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The mediating role of intrinsic motivation in the relationship among perceived autonomy support, psychological capital, and individual innovation: A Case Study of Universities in Vietnam

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Abstract
In today's business landscape, innovation plays a crucial role in enabling organisations to swiftly adapt to economic fluctuations amidst intense global competition. However, there is a scarcity of studies in Vietnam that investigate this issue in relation to human psychological factors. This study examines the potential mediating role of intrinsic motivation (IMO) in the relationship between psychological capital (CAP), perceived autonomy support (PAS), and individual innovation (IIN) within an educational setting. The research project consists of two stages: a pilot study and a main survey. The purpose of the pilot study is to assess the reliability of the scale, while the main survey aims to test the theoretical model. A convenience sample of 440 lecturers currently teaching at universities in the South of Vietnam was collected for the main research. The findings of the structural model testing show that IMO partially mediates the relationship between CAP, PAS, and IIN. All hypotheses were supported at a significance level of 5%. The study's findings have implications for managers in the education sector in Vietnam. Specifically, managers can promote the innovation of university lecturers by influencing their psychological capital. Furthermore, educational managers can foster a highly autonomous working environment, promoting a positive mindset among lecturers when engaging in challenging tasks.

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Introduction

The mental and physical abilities of humans are responsible for the creation of all properties and materials. The human resource has a significant impact on the current and future growth of organisations. While there are various methods to establish competitive advantages in businesses, the primary focus should be on creating competitive advantages for individuals. This factor is believed to be a constant presence in any organisation. The organisation ensures the continuous development of its human resources and provides appropriate strategies for implementing innovative processes in the market economy (Budhiraja et al., 2017).

Nowadays, in the face of intense global competition, innovation is essential for organizations to quickly adapt to economic changes. Historically, organisations have often focused on mechanical innovation for an extended period. Organisational innovation significantly impacts work performance (Sapprasert & Clausen, 2012). Multiple studies have shown that innovation contributes to an organisation's effectiveness (Bos-Nehles et al., 2017). A lack of innovation across different levels will significantly impact the company's competitiveness (Sweetman et al., 2011).

We were presented with the question of how to foster a culture of innovation among all individuals. Administrators are required to help executors in the workplace. Amabile et al. (2004) suggest that a method to encourage creativity is by recognising the individual's CAP granting autonomy, and providing support for their ideas. To encourage innovative development, directors must increase individuals' CAP. However, an inherent drive motivates individuals to think creatively. The CAP concept and its associated elements serve as the rationale for this process (Sweetman et al., 2011).

Humans play a crucial role in enhancing the competitiveness of businesses. Luthans et al. (2007) suggest that CAP is considered a competitive advantage for human resources. Several studies highlight the importance of CAP management in creating favourable conditions for long-term success and competitive advantage (Luthans & Youssef, 2004). Encouraging innovation is necessary to improve work efficiency in a creative environment.

Individuals should apply the CAP concept to address productivity in a creative work environment, individuals should apply the concept of the CAP. Human resource management (HRM) is a strategy for overcoming obstacles during the innovation development process. Multiple studies indicate that creativity is influenced by self-determination (Spreitzer, 1995) and related psychological factors such as hope (Luthans et al., 2007), resiliency (Carver & Scheier, 2002; Luthans et al.,

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2007; Sweetman et al., 2011), and self-efficacy (Tierney & Farmer, 2002).

The World Intellectual Property Organisation (WIPO) released a report in 2019 that improved Vietnam's ranking on the global innovation index by three positions, placing it at 42nd out of 129 nations. Despite its growth, this record still falls significantly below the average creative ranking of other countries. Empirical evidence indicates that a country's population, not its resources, determines its level of wealth or poverty. The science and technology revolution, along with globalisation, highlights the crucial role of HR in assessing the power dynamics among nations. The effective utilisation of innovation can enhance production capacity (Hughes, 2008). Examining this issue in the Vietnamese context is crucial and pertinent for the reasons.

Bos-Nehles et al. (2017) states that although many researchers are interested in organisational innovations, there is a limited understanding of the available options for facilitating individual innovation development in this context. These studies have not received significant global attention. In Vietnam, most of these subjects remain unexplored. Individuals' true inventive capacity remains unknown. The study examines research on enhancing individual innovation through the influence of CAP, perceived autonomy support, and IMO's mediating role.

Literature review

Perceived Autonomy Support (PAS), Psychological Capital (Cap), Intrinsic Motivation (IMO), And Individual Innovation (IIN)

Psychological capital (CAP)

Luthans et al. (2007); Luthans et al. (2005) define psychological capital as an individual's positive psychological development, including their conviction, mindfulness, and positive outlook on life and work (Han et al., 2012). In addition, many experts also consider CAP to be an essential and beneficial capability. Researchers recognise the components of positive organisational behaviour (POB) as surpassing individual human capacity to gain a competitive advantage (Luthans et al., 2005). Furthermore, various scholars offer divergent definitions of CAP. It has been suggested that CAP is a complex construct that relates to an individual's CAP development (Luthans et al., 2007). It is considered a favourable psychological state of development, consisting of four different aspects. (1) Having the ability to confidently overcome obstacles to achieve success, (2) maintaining an optimistic outlook on the positive outcomes of one's work both now and in the future, (3) putting in relentless effort, employing strategic approaches, and making the necessary endeavours to accomplish one's goals, and (4) staying steadfast in addressing challenging issues to ensure succeeded (Luthans et al., 2007).

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According to Stajkovic and Luthans (1998), self-efficacy refers to an individual's strong belief in their capacity to motivate, educate, and effectively work towards achieving a specific goal. According to Luthans et al. (2007), having a strong belief in oneself is crucial for achieving success. It refers to an individual's evaluation of their ability to perform a particular task (Parker, 1998).

Positivity is often described as the capacity to maintain an optimistic outlook, and it serves as a consistent source of motivation for individuals with self-assurance. Studying historical events can assist in developing an optimistic mindset. In their study, Luthans et al. (2006) describe the concept of "learning and experience from the past" as the process of observing current goals and later receiving the outcomes. An optimistic thinker is someone who has a positive outlook and generally expects positive outcomes. According to Scheier and Carver (1985), individuals typically adopt a distinct approach when it comes to exerting influence over their overall environment. They prefer favourable results rather than unfavourable ones.

According to Luthans et al. (2007), hope is characterised by a strong sense of purpose and the ability to adapt and navigate towards one's objectives. Snyder and Forsyth (1991); Charles R Snyder et al. (1991) define hope as a "positive motivational state that is based on an interactively derived sense of successful and hypothesized that strength for the ultimate goal is an expression of the positive motive state".

Lastly, Resilience often refers to positive adjustment. The capacity to overcome challenges, face setbacks, and bounce back from failure, while staying strong in the face of adversity, is referred to as resilience (Fred Luthans, 2002). Overcoming adversity, suffering, and loss is a testament to an individual's resilience and ability to bounce back (Block & Kremen, 1996; Luthans et al., 2007; Luthans et al., 2005). Nguyen et al. (2012b) view overcoming obstacles as a positive development in challenging environments.

Perceived Autonomy Support

Extensive research (Spreitzer, 1995) reveals that individuals who delegate tasks demonstrate higher levels of creativity and a more positive perception of their work performance. Delegation plays a crucial role in boosting employees' emotions, leading them to take positive actions towards their self-set goals. According to Spreitzer (1995), this factor is a component of IMO, which is a set of traits that reflect an individual's attitude towards their job. It encompasses four key elements: impact, competence, autonomy, and meaning.

Several papers discuss perceived autonomy, support, or self-determination in a similar manner. Autonomy at work refers to an individual's perception of the opportunity to exercise personal choice and decision-making in accomplishing tasks (Zigarmi et al., 2012). Self-determination refers to the extent to which individuals

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can attain their desired goals and make significant decisions regarding their work (Hackman & Oldham, 1975). The concept of empowerment varies between organisations and individuals. Organizationally, delegation refers to the transfer of authority from organizations to subordinates. The psychological state of an empowered individual is characterized by self-awareness of their own power, which manifests through self-determination (Kazlauskaite et al., 2011).

Intrinsic motivation

SDT categorizes motivation into two broad types of inspiration. Many studies often discuss both external and internal motives and highlight their differences. Deci and Ryan (2000) provide the following definitions of extrinsic and intrinsic motivation.

Inherent inspiration refers to the internal drive that originates from the actual activity itself, rather than being influenced by external factors or driven by emotions that individuals find interesting, pleasant, and enjoyable. Individuals are more likely to be motivated by the gratifying result rather than the outcome when their internal activity is limited. Warr et al. (1979) support the notion that individuals who perform their job effectively are motivated by their inner thoughts. Amabile (1988) defines intrinsic motivation as positive individual reactions to the job itself, rather than external factors.

Intrinsic motivation differs from extrinsic motivation as it is characterised by a focus on the enjoyment of the task itself, while extrinsic motivation is associated with behaviours aimed at achieving a specific outcome. However, individuals often prioritise external motivations, such as rewards, whether they are financial or non-monetary. These investigations are conducted in various social settings, with a primary focus on external variables. These studies fail to fully address the issue because an individual's work motivation is influenced not only by external factors but also by internal forces. The investigation into the motivation behind an individual's decision to undertake a particular task was raised by Deci et al. (2000).

Self-determination theory describes four degrees of intrinsic drive.

External regulation: actions that people perform are influenced by external factors.

Introjected regulation: Since inspiration is controlled in this occurrence, the people who participate in the way of behaving are to some degree exposed to inner pressure.

Identified regulation: this type of motivation occurs when a person voluntarily engages in the behavior because they consider it significant.

Integrated regulation: Because it is similar to achieving a personal objective, this kind of motivation works best when the action is done voluntarily.

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Meanwhile, IMO arises from the inherent interest in its own behaviour. In other words, IMO refers to the mental strength that manifests itself during an action without the influence of external factors. External influences have a stronger effect on an individual's excitement and contentment compared to their job performance (Amabile, 2012). Recent discussions among educators have focused on the relationship between IMO and the act itself, rather than any secondary effects that may be associated with interest in performing the act (Amabile, 2012; Oudeyer & Kaplan, 2007). Deci et al. (2000) state that the core issues related to this concept are still unresolved, making it a topic of debate in the field of psychology. Extrinsic motivation and intrinsic motivation are occasionally subject to misinterpretation. Teachers believe that IMO has a greater impact on academic success than extrinsic motivation (Deci et al., 1999).

Individual Innovation

Job performance is a multifaceted term, with inventive performance being one of its components (Nguyen et al., 2019). The organization is progressively worried about creative improvement as a fundamental asset. Additionally, academic researchers place a greater emphasis on the organizational aspects that foster creativity (Amabile, 1988; Oldham & Cummings, 1996). Innovation is a product, process, or idea that meets two requirements: being useful and novel is how innovative results in an organization are demonstrated (Amabile, 1988; Oldham et al., 1996).

According to Goldsmith and Foxall (2003), the concept of innovation is defined in various ways due to its extensive application across different fields and sociological theories. The relationship between this process and the generation of new products, concepts, or procedures may be attributed to the innovative process that it entails. Innovative behaviour refers to an individual's intentional generation and application of new and valuable ideas that bring benefits to groups, individuals, and organisations. This statement asserts that innovation is closely linked to creativity (creativity is simply the process of generating new ideas) (Scott & Bruce, 1994).

Moreover, there exists a differentiation between these two concepts. Innovation, which focuses on practical application and generating innovative outcomes, is different from creation. De Jong and Den Hartog (2008) argue that creativity is a crucial factor in driving innovation. Amabile et al. (1996) define innovativeness as the capacity to generate and effectively implement ideas. According to Hurt et al. (1977), innovation is "the willingness to try new things".

The Linkage Among PAS, CAP, IMO, and IIN

CAP - IMO

Planned behaviour encompasses the various factors that influence one's intention

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and is defined as the overall effort exerted by an individual to accomplish a task, as per Ajzen (1991) TBP. Behaviour tendencies can be utilised to forecast or elucidate their actual behaviour. When it comes to the paper, according to the TPB model, IMO or intention plays a crucial role in determining one's behaviour. The attitudes mentioned earlier are reflected in the components of CAP.

The IMO of an individual is influenced by their psychological traits, which can be classified as either positive or negative based on their desirability, as discussed by Sahoo et al. (2015). Several researchers have established links between empowerment and CAP, as well as between CAP and behaviour and attitudes (Joo et al., 2016). People who possess positive psychological qualities, such as optimism, hope, resilience, and self-efficacy, tend to have different attitudes compared to those who have negative psychological traits, such as low self-esteem. In other words, motivation is the individual's desire to act in this situation, which is also the initial step before taking any action (Ajzen, 1991). This mindset results in prioritising intention over actual action. As a result, aspects of CAP influence intention.

Exploring the link between IMO and CAP. Positive psychological traits such as self-efficacy, optimism, hope, and determination can greatly influence a person's intrinsic motivations. In other words, having a positive attitude will lead to positive intrinsic motivations, and vice versa. Individuals with a moral compass are more inclined to engage in positive actions, such as visiting places of worship, donating to those in need, and engaging in prayer. Typically, they exhibit appropriate behaviour and thinking.

Consequently, having a strong belief and attitude can lead to the desired behaviour, just like the impact of intrinsic motivation from CAP. Based on the TPB theory, attitude plays a crucial role in this case. Research conducted by Gulistan Yunlu and Clapp-Smith (2014) found a strong correlation between motivation and CAP in a dynamic cultural setting across different countries.

Bandura (1977) said that "Confidence is not only one's ability but also one's own beliefs in the face of difficulties". Put simply, someone who has a high level of self-confidence can boost their own IMO and personal creativity, according to research by Tierney et al. (2002) and Amabile et al. (1996). For those who are academically inclined, they cultivate a strong desire for positive results and foster a sense of accomplishment to make their aspirations come true. Based on the research conducted by Akman and Korkut (1993), it has been found that hope plays a significant role in driving individuals towards the accomplishment of their objectives.

Ng et al. (2012) also discovered a correlation between motivation and CAP in the multicultural field. Developing a strong cultural intelligence is a testament to an individual's ability to embrace and adapt to different cultural dynamics. Individuals

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who are highly motivated will easily adapt to the changing multicultural environment (Deci et al., 2000). Based on a recent study conducted by Imai and Gelfand (2010), it was found that cultural motives can be enhanced through the development of self-assurance in individuals. Thus, psychological factors are inherent factors that have a beneficial impact on cultural motives.

PAS - IMO

Control beliefs lead to the development of perceived behaviour control, according to TPB theory. This means that individuals can influence their behaviour based on their own perception of specific desires (Ajzen, 1991). When considering the situation, for example, an instructor with a strong conviction feels compelled to buy a new home that can serve as a warm and inviting space for colleagues and students, while also providing a comfortable living environment for his family. Furthermore, as a university lecturer, he faces the weight of societal expectations, and his circumstances would be overwhelming if he resided in a less fortunate dwelling. Afterwards, he finds the idea of buying another house much more compelling. However, his ability to afford a comfortable new house in HCMC, given his low income, is hindered by his limited savings and perceived behavioural control. In this study, the concept of "Perceived Autonomy Support" pertains to an individual's perception of their capacity to execute their intentions.

IMO–IIN

According to Ajzen (1991), the planned way of behaving is the main factor that determines actual activity in the theory of TPB. As previously mentioned, the internal drive that influences behaviour towards a desired goal is known as intrinsic motivation, which aligns with one's intention. Furthermore, in Robbins and Judge (2017), the expectancy theory, which was developed by Victor Vroom in 1964, provides an explanation for the connection between motive and its outcomes. According to expectancy theory, the effectiveness of an individual's actions is determined by the desired outcome they hope to achieve. Employees are more likely to be motivated to put in extra effort when they perceive that their hard work will lead to improved performance. When someone recognises that putting in effort will lead to positive outcomes and inspire them to act, the relationship between effort and its effects becomes apparent.

While the link between innovative performance and intrinsic motivation is not extensively studied, there is ample evidence indicating a correlation between creativity and job performance. The study conducted by Baard et al. (2004) further supports this finding. A study conducted by Baard et al. (2004) revealed a positive correlation between IMO and job performance. As per Spreitzer's research in 1995, employees are more likely to be motivated and perform better when they find their work meaningful, and it positively impacts their perception of their jobs.

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Linkage Among CAP (psychological capital), PAS (perceived autonomy support) and IIN (individual innovation)

Internationally, there have been several studies examining the relationship between CAP and work performance. In Vietnam, a few studies have also been conducted on this topic, including those by Luthans et al. (2006), F. Luthans (2002), Brown and Peterson (1994), Dinh Tho et al. (2014), and Nguyen and Nguyen (2012a). Academic researchers have rarely established a direct link between CAP and IIN, and there is limited research on this topic in Vietnam. Tho and Duc (2021) found that explorative learning is influenced by CAP and has a significant impact on individual innovation. Sweetman et al. (2011) and Amabile et al. (2004) suggest that activating the individual's CAP, or the source of creativity, is a method to enhance creativity.

The association between autonomy and individual innovation is infrequent, like the correlation between CAP and innovative innovation. Li et al. (2015) found that individuals have higher confidence in their ability to handle organisational problems. Empirical evidence suggests that empowerment is a significant factor in promoting creativity (Budhiraja et al., 2017). Spreitzer (1995) found that employees with high psychological empowerment demonstrate greater creativity. Prior research has established a correlation between employee empowerment and creativity (Singh & Sarkar, 2012; Sun et al., 2012).

Concepts and hypotheses

Based on the reasons presented, the following hypotheses are established:

H1+: CAP has a favourable influence on IMO.
H2+: PAS has a favourable influence on IMO.
H3+: IMO has a favourable influence on IIN.
H4+: CAP has a favourable influence on IIN.
H5+: PAS has a favourable influence on IIN.

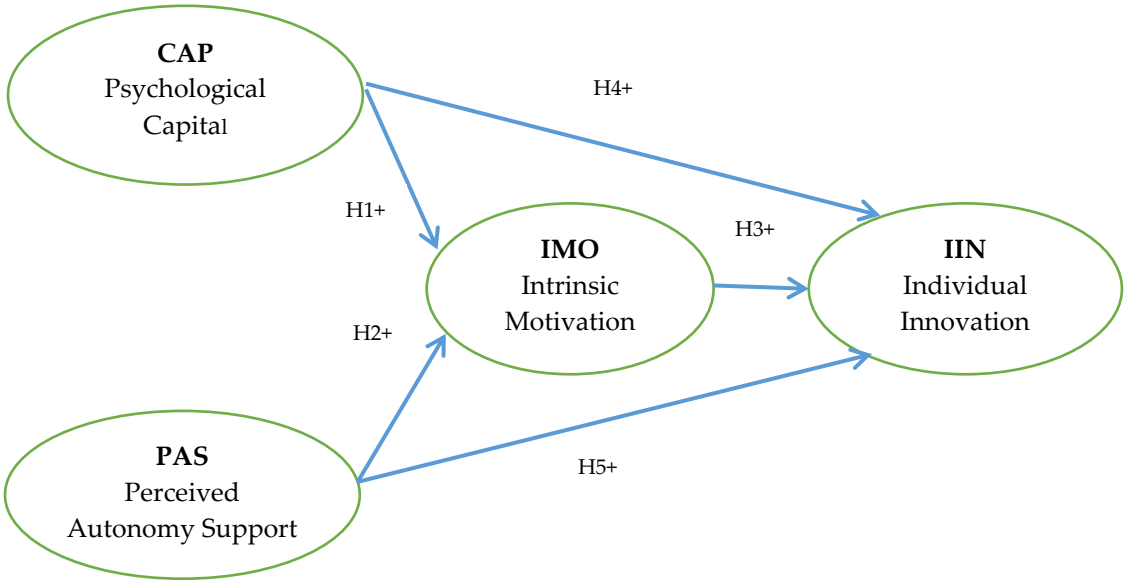

Figure 1: Conceptual Model.

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Research method.

Research Context

Vietnam exemplifies IIN research. Vietnam has shifted from a centrally planned economy to a market-based economy with a leading role for the state sector. Nguyen et al. (2012b) found that Vietnam's economic transformation in the past twenty years has led to a notable rise in demand for skilled professionals in both domestic and international companies.

Vietnam's universities have also addressed this demand by enhancing the quality of their educational programmes. Thus, to ensure the utmost quality of their training, universities should implement policies that foster innovation among lecturers. The survey was conducted with a main test sample size of 440, using a convenient sampling method. The participants were university instructors who possessed a master's degree or higher.

Research Process

This study consisted of two phases: a pilot study and the main survey.:

The pilot study includes both a qualitative study and a quantitative survey. Five experts conducted in-depth interviews for the qualitative study. To ensure that the scales accurately reflect the importance of the study concepts within the study's context, it is necessary to adapt and develop the items. Focus groups consisting of 12 experts are utilised to assess the respondents' lack of understanding regarding the meanings of the items. A pilot survey was conducted to collect quantitative data from 124 lectures. The survey was administered through face-to-face interviews at 6 universities to ensure consistency in the measurement scales. The reliability of the scales was evaluated using Cronbach's Alpha and EFA.

Additionally, face-to-face interviews were employed in the primary survey. A sample of 440 lecturers from various universities in Vietnam, such as University of Tien Giang, Finance-Marketing, and Thu Dau Mot, was conveniently selected for interviews. The primary objective was to validate the SEM, reassess the scale, and examine the theoretical model. The author initially employs EFA to reassess the reliability of the scale. Subsequently, the author utilises Amos software to examine the structural model (SEM).

Measurements

Each observer measuring research concepts is customised to the context of the research. The second order constructs were CAP and IIN. The initial ones, conversely, were PAS and IMO. The CAP assessment evaluated four different areas, specifically SE, OP, RE, and HP, by utilising a total of 22 indicators from various

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sources such as Block et al. (1996), Parker (1998), Scheier et al. (1985), Luthans et al. (2005), and Nguyen et al. (2012a). IIN consisted of two components: Ten items adapted from Hurt et al. (1977) were utilised to assess "willingness to try and creative original". The IMO assessment utilised five indicators derived from the research of Tremblay et al. (2009) and Amabile et al. (1994).

Finally, three items from Spreitzer's work were utilised to assess PAS. In the beginning, the scales were all written in English. However, a language expert was brought in to translate the indicators into Vietnamese. Because most respondents have limited English proficiency, it is critical to implement this procedure. An experienced interpreter will be available to assist the interviewee with the correct translation. People often criticize self-assessment, believing it to be less accurate than an objective answer. However, ensuring anonymity ensures its validity. We rated each item using a five-point Likert scale: Use the following scale to indicate your level of agreement: 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, and 5 for strongly agree.

Results and discussion

The qualitative study

After consulting extensively with specialists, a total of forty-two items have been identified for further development. This includes the creation of two additional PAS observers. Additionally, three items have been removed based on valuable input from experts in the focus group.

Measure Refinement

As mentioned in the methodology, the reliability was improved using EFA and Cronbach's alpha reliability. A pilot study was conducted, interviewing 124 university lecturers. The study found that all the scales used met the requirements for reliability, as indicated by the findings. Particularly, Cronbach's Alphas of the scales measuring IIN, PAS, CAP, and IMO were respectively RE=0.82; OP=0.86; HP=0.79; SE=0.89, after eliminating one predicator (Item-Total correlation is not greater than 0.3); WC=0.89; PAS=0.898; CO=0.79; IMO=0.82. All remaining predicators were continued because the Total-correlations were greater than 0.3.

The EFA analysis revealed four components with an eigenvalue of 1.367, which accounted for 55.328% of the extracted variance. In a similar manner, two components were extracted from IIN with an eigenvalue of 1.972. After eliminating one item of CO due to its loading weight being less than 0.5, the variance retrieved was 65.8%. One part each of PAS and IMO were extracted at specific eigenvalues, resulting in the extraction of 64.18 and 53.61 percent of the variance, respectively. In this study, it was found that all 37 remaining items met the criteria for validity and

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reliability, according to the preliminary findings. Consequently, the main survey incorporated these variables.

Measurement Validation

During this phase, the CFA method was employed to validate the scales, followed using SEM to confirm the theoretical model and its hypotheses. As mentioned earlier, the model consists of four constructs: IIN, CAP, PAS, and IMO. The data set from the pilot study, which includes 124 university lectures, is utilised to assess the enhancement of these concepts through the application of EFA and Cronbach's Alpha reliability. The CFA then utilised empirical data from 440 undergraduate lectures to validate the measures in the main survey.

The saturated model was reanalysed four times to ensure a strong fit to the data (as the GFI was below 0.9). The factor loadings for PAS4, however, are 0.484 (under 0.5). Therefore, CFA is carried out for the fifth time after PAS4 is removed. The acceptable data can be used with the saturated model or final measurement model: $\chi 2$ [579] = 908.66 (p= 0.000); CMIN/df=1.57<2; CFI=0.96>0.9; TFI=0.95>0.9; GFI=0.899 (roughly 0.9) and RMSEA=0.036< 0.05 (seeing Fig.2).

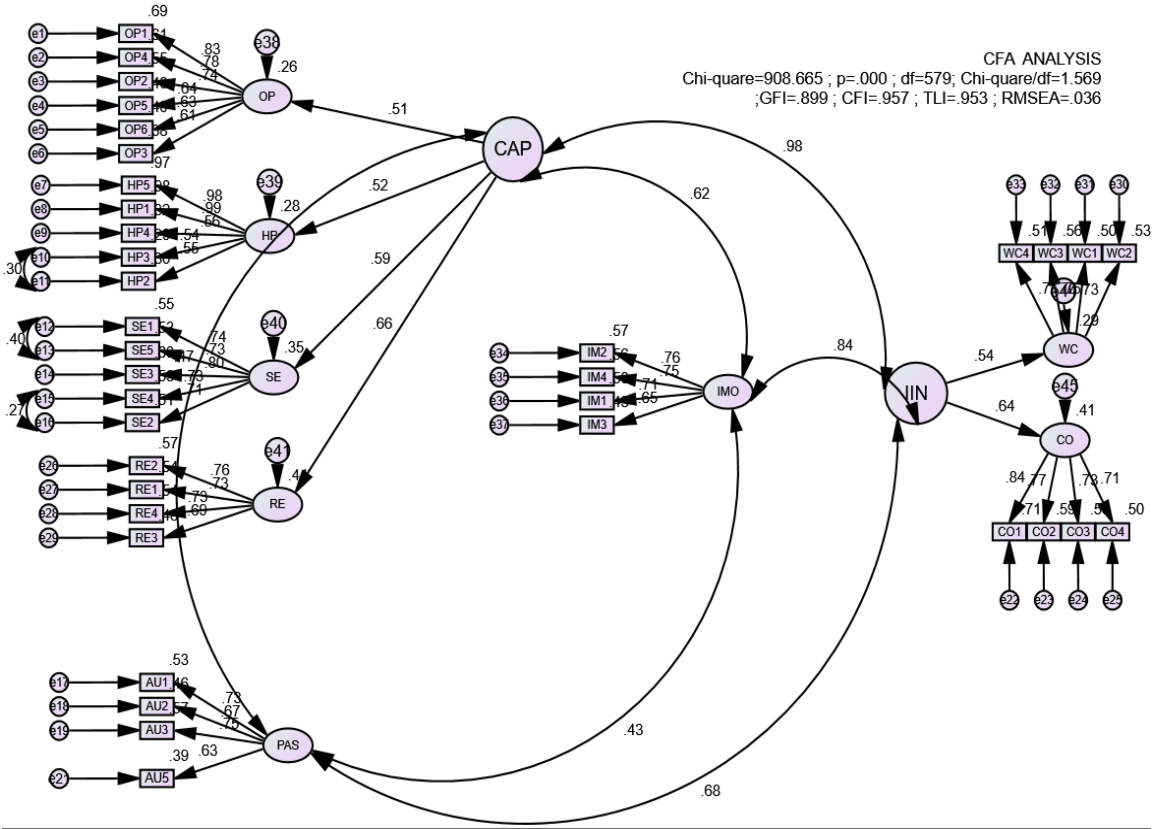

Figure 2. Saturated Model

All predictor factor loadings in the model were found to be statistically significant (p<0.001) and exceeded the threshold of 0.5. The findings indicate that the scales

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employed to assess these concepts were one-dimensional and demonstrated convergent validity within the chosen method. The standard errors and correlations between the constructs (see Appendix) indicate that they were significantly different from each other. Therefore, they provide evidence for the construct of discriminant validity. The scales' factor loadings, CR, and AVE are all considered satisfactory (except PAS's AVE is a bit weak, 0.487), as shown in Table 1.

Table 1: AVE, CR, and Standardized CFA Loading.

			Unstandardized Est	Standardized Est	S.E.	C.R.	p
CAP: OP: ρ_c=0.89; AVE=0.51							
OP1	<---	OP	.83	1.000			
OP4	<---	OP	.78	.89	.05	17.75	***
OP2	<---	OP	.74	.88	.05	16.61	***
OP5	<---	OP	.63	.68	.04	13.75	***
OP6	<---	OP	.63	.63	.04	13.65	***
OP3	<---	OP	.61	.64	.04	13.21	***
CAP: HP: ρ_c=0.86; AVE=0.57							
HP5	<---	HP	.98	1.000			
HP1	<---	HP	.98	1.02	.01	66.93	***
HP4	<---	HP	.56	.56	.04	14.01	***
HP3	<---	HP	.54	.53	.04	13.26	***
HP2	<---	HP	.54	.54	.04	13.47	***
CAP: SE: ρ_c=0.86; AVE=0.55							
SE1	<---	SE	.74	1.000			
SE5	<---	SE	.72	1.007	.05	18.47	***
SE3	<---	SE	.79	1.153	.07	14.73	***
SE4	<---	SE	.72	1.095	.08	13.46	***
SE2	<---	SE	.71	1.025	.07	13.24	***
CAP: RE: ρ_c=0.82 AVE=0.53							
RE2	<---	RE	.75	1.000			
RE1	<---	RE	.73	1.01	.07	13.98	***
RE4	<---	RE	.73	.97	.06	13.99	***
RE3	<---	RE	.69	.95	.07	13.31	***
Perceived Autonomy Support: PAS: ρ_c=0.79; AVE=0.49							
PAS1	<---	PAS	.73	1.000			
PAS2	<---	PAS	.67	.88	.073	12.168	***
PAS3	<---	PAS	.75	1.03	.079	13.176	***
PAS5	<---	PAS	.62	.82	.072	11.393	***
IIN: WC: ρ_c=0.81; AVE=0.52							
WC2	<---	WC	.72	1.000			
WC1	<---	WC	.70	.99	.07	12.92	***
WC3	<---	WC	.74	1.01	.07	13.56	***
WC4	<---	WC	.71	.96	.07	13.06	***
IIN: CO: ρ_c=0.85; AVE=0.58							
CO1	<---	CO	.84	1.000			
CO2	<---	CO	.76	.92	.05	17.11	***
CO3	<---	CO	.72	.88	.05	16.04	***
CO4	<---	CO	.70	.86	.05	15.45	***
Intrinsic Motivation: IMO: ρ_c=0.81; AVE=0.52							
IMO2	<---	IMO	.75	1.000			
IMO4	<---	IMO	.75	1.02	.07	14.28	***
IMO1	<---	IMO	.70	.99	.07	13.59	***
IMO3	<---	IMO	.65	.91	.07	12.60	***

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In addition, the study's findings show that the theoretical model, market data, and hypotheses align with each other. In addition, the experiment's results show that, with a 5% level of significance, the hypotheses are statistically significant. It is evident that IIN is impacted by CAP and PAS, both directly and indirectly, through IIN. Based on the test results presented in Table 2, it is evident that CAP has a more significant influence on individual innovation compared to perceived autonomy support.

Table 2: Structural Path.

			Estimate	S.E.	C.R.	P
IMO	<---	PAS	.18	.06	2.61	.009
IMO	<---	CAP	.54	.13	5.85	***
IIN	<---	IMO	.32	.06	3.11	.002
IIN	<---	CAP	.67	.13	4.91	***
IIN	<---	PAS	.23	.05	2.88	.004

Discussion

The results of structural modeling (SEM) analysis say that the research model is suitable for market data, and at the same time, the research hypotheses from H1 to H5 all have specific statistical significance as follows: H1(CAP->IMO) statistically significant with coefficient β1=0.54, this is the second largest coefficient after the effect β4=0.67 with hypothesis H4 (CAP -> IIN). This shows that the influence of psychological capital on the variables in the model is very strong. H2 (PAS -> IMO) is also statistically significant in that the effect coefficient β2=0.18 is the smallest effect coefficient, while H5 (PAS -> IIN) has a coefficient β5=0.23. Finally, the impact of intrinsic motivation (IMO) on individual innovation (IIN) is also statistically significant with β3=0.32.

This study has found evidence of a strong correlation between perceived autonomy support and individual innovation. It is worth noting that previous studies have also established a connection between delegation, creativity, and innovation (Budhiraja et al., 2017; Singh et al., 2012; Sun et al., 2012).

This study simultaneously established the relationship between the four concepts of psychological capital, perceived autonomy support, intrinsic motivation, and individual innovation. In addition, the research findings indicate that the theoretical model aligns with market data and provides evidence for the proposed hypotheses. The results, based on a 5% significance level, indicate that all hypotheses have achieved statistical significance. It is evident that psychological capital and perceived autonomy support play a significant role in fostering individual innovation, both through direct influence and indirectly by enhancing intrinsic drive. Table 2's test results reveal that Cap exhibits a stronger propensity for individual innovation than PAS. This study has significant implications for

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theoretical development and validation.

Conclusion

This study was conducted in two phases: a pilot study and a full survey. The pilot study was further divided into two steps, namely qualification and quantitative analysis. Research studies are often conducted to modify scales and improve measurements. The objective of this research is to investigate the correlation between the IIN and overall CAP, PAS in emerging economies such as Vietnam.

There is compelling evidence that IMO plays a crucial role in these relationships. In this case, IMO plays a role in connecting CAP and IIN, as well as PAS and IIN. The findings of this study align with the existing literature and support the author's initial expectations, as outlined in the conceptual model and research hypotheses. The study results have significant practical implications as they highlight the potential for improvement in a person's psychological state known as CAP. More specifically, the data indicate that there is a correlation between raising the CAP of labour and increasing IIN.

Conflict of interest:
No conflict of interest.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179-211. 10.1016/0749-5978(91)90020-T

Akman, Y., & Korkut, F. (1993). A study on the scale of hope. *Hacettepe University Faculty of Education Journal, 9*, 193-202.

Amabile, T. (2012). *Componential Theory of Creativity*. Harvard Business School. https://www.hbs.edu/ris/Publication%20Files/12-096.pdf

Amabile, T. M. (1988). A model of creativity and innovation in organizations. *Research in organizational behavior, 10*(1), 123-167. https://www.hbs.edu/faculty/Pages/item.aspx?num=7441

Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the Work Environment for Creativity. *Academy of Management journal, 39*(5), 1154-1184. https://doi.org/10.2307/256995

Amabile, T. M., Hill, K. G., Hennessey, B. A., & Tighe, E. M. (1994). The Work Preference Inventory: Assessing intrinsic and extrinsic motivational orientations. *Journal of personality and social psychology, 66*(5), 950-967. https://doi.org/10.1037/0022-3514.66.5.950

Amabile, T. M., Schatzel, E. A., Moneta, G. B., & Kramer, S. J. (2004). Leader behaviors and the work environment for creativity: Perceived leader support. *The leadership quarterly, 15*(1), 5-32. https://doi.org/10.1016/j.leaqua.2003.12.003

International Journal of Instructional Cases
ISSN: 2399-830x

Baard, P. P., Deci, E. L., & Ryan, R. M. (2004). Intrinsic Need Satisfaction: A Motivational Basis of Performance and Weil-Being in Two Work Settings1. *Journal of Applied Social Psychology*, *34*(10), 2045-2068. https://doi.org/10.1111/j.1559-1816.2004.tb02690.x

Bandura, A. (1977). *Self-Efficacy: The Exercise of Control*. Freeman. https://psycnet.apa.org/record/1997-08589-000

Block, J., & Kremen, A. M. (1996). IQ and ego-resiliency: conceptual and empirical connections and separateness. *Journal of personality and social psychology*, *70*(2), 349-361. https://doi.org/10.1037//0022-3514.70.2.349

Bos-Nehles, A., Renkema, M., & Janssen, M. (2017). HRM and innovative work behaviour: A systematic literature review. *Personnel review*, *46*(7), 1228-1253. https://doi.org/10.1108/PR-09-2016-0257

Brown, S. P., & Peterson, R. A. (1994). The Effect of Effort on Sales Performance and Job Satisfaction. *Journal of Marketing*, *58*(2), 70-80. https://doi.org/10.1177/002224299405800206

Budhiraja, S., Pathak, U. K., & Kaushik, N. (2017). A framework for untapped creativity: leveraging components of individual creativity for organizational innovation. *Development and Learning in Organizations: An International Journal*, *31*(6), 7-9. https://doi.org/10.1108/DLO-05-2017-0050

Carver, C. S., & Scheier, M. F. (2002). Optimism//CR Snyder, SJ Lopez (eds). Handbook of positive psychology. In (pp. 303–312): Oxford University Press.

De Jong, J. P., & Den Hartog, D. N. (2008). Innovative work behavior: Measurement and validation. *EIM Business and Policy Research*, *8*(1), 1-27. https://doi.org/10.1111/j.1467-8691.2010.00547.x

Deci, E. L., Koestner, R., & Ryan, R. M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, *125*(6), 627-668. https://doi.org/10.1037/0033-2909.125.6.627

Deci, E. L., & Ryan, R. M. (2000). The" what" and" why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological inquiry*, *11*(4), 227-268. https://doi.org/10.1207/S15327965PLI1104_01

Dinh Tho, N., Dong Phong, N., & Ha Minh Quan, T. (2014). Marketers' psychological capital and performance. *Asia-Pacific Journal of Business Administration*, *6*(1), 36-48. https://doi.org/10.1108/apjba-04-2013-0026

Goldsmith, R. E., & Foxall, G. R. (2003). The Measurement of Innovativeness. *The International Handbook on Innovation*, *5*(2003), 321-330. https://doi.org/10.1016/b978-008044198-6/50022-x

Gulistan Yunlu, D., & Clapp-Smith, R. (2014). Metacognition, cultural psychological capital, and motivational cultural intelligence. *Cross-Cultural Management*, *21*(4), 386–399. https://doi.org/10.1108/ccm-07-2012-0055

Hackman, J. R., & Oldham, G. R. (1975). Development of the job diagnostic survey. *Journal of applied psychology*, *60*(2), 159-170. https://doi.org/10.1037/h0076546

International Journal of Instructional Cases
ISSN: 2399-830x

Han, Y., Brooks, I., Kakabadse, N. K., Peng, Z., & Zhu., Y. (2012). A grounded investigation of Chinese employees' psychological capital. *Journal of Managerial Psychology, 27*(7), 669–695. https://doi.org/10.1108/02683941211259511

Hughes, L. W. (2008). A correlational study of the relationship between sense of humor and positive psychological capacities. *Economics & Business Journal: Inquiries & Perspectives, 1*(1), 46-55. https://digitalcommons.cwu.edu/cobfac/288

Hurt, H. T., Joseph, K., & Cook, C. D. (1977). Scales for The Measurement of Innovation Research. *Human Communication Research, 4*(1), 58–65. https://doi.org/10.1111/j.1468-2958.1977.tb00597.x

Imai, L., & Gelfand, M. J. (2010). The culturally intelligent negotiator: The impact of cultural intelligence (CQ) on negotiation sequences and outcomes. *Organizational Behavior and Human Decision Processes, 112*(2), 83–98. https://doi.org/10.1016/j.obhdp.2010.02.001

Joo, B.-K., Lim, D. H., & Kim, S. (2016). Enhancing work engagement. *Leadership & Organization Development Journal, 37*(8), 1117–1134. https://doi.org/10.1108/lodj-01-2015-0005

Kazlauskaite, R., Buciuniene, I., & Turauskas, L. (2011). Organisational and psychological empowerment in the HRM-performance linkage. *Employee Relations, 34*(2), 138-158. https://doi.org/10.1108/01425451211191869

Li, Y., Wei, F., Ren, S., & Di, Y. (2015). Locus of control, psychological empowerment, and intrinsic motivation relation to performance. *Journal of Managerial Psychology, 30*(4), 422–438. https://doi.org/10.1108/JMP-10-2012-0318

Luthans, F. (2002). The need for and meaning of positive organizational behavior. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 23*(6), 695-706. https://doi.org/10.1002/job.165

Luthans, F. (2002). Positive organizational behavior: Developing and managing psychological strengths. *Academy of Management Perspectives,* (116), 57–72. https://doi.org/10.5465/ame.2002.6640181

Luthans, F., Avey, J. B., Avolio, B. J., Norman, S. M., & Combs, G. M. (2006). Psychological capital development: toward a micro-intervention. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 27*(3), 387-393. https://doi.org/10.1002/job.373

Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological capital: Measurement and relationship with performance and satisfaction. *Personnel psychology, 60*(3), 541-572. https://doi.org/10.1111/j.1744-6570.2007.00083.x

Luthans, F., Avolio, B. J., Walumbwa, F. O., & Li, W. (2005). The psychological capital of Chinese workers: Exploring the relationship with performance. *Management and organization review, 1*(2), 249-271. https://doi.org/10.1111/j.1740-8784.2005.00011.x

International Journal of Instructional Cases
ISSN: 2399-830x

Luthans, F., & Youssef, C. M. (2004). Human, social, and now positive psychological capital management: Investing in people for competitive advantage. *Organizational Dynamics, 33*(2), 143–160. https://doi.org/10.1016/j.orgdyn.2004.01.003

Ng, K. Y., Van Dyne, l., & Ang, S. (2012). Cultural intelligence: a review, reflections, and recommendations for future research. *Conducting Multinational Research: Applying Organization Psychology in the Workplace*, 29-58. https://soonang.com/wp-content/uploads/2012/04/Ng_Van-Dyne-Ang-2012-CQ-review-reflections.pdf

Nguyen, H. M., Nguyen, C., Ngo, T. T., & Nguyen, L. V. (2019). The Effects of Job Crafting on Work Engagement and Work Performance: A Study of Vietnamese Commercial Banks. *The Journal of Asian Finance, Economics, and Business, 6*(2), 189–201. https://doi.org/10.13106/jafeb.2019.vol6.no2.189

Nguyen, T. D., & Nguyen, T. T. (2012a). Psychological capital, quality of work life, and quality of life of marketers: Evidence from Vietnam. *Journal of Macromarketing, 32*(1), 87-95. https://doi.org/10.1177/0276146711422065

Nguyen, T. D., Shultz, C. J., & Westbrook, M. D. (2012b). Psychological hardiness in learning and quality of college life of business students: evidence from Vietnam. *Journal of Happiness Studies, 13*(6), 1091-1103. https://doi.org/10.1007/s10902-011-9308-0

Oldham, G. R., & Cummings, A. (1996). Employee Creativity: Personal and Contextual Factors at Work. *Academy of Management journal, 39*(3), 607–634. https://doi.org/10.2307/256657

Oudeyer, P. Y., & Kaplan, F. (2007). What is intrinsic motivation? A typology of computational approaches. *Frontiers in neurorobotics, 1*, 1-14. https://doi.org/10.3389/neuro.12.006.2007

Parker, S. K. (1998). Enhancing role breadth self-efficacy: the roles of job enrichment and other organizational interventions. *Journal of applied psychology, 83*(6), 835-852. https://doi.org/10.1037/0021-9010.83.6.835

Robbins, S. P., & Judge, T. A. (2017). *Organizational behavior*. Pearson. https://elibrary.pearson.de/book/99.150005/9781292016573

Sahoo, B. C., Sia, S. K., Sahu, N., & Appu, A. V. (2015). Psychological Capital and Work Attitudes: A Conceptual Analysis. *Journal of Organization and Human Behaviour, 4*(2 & 3), 11-21. https://doi.org/10.21863/johb/2015.4.2and3.008

Sapprasert, K., & Clausen, T. H. (2012). Organizational innovation and its effects. *Industrial and Corporate Change, 21*(5), 1283-1305. https://doi.org/10.1093/icc/dts023

Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: assessment and implications of generalized outcome expectancies. *Health psychology, 4*(3), 219-247. https://doi.org/10.1037//0278-6133.4.3.219 ·

Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: a path model of individual innovation in the workplace. *Academy of Management journal, 37*(3), 580-607. https://www.proquest.com/docview/199780436?

Singh, M., & Sarkar, A. (2012). The relationship between psychological empowerment and innovative behavior: A dimensional analysis with job

International Journal of Instructional Cases
ISSN: 2399-830x

involvement as mediator. *Journal of Personnel Psychology, 11*(3), 27–137. https://doi.org/10.1027/1866-5888/a000065

Snyder, C. R., & Forsyth, D. R. (1991). *Handbook of social and clinical psychology: The health perspective* (Vol. 162). Pergamon Press. https://www.researchgate.net/publication/279233809

Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., Yoshinobu, L., Gibb, J., Langelle, C., & Harney, P. (1991). The will and the ways: development and validation of an individual-differences measure of hope. *Journal of personality and social psychology, 60*(4), 570. https://psycnet.apa.org/doi/10.1037/0022-3514.60.4.570

Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management journal, 38*(5), 1442-1465. https://doi.org/10.5465/256865

Stajkovic, A. D., & Luthans, F. (1998). Social cognitive theory and self-efficacy: Goin beyond traditional motivational and behavioral approaches. *Organizational Dynamics, 26*(4), 62-74. https://doi.org/10.1016/S0090-2616(98)90006-7

Sun, L. Y., Zhang, z., Qi, j., & Chen, z. x. (2012). Empowerment and creativity: A cross-level investigation. *Leadership Quarterly, 23*(1), 55–65. https://doi.org/10.1016/j.leaqua.2011.11.005

Sweetman, D., Luthans, F., Avey, J. B., & Luthans, B. C. (2011). Relationship between positive psychological capital and creative performance. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration, 28*(1), 4-13. https://doi.org/10.1002/cjas.175

Tho, N. D., & Duc, L. A. (2021). Team psychological capital and innovation: the mediating of team exploratory and exploitative learning. *Journal of Knowledge Management, 25*(7), 1745-1759. https://doi.org/10.1108/jkm-06-2020-0475

Tierney, P., & Farmer, S. M. (2002). Creative self-efficacy: Its potential antecedents and relationship to creative performance. *Academy of Management journal, 45*(6), 1137-1148. https://doi.org/10.5465/3069429

Tremblay, M. A., Blanchard, C. M., Taylor, S., Pelletier, L. G., & Villeneuve, M. (2009). Work Extrinsic and Intrinsic Motivation scale: its value for organizational psychology research. *Canadian Journal of Behavioural Science, 41*(4), 213–226. https://doi.org/10.1037/a0015167

Warr, P., Cook, J., & Wall, T. (1979). Scales for the measurement of some work attitudes and aspects of psychological well-being. *Journal of occupational Psychology, 52*(2), 129-148. https://doi.org/10.1111/j.2044-8325.1979.tb00448.x

Zigarmi, D., Nimon, K., Houson, D., Witt, D., & Diehl, J. (2012). The work intention inventory: Initial evidence of construct validity. *Journal of Business Administration Research, 1*(1), 24-42. https://doi.org/10.5430/jbar.v1n1p24

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Appendix

			r	Se('r)	CR	P
CAP	<-->	PAS	0.46	0.04227	12.631	2.1028E-29
PAS	<-->	IIN	0.68	0.03494	9.0999	3.2026E-09
PAS	<-->	IMO	0.42	0.04316	13.229	7.5371E-23
IIN	<-->	CAP	0.97	0.00974	2.1558	0.03163727
CAP	<-->	IMO	0.62	0.03733	10.070	1.3560E-19
IMO	<-->	IIN	0.83	0.02629	6.2756	8.3771E-21
e13	<-->	e12	0.39	0.04381	13.717	7.0510E-19
e11	<-->	e10	0.29	0.04562	15.407	4.1100E-32
e16	<-->	e15	0.27	0.04596	15.815	6.7739E-39