DETERMINANTS OF RADICAL AND INCREMENTAL INNOVATION: THE ROLES OF HUMAN RESOURCE MANAGEMENT PRACTICES, KNOWLEDGE SHARING, AND MARKET TURBULENCE

Dat Tho Tran
National Economics University, Hanoi, Vietnam
tranthodat@neu.edu.vn

Khoa Vu Dinh*
Hanoi University of Industry, Hanoi, Vietnam
vudinhkhoa@hau.edu.vn

Phong Ba Le
Hanoi University of Industry, Hanoi, Vietnam
lebaphong@hau.edu.vn

Phuong Thi Lan Tran
National Economics University, Hanoi, Vietnam
phuongttl@neu.edu.vn

* Corresponding author

ABSTRACT

Aim/Purpose
Given the increasingly important role of knowledge and human resources for firms in developing and emerging countries to pursue innovation, this paper aims to study and explore the potential intermediating roles of knowledge donation and collection in linking high-involvement human resource management (HRM) practice and innovation capability. The paper also explores possible moderators of market turbulence in fostering the influences of knowledge-sharing (KS) behaviors on innovation competence in terms of incremental and radical innovation.

Background
The fitness of HRM practice is critical for organizations to foster knowledge capital and internal resources for improving innovation and sustaining competitive advantage.

Methodology
The study sample is 309 respondents and Structural Equation Model (SEM) was used for the analysis of the data obtained through a questionnaire survey with the aid of AMOS version 22.
**Contribution**

This paper increases the understanding of the precursor role of high-involvement HRM practices, intermediating mechanism of KS activities, and the regulating influence of market turbulence in predicting and fostering innovation capability, thereby pushing forward the theory of HRM and innovation management.

**Findings**

The empirical findings support the proposed hypotheses relating to the intermediating role of KS in the HRM practices-innovation relationship. It spotlights the crucial character of market turbulence in driving the domination of knowledge-sharing behaviors on incremental innovation.

**Recommendations for Practitioners**

The proposed research model can be applied by leaders and directors to foster their organizational innovation competence.

**Recommendations for Researchers**

Researchers are recommended to explore the influence of different models of HRM practices on innovation to identify the most effective pathway leading to innovation for firms in developing and emerging nations.

**Impact on Society**

This paper provides valuable initiatives for firms in developing and emerging markets on how to leverage the strategic and internal resources of an organization for enhancing innovation.

**Future Research**

Future studies should investigate the influence of HRM practices and knowledge resources to promote frugal innovation models for dealing with resource scarcity.

**Keywords**

high-involvement HRM, knowledge sharing, knowledge donating, knowledge collecting, radical innovation, incremental innovation

---

**INTRODUCTION**

In the increasingly complex and swiftly changing business environment, scholars and practitioners consider improving innovation capability as the optimal and strategic orientation for firms to create value and keep a competitive advantage in the long run (P. B. Le & Lei, 2019). Innovation capability is widely accepted as a dynamic competence that allows firms to adjust and evolve their services and products aimed at meeting customers’ needs (Gui et al., 2022; Than et al., 2023). Consequently, firms are attempting to improve their innovation capability to succeed in dealing with external turbulences and environments that might induce negative effects on organizational performances (Gong et al., 2021). Previous works emphasize innovation as the fundamental driver to develop the economy and achieve competitive advantage for both firms and nations (P. B. Le & Le, 2023; P. B. Le & Lei, 2019; D. K. Nguyen et al., 2019; T. N. Nguyen et al., 2022). Yet, firms in emerging and developing markets often struggle to become real innovators rather than imitators because the majority of these firms are small and medium sizes, with a lack of resources and capital for successful innovation (Gui et al., 2021; Lei et al., 2020). Such a situation has required researchers and practitioners to devote more effort to detecting the finer antecedents, new mechanisms, and optimal solutions to improve innovation capability for firms in those nations (P. B. Le, 2021; Than et al., 2023). Among the sources for predicting the innovation capability of firms, scholars highlight the crucial role of human and knowledge capital as the strategic forces for organizations to pursue and improve their innovation competence (Gui et al., 2022; Singh et al., 2021). Consequently, to shed light on the characters and influences of these possible constructs, this paper attempts to elucidate the relationship between high-involvement human resource management (HRM) practices and specific forms of innovation capability; namely, incremental and radical innovations through the mediators of explicit and tacit knowledge sharing (KS). The paper is anticipated to increase the theory and initiatives of innovation management through the roles of HRM practices and knowledge management by many motives.
First, knowledge and human resources are regarded as valuable and core assets for organizations to initiate worth and attain competitive advantage in swiftly changing environments (P. B. Le & Lei, 2019; Singh et al., 2021). HRM practices serve as the foremost drives for organizations to formulate and develop the necessary skills, attitudes, and behaviors of employees for pursuing innovation and achieving key outcomes (C.-J. Chen & Huang, 2009; Than et al., 2023). Nevertheless, there is wide recognition of the significance of HRM practices toward the key goals of organizations of flexibility, productivity, and organizational performance. Very few empirical studies are interested in explaining the latent impacts of high-involvement HRM practices on firms’ innovation capability (Cao et al., 2022; Waheed et al., 2019). The literature indicates that the possible differential impacts of HRM practices on specific forms of innovation have not yet been adequately investigated by previous studies (Cao et al., 2022; Haneda & Ito, 2018). For that reason, to increase the understanding of how high-involvement HRM practices can influence certain aspects of innovation such as incremental and radical innovation, the first research question arises:

**RQ1. Do high-involvement HRM practices significantly predict incremental and radical innovations?**

Secondly, HRM practices contribute to creating the appropriate mechanism and climate to cultivate employees’ behaviors of sharing knowledge and ideas for achieving significant changes and innovations (T. T. Le & Le, 2023; Tan & Nasurdin, 2011). Relatively few works have explained how HRM practices, directly and indirectly, influence the innovation competence of firms via KS behaviors (Cao et al., 2022; Kaabi et al., 2018). In particular, Than et al. (2021) underscored the necessity of filling the theoretical and practical gaps in the roles of HRM practices and KS behaviors in relation to organizational capability for innovations. For such reason, this paper explores the possibility of the mediating roles of knowledge collection and donation in the correlation between high-involvement HRM practices and innovations by answering the following research question:

**RQ2. Do KS behaviors mediate the influence of high-involvement HRM practices on incremental and radical innovations?**

Thirdly, emerging and developing economies are supposing an increasingly preeminent spot in the global economy. Firms in these nations are facing many significant challenges with resource scarcity and the instability of the business environment (P. T. Le & Le, 2022; Than et al., 2023). Prior studies revealed that environmental factors are important ones affecting the efforts of organizations to pursue innovations (Iqbal et al., 2021; Naranjo-Gil, 2009). Among those, market turbulence is one of the major variables considerably controlling the innovation outcomes and degrees of firms (Iqbal et al., 2021; Sung & Choi, 2021). It involves persistent shifts in the dislikes and likes of customers, cost/price systems, and the pattern of competing firms (Iqbal et al., 2021; Silva & Caetano, 2014). Accordingly, if firms are capable of anticipating market turmoil accurately, they would promote solutions to stimulate KS activities for innovations (P. T. Le & Le, 2022). However, so far, there have been few studies interested in examining the ability of market turbulence to inhibit or promote innovation capability in relation to knowledge resources and KS (P. T. Le & Le, 2022; Shehzad et al., 2022). Accordingly, this paper attempts to explore and explain the possible moderating roles of market turbulence in the KS-innovation relationship. The findings of such efforts are expected to assist firms in emerging and developing economies to have proper knowledge of environmental influences for successful innovation. Accordingly, the third research question is:

**RQ3. Does market turbulence moderate the connection between KS and innovation capability?**

Resource-based theory (RBT) indicated that firms’ superior performance depended upon the unique bundle of strategic resources that they possess and deploy effectively (Barney, 1991). The literature considers knowledge and human capital among the strategic, valuable, and hard-to-imitate resources to be used with the aim of improving innovation and competitive advantage (Barney & Wright, 1998; Ndlela & Du Toit, 2001; Than et al., 2023; S. Wang & Noe, 2010). Accordingly, to address the above research questions, this paper applies RBT and Structural Equations Modelling (SEM) to examine the
relationship between the latent variables based on data from 309 respondents from 125 manufacturing and service companies in Vietnam. This study expects to enrich the theory of innovation management by showing a new approach to fostering innovation capability for firms in emerging and developing nations.

To answer the above research questions, this paper reports on a survey study that examines the relationship between the latent variables of human resource management practices, knowledge sharing, market turbulence, and specific forms of innovation. This study is expected to enrich the theory of innovation management by showing a new approach to following and fostering innovation capability for firms in emerging and developing nations. The remainder of the paper is organized as follows. First, the section on the literature review explores the literature and hypotheses. Second, the section on methodology describes the research procedure to test the model and data collection. Third, the section on findings analyzes the data and discusses the empirical results. Finally, this study provides conclusions, managerial implications, and limitations, and makes proposals for future research in the discussion section.

**Literature Review**

*The Influence of High-Involvement HRM Practices on Innovation Capability*

Innovation capability has been recognized as a significant factor for firms in developing and emerging markets to achieve competitive advantage in the 21st century because it enables organizations to meet the changing needs of customers by offering them required products and services (Gui et al., 2022; P. B. Le et al., 2020). It is defined as the capability of firms in generating new services and products, working operations, and management processes to increase performance and attain competitiveness (Drucker, 2014; T. T. Le & Le, 2023; Than et al., 2023). Prior studies distinguish innovation capability in different categories (Anderson et al., 2014; Tsai et al., 2001). However, incremental and radical innovations are recognized as two distinct and crucial degrees of innovation allowing firms to adapt to the swift change and turbulence of the markets (P. B. Le et al., 2020; P. T. Le & Le, 2022). According to P. T. Le and Le (2022), “radical innovation is the high degree of novelty that changes the whole order of things referring to the acquisition and application of new knowledge to develop completely new products or services for new customers or emerging markets” and “incremental innovation is the low degree of novelty given from small changes in technology and product improvements”. To put it simply, radical innovation involves the core while fundamental and incremental innovations refer to minor innovations originating from available products, services, knowledge, and platforms.

HRM practices operated properly will always bring more positive results than others, thus organizations are implored to choose and adopt the best practices (Cao et al., 2022; Than et al., 2023). Strategic literature shows two main perspectives by which firms can apply to govern and establish connections with individuals in their organizations (Camelo-Ordaz et al., 2011). First, the perspective based on transaction cares about the implementation of HRM practice to stimulate the short-term interchange among individuals as well as the relationship between employees and the organization. In contrast, high-involvement HRM practice emphasizes the need for developing long-term relationships between employees and the organization (Cao et al., 2022). The literature has recognized high-involvement HRM as a useful management tool emphasizing the involvement of employees as a key expediency of practice to enrich their skills, knowledge, and motivation (Rubel et al., 2017; Shin et al., 2018). Significant findings on the effect of HRM practices show that firms should focus on developing available assets, including HRM practices and knowledge resources, to stimulate innovation competencies and competitive advantages (Shin et al., 2018; Than et al., 2021).
HRM practice serves as an apparatus for organizations to leverage human and other organizational resources to drive innovation capabilities. As expected, many previous studies on this topic have indicated the meaningful influence of HRM practice on innovation capacity. For instance, based on the empirical data of 174 Spanish companies, Jiménez-Jiménez and Sanz-Valle (2008) pointed out that, by establishing a suitable HRM system, firms can pursue and enhance their ability to innovate in different paradigms. Moreover, C.-J. Chen and Huang (2009) highlighted the important role of HRM practices as a strategic approach to influencing and transforming capacities, behaviors, and attitudes of employees toward certain goals of organizations such as innovations. In other words, effective HRM practices help firms create catalysts and appropriate climates to cultivate innovation activities among employees. De Winne and Sels’ (2010) study, using data from 637 firms in Belgium, revealed that HRM practice acts as a decisive antecedent of innovation initiatives in Belgian start-ups. Their findings underscored the importance of the high range of HRM practices in comparison with the low human resource of Belgian start-ups in pushing innovations. Diaz-Fernandez et al.’s (2017) longitudinal study using a survey of industrial strategic behaviors in Spanish firms from 2001 to 2008 found that HRM practices significantly contribute to increasing innovation as it helps firms effectively employ a majority of available assets and resources for prompting innovation competencies. According to Aman et al. (2018), one of the important aims of HRM practices is to bring a conducive climate to foster the necessary skills and abilities of employees for pursuing innovation. Their findings showed the benefits of HRM practice in actively increasing employee knowledge and innovation abilities in the banks of Vehari, Pakistan. Notably, Camelo-Ordaz et al. (2011) indicated proof of considerable effects and significant link of high-involvement HRM practice with the degrees of knowledge sharing and innovation of organizations. Similarly, according to Yasir and Majid (2020), firms might apply a high-involvement human resource approach to improve their innovation outcomes by transforming existing capabilities into superior competencies and behaviors from employees for innovations. According to the RBV, HRM practices are an essential part of all resources in an organization to drive innovation and maintain competitive advantage (Iqbal et al., 2021). The work of Lei et al. (2021) in an emerging market pointed out that HRM practices remarkably contribute to increasing exploitative and exploratory innovation capability through their positive impacts on the processes of acquiring, sharing, and applying knowledge of employees in organizations. Typically, the findings of Cao et al. (2022) showed that high-involvement HRM practice is necessary and a smart choice to boost innovation capability for organizations in developing and emerging markets by considerable influences on tacit and explicit KS. These arguments support the positive HRM-innovation relationship. This study, therefore, proposes the following hypotheses:

**H1a:** High-involvement HRM practices positively predict radical innovation.

**H1b:** High-involvement HRM practices positively predict incremental innovation.

**Mediating Role of KS Between High-Involvement HRM Practices and Innovation Capability**

Knowledge sharing is an important element that determines the degree of success of knowledge management and innovation initiatives (P. B. Le & Lei, 2019). Accordingly, how to improve KS among employees is a well-discussed topic among scholars and practitioners in the field of organizational behavior (P. B. Le et al., 2022; Phong & Son, 2020; Singh et al., 2021). The current literature defined KS as the process of exchanging knowledge among employees in organizations that include both processes of providing knowledge to others and searching for knowledge from others (P. B. Le & Nguyen, 2023; S. Wang & Noe, 2010). Van den Hooff and De Ridder (2004) divide KS behaviors into two categories, namely, knowledge donation and knowledge collection. According to Le and Lei (2017), the former “reflects the voluntary and proactive degree of individuals in communicating or supplying personal intellectual capital to colleagues” while the latter refers to the process by which individuals gather “skills and knowledge from colleagues to learn what their colleagues know”.
HRM practices involve the management procedures that enable firms to take possession of valued knowledge and higher innovative performance (Singh et al., 2021; Than et al., 2023). HRM practice plays an important role in constituting a favorable environment to foster KS behaviors among individuals in organizations (Cao et al., 2022; Singh et al., 2021). As claimed by Soliman and Spooner (2000), HRM practice helps organizations detect knowledge-related gaps, and support the process of acquiring, promoting, applying, and regenerating knowledge capital of employees. In addition, HRM practices assist organizations in creating a positive climate to stimulate information flows aligned with organizational goals. According to Camelo-Ordaz et al. (2011), HRM practice boosts the formation of a social environment within an organization that gives support and promotes KS among individuals for development. Their findings revealed the substantial effect of high-involvement HRM practice on employee willingness to share knowledge and expertise. Jiménez-Jiménez and Sanz-Valle (2008) asserted that firms need to develop an appropriate HRM approach to increase KS activities because it helps firms create a beneficial climate for employees to acquire and share explicit knowledge. Based on a qualitative approach, Gope et al. (2018) contended that the important achievement in knowledge resources as a result of HRM practices would inspire and motivate employees to share knowledge or skills with their colleagues. Cao et al. (2022) indicated that HRM practice is an optimal solution for organizations to strengthen knowledge resources and capital. Their findings showed the significant consequence of high-involvement HRM practice on both explicit and tacit KS. These arguments support a positive link between HRM practices and KS; therefore, the following hypotheses are proposed (Figure 1):

**H2a:** High-involvement HRM practices significantly predict knowledge donation.

**H2b:** High-involvement HRM practices significantly predict knowledge collection.

Many previous academic works have denoted significant effects of KS on innovation (Sáenz et al., 2012; C. Wang & Hu, 2020). Truly, Jansen et al.’s (2006) findings showed the significant KS-innovation relationship in enabling organizations to desist from being controlled “inside their knowledge boundaries.” Sáenz et al. (2012) indicated that processes of sharing knowledge among individuals such as mentoring, coaching, communities of practice, and action rotating are some of the major approaches for Colombian and Spanish high-tech companies to enhance their innovation competence. As reported by Choi et al. (2016), the process of sharing task-oriented knowledge allows individuals to generate occasions to enrich their knowledge and novel methods of working, and thereby enhance the organizational ability to innovate. P. B. Le et al. (2020) pointed out that processes of sharing explicit knowledge contribute to creating new ideas and solutions for organizations to increase their incremental innovation capacity. Nguyen et al. (2022) justified that, by sharing new and available knowledge, individuals can learn, combine, and enhance their value of knowledge resources, then be

---

**Figure 1. The proposed research model**

*Note: ----- indirect effect*
able to translate novel ideas into the capability of innovations. From these discussions, this study argues that KS would help organizations to augment work-related problems and utilize new knowledge for developing new products at different degrees of novelty. Accordingly, this study hypothesizes that:

H3a: Knowledge donation positively affects incremental innovation
H3b: Knowledge donation positively affects radical innovation
H3c: Knowledge collection positively affects incremental innovation.
H3d: Knowledge collection positively affects radical innovation.

The above-mentioned hypotheses bridge HRM practice-innovation relationships via the intermediating mechanism of KS behaviors. In other words, KS might serve as a mediating factor to connect the relationship between high-involvement HRM practice and certain forms of innovation. Additionally, Camelo-Ordaz et al. (2011) manifested that high-involvement HRM practice is effective to encourage KS processes of employees, thereby boosting the innovation of organizations. According to Al-Bahussin and El-Garaify (2013), HRM practice acts as a precondition for promoting knowledge management and KS climate, hence generating organizational innovation. The findings of the empirical study of Kaabi et al. (2018) from organizations in the United Arab Emirates showed that KS activities significantly mediate the impacts of HRM practices on innovation performance. Singh et al. (2021) indicated that processes of sharing knowledge significantly mediate the effects of knowledge-based HRM practices on innovation performance. Especially, Iqbal et al. (2021) and Cao et al. (2022) argued that HRM practices are a set of activities used by the organization to manage organizational capabilities such as creating public relationships, collecting, and managing knowledge to increase innovation capability, and achieving competitive advantages. Their finding showed evidence of the partial mediating role of the process of KS and knowledge management in collecting the relationship between HRM practices and innovation capability. So, this study suggests the following hypotheses:

H4a: KS behaviors serve as a mediator to connect the effect of high-involvement HRM practices on incremental innovation.
H4b: KS behaviors serve as a mediator to connect the effect of high-involvement HRM practices on radical innovation.

**Moderating Role of Market Turbulence in the KS-Innovation Relationship**

Environmental turbulence is frequently examined as unpredictable and discrete occurrences in the business environs including boycotts by environmentalists, dramatic changes in the economy, significant technological changes, customer needs, and so on (Calantone et al., 2003; Dost et al., 2019; Sung & Choi, 2021). According to P. T. Le and Le (2022), market turbulence is kind of important environmental element that alters the influence of dynamic competence and organizational factors on key outcomes and effectiveness. Therefore, how to succeed in dealing with instability and turbulent contexts is a primary priority of business leaders (P. T. Le & Le, 2022).

Market turbulence is extremely challenging and diverse. Hence, leaders are increasingly focusing on the role of innovation in strategic directions, especially in enhancing and evolving new services and products, optimizing operation conditions, and improving the reputation of the organization (P. T. Le & Le, 2022; Li, 2022). Previous studies revealed that the level of market movement opens opportunities for organizations to utilize knowledge from multifarious sources to innovate (Dost et al., 2019; P. T. Le & Le, 2022). In other words, market volatilization intensifies the influence of knowledge sources and KS activity on innovation. Recently, Shehzad et al. (2022) justified that activities of sharing explicit and tacit knowledge from superiors and peers inside an organization might help prior knowledge base and expertise become more accurate and pertinent, and their interaction
effects on innovation are more significant during market uncertainty. Based on these arguments, this study poses the hypotheses that:

**H5a:** Market turbulence strengthens the impact of knowledge donation on radical innovation.

**H5b:** Market turbulence strengthens the impact of knowledge donation on incremental innovation.

**H5c:** Market turbulence strengthens the impact of knowledge collection on radical innovation.

**H5d:** Market turbulence strengthens the impact of knowledge collection on incremental innovation.

**METHODODOLOGY**

**SAMPLE AND DATA COLLECTION**

A survey questionnaire was developed to gather data and examine the validity of the proposed hypotheses. This study collected data from May to August 2022 through a survey of 125 Vietnamese manufacturing and service firms. We randomly selected these companies from the yellow pages of the Vietnamese business directory with 250,000 enterprises. The sampling technique in this study is a simple random sample by which each of the 250,000 enterprises has an equal chance of being selected as a subject. This technique is appropriate because of the ease of assembling the sample and ensures good representativeness of the population (Sharma, 2017). The authors contacted representatives of these enterprises to elucidate the research’s significance, pledge to keep the survey confidential information, and suggestions for gathering questionnaires. The respondents in this study were directors, deputy managers/directors, or heads of important departments such as R&D, organization, and administration. The observable variables were modified from previous studies to evolve the preliminary list of measurements. Basically, the authors handed out 550 question sheets and acquired 435 in return during the official survey. Finally, the study collected 309 valid questionnaires (56.1%).

According to Kock and Hadaya (2018), the “10-times rule” method is the most widely used minimum sample size estimation method in PLS-SEM based on the rule that the sample size should be greater than 10 times the maximum number of inner or outer model links pointing at any latent variable in the model. In the current study, the 10-times rule method leads to the minimum sample size estimation of 40, regardless of the strengths of the path coefficients. This is because the maximum number of model links pointing at any variable in the model is 4, which multiplied by 10 yields 40. In addition, Tabachnick and Fidell (1996) argued that the minimum sample size needs to satisfy the value of $50 + 8m = 50 + 8 \times 5 = 90$ ($m$ is the number of independent variables), so the sample size in this study is satisfactory.

**MEASURES**

This study used six items adapted from Camelo-Ordaz et al.’s (2011) research to measure the perception of high-involvement HRM practices in an organization. These items used a Likert scale format that ranged from a very little extent (1) to a very large extent (5). A specific sample of a variable was “Training activities in my company focus on team building and interpersonal relations.” The scale of KS was measured by adapting items from the research of Son et al.’s (2020). The scale had ten items that used a Likert scale format ranging from very little extent (1) to very large extent (5). This study measures knowledge collecting and knowledge donating as unidimensional constructs. This measurement is valid and consistent with previous studies (e.g., B. P. Le et al., 2018), of which five items were employed to measure knowledge donation and five others were used to measure knowledge collection. An example of these items is “I often share with my colleagues the new working skills that I learn” and “My colleagues often share with me the working skills they know when I ask them.”
addition, ten items were developed from the research of Sheng and Chien (2016) to evaluate incremental and radical innovation. These items used a Likert scale format that ranged from a very little extent (1) to a very large extent (5), of which, five items were used to measure radical innovation (e.g., “we invent new products and service”); five remaining ones were utilized to measure incremental innovation (e.g., “we frequently refine the provision of existing products and services”). This study also utilized three items originating from Calantone et al.’s (2003) study to estimate market turbulence, e.g., “We cater to many of the same customers as in the past.” These items used a Likert scale format that ranged from very little extent (1) to very large extent (5). Finally, we considered firm characteristics of industry type as control variables to clarify the distinctions in companies’ ability to innovate (Yang et al., 2018).

**DATA ANALYSIS**

There are three stages of the data analysis process. Step 1: Data collection and description of statistical analysis. The purpose of this step is to provide simple summaries of the sample and the measures. Step 2: Exploratory and confirmatory factor analysis. These techniques are used in scale development, scale adaptation studies, and the goodness-of-fit of the measurement model. Step 3: Regression analysis. This technique is used to test hypotheses and study linear relationships. This study utilized Structural Equation Modeling (SEM) to test proposal hypotheses in the research model using data gathered from the 309 respondents in 125 firms because (1) SEM method has been widely used due to its ability to demonstrate versatile regression correlations on a single model and test (Kline, 2015), and (2) it is also proper and practical to identify interaction and mediation effects (P. B. Le & Lei, 2019).

To eliminate the potential effect of common method bias (CMB) in self-reporting variables, this study used Harman’s single factor test to check for the probably existing CMB issues (Podsakoff & Organ, 1986). Accordingly, this study implements Exploratory Factor Analysis and Principal Component Factor to analyze all questionnaire items of six latent constructs with an eigenvalue larger than 1 extracted, the cumulative percent of the variance is 82.696, explanation variance percent of the first factor is 15.789% (less than 50%). Accordingly, CMB is not a significant issue in current data.

It is important first to check the normality of the data to ensure that the model assumptions are not violated, which may create problems with the estimations (Byrne, 2016). According to Tabachnick et al. (2013, pp.497-516), to measure normal distribution, skewness, and kurtosis are appropriate measures that should be within the range from 2 to –2 (Table 1).

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><em>Statistic</em></td>
<td><em>Std. error</em></td>
</tr>
<tr>
<td>High-involvement HRM practices (HRM)</td>
<td>– 0.564</td>
<td>0.139</td>
</tr>
<tr>
<td>Knowledge donating (KD)</td>
<td>– 0.088</td>
<td>0.139</td>
</tr>
<tr>
<td>Knowledge collecting (KC)</td>
<td>– 0.216</td>
<td>0.139</td>
</tr>
<tr>
<td>Radical innovation (RI)</td>
<td>– 0.216</td>
<td>0.139</td>
</tr>
<tr>
<td>Incremental innovation (II)</td>
<td>– 0.007</td>
<td>0.139</td>
</tr>
<tr>
<td>Market turbulence (MT)</td>
<td>– 0.200</td>
<td>0.139</td>
</tr>
</tbody>
</table>

Based on Table 1, the absolute values of kurtosis for high-involvement HRM practices, KS constructs, market turbulence, and innovation capabilities fell between –1.317 and –0.099, and the values of skewness fell between 1.031 and 1.965. Therefore, the skewness and kurtosis in this research can be accepted as they all fell within the range of ±2.
In addition, to ensure multicollinearity does not result in spurious findings during regression analysis, we have calculated the variance inflation factor (VIF). The VIF is found to be less than 3 for all the independent variables, so potential multicollinearity-related issues were not a concern.

RESULTS

MEASUREMENT MODEL

As shown in Table 2, this study examines the Cronbach’s alpha coefficient (Cα) of all variables to test the reliability of the measurement. Statistical results range from 0.92 to 0.96 (greater than 0.7 recommended by Nunnally & Bernstein, 1994). In addition, to examine the discriminant and convergent validity of the total measurement model, this study evaluates confirmatory factor analysis (CFA) as recommended by Brown (2015).

Table 2. Standardized loading and reliabilities for the measurement model

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Standardize loading</th>
<th>t-value</th>
<th>AVE</th>
<th>CR</th>
<th>Cα</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-involvement HRM practices</td>
<td>6</td>
<td>-</td>
<td>-</td>
<td>0.67</td>
<td>0.92</td>
<td>0.92</td>
</tr>
<tr>
<td>HRM1</td>
<td>0.805***</td>
<td>20.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRM2</td>
<td>0.785***</td>
<td>15.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRM3</td>
<td>0.848***</td>
<td>17.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRM4</td>
<td>0.819***</td>
<td>20.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRM5</td>
<td>0.849***</td>
<td>17.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRM6</td>
<td>0.796***</td>
<td>15.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge donating (KD)</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td>0.70</td>
<td>0.92</td>
<td>0.92</td>
</tr>
<tr>
<td>KD1</td>
<td>0.813***</td>
<td>23.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KD2</td>
<td>0.821***</td>
<td>17.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KD3</td>
<td>0.851***</td>
<td>18.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KD4</td>
<td>0.852***</td>
<td>23.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KD5</td>
<td>0.845***</td>
<td>18.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge collecting (KC)</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td>0.85</td>
<td>0.96</td>
<td>0.96</td>
</tr>
<tr>
<td>KC1</td>
<td>0.980***</td>
<td>51.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KC2</td>
<td>0.968***</td>
<td>51.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KC3</td>
<td>0.785***</td>
<td>21.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KC4</td>
<td>0.943***</td>
<td>42.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KC5</td>
<td>0.939***</td>
<td>41.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radical innovation (RI)</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td>0.74</td>
<td>0.93</td>
<td>0.93</td>
</tr>
<tr>
<td>RI1</td>
<td>0.832***</td>
<td>20.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RI2</td>
<td>0.858***</td>
<td>33.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RI3</td>
<td>0.891***</td>
<td>23.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RI4</td>
<td>0.840***</td>
<td>20.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RI5</td>
<td>0.902***</td>
<td>33.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incremental innovation (II)</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td>0.82</td>
<td>0.95</td>
<td>0.95</td>
</tr>
<tr>
<td>II1</td>
<td>0.922***</td>
<td>38.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II2</td>
<td>0.874***</td>
<td>23.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Convergent validity: With respect to convergent validity, Table 2 shows that statistical indicators satisfy important standards of convergent validity suggested by Hair et al. (2006). Specifically, factor loadings range from 0.749 to 0.980, CR values range from 0.92 to 0.96, and the AVE values range from 0.67 to 0.88.

Discriminant validity: This study continues checking the discriminant validity of the factors by examining criteria recommended by Fornell and Larcker (1981). As shown in Table 3, the AVE’s square root of each variable is higher than the inter-construct correlations. Thus, the discriminant validity condition is satisfied. Consequently, these findings show secure support for both latent reliability and discriminant validity of measurements.

Table 3. Descriptive statistics and constructed correlations

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Mean</th>
<th>SD</th>
<th>HRM</th>
<th>KD</th>
<th>KC</th>
<th>RI</th>
<th>II</th>
<th>MT</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-involvement HRM practices</td>
<td>3.44</td>
<td>0.55</td>
<td>0.81</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge donating (KD)</td>
<td>3.52</td>
<td>0.61</td>
<td>0.61***</td>
<td>0.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge collecting (KC)</td>
<td>3.58</td>
<td>0.54</td>
<td>0.44***</td>
<td>0.40***</td>
<td>0.92</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radical innovation (RI)</td>
<td>3.69</td>
<td>0.65</td>
<td>0.62***</td>
<td>0.68***</td>
<td>0.47***</td>
<td>0.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incremental innovation (II)</td>
<td>3.64</td>
<td>0.62</td>
<td>0.57***</td>
<td>0.59***</td>
<td>0.48***</td>
<td>0.57***</td>
<td>0.90</td>
<td></td>
</tr>
<tr>
<td>Market turbulence (MT)</td>
<td>3.42</td>
<td>0.79</td>
<td>0.04</td>
<td>0.06</td>
<td>-0.05</td>
<td>0.05</td>
<td>0.1</td>
<td>0.93</td>
</tr>
</tbody>
</table>

Notes: S.D: standard deviation; Diagonal elements (in bold) are the square root of the AVE; ***p < 0.001.

Satisfaction of the measurement model: This study judged the good fit of measurement by investigating incremental and absolute fit values. Table 4 manifests that all fit indicators of the measurement are acceptable. Hence, the model is consistent with the data and reliable.

Table 4. The fit indicators of the CFA model

<table>
<thead>
<tr>
<th>Fit index</th>
<th>Scores</th>
<th>Proposal threshold values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute fit values</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chi-square/df - (CMIN/df)</td>
<td>1.223</td>
<td>≤ 2; ≤ 5</td>
</tr>
<tr>
<td>Goodness of fit index - (GFI)</td>
<td>0.915</td>
<td>≥ 0.90; ≥ 0.80</td>
</tr>
<tr>
<td>Root mean square error of approximation - (RMSEA)</td>
<td>0.027</td>
<td>≤ 0.08; ≤ 0.10</td>
</tr>
<tr>
<td>Incremental fit values</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incremental fit measures including normed fit index - (NFI)</td>
<td>0.958</td>
<td>≥ 0.90</td>
</tr>
</tbody>
</table>
Determinants of Incremental and Radical Innovation

| Adjusted goodness of fit index - (AGFI) | 0.886 | ≥ 0.90; ≥ 0.80 | 
| Comparative fit index - (CFI) | 0.992 | ≥ 0.90 | 

Notes: a and b: good and acceptable fit.

**STRUCTURAL MODEL AND FINDINGS**

Previous research suggests that the structural equation model (SEM) is appropriate to demonstrate and explain the flexible regression correlations on a sole model (Kline, 2015). According to P. B. Le and Lei (2019), SEM is also practical and fits to examine the mediation and interaction effects. The fit indicators of the structural model are good enough (χ²=473.30; df = 385; RMSEA = 0.049; GFI = 0.865; CFI = 0.991; TLI = 0.990), advocating that correlation coefficients among research variables fit the data.

**Test direct effects**

The results of SEM shown in Figure 2 and Table 5 indicate that standardized regression coefficients of direct influences are significant and compatible with the stated hypotheses. Specifically, regarding H1a and H1b, the results in Table 5 show the positive effects of high-involvement HRM practices on radical innovation (β = 0.270; p < 0.001), and incremental innovation (β = 0.254; p < 0.001). Thus, hypotheses H1a and H1b are empirically supported.

![Figure 2. Results of structural model](image)

Notes: ***p<.001; **p<.05; ---- non-significant paths

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Beta</th>
<th>Standard error</th>
<th>t-value</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRM → Radical innovation</td>
<td>0.270***</td>
<td>0.078</td>
<td>4.048</td>
<td>Supported</td>
</tr>
<tr>
<td>HRM → Incremental innovation</td>
<td>0.259***</td>
<td>0.077</td>
<td>3.730</td>
<td>Supported</td>
</tr>
<tr>
<td>HRM → Knowledge donating</td>
<td>0.627***</td>
<td>0.069</td>
<td>10.358</td>
<td>Supported</td>
</tr>
<tr>
<td>HRM → Knowledge collecting</td>
<td>0.456***</td>
<td>0.061</td>
<td>7.953</td>
<td>Supported</td>
</tr>
<tr>
<td>Relationship</td>
<td>Beta</td>
<td>Standard error</td>
<td>t-value</td>
<td>Results</td>
</tr>
<tr>
<td>--------------</td>
<td>--------</td>
<td>----------------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>KD → Radical innovation</td>
<td>0.444***</td>
<td>0.065</td>
<td>7.049</td>
<td>Supported</td>
</tr>
<tr>
<td>KD → Incremental innovation</td>
<td>0.338***</td>
<td>0.063</td>
<td>5.245</td>
<td>Supported</td>
</tr>
<tr>
<td>KC → Radical innovation</td>
<td>0.184***</td>
<td>0.053</td>
<td>3.759</td>
<td>Supported</td>
</tr>
<tr>
<td>KC → Incremental innovation</td>
<td>0.244***</td>
<td>0.053</td>
<td>4.740</td>
<td>Supported</td>
</tr>
<tr>
<td>Industry type → Radical innovation</td>
<td>-0.001</td>
<td>0.056</td>
<td>-0.018</td>
<td>Not Supported</td>
</tr>
<tr>
<td>Industry type → Incremental innovation</td>
<td>-0.011</td>
<td>0.056</td>
<td>-0.198</td>
<td>Not Supported</td>
</tr>
<tr>
<td>MT*KD → Radical innovation</td>
<td>0.031</td>
<td>0.019</td>
<td>1.584</td>
<td>Not Supported</td>
</tr>
<tr>
<td>MT*KD → Incremental innovation</td>
<td>0.077***</td>
<td>0.020</td>
<td>3.854</td>
<td>Supported</td>
</tr>
<tr>
<td>MT*KC → Radical innovation</td>
<td>0.002</td>
<td>0.020</td>
<td>0.126</td>
<td>Not Supported</td>
</tr>
<tr>
<td>MT*KC → Incremental innovation</td>
<td>0.054**</td>
<td>0.019</td>
<td>2.854</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Notes: ***p < 0.001; **p < 0.05

With reference to hypotheses H2a and H2b, the findings support the positive and significant influences of high-involvement HRM practices on knowledge donation and collection. Specifically, the effect of high-involvement HRM practices on knowledge donation (β = 0.627; p < 0.001) is more significant than its influences on knowledge collection (β = 0.456; p < 0.001).

Regarding the correlation between KS behaviors and innovation capabilities, findings also verify the hypotheses H3a, H3b, H3c, and H3d. Particularly, the findings reveal that knowledge donation has greater effects on both radical innovation (β = 0.444; p < 0.001) and incremental innovation (β = 0.338; p < 0.001) in comparison with the effects of knowledge donation on radical innovation (β = 0.184; p < 0.001) and incremental innovation (β = 0.244; p < 0.001). It highlights the significant role of knowledge donation in fostering organizational capability for incremental and radical innovation.

With respect to the control role of the industry type, the findings do not favor its control role on the innovation capability of the organization because regression coefficients are insignificant statistically. Hence, industry type does not signal a difference in innovation capability among organizations.

**Test mediating effects**

As shown in Table 6, to evaluate proofs reflecting the mediating role of KS in the HRM practice-innovation relationship, this paper applies the method of bootstrap confidence intervals with 5,000 repetitions to affirm the statistical significance of the indirect influences as recommended by Preacher and Hayes (2008).

### Table 6. Confidence intervals of the indirect effects

<table>
<thead>
<tr>
<th>Path</th>
<th>Direct effects</th>
<th>Indirect effects</th>
<th>Total effects</th>
<th>Bias-corrected confidence intervals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower confidence level</td>
</tr>
<tr>
<td>HRM → KC &amp; KD → RI</td>
<td>0.270***</td>
<td>0.363***</td>
<td>0.633***</td>
<td>0.294</td>
</tr>
<tr>
<td>HRM → KC &amp; KD → II</td>
<td>0.259***</td>
<td>0.323***</td>
<td>0.583***</td>
<td>0.244</td>
</tr>
</tbody>
</table>

Note: ***p < 0.001

Findings in Table 6 point out that the indirect impact of high-involvement HRM practices on radical innovation (β = 0.363; p < 0.001) and incremental innovation (β = 0.323; p < 0.001) are statistically significant and within the allowed confidence interval. Thus, these findings show that KS behaviors...
serve as a partial mediation in the relationship between high-involvement HRM practices and innovation capabilities.

**Test moderating effects**

To examine the moderating role of market turbulence in the KS-innovation correlation, we estimate the impact of MT*KD interaction on each form of innovation. The findings manifest that this impact is insignificant ($\beta = 0.031; p > 0.1$) and H5a is not supported. In contrast, the effect of MT*KD interaction on incremental innovation is significant ($\beta = 0.077; p < .001$), and H5b is supported (Figures 3). Similarly, H5c is not supported because the results do support arguments about the impact of MT*KC interaction on radical innovation ($\beta = 0.002; p > 0.1$) while supporting its effect on incremental innovation ($\beta = 0.054; p < 0.05$). In this case, hypothesis H5d is confirmed (Figures 4). Generally, our findings disclose that market turbulence significantly and positively impacts KS behaviors on incremental innovation.

**Figure 3.** Moderating effect of MT between KD and incremental innovation

**Figure 4.** Moderating effect of MT between KC and incremental innovation
DISCUSSIONS AND IMPLICATIONS

Improving innovation capability is a primary concern of academics and leaders of firms in emerging markets because of its remarkable benefits in creating adaptive capacity and competitive advantage (Phan, 2019; Van et al., 2018; Yi et al., 2021; Zapata-Cantu, 2020). However, V. Z. Chen et al. (2014) indicated that it is a real challenge for firms in an emerging market to foster innovation if they rely on external support due to “inadequate external institutions, associated with market failures, highly bureaucratic and corrupt legal-political governance, and weak property-rights regimes” (p. 2). By investigating and showing evidence of the positive effects of a firm’s internal strategic factors (such as high-involvement HRM practice and KS) on its capability to innovate under the moderating effect of market turbulence, this study points out the right direction to pursue innovation for firms in developing and emerging nations. It highlights that enhancing innovation capacity must originate mainly from internal resources and factors that they can control. The positive contributions of this paper in terms of theory and practice of innovation are reflected in the following specific aspects.

First, this study has confirmed the benefits of high-involvement HRM practices as the key antecedent for firms in emerging markets to follow innovation. Although there have been few studies on KS and innovation (Khan et al., 2019; Vladić et al., 2021), they still have confusion in identifying the core factors affecting specific aspects of innovation, such as incremental and radical innovations (P. T. Le & Le, 2022; Shehzad et al., 2022). In addition, effective HRM practices are widely recognized as a decisive precursor to fostering innovation and organizational outcomes but studies on the role and impact of high-involvement HRM practice on the innovation competence of enterprises are still fairly modest and limited (Cao et al., 2022; Chang et al., 2011; Waheed et al., 2019). Than et al. (2021) indicated that “several scholars proposed the relationship between HRM and knowledge management capability based on the literature. However, stronger empirical confirmation is required.” Accordingly, by paying attention to clarifying the antecedent role of high-involvement HRM practice in predicting innovation outcomes, this study has brought insights and causal mechanisms of this relationship. The findings have verified the significant and positive impacts of high-involvement HRM practice on incremental and radical innovation and disclosed that high-involvement HRM practice might be the most appropriate means of advancing organizational capability for incremental and radical innovations.

Second, the literature highlighted the important role of fostering KS activities as an effective method to enhance knowledge capital and organizational innovation (T. T. Le & Le, 2023; Yi et al., 2021). However, the empirical research clarifying this impact is still sparse (Than et al., 2021; Yao et al., 2020). By examining the effect of knowledge donation and collection on incremental and radical innovations, this study endorses the crucial role of KS behaviors in predicting innovation capability. It also reveals and affirms the significant role of knowledge donation behaviors in inducing more influences on both types of innovations. These findings are meaningful and valuable because it helps academia to have detailed insights into effective pathways to drive innovation. Being consistent with the findings of Than et al. (2021), we demonstrate that promoting KS is the right choice and opens up opportunities for firms in emerging nations to make fundamental changes in technological trajectory and operation, hence improving competitive advantage for better penetration into existing markets.

Third, scholars argue that innovation capability might be formed as the HRM-related impacts (Kaabi et al., 2018), especially KS activities were found to actively mediate the effects of organizational factors such as transformational leadership (Al-Husseini et al., 2021), organizational justice (Akram et al., 2020) and organizational culture (P. B. Le et al., 2020). However, with the exception of the work by Cao et al. (2022), very few studies have potential intermediating roles of KS activities for HRM practice-innovation relationships. The result from this paper has asserted that KS behaviors significantly mediate the influence of high-involvement HRM practice on incremental and radical innovations. It also reports that high-involvement HRM practice would positively predict firms’ innovation competence as a result of its influence on employees’ enthusiasm and KS behaviors.
Fourth, scholars highlight the need of determining mechanisms of how market turbulence drives the correlations between behavior variables and organizational factors, such as the KS-innovation correlation (P. T. Le & Le, 2022; Li, 2022). By investigating this linkage in Vietnam, we have provided a theoretical basis and shown proof for its moderating role, and indicates that market turbulence might act as a situational variable and create a reciprocal effect to drive incremental and radical innovations. Consistent with the work of Shehzad et al. (2022), the paper reveals the crucial contingent role of market turbulence in affecting innovation outcomes.

Finally, the paper increases the understanding of the correlations among HRM practice, KS, and innovation in emerging markets. Vietnam is known as a promising country with stable economic growth in recent years. Yet, Vietnamese enterprises are facing many challenges for renovation in terms of physical, financial, and technological resources (Cao et al., 2022; P. B. Le, 2020; Pham & Hoang, 2019). Such status requires greater motivation to discover less expensive and more viable solutions to innovate for organizations (Gui et al., 2021; P. T. Le & Le, 2022). Therefore, the findings have opened a pathway for organizations in emerging markets to promote innovation with limited resources, such as focusing on high-involvement HRM practices, motivating employees to share explicit and tacit knowledge, and concerning the impact of contextual factors.

LIMITATIONS AND RECOMMENDATIONS

Besides contributing to improving the understanding of the relationship between latent variables, the research has certain constraints. First, although the research utilizes the cross-sectional approach for testing the relations among the latent factors, it might not rule out that the correlations might change in the long run. Hence, a longitudinal study is necessary to address this restriction. Second, this study is implemented in a developing country context and implications might only be applied to developing nations. Therefore, we recommend that future studies should persist in developed countries to clarify and strengthen research results. Finally, the innovation effort and strategy of organizations in developing markets tend to be influenced by environmental turbulences and resource constraints (P. B. Le et al., 2022). The paper suggests that future works should focus on exploring available constructs such as HRM practices and knowledge resources to promote frugal innovation models dealing with resource scarcity.

CONCLUSIONS

With the continuing high growth rates of emerging markets, firms in these nations increasingly face pressures to innovate because an understanding of innovation is less readily available in emerging markets and that access to such knowledge is plagued by market inefficiencies, information problems, and skilled labor shortages (Than et al., 2023; Zapata-Cantu, 2020). By developing a research model that emphasizes the mediating role of knowledge donation and collection in linking HRM practice-innovation relationship as well as moderating the role of market turbulence in fostering the influences of KS behaviors on incremental and radical innovation, this paper has provided valuable initiatives for firms in the developing and emerging markets on the effective pathway to leverage the strategic and internal resources of the organization for enhancing innovation.

ACKNOWLEDGEMENTS

This research is funded by National Economics University, Hanoi, Vietnam. Grant CBQT1.2021.03 (264/QĐ-DHKTQD).

REFERENCES


Byrne, B. M. (2016). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (3rd ed.). Routledge. [https://doi.org/10.4324/9781315757421](https://doi.org/10.4324/9781315757421)


Determinants of Incremental and Radical Innovation


Determinants of Incremental and Radical Innovation


Authors

Dat Tho Tran is a Professor and Chair of Science and Training Council - National Economics University, Hanoi, Vietnam. He received his PhD from the Australian National University in 1998. His publications have appeared in various international refereed journals, conference proceedings and as book chapters. His research interests include knowledge management, innovation management, economic growth, and environmental sustainability.

Khoa Vu Dinh is a lecturer in Hanoi University of Industry. He has a doctorate degree from National Economics University, Hanoi, Vietnam, in 2016. His publications have appeared in several prestigious ISI journals such as Journal of Business & Industrial Marketing, Journal of Business-to-Business Marketing, and Asia-Pacific Journal of Business Administration. His research interests include leadership, innovation, supply chain collaboration and knowledge management.

Phong Ba Le is an Associate Professor of Economics at Hanoi University of Industry, Hanoi, Vietnam. He received his PhD from the School of Business Administration, Hunan University, China, in 2018. His publications have appeared in many prestigious ISI journals. He also served as a reviewer for many journals indexed in SSCI and Scopus, such as Journal of Knowledge Management, Knowledge Management Research & Practice, International Journal of Manpower, Sage Open, Leadership & Organization Development Journal. His research interests include leadership, knowledge management, innovation management, organizational behavior, and human resource management.

Phuong Thi Lan Tran is a Lecturer at the School of Banking and Finance, National Economics University, Hanoi, Vietnam. She received her Master's from the School of Business and Economics, Australian National University, Australia, in 2011. She received her PhD at the National Economics University, Vietnam in 2020. Her publications have appeared in some Scopus and ISI journals. Her research interests include financial management, corporate finance, green finance, human resource management, and innovation.