

Trang, Pham Thu

Article

How do work characteristics affect job performance? An investigation in Vietnam

Cogent Business & Management

Provided in Cooperation with:

Taylor & Francis Group

Suggested Citation: Trang, Pham Thu (2022) : How do work characteristics affect job performance? An investigation in Vietnam, Cogent Business & Management, ISSN 2331-1975, Taylor & Francis, Abingdon, Vol. 9, Iss. 1, pp. 1-16,
<https://doi.org/10.1080/23311975.2022.2116801>

This Version is available at:

<https://hdl.handle.net/10419/289228>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>

How do work characteristics affect job performance? An investigation in Vietnam

Pham Thu Trang

To cite this article: Pham Thu Trang (2022) How do work characteristics affect job performance? An investigation in Vietnam, Cogent Business & Management, 9:1, 2116801, DOI: [10.1080/23311975.2022.2116801](https://doi.org/10.1080/23311975.2022.2116801)

To link to this article: <https://doi.org/10.1080/23311975.2022.2116801>



© 2022 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.



Published online: 04 Sep 2022.



Submit your article to this journal [↗](#)



Article views: 2719



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 1 View citing articles [↗](#)



Received: 07 June 2021
Accepted: 19 August 2022

*Corresponding author: Pham Thu Trang, Faculty of Business Administration, Banking Academy of Vietnam, 10063, Vietnam
E-mail: trangpt@hvn.edu.vn

Reviewing editor:
Richard Wickramaratne,
Department of Human Resource Management, University of Peradeniya, Kandy, Sri Lanka

Additional information is available at the end of the article

MANAGEMENT | RESEARCH ARTICLE

How do work characteristics affect job performance? An investigation in Vietnam

Pham Thu Trang^{1*}

Abstract: This study aims to examine how work characteristics influence employee performance through the mediating role of job-based psychological ownership in a developing country. The research employed 432 Vietnamese employees from 10 manufactories located in three regions of Vietnam: The North, the Middle and the South of Vietnam. The results reveal that job-based psychological ownership mediates four relationships between task identity, task significance, autonomy, feedback, and in-role performance. Unexpectedly, skill variety, the remaining work characteristic considered here, does not impact job-based psychological ownership, meaning that here the mediating role of job-based psychological ownership does not exist. This paper concludes with discussions and recommendations for Vietnamese businesses.

Subjects: Human Resource Management; Work & Organizational Psychology; Personnel Selection, Assessment, and Human Resource Management; Human Resource Management

Keywords: work characteristics; job-based psychological ownership; in-role performance; human capital; structural equation modeling; developing economy

1. Introduction

Vietnam is a developing country where labour productivity plays a critical role in gaining competitive advantages. However, Vietnam is one of the least productive nations in Asia (Asian Productivity Organization, 2020, 2021). In 2019, for example, Vietnam was classed as having one of the lowest rates of labour productivity in Asia, just above Cambodia, Nepal, and Bangladesh. Although Vietnam's labour productivity increased significantly in 2020, it remained in the group of least productive Asian nations (Asian Productivity Organization, 2021).

Scholars and practitioners are concerned about psychological ownership because it predicts employee performance (Atatsi et al., 2021; O'driscoll et al., 2006; Peng & Pierce, 2015; Pierce et al., 2003, 2009; Pierce & Rodgers, 2004; Van Dyne & Pierce, 2004), productivity (Pierce & Rodgers, 2004) and financial performance (Wagner et al., 2003). Psychological ownership refers to the state in which individuals feel as if the target is owned partly or fully owned by them (Pierce et al., 2001). Even though there are various psychological ownership targets (Pierce et al., 2003), scholars have mainly concentrated on organisation- and job-based ownership (Dawkins et al., 2017).

Compared with organisation-based psychological ownership, job-based psychological ownership has received less attention (Dawkins et al., 2017), despite the fact that job-based psychological ownership is a determinant of positive outcomes such as in-role performance, organisational citizenship behaviour and proactive work behaviour (Wang et al., 2019). Among the few studies on job-based psychological ownership, the predictors were found to include autonomy (Mayhew et al., 2007), job complexity (Brown, Pierce, et al., 2014), leadership (Bernhard & O'Driscoll, 2011), the structure of the work environment (Pierce et al., 2004), employees' spiritual and emotional

intelligence (Kaur et al., 2013) and job engagement (Wang et al., 2019). So far, to the author's best knowledge, there has been no research on how each work characteristic affects in-role performance through job-based psychological ownership. This study sets the foundation for job design suggestions for Vietnamese companies, where the use of job specialisation is prevalent.

The work characteristics proposed by Hackman and Oldham (1975) comprise skill variety, task identity, task significance, autonomy, and feedback. Previous researchers have considered job characteristics as a composite factor to explore the relationship between job characteristics with employee performance or they have sporadically examined work characteristics when testing the relationship between job characteristics and psychological ownership (Brown et al., 2014; Mayhew et al., 2007; O'driscoll et al., 2006). Moreover, these relationships were examined mostly in Western countries. Brown et al. (2014) employed 424 US participants in packaging companies, while Mayhew et al. (2007) used a sample of 68 employees in two accounting firms in Australia. O'driscoll et al. (2006) explored the effect of the work environment on employee attitude and behaviour through job-based psychological ownership, where the environment in question contained technology routinisation, job autonomy, and participation in decision making in the context of New Zealand.

This study contributes to the literature on work characteristics and psychological ownership in the following three aspects. First, this study provides an insightful understanding of how each work characteristic affects job performance through the intervention of job-based psychological ownership. Because companies have limited resources, it is challenging for them to follow a list of recommendations inferred from previous research that considers work characteristics as a composite factor to examine the relationship between job characteristics with employee performance. The research findings show that only four out of five job characteristics proposed by Hackman and Oldham (1975) affect psychological ownership, but that they have different degrees of impact. This finding implies that businesses should choose the most effective solutions that enhance the most influential factors. Moreover, this study confirms that the structure of job characteristics is 5 separate factors with the Vietnamese data, hence, it is not correct to examine work characteristics as a summated factor. Even though Hackman and Oldham (1975) claim that work characteristics are five separate variables, Dunham et al. (1977) contend that in different samples, the structure of work characteristics might comprise two, three, four, or five distinct factors. Finally, this study contributes to the literature on psychological ownership because it was conducted in Vietnam, an Asian developing country. Hofstede et al. (2005) claim that people from different cultures behave differently. Previous studies have examined Western samples such as those in the US (Brown et al., 2014), Australia (Mayhew et al., 2007), and New Zealand (O'driscoll et al., 2006). Mayhew et al. (2007) recommend research in Asian countries for further generalisation of results.

The rest of this paper is structured as follows. The second part presents a literature review on psychological ownership theory and hypotheses. Then the research method is described in the third section. Section 4 analyses the research findings and section 5 presents a discussion of the research findings and makes suggestions for managers.

2. Literature review

2.1. The theory of psychological ownership

The theory of psychological ownership is proposed by Pierce et al. (2001). This theory was developed to explain the issue that a series of solutions aiming to improve employee legal ownership do not lead to superior performance. Pierce et al. (1991) argue that only when these solutions are effective does psychological ownership exist. This theory posits that psychological ownership is both nature and nurture. Also, psychological ownership theorists assume that: (1) the feeling of ownership is a part of the human condition; (2) people develop feelings of ownership towards a variety of objects, both material and immaterial; and (3) feelings of ownership have important behavioural, emotional, and psychological consequences.

Based on a needs-driven perspective, Pierce et al. (2001) propose that psychological possessions satisfy three basic needs: efficiency and effectiveness, self-identity, and “having a place”. It is common sense that being efficacious is an innate need of human beings. Ownership, along with its rights, allows people to explore and alter the environment. The feeling of “being in control” makes people feel pleasure and efficacy. These feelings promote the emergence of psychological ownership. Moreover, people have a need for self-identity. In the process of interacting with possessions, people consider the possession as an extension of the self (e.g., my house, my car). People define themselves in relation to their possessions and they introduce their “new selves” to those around them. It is for this reason that they develop the feeling of ownership. Finally, people need a home to live in. When we inhabit something, it is not only an object but also a part of us. It is because of this feeling that people develop psychological ownership.

In answer to the question “How can we promote psychological ownership?” Pierce et al. (2001) argue that there are three routes to psychological possession: controlling the object, intimately knowing the object, and dedicating oneself to the object. First, people might feel that the object is theirs when they feel that they can control it. The more people control an object, the more they develop a sense of ownership. Additionally, when an individual thoroughly understands the target, he/she can develop a feeling of possession towards the object. When people associate the object with possession, they acquire information and knowledge about the object. The more information and knowledge they have, the more they come to intimately understand the object, and the higher the feeling of association and ownership towards the object. Finally, when someone is devoted to the object, he/she feels that it is his/hers. Since people have a sense of ownership about the things they create, the more we invest our emotion and energy in the object, the more we feel the object is an extension of the self. This is when the feeling of ownership emerges.

The outcomes of the feeling of possession are both positive and negative (Pierce et al., 2001). On the one hand, when a person feels that the target is theirs, they could expect to have rights to the target; at the same time, they assume their responsibility (Pierce et al., 1991). When individuals feel responsible for the object (e.g., an organisation or job), they tend to enhance their sense of responsibility for work outputs (Dipboye, 1977; Korman, 1970). The outcomes of developing a sense of responsibility include stewardship, citizenship behaviour, personal sacrifice, and the assumption of risk on behalf of the target (Pierce et al., 2001). On the other hand, psychological ownership might lead to deviant behaviour. An example of such behaviour is when an employee refuses to share the target of the feelings of possession (tools, machines, work-spaces) with their co-workers.

A number of studies have tested and confirmed the findings of this theory (Asatryan & Oh, 2008; Ashkanasy et al., 2014; Baer & Brown, 2012; Bernhard & O’Driscoll, 2011; Brown et al., 2014; Chiu et al., 2007; Ramos et al., 2014; Van Dyne & Pierce, 2004). Psychological ownership leads to positive outcomes such as organisational citizenship behaviours (O’driscoll et al., 2006; Pierce et al., 2018; Van Dyne & Pierce, 2004), leverage of employee performance (Brown et al., 2014; Md-Sidin et al., 2009; Van Dyne & Pierce, 2004), stewardship behaviour (Henssen et al., 2014), knowledge sharing (Han et al., 2010), and reduction in deviant behaviours (Avey et al., 2009). There are a number of studies that explain the routes to psychological ownership (Brown et al., 2014; Chi & Han, 2008; Chiu et al., 2007; Van Dyne & Pierce, 2004). Collecting data from three field studies, Van Dyne and Pierce (2004) suggest that psychological ownership predicts employee performance and organisational citizenship behaviours. Henssen et al. (2014) suggest that psychological ownership relates to stewardship behaviours. By investigating 387 R&D engineers in Taiwan, Chi and Han (2008) claim that all three forms of formal ownership (i.e., employee participation in profit-sharing, decision making, and access to business information) are positively related to employees’ psychological ownership of the organisation.

2.2. Hypotheses and research model

2.2.1. Skill variety and job-based psychological ownership

According to the theory of psychological ownership, one of the three ways to promote psychological ownership is dedication to the object. Skill variety promotes job-based psychological ownership through the route of self-investment in the job. Skill variety refers to the extent to which a job requires a variety of activities, in relation to the use of a number of different skills and talents (Hackman & Oldham, 1975). If a job requires various skills, individuals need to utilise a broad range of skills and talents (Pierce et al., 2009). As a result, employees need to spend more time, effort and affection on completing that job than on simple tasks (Li et al., 2020). Thus, the more diverse skills a job requires, the more employees develop job-based psychological ownership.

Brown et al. (2014) suggest that work requiring a variety of skills, which is a part of the job complexity derived from Hackman and Oldham (1975), positively impacts psychological ownership.

Therefore, I hypothesise that:

Hypothesis 1 (H_1): Skill variety has a positive relationship with job-based psychological ownership.

2.2.2. Task identity and job-based psychological ownership

Pierce et al. (2001) propose that intimately understanding the object and dedicating oneself to the object are two paths to psychological possession. Task identity influences job-based psychological ownership through the above two paths. Task identity is defined as the extent to which the job requires the completion of the “whole” or a part of the work that can be determined, or requests to perform a job from start to finish with visible results (Hackman & Oldham, 1975). When an individual is assigned a whole work, they have the opportunity to become familiar with all the tasks included in that work, and they know the order of tasks and links between tasks. Therefore, compared to individuals doing individual tasks, those individuals assigned to the whole work understand that job better. In addition, when the individual does the whole work from the starting point to the finishing point, they spend more time thinking about the work, for example, what needs to be done and the time required to do each individual task. Spending more time at work means dedicating more to work. Therefore, task identification has a positive effect on job-based psychological ownership.

There are numerous studies testing and conforming the relationship between task identity and understanding the work and job involvement (Chen & Chiu, 2009; Pierce et al., 2009). Pierce et al. (2009) propose that task identity predicts job-based psychological ownership. In an empirical study, Brown et al. (2014) suggest that task identity (as a part of job complexity) positively affects job-based psychological ownership.

Therefore, I hypothesise that:

Hypothesis 2 (H_2): Task identity has a positive relationship with job-based psychological ownership.

2.2.3. Task significance and job-based psychological ownership

The task significance is defined as the extent to which the task has a considerable impact on the life or work of others who are in the organisation or the external environment (Hackman & Oldham, 1975). The significance of the task affects psychological ownership through the route of self-investment in the work. When doing work with a high significance level, bearing in mind that the results of this work can positively and/or negatively affect the lives of others, an employee will work more carefully and more diligently. They will tend to devote a great deal of energy, time and effort to these tasks (Chen & Chiu, 2009). The more employees devote themselves to the tasks, the

stronger the feeling of possession of the tasks (Brown et al., 2014). Hence, task significance promotes job-based psychological ownership.

Therefore, I hypothesise that:

Hypothesis 3 (H₃): Task significance has a positive relationship with job-based psychological ownership.

2.2.4. Autonomy and job-based psychological ownership

Autonomy refers to the extent to which the job provides significant freedom, independence and discretion to the employee with regard to scheduling the work and determining the procedures required to perform the job (Hackman & Oldham, 1975). Job autonomy allows employees to make decisions related to issues such as deadlines, methods, tools, etc., which promotes job control (Pierce et al., 2009). As is suggested by Pierce et al. (2001), job control leads to a feeling of possession of the job; hence, job autonomy predicts job-based psychological ownership. Moreover, job autonomy leads to more dedication and participation at work (Chen & Chiu, 2009; Gardell, 1977), which results in a feeling of possession towards the job. Therefore, job autonomy positively affects job-based psychological ownership.

Empirical research suggests that job autonomy impacts job-based psychological ownership (Brown et al., 2014; Mayhew et al., 2007). Therefore, I hypothesise that:

Hypothesis 4 (H₄): autonomy has a positive relationship with job-based psychological ownership.

2.2.5. Feedback and job-based psychological ownership

Feedback from a job is defined as the extent to which the job provides direct and clear information about the effectiveness of task performance (Morgeson & Humphrey, 2006). A job with full feedback makes employees more aware of how effective they are in doing their work, which increases their understanding of their work. According to psychological ownership theory, the more deeply an individual understands the work, the higher the level of ownership they feel (Pierce et al., 2001). Moreover, feedback promotes work engagement (Xanthopoulou et al., 2009), which predicts psychological ownership (Ghafoor et al., 2011). Thus, feedback has a positive relationship with job-based psychological ownership.

Therefore, I hypothesise that:

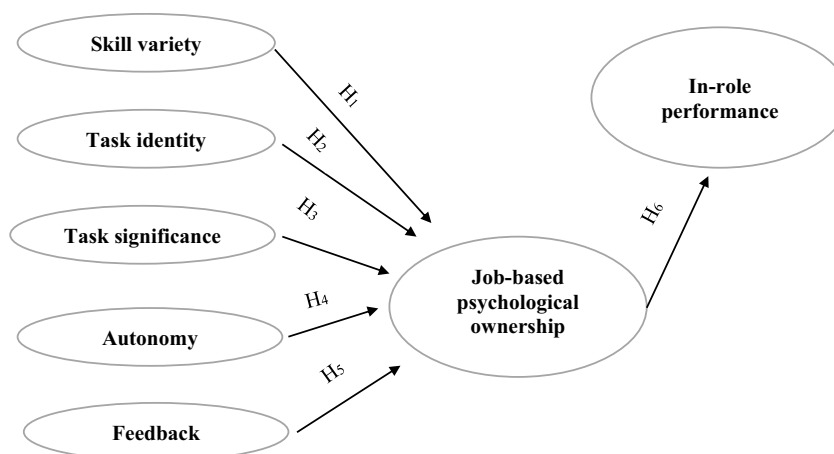
Hypothesis 5 (H₅): Feedback has a positive relationship with job-based psychological ownership.

2.2.6. Job-based psychological ownership and in-role performance

The psychological conditions of employees play an important role in predicting employee workplace behaviour. According to Kahn (1990), psychological conditions are “momentary” instances of an employee’s experience that shape his/her workplace behaviour. Recent studies show that psychological conditions have a positive impact on employee performance (Aslam et al., 2020; Sendawula et al., 2018), employee innovative behaviours (Atatsi et al., 2021), employee wellbeing (Rahman et al., 2020). Psychological ownership refers to the state in which individuals feel as if the target is owned partly or fully owned by them (Pierce et al., 2001). Hence, it can be inferred that psychological ownership might affect employee outcomes.

In-role performance refers to the duties and responsibilities identified in the job description, or those that are expected to be fulfilled (Williams & Anderson, 1991). People tend to devote a great

Figure 1. Research model.



deal of effort, time, care, and attention to the objects they own (Belk, 1988). Moreover, when an individual has a sense of possession of the object, they tend to be responsible and to do what they can to preserve and nurture the object (Pierce et al., 2001). It is inferred that when an individual develops a feeling of ownership towards their job, they will take responsibility, preserve, and take care of the work. As a result, their job performance is increased.

Prior empirical studies on the relationship between job-based psychological ownership and in-role performance have mixed results. There is a range of empirical studies demonstrating the significant relationship between job-based psychological ownership and in-role performance (Brown et al., 2014; Vandewalle et al., 1995; Van Dyne & Pierce, 2004). However, in other research, this relationship is not statistically significant (Mayhew et al., 2007). In this study, the author believes that job-based psychological ownership positively influences in-role performance.

Considering this, I hypothesise that:

Hypothesis 6 (H₆): Job-based psychological ownership has a positive relationship with in-role performance.

The research model is as shown in Figure 1

3. Methodology

3.1. Sample

Responses to a questionnaire were collected either face to face or online. The questionnaire was sent to 10 companies in all three regions of Vietnam: the North, the Middle, and the South. The author collected 455 responses, of which 23 were missing important information. The author therefore decided to exclude these 23 observations from the later analysis. Finally, the sample used in the study included 432 observations.

Out of 432 respondents to the questionnaire, 51.9% were male, and the rest (48.1%) were female. Most respondents (68.5%) described themselves as being at “subordinate” level, while approximately 18% were supervisors and 1.9 % were senior management. The vast majority (85.6%) of the respondents to the questionnaire lived in the North of Vietnam. The average age of the participants in this study was 31.56 years and the standard deviation was 6.88. The youngest was 18 years old and the oldest was 56 years old. The average tenure was 7.713 years with a standard deviation of 6.33.

3.2. Measure

3.2.1. Job-based psychological ownership

Psychological ownership was measured using a 7-item measure suggested by Van Dyne and Pierce (2004). Originally this scale was used to measure organisation-based psychological ownership. Later, Mayhew et al. (2007) changed it from “organisation” to “job” to measure job-based psychological ownership. The measure of psychological ownership developed by Van Dyne and Pierce (2004) comprises two parts: individual psychological ownership and collective psychological ownership. Individual psychological ownership was measured by four items while the collective psychological ownership measure included three statements. The participants were asked to rate their level of agreement to the four statements via a 7-point Likert-type scale (1 = strongly disagree; 7 = strongly agree). An example of the statements measuring job-based psychological ownership is “*This is my job*”. The alpha coefficient was 0.816.

3.2.2. Skill variety

Skill variety was measured by a 5-item measure adapted from Sims et al. (1976). The items derived from Sims et al. (1976) were in the form of questions, and the author converted these questions into statements. The respondents were required to state their level of agreement to the five statements with a 7-point scale where 1 = *strongly disagree* and 7 = *strongly agree*. An example of these 5 statements is “*The job requires a variety of skills*”. The alpha coefficient was 0.863.

3.2.3. Task identity

Task identity was measured by a 3-item measure adapted from Sims et al. (1976). The respondents were required to assess their level of agreement to the three statements with a 7-point scale where 1 = *strongly disagree* and 7 = *strongly agree*. An example of these 3 statements is “*I have many opportunities to do a job from beginning to end*”. The alpha coefficient was 0.876.

3.2.4. Task significance

Task identity was measured by a 3-item measure adapted from Sims et al. (1976). The respondents were required to rate the extent to which they agreed or disagreed with the three statements using a 7-point scale where 1 = *strongly disagree* and 7 = *strongly agree*. An example of these 3 statements is “*The results of my work are likely to significantly affect the lives or well-being of other people*”. The alpha coefficient was 0.826.

3.2.5. Autonomy

Sims et al. (1976) measured job autonomy with a 5-item measure. The respondents to the questionnaire were asked to assess their level of agreement with each of the five statements using a 7-point scale where 1 = *strongly disagree* and 7 = *strongly agree*. The alpha coefficient for autonomy was 0.801. We found that if we excluded the statement “*I often get feedback from my supervisor about my performance*” then the reliability coefficient increased to 0.865.

When considering the validity of this statement, the authors found that the above item did not strongly relate to autonomy in organisation settings. Hence, we decided to exclude this item from further analysis and the final alpha coefficient for autonomy was 0.865.

3.2.6. Feedback

Feedback was measured by Sims et al. (1976) with a 3-item measure. An example of items on the feedback scale is: “*I often find out how well I am doing my work.*” The respondents were asked to demonstrate their level of agreement with each of the statements on a 7-point scale where 1 = *strongly disagree* and 7 = *strongly agree*. The reliability coefficient was 0.816, reaching an acceptable level.

3.2.7. In-role performance

In-role performance was measured by a 7-item measure proposed by Williams and Anderson (1991). An example of items in the in-role performance measure is “*I fulfil the responsibilities*”.

outlined in my job description.” The respondents to the questionnaire were asked to assess their agreement level with each statement on a 7-point scale where 1 = *strongly disagree* and 7 = *strongly agree*. The initial reliability of the scale was 0.578, which was an unacceptable level. The author found that the Corrected Item-Total Correlation of three items was less than 0.2, which means that it is recommended to delete from the measure. These items were: “I engage in activities that will directly affect my performance evaluation”, “I neglect aspects of the job I am obligated to perform”, and “I fail to perform essential duties”. After removing these items, the reliability of the scale increased to 0.803. Therefore, the author decided to exclude these 3 items from the future analysis. The final alpha coefficient was 0.803.

The quantitative analysis methods used in this article were supported by SPSS 26 and SPSS AMOS 24 software. The scales were tested by Cronbach’s alpha coefficient, exploratory factor analysis and confirmatory factor analysis. Hypotheses were tested using the structural equation model (SEM) with the estimation method of maximum likelihood.

4. Results

4.1. Factor analysis

Although Hackman and Oldham (1975) confirmed the structure of job characteristics, Dunham (1976) argued that the structure of job characteristics varies in different samples. Therefore, Dunham et al. (1977) suggested testing the structure of job characteristics before further analysis.

Exploratory factor analysis (EFA) was conducted on the five measures of job characteristics first, followed by a comparison of five solutions: a 5-factor solution, 4-factor solution, 3-factor solution, 2-factor solution, and 1-factor solution. These were done to confirm the structure of the work characteristics.

The extraction method was principal component analysis. An eigen value greater than 1 was used to determine how many initial numbers of factors to retain. The rotation method was Varimax. The results of the EFA show that the 5-factor solution was suitable for the job characteristics. The items and their loadings are shown in Table 1.

As shown in Table 1, the items for each measure loaded on the same factor. There was no item that could load on multiple factors. Factor loadings greater than 0.30 are significant, those greater than 0.40 are important, and 0.50 or more are very significant (Hair et al., 2006). In line with this, factor loadings of 0.50 or greater were suitable for further analysis. An a priori analysis using the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy and Bartlett’s test of sphericity was first carried out to determine the suitability of factor analysis. From Table 1, Bartlett’s test of sphericity was calculated to be statistically significant with a p-value of 0.000 and a KMO of 0.811. The loading coefficients of each item were all greater than 0.7, indicating a well-defined structure.

The results of the EFA showed that job characteristics were appropriate for the 5-factor solution. However, to confirm the structure of the job characteristics, the author conducted confirmation factor analysis (CFA) and compared the five baseline models. The results of the CFA for the five baseline models are presented in Table 2.

The results in Table 2 show that base model 1, dividing the job characteristics into five separate factors, was the most appropriate solution. The model fit results show that baseline model 1 was acceptable. χ^2/df was 1.449, less than the acceptable level of 3; the goodness fit index (GFI) was 0.955, above the threshold of 0.9; the comparative fit index (CFI) was 0.981, above the threshold of 0.9; the root mean square error of approximation (RMSEA) was 0.034, less than the cut-off value of 0.08; and the standardised root mean square residual (SRMR) was 0.0361, which is an acceptable level. The remaining four baseline models had model fit indices that were not within acceptable levels. Base model 2 produced model fit indices in which only SRMR = 0.0709 was acceptable, as

Table 1. Exploratory factor analysis of job characteristic items

Items	Factors				
	Skill variety	Autonomy	Task significance	Feedback	Task identity
My job requires a variety of skills	0.780				
My duties are repetitious	0.781				
In a typical work day, my tasks are similar	0.811				
There are many opportunities to do a number of different things	0.761				
My job has a large amount of variety	0.841				
I often see projects or jobs through to completion					0.834
I have many opportunities to do a job from beginning to end					0.812
I often have opportunities to complete the work I start					0.889
My job is the one where a lot of other people can be affected by how well the work be done			0.865		
The results of my work likely to significantly affect the lives or well-being of other people			0.855		
My job is not significant or important in the broader scheme (R)			0.852		
I am left on my own to do my own work		0.784			
I am able to do my job independently		0.858			
I have opportunities for independent thought and action		0.819			
I have the freedom to do what I want on my job		0.792			
I find out how well I am doing on my job				0.885	
I have opportunities to find out how well I am doing on my work				0.815	
I have feeling that I know whether I am performing my job well or poorly				0.800	

KMO = 0.811; $\chi^2 = 3374.486$, df = 153; Sig (Bartlett's test) = 0.000)

Note: Loadings $< \pm 0.3$ are suppressed (R) Reverse score item.

the remaining indicators ($\chi^2/\text{df} = 4.112$; GFI = 0.870; CFI = 0.877; RMSEA = 0.085; 0.122) were not in the acceptable range suggested by Hair et al. (2006). The remaining three baseline models all showed model fit indices that were in the unacceptable thresholds.

As suggested by Hair et al. (2006), when comparing the fitness of two models, if increasing a small number of degrees of freedom (df) leads to a significant increase in χ^2 , this means that the latter structure is not as good as the former structure, and vice versa. When comparing each pair of models (baseline model 2 with baseline model 1; baseline model 3 with baseline model 1; baseline model 4 with baseline model 1; and baseline model 5 with baseline model 1), the results showed that a small increase in df led to a significant increase in χ^2 . The corresponding indices $\Delta\chi^2/\Delta\text{df}$ were 342.623/4; 791.551/7; 1258.571/9; and 1987.930/10, respectively. Hence, a 5-factor solution was the most suitable for the research data.

Confirmatory factor analysis was employed to test whether the data fitted the hypothetical measurement model, and it displayed satisfactory GIF indices: χ^2/df ratio was 1.883; GFI was 0.922;

Table 2. Comparison of five baseline models

Baseline models	χ^2/df	$\Delta\chi^2$ and Δdf		GFI	CFI	RMSEA	SRMR
Baseline model 1: 5—factor solution	1.449	—	—	0.955	0.981	0.034	0.0361
Baseline Model 2: 4—factor solution	4.112	342.623	4	0.870	0.877	0.085	0.0709
Baseline Model 3: 3—factor solution	7.416	791.551	7	0.788	0.741	0.122	0.1082
Baseline Model 4: 2—factor solution	10.791	1258.571	9	0.717	0.600	0.151	0.1340
Baseline model 5: 1—factor solution	16.113	1987.930	10	0.587	0.377	0.187	0.1660

Note: $\Delta\chi^2$ and Δdf were calculated by subtracting the χ^2 and df values of baseline models 2, 3, 4, and 5 minus the χ^2 and df values of model 1.

CFI was 0.955; RMSEA was 0.045; and SRMR was 0.0419 (see, Table 3). These results indicated that the GIF measures for the hypothesised model met the requirements for the benchmark fit indices proposed by Hair et al. (2006), thereby indicating that the conceptual model reasonably fits the data.

Reality, convergent and discriminant validity were also examined in the measurement model. As shown in Table 3, all composite reliability (CR) indices ranged from 0.812 to 0.865, greater than the acceptable level of 0.700, indicating that reliability was assured. Convergent validity is acceptable if the average variance extracted (AVE) is above 0.5 (Hair et al., 2006). The AVE indices ranged from 0.528 to 0.618, showing that convergent validity was guaranteed. Discriminant validity is satisfactory if the maximum shared variance (MSV) is less than AVE and if the Square Root of AVE is greater than the inter-construct correlations. The results showed that all the MSV indices were less than AVE. The squared roots of the AVE indices shown on the diagonal of Table 3 were larger than the inter-construct correlations shown below the diagonal, indicating that the discriminant validity was satisfied.

4.2. Structural model

Structured equation modelling was employed to test the hypotheses of the research model. Before assessing the statistical significance of each relationship, the author examined the appropriateness of the model. The model fit index showed that the total model was a good fit. In detail, $\chi^2/df = 1.992$, which is less than the threshold of 3, GFI = 0.995 was greater than the cut-off value of 0.9; CFI = 0.938 was greater than 0.9; RMSEA = 0.048 was less than 0.08; and SRMR = 0.0516 was less than 0.08. The above results showed that the correlation results were reliable.

Table 3. Model validity measure

	CR	AVE	MSV	SV	JA	TS	JF	TI	IRP	JOP
SV	0.865	0.564	0.154	0.751						
JA	0.866	0.618	0.397	0.393	0.786					
TS	0.827	0.614	0.063	0.098+	0.103+	0.784				
JF	0.819	0.601	0.374	0.119*	0.446***	0.184**	0.775			
TI	0.812	0.594	0.018	0.017	-0.115*	-0.045	-0.134*	0.771		
IRP	0.815	0.528	0.335	0.111+	0.436***	0.196***	0.579***	0.101+	0.726	
JOP	0.824	0.615	0.397	0.309***	0.630***	0.252***	0.611***	0.054	0.568***	0.784

$\chi^2/df = 1.883$; GFI = 0.922; CFI = 0.955; RMSEA = 0.045; SRMR = 0.0419

Note: SV = skill variety; TI = Task identity; TS = Task significance; JA = job autonomy; JF = job feedback; JPO = job-based psychological ownership; IRP = in-role performance; CR = Composite Reliability; AVE = Average Variance Extracted; MSV = Maximum Shared Variance

+: $p < 0.100$; *: $p < 0.05$; **: $p < 0.01$; ***: $p < 0.001$

Squared root of AVE shown on the diagonal

Table 4. Regression results

Hypotheses	β	Se	P	Decisions
SV \rightarrow JPO	0.092	0.056	0.104	Reject H ₁
TI \rightarrow JPO	0.228	0.068	***	Accept H ₂
TS \rightarrow JPO	0.161	0.053	0.02	Accept H ₃
JA \rightarrow JPO	0.652	0.084	***	Accept H ₄
JF \rightarrow JPO	0.509	0.065	***	Accept H ₅
JPO \rightarrow IRP	0.488	0.043	***	Accept H ₆

$\chi^2/df = 1.992$; GFI = 0.905; CFI = 0.938; RMSEA = 0.048; SRMR = 0.0516

Note: *** is $p < 0.01$

SV = skill variety; TI = Task identity; TS = Task significance; JA = job autonomy; JF = job feedback; JPO = job-based psychological ownership; IRP = in-role performance.

As shown in Table 4, four out of five variables of job characteristics positively impacted job-based psychological ownership. The variables affecting job-based psychological ownership were task identity, task significance, autonomy, and feedback. Task identity positively affected job-based psychological ownership ($\beta = 0.228$, $se = 0.068$, $p < 0.01$), supporting hypothesis H₂. As was expected, task significance had a positive relationship with job-based psychological ownership ($\beta = 0.228$, $se = 0.068$, $p = 0.02$), thus hypothesis H₃ was supported. Among the four influencing factors, autonomy had the greatest impact on job-based psychological ownership with $\beta = 0.652$, $se = 0.084$, $p < 0.01$; thus, hypothesis H₄ was accepted. Feedback positively impacts job-based psychological ownership ($\beta = 0.509$, $se = 0.065$, $p < 0.01$), so hypothesis H₅ was accepted. Unexpectedly, the relationship between skill variety and job-based psychological ownership was not statistically significant ($\beta = 0.092$, $se = 0.056$, $p = 0.104$), thus hypothesis H₁ was rejected. Of the four variables affecting job-based psychological ownership, autonomy had the biggest impact, followed by feedback, and two variables—task identity and task significance—had a similar level of impact on job-based psychological ownership. Table 4 also showed that job-based psychological ownership positively affected in-role performance with $\beta = 0.448$, $se = 0.043$, $p < 0.01$, supporting hypothesis H₆.

5. Discussion and recommendations

5.1. Discussion

The purpose of the study is to assess the impact of each job characteristic studied on job-based psychological ownership, and the impact of job-based psychological ownership on in-role performance. Based on the survey results of 432 Vietnamese employees, this study suggests that four out of the five job characteristics studied affect job-based psychological ownership. These job characteristics are task identity, task significance, autonomy, and feedback. The research results also show that job-based psychological ownership affects in-role performance. Unexpectedly, the relationship between skill variety and job-based psychological ownership is not supported. This non-statistically significant relationship signals that caution should be taken when using the composite variable for assessing the impact of job characteristics on job-based psychological ownership.

The above results are consistent with the results of previous studies (Brown et al., 2014; Mayhew et al., 2007; O'driscoll et al., 2006). Brown et al.'s (2014) work is complex, as a result of synthesising five job characteristics into one composite variable that positively affects job-based psychological ownership ($\beta = 0.46$, $p < 0.01$). Mayhew et al. (2007) suggest that autonomy positively influences job-based psychological ownership ($\beta = 0.37$, $p < 0.01$). The relationship between autonomy and job-based psychological ownership was the most significant in this study, and this result is consistent with the suggestion of Pierce et al. (2009). Pierce et al. (2009) argue that autonomy affects all three routes to job-based psychological ownership, while the remaining variables affect only one to two routes.

However, this study disagrees with the study of Brown et al. (2014) in some respects. Those authors suggest that skill variety (part of the work's complexity) positively impacts job-based psychological ownership, but skill variety was not statistically related to the feeling of ownership of the job in this study. To explore why in the context of Vietnam skill variety did not statistically affect job-based psychological ownership, the author conducted interviews with five questionnaire respondents. Each interview lasted 30 to 45 minutes, at a place and time convenient to the interviewees.

One person replied that:

My job requires many and diverse skills; I have to spend a lot of time and effort on the job. However, sometimes I don't clearly understand the work I'm doing because my job requires skills that I don't possess.

Others added more comments:

Although for a while I also mastered skills that I did not know at first, the skills I mastered very quickly needed updating, but I do not have enough time to quickly update those skills ... I often don't understand a part of my job well.

Skill variety refers to the extent to which a job requires different skills, knowledge and talents. Employees who do a job requiring diverse skills tend to devote their time, effort and energy to the job. However, if there is a mismatch between the employee's existing skills and the required skills, they may not possess a deep understanding of the job. As suggested by Pierce et al. (2001), there are three paths to psychological ownership: intimately understanding the object, dedicating oneself to the object and controlling the object. Skill variety might promote job-based psychological ownership through the path of dedication to the job. However, skill variety has a negative impact on job-based psychological ownership because it hinders an in-depth understanding of the job. As a result, as the two effects are combined, skill variety does not affect job-based psychological ownership.

The research results also show that job-based psychological ownership positively affects in-role performance. These results agree with the results of some previous studies (Brown, Pierce et al., 2014; Kaur et al., 2013; O'driscoll et al., 2006) and they disagree with those of Mayhew et al. (2007). In Brown, Pierce et al.'s (2014) study, job performance, which is measured by the individual sale performance provided by the company, has a positive impact on sale performance. In Kaur et al.'s (2013) research, employee performance is measured from the customers' point of view. In Mayhew et al. (2007), job performance is measured from a supervisor's point of view. Only in O'driscoll et al.'s (2006) research, in-role performance is measured according to the employee's subjective point of view. These previous research results show that psychological ownership affects employee performance according to customers' opinions, individual points of view, and objective results, while psychological ownership does not affect in-role performance measured from the supervisor's point of view. This difference in results can be attributed to the fact that Mayhew et al. (2007) employed a small sample group and the authors acknowledged that the small sample could create bias in the study.

5.2. Limitations

Although this study has contributed to theory and practice as outlined above, when using the research results or deducing from them, readers should pay attention to the following limitations. First, work characteristics, job-based psychological ownership and in-role performance were measured from the personal point of view and collected in the same survey. This can increase the correlation between variables due to the effect of the common variance method, which causes virtual correlation and correlation inflation (Williams & Brown, 1994). This limitation may bias the objective results. However, most studies on psychological ownership acknowledge this limitation in

their research (Peng & Pierce, 2015; Woon et al., 2017). Second, in-role performance is assessed by the individuals themselves, which can make the self-assessed performance higher than the actual performance of individuals. Future studies that employ objective scales will produce more reliable results.

Third, the sample size used in this study is acceptable ($n = 432$), but the sample group structure is not guaranteed. This limitation is mostly encountered in studies of psychological ownership (Brown et al., 2014; Chiu et al., 2007; Peng & Pierce, 2015). For example, most of the participants were in the North of Vietnam (up to 85%), which may bias the results. Future studies could focus on a sample in the Middle and South of Vietnam to supplement the results. Moreover, most respondents to the survey were people with a university degree or a higher degree. Future studies focusing on a less-qualified sample group would supplement the results of this study.

Fourth, the sample in the study was chosen through convenience sampling. If future studies utilise random sampling, this will be valuable for generalising the research results.

Despite the above limitations, the author believes that the research has made certain contributions to the literature on psychological ownership in Vietnam.

5.3. Conclusions and managerial recommendations

In summary, this study contributes to both the literature and practice. Firstly, this study provides an insightful understanding of how each work characteristic studied here affects job performance through the intervention of job-based psychological ownership, which helps companies with limited resources to choose and prioritise measures for themselves. Secondly, this study confirms that job characteristics are five distinct factors in Vietnamese data. Finally, this study contributes to the literature on psychological ownership because it investigates Vietnam, an Asian and developing country, which possesses a distinct culture.

The research findings show that increasing job-based psychological ownership is a reliable method for increasing in-role performance. The results also show that in order to enhance in-role performance through job-based psychological ownership, it is possible to increase four job characteristics: task identity, task significance, job autonomy and feedback. The analysis results also revealed that skill variety did not affect psychological ownership of a job.

Through the results of this study, some recommendations for managers can be drawn as follows. First, studies of job characteristics impacting job performance suggest that organisations should design tasks in such a way that they become complex through job enrichment and job enlargement. The results of this study have shown that job enrichment is superior to job enlargement for promoting employee performance. Job enlargement is defined as combining two or more tasks that were previously assigned to more than one employee into one job (Robbins & Judge, 2013). On the other hand, job enrichment is defined as building high-content work by including tasks such as planning, and evaluation often performed by supervisors (McShane & Glinow, 2017). Job enlargement refers to horizontal loading, while job enrichment refers to vertical loading. In this study, autonomy, i.e., giving employees the power to make decisions about when, how, which tools etc. related to their work, has the greatest impact, while skill variety does not impact in-role performance. This result confirms that organisations should utilise job enrichment to improve their performance.

Second, the results of this study also show that the more feedback employees receive, the better they perform. To increase feedback on the job, organisations need to build a clear evaluation system and give employees opportunities to participate in the evaluation of their work performance. Receiving feedback about the job is also helpful for empowerment (McShane & Glinow, 2017). McShane and Glinow (2017) argue that the most important foundation of employee empowerment is giving them enough information to make decisions. Solutions that can increase

job feedback include building a KPI system, 360-degree feedback, and an organisational culture of knowledge sharing.

Finally, the research results also show that task significance affects in-role performance through job-based psychological ownership. Therefore, to improve in-role performance, it is necessary to increase task significance. It should be noted that task significance is measured by the cognitive scale. Employee awareness of the importance of their task will increase their performance in their jobs. Hence, organisations can raise awareness of the importance of tasks through staff awareness training sessions.

Funding

This work is a research output belonging to the Research Working Group NCM.06.2022 (Group leader: Dr. Anh Duc Pham) of the Banking Academy of Vietnam and funded by the Banking Academy of Vietnam.

Author details

Pham Thu Trang¹

E-mail: trangpt@hvn.edu.vn

¹ Department of Business Management, Faculty of Business Administration, Banking Academy of Vietnam, Vietnam.

Disclosure statement

No potential conflict of interest was reported by the author.

Citation information

Cite this article as: How do work characteristics affect job performance? An investigation in Vietnam, Pham Thu Trang, *Cogent Business & Management* (2022), 9: 2116801.

References

- Asatryan, V. S., & Oh, H. (2008). . In *Journal of hospitality and tourism research* (Vol. 32, pp. 363 <https://doi.org/10.1177/1096348008317391>
- Ashkanasy, N. M., Ayoko, O. B., & Jehn, K. A. (2014). Understanding the physical environment of work and employee behavior: An affective events perspective. *Journal of Organizational Behavior*, 35(8), 1169–1184. <https://doi.org/10.1002/job.1973>
- Asian Productivity Organization. (2020). *APO productivity databook 2019*. https://www.apo-tokyo.org/publications/wp-content/uploads/sites/5/APO-Productivity-Databook-2019_light.pdf
- Asian Productivity Organization. (2021). *APO productivity databook 2020*. <https://www.apo-tokyo.org/publications/wp-content/uploads/sites/5/APO-Productivity-Databook-2020.pdf>
- Aslam, M. Z., Nor, M. N. M., Omar, S., Bustaman, H. A., & Foroudi, P. (2020). Predicting proactive service performance: The role of employee engagement and positive emotional labor among frontline hospitality employees. *Cogent Business & Management*, 7(1), 1771117. <https://doi.org/10.1080/23311975.2020.1771117>
- Atatsi, E. A., Azila-Gbettor, E. M., Mensah, C., & Villace, T. (2021). Predicting task performance from psychological ownership and innovative work behaviour: A cross sectional study. *Cogent Business & Management*, 8(1), 1917483. <https://doi.org/10.1080/23311975.2021.1917483>
- Avey, J. B., Avolio, B. J., Crossley, C. D., & Luthans, F. (2009). Psychological ownership: Theoretical extensions, measurement and relation to work outcomes. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 30(2), 173–191. <https://doi.org/10.1002/job.583>
- Baer, M., & Brown, G. (2012). Blind in one eye: How psychological ownership of ideas affects the types of suggestions people adopt . In *Organizational behavior and human decision processes* (Vol. 118, pp. 60–72). <https://doi.org/10.1016/j.obhdp.2012.01.003>
- Belk, R. W. (1988). Possessions and the extended self. *Journal of Consumer Research*, 15(2), 139–168. <https://doi.org/10.1086/209154>
- Bernhard, F., & O'Driscoll, M. P. (2011). Psychological ownership in small family-owned businesses: Leadership style and nonfamily-employees' work attitudes and behaviors. *Group & Organization Management*, 36(3), 345–384. <https://doi.org/10.1177/1059601111402684>
- Brown, G., Crossley, C., & Robinson, S. L. (2014). Psychological ownership, territorial behavior, and being perceived as a team contributor: The critical role of trust in the work environment. *Personnel Psychology*, 67(2), 463–486. <https://doi.org/10.1111/peps.12048>
- Brown, G., Pierce, J. L., & Crossley, C. (2014). Toward an understanding of the development of ownership feelings. *Journal of Organizational Behavior*, 35(3), 318–338. <https://doi.org/10.1002/job.1869>
- Chen, -C.-C., & Chiu, S.-F. (2009). The mediating role of job involvement in the relationship between job characteristics and organizational citizenship behavior. *The Journal of Social Psychology*, 149(4), 474–494. <https://doi.org/10.3200/SOCP.149.4.474-494>
- Chi, N.-W., & Han, T.-S. 2008. Exploring the linkages between formal ownership and psychological ownership for the organization: The mediating role of organizational justice . In *Journal of occupational and organizational psychology* (Vol. 81, pp. 691–712). <https://doi.org/10.1348/096317907X262314>
- Chiu, W. C. K., Hui, C. H., & Lai, G. W. F. 2007. Psychological ownership and organizational optimism amid China's corporate transformation: Effects of an employee ownership scheme and a management-dominated board. In *The international journal of human resource management* (Vol. 18, pp. 303–321). Taylor & Francis. <https://doi.org/10.1080/09585190601102539> .
- Dawkins, S., Tian, A. W., Newman, A., & Martin, A. (2017). Psychological ownership: A review and research agenda. *Journal of Organizational Behavior*, 38(2), 163–183. <https://doi.org/10.1002/job.2057>
- Dipboye, R. L. (1977). A critical review of Korman's self-consistency theory of work motivation and occupational choice. *Organizational Behavior and Human Performance*, 18(1), 108–126. [https://doi.org/10.1016/0030-5073\(77\)90021-6](https://doi.org/10.1016/0030-5073(77)90021-6)
- Dunham, R. B. (1976). The measurement and dimensionality of job characteristics. *Journal of Applied Psychology*, 61(4), 404. <https://doi.org/10.1037/0021-9010.61.4.404>
- Dunham, R. B., Aldag, R. J., & Brief, A. P. (1977). Dimensionality of task design as measured by the job

- diagnostic survey. *Academy of Management Journal*, 20(2), 209–223. <https://doi.org/10.5465/255395>.
- Gardell, B. (1977). Autonomy and participation at work. *Human Relations*, 30(6), 515–533. <https://doi.org/10.1177/001872677703000603>
- Ghafoor, A., Qureshi, T. M., Khan, M. A., & Hijazi, S. T. (2011). Transformational leadership, employee engagement and performance: Mediating effect of psychological ownership. *African Journal of Business Management*, 5(17), 7391–7403. <https://doi.org/10.5897/AJBM11.126>
- Hackman, J. R., & Oldham, G. R. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology*, 60(2), 159. <https://doi.org/10.1037/h0076546>
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis*. Uppersaddle River. Pearson Prentice Hall.
- Han, T.-S., Chiang, -H.-H., & Chang, A. (2010). Employee participation in decision making, psychological ownership and knowledge sharing: mediating role of organizational commitment in Taiwanese high-tech organizations. *Confucian HRM in Greater China*, 21, 2218.
- Henssen, B., Voordeckers, W., Lambrechts, F., & Koiranen, M. (2014). The CEO autonomy–stewardship behavior relationship in family firms: The mediating role of psychological ownership. *Journal of Family Business Strategy*, 5(3), 312–322. <https://doi.org/10.1016/j.jfbs.2014.01.012>
- Hofstede, G., Hofstede, G. J., & Minkov, M. (2005). *Cultures and organizations: Software of the mind* (Vol. 2). Citeseer.
- Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4), 692–724. <https://doi.org/10.5465/256287>.
- Kaur, D., Sambasivan, M., & Kumar, N. (2013). Effect of spiritual intelligence, emotional intelligence, psychological ownership and burnout on caring behaviour of nurses: A cross-sectional study. *Journal of Clinical Nursing*, 22(21–22), 3192–3202. <https://doi.org/10.1111/jocn.12386>
- Korman, A. K. (1970). Toward an hypothesis of work behavior. *Journal of Applied Psychology*, 54(1p1), 31. <https://doi.org/10.1037/h0028656>
- Li, J., Sekiguchi, T., & Qi, J. (2020). When and why skill variety influences employee job crafting. *Employee Relations: The International Journal*, 42(3), 662–680. <https://doi.org/10.1108/ER-06-2019-0240>
- Mayhew, M. G., Gardner, J., Bramble, T., & Ashkanasy, N. M. (2007). A Study of the Antecedents and Consequences of Psychological Ownership in Organizational Settings. In *Journal of social psychology* (Vol. 147, pp. 477–501). <https://doi.org/10.3200/SOCP.147.5.477-500>
- McShane, S., & Glinow, M. A. V. (2017). *Organizational behavior*. McGraw-Hill Education.
- Md-Sidin, S., Sambasivan, M., & Muniandy, N. (2009). Impact of psychological ownership on the performance of business school lecturers. *Journal of Education for Business*, 85(1), 50–57. <https://doi.org/10.1080/08832320903217903>
- Morgeson, F. P., & Humphrey, S. E. (2006). The Work Design Questionnaire (WDQ): Developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of Applied Psychology*, 91(6), 1321. <https://doi.org/10.1037/0021-9010.91.6.1321>
- O’driscoll, M. P., Pierce, J. L., & Coghlan, A.-M. (2006). The psychology of ownership: Work environment structure, organizational commitment, and citizenship behaviors. *Group & Organization Management*, 31(3), 388–416. <https://doi.org/10.1177/1059601104273066>
- Peng, H., & Pierce, J. (2015). Job-and organization-based psychological ownership: Relationship and outcomes. *Journal of Managerial Psychology*, 30(2), 151–168. <https://doi.org/10.1108/JMP-07-2012-0201>
- Pierce, J. L., Dirks, K. T., & Kostova, T. (2003). The state of psychological ownership: Integrating and extending a century of research. *Review of General Psychology*, 7(1), 84–108. <http://library.lincoln.ac.uk/items/eds/psych/2003-01663-006>
- Pierce, J. L., Jussila, I., & Cummings, A. (2009, May). Psychological ownership within the job design context: Revision of the job characteristics model. *Journal of Organizational Behavior*, 30(4), 477–496. <http://library.lincoln.ac.uk/items/eds/psych/2009-05638-002>
- Pierce, J. L., Jussila, I., & Li, D. (2018). Development and validation of an instrument for assessing collective psychological ownership in organizational field settings. *Journal of Management and Organization*, 24(6), 776–792. <https://doi.org/10.1017/jmo.2016.66>
- Pierce, J. L., Kostova, T., & Dirks, K. T. (2001). Toward a theory of psychological ownership in organizations. *Academy of Management Review*, 26(2), 298–310. <https://doi.org/10.2307/259124>
- Pierce, J. L., O’driscoll, M. P., & Coghlan, A.-M. (2004). Work environment structure and psychological ownership: The mediating effects of control. *Journal of Social Psychology*, 144(5), 507. <http://library.lincoln.ac.uk/items/eds/edselc/edselc.2-52.0-4444348452>
- Pierce, J., & Rodgers, L. (2004, October). The psychology of ownership and worker-owner productivity. *Group & Organization Management*, 29(5), 588–613. <http://library.lincoln.ac.uk/items/eds/edswss/000223698000004>
- Pierce, J. L., Rubenfeld, S. A., & Morgan, S. (1991). Employee ownership: A conceptual model of process and effects. *Academy of Management Review*, 16(1), 121–144. <https://doi.org/10.2307/258609>
- Rahman, A., Björk, P., Raval, A., & Wright, L. T. (2020). Exploring the effects of service provider’s organizational support and empowerment on employee engagement and well-being. *Cogent Business & Management*, 7(1), 1767329. <https://doi.org/10.1080/23311975.2020.1767329>
- Ramos, H. M., Man, T. W. Y., Mustafa, M., & Ng, Z. Z. (2014). Psychological ownership in small family firms: Family and non-family employees’ work attitudes and behaviours. *Journal of Family Business Strategy*, 5(3), 300–311. <https://doi.org/10.1016/j.jfbs.2014.04.001>
- Robbins, S. P., & Judge, T. A. (2013). *Organizational behavior* (Vol. 4). Pearson Education.
- Sendawula, K., Nakyejwe Kimuli, S., Bananuka, J., Najjemba Muganga, G., & Wanasika, I. (2018). Training, employee engagement and employee performance: Evidence from Uganda’s health sector. *Cogent Business & Management*, 5(1), 1470891. <https://doi.org/10.1080/23311975.2018.1470891>
- Sims, H. P., Jr, Szilagyi, A. D., & Keller, R. T. (1976). The measurement of job characteristics. *Academy of Management Journal*, 19(2), 195–212. <https://doi.org/10.5465/255395>
- Van Dyne, L., & Pierce, J. L. (2004). Psychological ownership and feelings of possession: Three field studies predicting employee attitudes and organizational citizenship behavior. *Journal of Organizational Behavior*, 25(4), 439–460. <http://library.lincoln.ac.uk/items/eds/psych/2004-14302-001>

- Vandewalle, D., Van Dyne, L., & Kostova, T. (1995). Psychological ownership: An empirical examination of its consequences. *Group & Organization Management*, 20(2), 210–226. <https://doi.org/10.1177/1059601195202008>
- Wagner, S. H., Christiansen, N. D., & Parker, C. P. 2003. Employees that think and act like owners: Effects of ownership beliefs and behaviors on organizational effectiveness. In *Personnel psychology* (Vol. 56, pp. 847–872). Blackwell Publishing. <https://doi.org/10.1111/j.1744-6570.2003.tb00242.>
- Wang, L., Law, K. S., Zhang, M. J., Li, Y. N., & Liang, Y. (2019). It's mine! Psychological ownership of one's job explains positive and negative workplace outcomes of job engagement. *Journal of Applied Psychology*, 104(2), 229. <https://doi.org/10.1037/apl0000337>
- Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*, 17(3), 601–617. <https://doi.org/10.1177/014920639101700305>
- Williams, L. J., & Brown, B. K. (1994). Method variance in organizational behavior and human resources research: Effects on correlations, path coefficients, and hypothesis testing. *Organizational Behavior and Human Decision Processes*, 57(2), 185–209. <https://doi.org/10.1006/obhd.1994.1011>
- Woon, W., Nasurdin, A. M., & Tan, C.-L. (2017). Linking organizational climate, psychological ownership, and intention to stay: A proposed model. *Global Business & Management Research*, 9(Special Issue), 127–142. <http://library.lincoln.ac.uk/items/eds/bth/122717258>
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2009). Reciprocal relationships between job resources, personal resources, and work engagement. *Journal of Vocational Behavior*, 74(3), 235–244. <https://doi.org/10.1016/j.jvb.2008.11.003>



© 2022 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.

You are free to:

Share — copy and redistribute the material in any medium or format.

Adapt — remix, transform, and build upon the material for any purpose, even commercially.

The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made.

You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

No additional restrictions

You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.



Cogent Business & Management (ISSN: 2331-1975) is published by Cogent OA, part of Taylor & Francis Group.

Publishing with Cogent OA ensures:

- Immediate, universal access to your article on publication
- High visibility and discoverability via the Cogent OA website as well as Taylor & Francis Online
- Download and citation statistics for your article
- Rapid online publication
- Input from, and dialog with, expert editors and editorial boards
- Retention of full copyright of your article
- Guaranteed legacy preservation of your article
- Discounts and waivers for authors in developing regions

Submit your manuscript to a Cogent OA journal at www.CogentOA.com

