of respondents were younger composition of workforce with income earned between Malaysian Ringgit 2,000.00 to 2,999.00. Most respondents had high school education (41.9%) followed with 28.5% had diploma, 24.7% had bachelor degree and 2.7% with Master.

When analysing the measurement model, it was found that were several items loading below 0.5 which were subsequently removed (3 items of IWB, 4 items from JP) (Joseph *et al.*, 2010). The remaining items' average construct validity with significant loading value ranged from 0.704 to 0.882. Table 1 shows the results of convergent validity in forms of loading, average variance extracted (AVE) and composite reliability (CR). AVE values ranged from 0.542 to 0.661 indicating an adequate convergent validity while the CR values ranged from 0.780 to 0.951.

**Table-1.** Convergent Validity

Variables	Items	Loadings	AVE	CR
Innovative	CHAMP1	0.704	0.596	0.912
Work	CHAMP2	0.767		
Behavior	GEN2	0.781		
	GEN3	0.764		
	IMPL1	0.761		
	IMPL2	0.774		
	IMPL3	0.849		
Creative	CSE_1	0.835	0.661	0.951
Self- efficacy	CSE_2	0.785		
	CSE_3	0.882		
	ISE1	0.854		
	ISE2	0.865		
	ISE3	0.808		
	ISE4	0.828		
	ISE5	0.755		
	ISE6	0.763		
	ISE7	0.744		
Job	JP_3	0.759	0.542	0.780
Performance	JP_5	0.710		
	JP_7	0.739		

Discriminant validity is assessed by comparing the square root of AVE with latent variable correlations. Acceptable discriminant is observed when the square root of the AVE exceeded the values of all correlations (Chin, 2010) as shown in Table 2. Moreover, values for HTMT were all below 0.85 which indicated discriminant validity of all the three constructs (Henseler *et al.*, 2014).

**Table-2.** Discriminant Validity

Variables	1	2	3
1. Creative Self Efficacy	<b>0.813</b>		
2. Innovative Work Behavior	0.807	<b>0.772</b>	
3. Job Performance	0.395	0.269	<b>0.736</b>

The  $R^2$  value was 0.163, which suggested that 16.3% of variance in job performance may be explained by creative self-efficacy and innovative work behaviour. Self-efficacy was positively related to innovative work behaviour ( $\beta = 0.510$ ,  $p < 0.05$ ) and innovative work behaviour ( $\beta = 0.807$ ,  $p < 0.001$ ) while there was no significant relationship between innovative work behaviour and job performance. Thus, Only  $H_2$  and  $H_3$  were supported.

**Table-3.** Path Coefficient and Hypotheses Testing

Hypothesis	Relationship	Coefficient	t-Value	Supported
$H_1$	IWB - JP	-0.143	0.605	No
$H_2$	CSE - JP	0.510	2.242*	Yes
$H_3$	CSE - IWB	0.807	19.969**	Yes

\*\* $p < 0.001$ ; \* $p < 0.05$

## 5. Discussion and Conclusions

The results indicate that creative self-efficacy is predictive of both innovative work behaviour and job performance which are indeed consistent with previous studies. Theoretically, this result adds to the existing corpus of knowledge which highlights the importance of CSE that transcends the IWB alone. Moreover, this study acknowledge that creative self-efficacy is an important attribute the employers should be focusing on for selection and hiring process and to be enhanced through training among existing employees. Haines-Gadd (2015) found that Theory of Inventive Problem Solving (TRIZ) training could increase levels of creative self-efficacy of participants and certain job-relevant capabilities are also associated with innovative work behaviour.

The insignificant relationship between innovative work behaviour and job performance could be attributed to the fact that measurement of job performance has failed to incorporate measures related to innovativeness and creativity. As revealed by a study done by Abbas and Raja (2015), innovative behaviour is part of organizational citizenship behavior (OCB) rather than task performance alone. This disparity needs to be scrutinized if organizations would like to improve their innovativeness. Furthermore, previous studies (e.g. Kim and Koo (2017)) used self-reported measure which might be self-inflated. As mentioned earlier, employees who tend to display IWB usually perform better as they are more likely to find solutions to their performance problems and act on them. Another aspect that need to be highlighted is that job description of the employees do not include innovative work behaviour (Leong and Rasli, 2014). This will lead to ineffective and inaccurate performance appraisal which is not aligned with reward system. Contextual factor might need to be considered too as participating respondents were



manufacturing employees who are not in creative or innovative industry. Therefore, creativity and innovativeness have not been emphasized especially when job specialization is high as in the manufacturing companies.

Future research could replicate this study in a broader context as multi-level assessments are very difficult to achieve. Rather than focusing on task performance, inclusion of citizenship performance might need to be considered. This is in line with Poropat's (Poropat, 2002) finding and also (Sonnetag and Frese, 2005a). In conclusion, this study has substantiated previous empirical evidence on IWB with several theoretical implications as theory on IWB has been absent.

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