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The Role of Intrinsic Motivation in the Relationship Between Psychological Capital and Innovative Performance: Empirical Evidence from Vietnam*

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Abstract

This research examines the mediation of intrinsic motivation (IP) in the relationship between psychological capital (Psycap) and innovative performance (IP) in the educational environment of the transitioning economy. A test was based on a convenient sample of 440 University lecturers participating in a hardcopy survey was collected from ten universities and colleges in Southern Vietnam, from April 2020 to December 2020, while social isolation is strictly enforced by the government (Covid-19). The hypotheses are then proposed and conducted using confirmatory factor analysis (CFA) and the structural equation modeling technique (SEM). The testing structural model results reveal that all the hypotheses are satisfied at the 5% significance level. Intrinsic motivation is a partial mediator in the linkage between psychological capital and innovative performance. These findings suggest that the importance of Psychological Capital (PsyCap) of workers promotes job performance in general, especially in individuals' creativity in a transitioning market, Vietnam. In addition, Based on the research results, several solutions are also proposed to promote innovative performance in the conditions of education in Vietnam. Besides, the author also gave a few comments on the findings as well as the limitations that this study encountered, especially how the survey samples were collected.

Keywords: Psychological Capital, Intrinsic Motivation, Innovative Performance, Vietnam

JEL Classification Code: M10, M20, M31

1. Introduction

All properties and materials are created by human beings' mental and physical capacities. Therefore, human resource plays a crucial part in existing and development for businesses. There are various kinds of creating competitive advantages for businesses, but building the competitive advantages of humans is the core factor, and it is regarded as a sustainable and unchanged factor in any organization. To maintain this advantage, the organization should continuously change human resources and give out suitable solutions to implement the innovative process for innovative change in a harsh competitive market (Budhiraja, 2017).

Many studies have suggested that the competencies of the leader affect the organizational performance (Salim & Rajput, 2021), and the study of Sekakubo et al. (as cited in Salim & Rajput, 2021) is a specific case to say that. Nowadays, innovation is an inevitable factor that helps the organization's fast adjustment to economic change in front of harsh global competitiveness. In contrast, the organization

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often focused on technological innovation a long time ago. Innovation in the organization is essential, and it impacts effective performance (Sapprasert & Clausen as cited in Fernandes et al., 2018). Many studies show that innovation brings the organization's effectiveness (Thornhill as cited in Bos-Nehles, 2017). Lacking innovation at different levels will reduce the competitiveness capacity seriously for the organization (Sweetman et al., 2010).

A question raised to us how to encourage the spirit of innovation for each individual. This is what managers need to do for job performance in their organization. One way to persuade the creation is to master the individual's psychological capital and self-decisive mechanism and nourish the organization's innovation (Amabile et al., 2004). Therefore, the managers need to push up the individual's psychological capital, which is an indirect way to boost the creative capacity and start innovation development, which is derived from this cause. Sweetman et al. (2010) added the interior motive power element to push up the psychological capital.

The most concerning factor is itself human who creates competitiveness for business all the time. According to Luthans et al. (2007), among the emphasized causes, the psychological capital that is well managed will help the organization's success on long- term competitive advantages Luthans and Youssef (as cited in Fedai & Ata, 2015). So, in order to improve work efficiency in an innovative organizational environment, psychological capacity is needed, which is a cause to start the innovation. In other words, the intrinsic motivation mechanism increases the innovation of which psychological capital and its parts are considered to be a concrete case for developing the process. Therefore, to enhance the effective performance in an innovative organizational environment, the psychological capital is applied by the members' innovation. Human resource management is one of the ways to fight against the obstacle during the process of necessary innovation, and many studies prove that the creation is impacted positively by the following psychological parts: self-efficacy (Tiemey & Farmer, 2002); Hope (Luthans et al., 2007; Carver & Scheier, as cited in Sweetman et al., 2010) and resiliency (Luthans et al., 2007; Sweetman et al., 2010).

Vnexpress.net, on July 24th, 2019, said that In New Delhi- India, WIPO announced the ranking list of worldwide innovation indexes in 2019, Vietnam increased 3 levels, ranked by 42/129 countries; however, the innovation index of Vietnam remains at a far distance in comparison to the average group. The world's fact shows that the strong and weak countries do not depend on their population, resources, but they belong to humans. In the context of globalization and the science and technology revolution, competitiveness among the different countries at any level depends upon human resources. If human innovation is applied well, the production capacities will enhance parallelly (Hughes, 2008). So, implementing the research is completely meaningful in the Vietnamese context.

Although many researchers are most concerned about innovation issued at their organizations, they know little understanding of how to make an individual's innovation development in this process (Bos-Nehles, 2017). This is a subject that is rarely studied in the world. In the country (Vietnam) area, it is seldom studied, so it is impossible to find humans' real innovation capacity. Therefore, the subject of increasing the effect of performance innovatively under the impact on psychological capital and the immediate role of inner motive is considered in this process.

2. Literature Review

2.1. Psychological Capital, Intrinsic Motivation, and Innovative Performance

Psychological capital

It is defined to be the individual's positive psychological development (Luthans et al., 2007; Luthans et al., 2005), and it is also belief, awareness, positive attitude of the individual to the cycle of life and work (Tettegah, as cited in Han et al., 2012). Besides, other psychologists also consider psychological capital as a basic positive capacity. Especially, Positive Organizational Behavior (POB) and its components are affirmed that these go beyond the ability of the human to gain competitive advantages by themselves (Luthans et al., 2005).

Luthans et al. (2007) said that psychological capital is a multi-sided structure relating to the situation of individual's psychological capital development, and it is considered a state to develop psychology positively and expressed by the four parts: (1) having adequate confidence to overcome challenges for success, (2) being optimistic about the good result of work at the present and in the future, (3) being persistent in pursuing the goal and necessary efforts to plan the concrete strategy for exemplary achievements (4) being persistent in solving difficult problems for achievements (Luthans et al., 2007).

Luthans (2002a, 2002b) are based on theories and real studies to identify the components for psychological capital formation. Luthans (2002a, 2002b), Luthans et al. (2007) give out the positive psychological states that can respond to these standards: self-efficacy, hope, optimism, resilience, etc. According to Luthans et al. (2007), four elements express the psychological capital: (1) Confident enough for success before challenges (2) Optimistic about a good result for present and future job (3) persistence for goal (4) looking for problem-solving to overcome difficulties.

(1) Self-efficacy is the certainty or belief of an individual with their capacity that pushes up their motivation, knowledge, and necessary action for the given out tasks (Stajkovic & Luthans, 1998). Belief proves

for necessary efforts to be successful Luthans et al. (2007). Park (1998) supposed that it evaluates an individual about the implementation capacity of particular work.

(2) Optimism is the permanent confidence, and it is a remaining trend for the optimist spirit all the time. The spirit of optimism can be developed by learning and experiences from the past and awareness of the objects and phenomena at present as well as in the future (Luthans et al., 2006). Optimism is the positive thinking of the present and future success Luthans et al. (2007), Scheier and Carver (1985) said that, popularly, humans have a different approach to the world around them. Others tend favorable in their outlook. The optimists expect everything that happens depends on their thoughts; they believe good results more than worse ones.

(3) Hope is the consistency of a person's goal, and it is necessary to change the way of implementation and reform the way for the end (Luthans et al., 2007). Snyder et al. (1991a) supposed the positive motive state is expressed by energy for the last goal, while Snyder et al. (1991b) explain the definition of the "hope" with another way, the definition of the concept has two sides: (1) "pathways," how to plan of ways to meet the goal and (2) "agency," an individual's perception of how to achieve goal-directed determination. What is a more formal statement, hope is an awareness that is based on reciprocity in success (Snyder et al., 1991b).

(4) Resilience is the capacity that can be developed to be struggling with adversity and obstacles, contradict, and failure, as well as it must have remained persistently for difficulty overcome (Lusthans, 2002a). Overcoming the difficulty is the capacity of resistance, endurance, before any circumstances and failure, and it is also the capacity of persistence (Luthans et al., 2005; Luthans et al., 2007; Block & Kremen, 1996). At the same time, Nguyen and Nguyen (2011) argue that overcoming difficulties is a positive adjustment in a concrete circumstance.

Intrinsic motivation

Based on self-determination theory, motivation is classified as follows:

Self-determination theory supposes the human's spirit of motivating is classified into three kinds: Intrinsic motivation, extrinsic motivation, and without having motivation.

The researchers often tell the difference between intrinsic motivation and extrinsic motivation. Ryan and Deci (2000) give out the two conceptions about intrinsic motivation and extrinsic motivation, which is expressed as follow:

Intrinsic motivation is defined to be the activities linked to satisfaction more than separate actions. If humans' internal action is being forced, a person will be stimulated because of the controlling goal, more challenging for the result. Working is not affected by external factors or suffered from other pressure. This concept is suitable to Warr et al. (as cited in Suteerawat et al., 2016) says, "the degree of one person who works his job well to satisfy his inner thought." According to Amabile (as cited in Long & Hartog, 2008), intrinsic motivation is the motive that forces the individual's positive reflection on their own work more than the outside impact.

On the other hand, the outside motive is the motivation that links to the activities for the concrete results. Therefore, the outside motive is different from the inside motive, singly, because it creates interesting things from its own achievement. However, the theory and practice of working motive focus mainly on external factors that stimulate working motive based on the material awards like salary, bonus, rating system, working environment, and work characteristics. Those studies were carried out in different social contexts; most were mainly based on external factors. It is unclear to express the nature of the issue totally because the job motivation of an individual is not only based on external factors but the inside force. Deci and Ryan (2000) raised the question of why a human chooses a concrete action to implement it?

According to self-determination theory, extrinsic motivation is divided into four different degrees:

External regulation: all behavior is carried out by outside requirements to achieve reward or to avoid punishment. For example, the staff tries their hardest to get the reward.

Introjected regulation: This is a motive that is controlled. In this case, individuals act by internal pressure. For instance, employees try not to violate organizational regulations because they are ashamed of their colleagues.

Identified regulation: The motivation arises when an individual appreciates the behavior that he or she is doing it voluntarily. For example, when employees voluntarily attend fire fighting classes organized by the company, they can also know how to protect themselves in case of an incident.

Integrated regulation: In this type of motive, the behavior is performed because it is perfectly suited to the person's performance. For example, employees volunteer to attend extra classes due to their own development of knowledge, skills, and work performance.

Whereas intrinsic motivation is the one that is derived from the inherent attraction and satisfaction of the behavior. In other words, intrinsic motivation is the agent encapsulated within the behavior, and it does not require any other agents outside. For a specific job, it is accomplished for the individual's passion, challenge, or satisfaction more than performed by an extrinsic motive, for example, such as being supervised, emulated, or required by the other agent (Amabile, 2012).

Intrinsic motivation is associated with action due to the interests directly related to the agent's internal act. The topic is interested in the educational community in recent years (Barto, 2004; Oudeyer, 2007). This concept originates in the

field of psychology and is still debated because the basics of this concept remain unanswered Ryan and Deci (2000).

Intrinsic motivation is sometimes confused with internal motivation. Traditionally, educators consider intrinsic motivation to lead to better academic performance than extrinsic motivation (Deci et al., 1999).

Innovative performance

Job performance is a multidimensional concept (DeVet & Van der Beek, as cited in Nguyen et al., 2019) in which innovative performance is one of those aspects. Innovation is increasingly concerned and considered a necessary asset of the organization. Scholars are also more fond of the organization's factors that promote creation (Amabile,1988; Oldham & Cummings. 1996). Innovative performance in an organization is manifested through the behavior of innovation, which is the idea, process, or product that satisfies two properties that are novel and useful (Amabile, 1988; Oldham & Cummings, 1996).

The definition of innovation is plentiful because this concept is applied in many different fields and many sociological theories (Goldsmith & Foxall, 2003). It can be linked to the innovative process through which new items, ideas, or new processes are created (Zaltma et al., as cited in Goldsmith & Foxall, 2003). Innovative acts are the intrinsic behavior of individuals to create and implement novel and useful ideas that benefit individuals, groups, and organizations. This implies that innovation is broader than creativity. In contrast, creativity is only the process of creating new ideas, Acott and Bruce (as cited in Bos-Nehles et al., 2017). There is also a difference between these two concepts, unlike creation, the innovation that intends to a practical orientation and leads to a certain output. Creation is an important component of innovation, which is considered the starting point of new ideas change (West, as cited in Jong & Hartog, 2008).

Amabile et al. (1996) argued that creativity is the idea generation and the utility of these ideas. Hurt et al. (1977) describe innovation as a willingness to try new things (Goldsmith & Foxall, 2003).

2.2. The Linkage Among Psychological Capital, Intrinsic Motivation, and Innovative Performance

2.2.1. Psychological Capital – Intrinsic Motivation

The theory of planned behavior (TPB) of Ajzen (1991) says that the act can be predicted or explained by behavioral intention. Behavioral intention is assumed to include motivational factors that influence behavior and that are defined as the level of effort that people try to perform that behavior (Ajzen, 1991). Applied to this study, according to the TPB's ideas, intrinsic motivation or intention is the basic factor that promotes behavior. As mentioned above, the components of psychological capital are factors that reflect the attitude.

An individual's intrinsic motivation depends on his or her psychological traits that form attitudes. Several studies examine the relationship between psychological capital and attitudes. Attitude can be understood in a positive or negative sense (desirable or undesirable aspect) (Sahoo et al., 2015). Meanwhile, many scientists have studied and found the relationship between psychological capital and variables of behavior and attitudes, as well as the linkage between psychological capital and empowerment (Joo et al., 2016).

For instance, people with positive psychological characteristics such as optimism, self-efficacy, resiliency, etc., will have a different attitude from people with negative thoughts. The attitude leads to intention behavior (Ajzen, 1991) before the actual behavior. In other words, motivation is also the intention behavior, also the prerequisite for any real action. So it is deduced that Psychological capital and its components affect intrinsic motivation.

As mentioned above about the relationship between psychological capital and intrinsic motivation, if anyone has positive psychological factors such as optimism, hope, self-efficacy, etc., these traits will motivate them. In other words, once people have a positive attitude, they also will obtain positive intrinsic motives. In case people have a negative attitude, a negative attitude will stuff in their mind. For example, people who have an attitude against evil, their motivation will be inclined to do good deeds in their life, such as visiting the temple, doing charity, saying a prayer. In general, they do good and positive things.

So, belief-attitude will create the intended behavior; similarly, Psychological capital will lead to the intrinsic motive. The theoretical framework of TPB applied in this situation is "attitude." This is confirmed by Gulistan and Clapp-Smith (2014), the authors have affirmed the positive relationship between psychological capital and job motivation in a changing cultural environment.

The foundation for personal success, happiness, and motivation is supported by psychological capital, especially self-efficacy (Cherian & Jacob, 2013) and hope (Peterson et al., 2011). It is thought that people with high self-confidence can influence their work motivation on both positive and negative sides. Confident people know how to improve their motivation and choose challenging jobs, motivate themselves to overcome challenges for goals (Fedai & Ata, 2015).

Belief is not only a person's ability but one's own belief in the face of the obstacle (Bandura, as cited in Sonnentag et al., 2008). In other words, a person with high self-efficacy will increase their intrinsic motive, innovative performance

(Amabile et al., 1996), and personal creativity (Tierney & Farmer, 2002). Meanwhile, people with the characteristics of hope reinforce the desire for positive results and bring them to feel about the good to make dreams come true. Hope can be seen as a trait that awakens people to gain motivation (Akman & Korkut, as cited in Fedai & Ata, 2015).

The relationship between psychological capital and motivation is also found in the multicultural field. Motivational cultural intelligence reflects an individual's ability to adapt to learning and accept cultural changes in different cultures (Ng et al., 2012). Individuals with high motivation will be interested in absorbing the changing multicultural environment (Deci & Ryan, as cited in Gulistan & Clapp-Smith, 2014).

Recent studies show that people can be trained to increase their own confidence, which will lead to increased cultural motivations (Imai & Gelfand, 2010). Thus, psychological capital components are considered intrinsic factors that positively impact the cultural motive.

2.2.2. Intrinsic Motivation–Innovative Performance

As mentioned above, motivation is the main reason for motivating behavior (Guay et al., as cited in Lai, 2011). Victor Vroom's, 1964's expectancy theory in Robbins and Judge (2013) explains the relationship between motive and its results.

According to the ideas of the expectancy theory, the power of action trend that motivation is the main reason to push up behavior depends on our expectation on its outcome and attractiveness. Accordingly, employees will be stimulated to make more efforts when they believe that it will lead to a good outcome. The effort-effect relationship shows when an individual realizes that effort will bring them the outcome and stimulate their activity. Much empirical evidence says that there is a link between intrinsic motivation and job performance (Karatepe & Tekinku; Grants; & Guo et al., as cited in Yulius, 2016). This is also confirmed in the research by Baard et al. (2004) on this relationship that has a positive relationship between intrinsic motivation and job performance.

If meaningful work can promote workers' perceptions of their work, They will work in a better spirit Spreitzer (1995). Motivation working from the inside affects cognition, behavior, and emotions strongly. When individuals are driven by intrinsic motivation, their actions are consistent with their performance (Ryan, 1995). In the study of Fedai and Ata (2015), the author also found a relationship between satisfaction, motivation, and job performance.

Baard et al. (2004) affirmed that self-determination is positively related to work performance. Many previous studies have shown that intrinsic motivation has a strong and positive impact on job satisfaction (Muchisky & Tuttle, as cited in Li et al., 2015). When workers are satisfied with QWL (Quality of Work Life), they will increase their efforts (Zigarmi et al., 2012) and then significantly improve their work performance (Brown & Peterson, 1994).

The relationship between motivation and job performance is generally found in public service. The study also showed a relationship between PSM and worked performance in which employees with high PSM (Public Service Motivation) will be highly effective (Cheng, 2015). The study of the influence of intrinsic motivation on performance with Organizational Social Behavior is the intermediate variable that shows that working motivation has a partial impact on job performance (Yulius, 2016).

2.2.3. Psychological Capital – Innovative Performance

The above analysis demonstrates that the relationship between psychological capital and job performance is tested by many studies in the world (Luthans, 2002b; Luthans et al., 2006; Brown & Peterson, 1994). Some studies were conducted in Vietnam on this topic (Nguyen and Nguyen, 2011; Dinh Tho et al., 2014). The direct relationship between psychological capital and innovative performance is rarely found and has hardly been studied in Vietnam; however, the study of Tho and Duc (2020) shows that psychological capital impacts explorative learning, and then explorative one has a strong influence on innovative performance. Amabile et al. (2004) suggested that the way to promote creativity is to impact individuals' psychological capital. Sweetman (2010) points out creation; the managers can indirectly push up psychological capital- a creativity source (Wang & Lam, 2019).

2.2.4. Hypotheses and Conceptual Model

From the evidence analyzed above, a Conceptual model is proposed with the following hypotheses (Figure 1):

H1: *PsyCap has a positive impact on IP.*
H2: *IM has a positive influence on IP.*
H3: *IM is affected by PsyCap.*

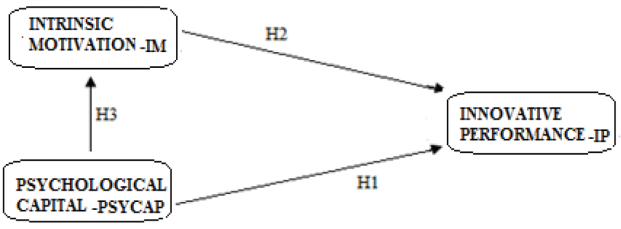

Figure 1: Conceptual Model

3. Methodology

3.1. Research Context

Researches on the topics of innovation are found rarely in Vietnam, so it is suitable for the IP study in the current circumstance of Vietnam's market economy transition. Instead of the central role of the market economy run by multi-economic sectors, the state economic sector plays a guiding role. In the past two decades, Vietnam's continuing economic transformation has sharply increased the needs of qualified staff by Vietnamese enterprises and firms from other countries due to the challenging competition in the local and global markets (Nguyen et al., 2012). Vietnamese universities have also responded to this requirement by enhancing the quality of their education programs. Therefore, universities in Vietnam need to have a transparent policy to promote the teaching staff's well-trained quality.

3.2. Research Process

Two phases comprised the research: a pilot study and the main survey:

(1) The pilot study included a qualitative study and a quantitative survey. In the pilot qualitative study, the focus group was conducted with twelve lecturers in three universities in Ho Chi Minh City, Vietnam. The purpose of this study was to modify the measures of the constructs in the model. The quantitative pilot survey was implemented by using face-to-face interviews with one hundred and twenty lectures at Long An University of Economics and Industry (LAU), Tien Giang University (TGU), Nguyen Tat Thanh University (NTTU), University of Finance-Marketing (UFM), Saigon College of Arts, Culture and Tourism (SACT), Ly Tu Trong College (LTTC) to refine the scales. Cronbach's alpha reliability and exploratory factor analysis (EFA) were used to assess the scales preliminarily.

(2) The main survey was also used the face-to-face interviews technique. A convenience sample with four hundred 440 lectures at the university, such as Ho Chi Minh City Open University (HOU), Ho Chi Minh City University of Food Industry (FIU), Tien Giang University (TGU), and Long An University of Economics and Industry (LAU), Nguyen Tat Thanh University (NTTU), University of Finance-Marketing (UFM), Thu Dau Mot University (TDMU), Saigon College of Arts, Culture and Tourism (SACT), Ly Tu Trong College (LTTC), Thu Duc College (TDC) were interviewed in this survey. The purpose of this main survey was to validate the measures and to test the structural model. First, confirmatory factor analysis (CFA) was used to evaluate the measures. Then, analyses were conducted using the AMOS program for structural equation modeling (SEM) to test the theoretical model and hypotheses.

3.3. Measurements

All items measuring research concepts are modified to adapt to the research context. IM was the first-order construct, and Psycap and IP were the second-order constructs. Psycap was comprised of four components: Self-efficacy (SE), hope (HP), optimism (OP), and resiliency (RE) were all measured by thirteen indicators borrowed from Nguyen and Nguyen (2011). IP was comprised of two components: *Willing to try* and *Creative original* was measured by eight adopted from (Hurt et al., 1977). Finally, IM was measured by four adapted from (Amabile et al., 1994).

Although self-assessment has been criticized for being less accurate compared to objective criterion measures, it is valuable only when anonymity is guaranteed. All indicators used five-point Likert rating-scales (1 = *strongly disagree*, 2 = *disagree*, 3 = *somewhat disagree or agree*, 4 = *agree*, 5 = *strongly agree*). Representative indicators include: "I feel confident of analyzing a long-term problem to find a solution" (self-efficacy); "In uncertain times, I usually expect the best" (optimism); "There are a lot of ways around any problem that I am facing now" (hope); "I quickly get over and recover from being startled" (resiliency); "I enjoy applying the knowledge and skills learned from my business school to my current job" (intrinsic motivation); "I am reluctant about adopting new ways of doing things until I see them working for people around me" (willing to try); "I am inventive kind of person" (creative original). All the measures were initially prepared in English and then translated into Vietnamese by a fluent translator. This procedure was performed because most of the lecturers are not well-understood English. Then, the fluent translator helps interviewees with the accurate translation version.

3.4. Sample Characteristics

The number of questionnaires that were delivered was 500 (50 for each institution). Overall, 440 valid sheets were returned with a rate of 88%. The sample of 440 respondents (university lecturers) included 250 (56.7%) male lectures and 190 (44.3%) female lectures. There were 360 (81.8%) masters, 80 (18.2%) doctors, and above in terms of academic title or degree.

Table 1: The Interviewees were Classified by the Training Institution

		Frequency	Percent	Cumulative Percent
Valid	1 FIU	50	11.4	11.4
	2 TDMU	50	11.4	22.7
	3 DLA	50	11.4	34.1
	4 TGU	50	11.4	45.5
	5 NTTU	50	11.4	56.8
	6 HOU	35	8.0	64.8
	7 DTM	35	8.0	72.7
	8 CLT	40	9.1	81.8
	9 CTD	47	10.7	92.5
	10 CVH	33	7.5	100.0
	Total	440	100.0	

Classified by training institution, there were 50 (11.4%) interviewees at FIU, 50 (11.4%) respondents at TDMU, 50 (11.4%) interviewees at TGU, 50 (11.4%) respondents at NTTU, 50 university lectures (11.4%) were interviewed at LAU. There were also 35 (8.0%) of 50 valid sheets were used in the study at HOU, 35 (8.0%) interviewees at UFM, 40 (9.1%) interviewees at LTTC, 47 (10.7%) interviewees at TDC, and 33 (7.3%) respondents at SACT (Seeing Table 1).

4. Results

4.1. Measure Refinement

As previously mentioned, the measures were refined via Cronbach's alpha reliability and Exploratory Factor Analysis (EFA). Empirical data set of 120 were gathered from undergraduate lecturers in the pilot study. All scales which were applied in this study satisfied the reliability of Cronbach's alpha. Specifically, Cronbach's alphas of the scales measuring Psycap, IP and IM were respectively SE = 0.82; HP = 0.86; OP = 0.85; RE = 0.82; WC = 0.79; CO = 0.86; IM=0.80 and all item-total correlations were favorable (>0.3).

From the EFA's application (principal components with varimax rotation), Psycap is extracted four components with 61.27% percent variance extracted (eigenvalue = 1.734). EFA extracted two components from 8 items measuring IP with 63.17% percent of variance extracted (eigenvalue = 2.614). EFA (principal components with varimax rotation) extracted one factors from the items measuring IM with 65.12 percent of variance extracted at Eigenvalue = 2.931.

The preliminary assessment results indicated that all the used scales in this study satisfied the requirements for reliability and validity. Accordingly, these measures were used in the main survey.

4.2. Measurement Validation

In this phase, CFA was used to validate the measures then, and SEM was used to test the theoretical model and hypotheses. As presented previously, the model consisted of three constructs: Psycap, IM, and IP. The scales measure that these constructs were refined via Cronbach's alpha reliability and EFA, using the data set collected from 120 university lectures in the pilot study. These scales were then validated by CFA using the data set collected from 440 university lectures in the main survey.

The saturated model (final measurement model) is suitable to the acceptable data: χ^2 [266] = 437.181 (p = 0.000), GFI = 0.928, CFI = 0.959, TFI= 0.954, and RMSEA = 0.038 (depicted in Figure 2). The factor loadings of all items of the constructs in the model were high (≥0.599) and significant (p < 0.001). These findings indicate that the scales measuring these constructs were unidimensional, and the within-method convergent validity was achieved. The correlations between constructs, together with their standard errors (see Appendix), indicate that they were significantly different from unity. Thus, supporting the construct discriminant validity. Table 2 presents the CFA factor loadings of indicators, composite reliability (CR), and average variance extracted (AVE) of the scales.

4.3. Structural Results

With the accepted saturated model, SEM was considered a tool to test the theoretical model and three hypotheses properly.

Path analysis of SEM is employed to test the hypotheses about the relationship between Psycap, IM, and IP. The SEM results indicated that all three proposed hypotheses were supported (Table 3). To be consistent with hypothesis H1, a positive relationship between Psycap and IM was found (p<0.001). Hypothesis H2 accepted a positive linkage between Psycap and IP; the estimated structural path between these two constructs was also significant (p < 0.001), supporting this hypothesis. A positive relationship between IM and IP was also agreeable to hypothesis H3; the estimated structural path between these two constructs was significant (p < 0.001). Thus, it is possible to conclude that the research model is suitable for the data collected from respondents. Based on Table 4, the total effect from Psycap to IP is much stronger than from that of IM; the results also show that IM is a partial intermediary in the relationship between Psycap and IP.

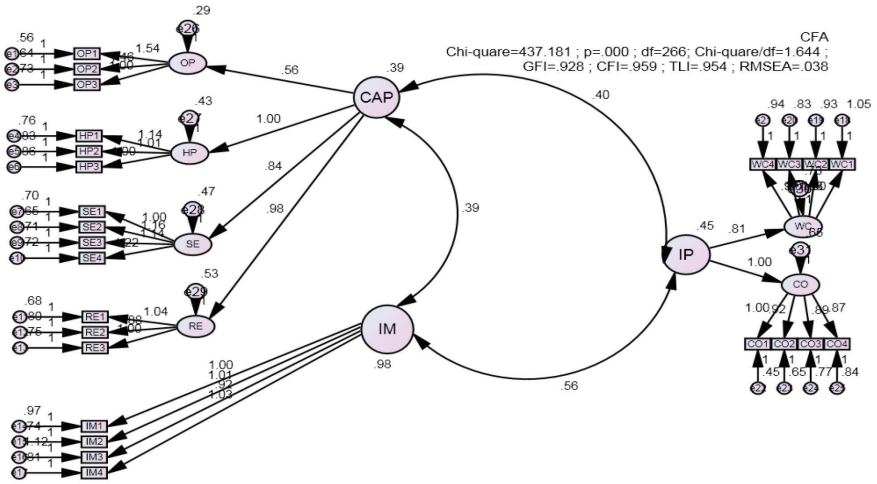

Figure 2: Saturated Model

Table 2: Standardized CFA Loading

	Unstandardized Estimate	Standardized Estimate	S.E.	C.R.	*p*
Psychological Capital: OP: ρ_c= 0.76; AVE = 0.52					
OP1 ← OP	1.536	0.796	0.141	10.858	***
OP2 ← OP	1.463	0.761	0.135	10.845	***
OP3 ← OP	1.000	0.599			
Psychological Capital: HP: ρ_c= 0.77; AVE = 0.53					
HP1 ← HP	1.140	0.765	0.093	12.253	***
HP2 ← HP	1.011	0.708	0.085	11.864	***
HP3 ← HP	1.000	0.699			
Psychological Capital: SE: ρ_c= 0.84; AVE = 0.58					
SE1 ← SE	1.000	0.718			
SE2 ← SE	1.161	0.779	0.080	14.545	***
SE3 ← SE	1.140	0.758	0.080	14.231	***
SE4 ← SE	1.221	0.780	0.084	14.561	***
Psychological Capital: RE: ρ_c= 0.78; AVE = 0.54					
RE1 ← RE	1.045	0.769	0.082	12.759	***
RE2 ← RE	0.883	0.684	0.073	12.059	***
RE3 ← RE	1.000	0.740			
Innovative Performance: WC: ρ_c= 0.81; AVE = 0.52					
WC1 ← WC	1.000	0.702			
WC2 ← WC	1.008	0.725	0.078	12.850	***
WC3 ← WC	1.032	0.753	0.078	13.195	***
WC4 ← WC	0.973	0.712	0.077	12.668	***
Innovative Performance: CO: ρ_c=0.85; AVE = 0.58					
CO1 ← CO	1.000	0.843			
CO2 ← CO	0.922	0.769	0.054	17.047	***
CO3 ← CO	0.887	0.728	0.055	16.017	***
CO4 ← CO	0.866	0.705	0.056	15.405	***
Intrinsic Motivation IM: ρ_c= 0.81; AVE = 0.52					
IM1 ← IM	1.000	0.710			
IM2 ← IM	1.010	0.759	0.074	13.608	***
IM3 ← IM	0.920	0.653	0.077	12.020	***
IM4 ← IM	1.029	0.749	0.076	13.480	***

Table 3: Structural Path Analysis

Hypotheses	Structural Path	Unstandardized Estimate	Standardized Estimate	S.E.	C.R.	*P*
H1	IM ← CAP	1.001	0.627	0.143	7.016	***
H3	IP ← CAP	0.792	0.730	0.147	5.377	***
H2	IP ← IM	0.256	0.377	0.071	3.611	***

Table 4: Direct, Indirect, and Total Effect on IP

Construct	Effect	Psycap	IM
IM	Direct	0.627	–
	Indirect	–	–
	Total	0.627	–
IP	Direct	0.730	0.377
	Indirect	0.236	–
Total		0.966	0.377

5. Discussion and Conclusion

This study aims to examine the direct relationship between Overall PsyCap (self-efficacy, hope, optimism, and resiliency) and the innovative performance in transitioning markets such as Vietnam. Besides, the research also verifies the mediating role of intrinsic motivation in this relationship. The results of the study support all the hypotheses. Specifically, intrinsic motivation acts as a partial intermediary in the linkage between psychological capital and IP. This study's results are consistent with the author's predictions specified in the conceptual model in this study and not different from the findings in the literature review.

There are two phases comprised of the research: a pilot study and the main survey in which the pilot study consisted of two steps: qualitative and quantitative study. The qualitative pilot study is for adjusting the scale, and the quantitative pilot one is for refining the scales. The main survey was to validate the measures and to test the theoretical models. The findings support all the hypotheses. This research also has important practical implications because psychological capital is a trail of an individual's psychological state, and it is flexible for development. Specifically, the findings suggest that innovative performance can be pushed up by developing workers' psychological capital.

Like many other studies, this study also has several limitations: First, the model was tested with a convenience sample of university lecturers in southern Vietnam. The model should also be conducted with university lecturers in other educational institutions in Vietnam (such as the Northern and the central region of Vietnam) to enhance the generalizability of the results. Second, the model should be replicated in other equivalent developing countries such as Malaysia, China, Thailand, etc. Third, The research should be done with a more diverse range of respondents being collected in the same study (lecturers, businessmen, sales staff, white-collar workers, and so on).

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Appendix

	R	**Se(‘*R*)**	**CR**	***P***
IM ↔ CAP	0.627	0.03722298	16.844433	1.90671E–49
CAP ↔ IP	0.967	0.012173686	79.433624	3.1129E–262
IM ↔ IP	0.835	0.026291959	31.758759	1.0571E–115