# The impact of intellectual capital on innovation in small and medium enterprise in the Mekong Delta, Vietnam

O impacto do capital intelectual sobre a inovação em pequenas e médias empresas no Delta do Mekong, Vietnã

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#### ABSTRACT

In the context of competition between businesses becoming more and more evident today, exploiting the intellectual capital of businesses to help businesses enhance their competitiveness is considered one of the priorities that businesses should carry out. To clarify the impact of intellectual capital on innovation in small and medium-sized enterprises in the Mekong Delta, the study conducted a survey of 253 enterprises, including 82 enterprises operating in the industrial sector, 91 enterprises operating the agricultural sector, and 80 in enterprises operating in the service sector. The author conducted research through two stages: qualitative research and quantitative research. Besides, the data analysis method chosen by the author is (1) EFA exploratory factor analysis; (2) confirmatory factor analysis CFA; (3) test the model using linear structural equation SEM. The results of estimating the linear structural model (SEM) show that the components "Human capital" and "Organizational capital" are more dominant than "Social capital" affects the innovation activities of businesses and has a positive impact. Innovation activities have a positive impact on business performance, of which the strongest and decisive impact is "process innovation", followed by "organizational innovation", the third is "marketing innovation" and the lowest is "product innovation".

Keywords: intellectual capital, innovation, small and medium enterprises, Mekong Delta

#### RESUMO

No contexto em que a concorrência entre as empresas está se tornando cada vez mais evidente hoje em dia, a exploração do capital intelectual das empresas para ajudá-las aumentar а sua competitividade é considerada uma das prioridades que as empresas devem realizar. Para esclarecer o impacto do capital intelectual sobre a inovação em pequenas e médias empresas no Delta do Mekong, o estudo realizou uma pesquisa 253 empresas, incluindo 82 сот empresas que operam no setor industrial, 91 empresas que operam no setor agrícola e 80 empresas que operam no setor de serviços. O autor conduziu a pesquisa em duas etapas: pesquisa qualitativa e pesquisa quantitativa. Além disso, o método de análise de dados

escolhido pelo autor foi (1) análise fatorial exploratória EFA; (2) análise fatorial confirmatória CFA; (3) teste do modelo usando equação estrutural linear SEM. Os resultados da estimativa do modelo estrutural linear (SEM) mostram que os componentes "Capital humano" e "Capital organizacional" são mais dominantes do que o "Capital social" e afetam as atividades de inovação das empresas e têm um impacto positivo. As atividades de inovação têm um impacto positivo no desempenho dos negócios, sendo que o impacto mais forte e decisivo é a "inovação de processo", seguida pela "inovação organizacional", a terceira é a "inovação de marketing" e a menor é a "inovação de produto".

**Palavras-chave:** capital intelectual, inovação, pequenas e médias empresas, Delta do Mekong

#### **1. INTRODUCTION**

In the context of global competition, where tangible capital is limited, intangible capital, especially intellectual capital, still has a lot of potential to be exploited, requiring us to have study more specialized about intellectual capital, thereby helping businesses enhance their competitiveness through enhancing intangible assets, which cannot be easily imitated by competitors. Therefore, knowledge is considered the key to economic growth and sustainable development. In the 1990s, businesses realized that knowledge was increasingly becoming the most important strategic resource and a major and dominant economic resource (Gavious

& Russ, 2009; Ramezan, 2011). Intellectual capital is known to play a particularly important role in a knowledge society (Bukh, Larsen, & Mouritsen, 2001). The first step businesses need to consider when moving from a traditional business to a knowledge-based business is to be aware of the organization's knowledge also known as intellectual capital (Montequin, Fernandez, Cabal, & Gutierrez, 2006). Organizations engaged in the knowledge era need to understand that they should use three types of capital (physical capital (tangible), financial capital and intellectual capital) to gain a competitive advantage over their competitors (Andriessen, 2004; Wall, 2005). Organizations of all types will need to become better at both creating new intellectual capital and using what they already have (Bartholomew, 2008). Intellectual capital acts as the most important member to demonstrate the difference between market value and book value of many businesses (Beattie & Thomson, 2007; Bozbura, Beskese, & Kahraman, 2007; Wall, Kirk, & Martin, 2004; Yang & Lin, 2009). In addition, many other studies have mentioned the impact of intellectual capital on business performance; the impact of innovation on business performance; or consider the impact relationship of all three contents but in different components of innovation, typically the studies of Cabello-Medina et al. (2011); Hussinki (2015); Beltramino et al (2020); Duodu and Rowlinson (2021); Barbieri et al (2021)... These studies lead to different conclusions about the impact of each component of intellectual capital on innovation, each different component of innovation affects business performance. And therefore, continuing to research the relationship of intellectual capital to innovation and business performance but looking at the components of intellectual capital and innovation as a whole will shows a more complete picture of this relationship. In recent years, in Vietnam there have been many studies on knowledge management and innovation in businesses. However, research on knowledge management and innovation in small and medium-sized enterprises in Vietnam in general and in the Mekong Delta in particular has only stopped at the level of explaining concepts. Research has not yet quantified the impact relationship of each component of intellectual capital on each component of innovation and each component of innovation on business performance. Therefore, business managers and policy makers do not have both theoretical and practical evidence of the role of intellectual capital management in innovation activities in businesses and what innovation activities mean to organizational performance. Therefore, the author's research on this issue is necessary and meaningful in both theory and practice.



#### 2. THEORETICAL BASE AND RESEARCH MODEL

#### 2.1. Intellectual capital

Intellectual capital is all the intangible resources that an organization holds and thereby creates a competitive advantage and by combining tangible resources, the organization creates future profits. Intellectual capital is understood as the skills, knowledge, information, experience, problem-solving ability and collective intelligence of the entire organization. Intellectual capital includes three components: (1) human capital; (2) organizational capital and (3) social capital. In particular, human capital is the knowledge, skills, adaptability and application ability of each person. Organizational capital includes institutionalized knowledge, systems of experience within the organization and used through databases, patents, manuals, structures, systems and processes; Social capital includes knowledge that is internalized, available to use, and adopted by interactions between individuals and networks (Subramaniamand & Youndt, 2005; Youndt, Subramaniam, & Snell, 2004).

#### 2.2. Creative innovation activities

There are two approaches to researching innovation: (1) viewing innovation as a process and the other (2) viewing innovation as a result (Crossan & Apaydin, 2010). Innovation as a process involves the "how" question, while innovation as an outcome involves the "what" aspect. Innovation as a process considers where innovation takes place and the internal and external drivers for innovation (e.g. availability of resources and knowledge, market opportunities, compliance with a new standard) and what are the resources for innovation (internal and external). Meanwhile, innovation as a result focuses on the types of innovation (product, process, organization and marketing), the level of innovation (intensification or enhancement) and the referent (company, market, industry) used to evaluate the degree of novelty. Although innovation as a process precedes innovation as an outcome, this aspect has so far received less attention than other issues (Crossan & Apaydin, 2010). Nham Phong Tuan (2016) affirms that when talking about innovation, we refer to innovation activities (products, processes, marketing, organization) and the results of those innovation activities in the organization.



#### 2.3. Business results of the enterprise

The performance of an enterprise is the transformation of inputs into outputs to achieve the set goals. Business performance is related to the relationship between cost effectiveness and output and between output and achieved goals. Business performance results can be measured by many indicators that have been mentioned by previous studies (Chalos & Chen, 2002). Specifically, according to Maani, Putterill, and Sluti (1994), business performance is evaluated through market share, profit/revenue, profit/assets, at the same time. From that point of view, Huang (1997) also use Profit and revenue to evaluate business performance. According to Podsakoff et al. (1996), business performance is evaluated through changes in product quality.

The combined influence of one or more components of intellectual capital (human capital, organizational capital, social capital) on the innovation process, innovation results and performance outcomes has been studied at organizations of different sizes (small and medium enterprises, large enterprises), in industries (high technology, healthcare, accommodation) and in countries (USA, Nordic countries, Australia).

A series of studies have focused on analyzing intellectual capital for innovation (Prajogo & Ahmed, 2006), studying how intellectual capital impacts innovation outcomes (Jassawalla & Sashittal, 1998; Subramaniamand & Youndt, 2005), the impact of intellectual capital on business performance (Hayton, 2005; Mol & Birkinshaw, 2009; Tseng, Huo, & Chou, 2008). Many studies have shown that intellectual capital has a positive impact and positive relationship with innovation and business performance (Bontis, Keow, & Richardson, 2000; Cabello-Medina, Lopez - Cabrales, & Valle-Cabrera, 2011). Research by Wu and Sivalogathasan (2013) found that intellectual capital in organizations (human capital, social capital and organizational capital) has an impact on innovation ability, they are related to outcomes. innovation and business performance (El-Telbani, 2013; X. Wu & V. Sivalogathasan, 2013; Zerenler, Hasiloglu, & Sezgin, 2008).

Many studies have proven that there is a positive relationship between intellectual capital components and business innovation activities. Besides, there are also many studies that have proven the relationship between innovation and a positive impact on business performance. A number of recent studies have estimated an overall model examining the impact relationship of each component of intellectual capital on innovation and the impact of

innovation on business performance (Barbieri, Buonomo, Farnese, & Benevene, 2021; Beltramino, Garcia-Perez-de-Lema, & Valdez- Juarez, 2020; Duodu & Rowlinson, 2021; Xiaobo WU & V. Sivalogathasan, 2013). These studies consider innovation as a variable that depends on the components of intellectual capital, then consider performance as a variable that depends on innovation, then estimate the overall model using the structural linear regression (SEM) or testing into two or more separate linear regression models.

#### 2.4. Research models

Based on the theoretical framework built above, the author conducts an overview of the research model on the impact of intellectual capital on innovation in small and mediumsized enterprises in the Mekong Delta as follows (Figure 1):

Based on the research model and established hypotheses, we propose two large groups of hypotheses including: (H1) The components of intellectual capital have a positive impact on each component of innovation of small and medium-sized enterprises in the Mekong Delta and (H2) The components of innovation activities have a positive impact on the performance of small and medium-sized enterprises in the Mekong Delta.





# 3. RESEARCH METHODS

## **3.1.** Scale development

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The scales used in the study were built based on an overview of studies on the impact of intellectual capital on innovation in small and medium-sized enterprises in the Mekong Delta. The scale was then adjusted and supplemented to suit the research context of small and medium-sized enterprises in the Mekong Delta, based on the results of in-depth interviews with 5 experts from universities Economics sector, people with a deep understanding of intellectual capital to innovation in small and medium-sized enterprises. The scale is built based on the theory of intellectual capital in organizations by Wu & Sivalogathasan (2013) and the scale measuring the relationship between innovation and business results by Barbieri, Farnese & Benevene (2021).

#### Table 1

Encode	Research concept	Number of observed variables	<b>Reference source</b>				
CN	Human capital	5	Wu & Sivalogathasan (2013); Expert discussion				
TC	Organizational capital	5	Wu & Sivalogathasan (2013); Expert discussion				
XH	Social capital	4	Wu & Sivalogathasan (2013); Expert discussion				
SP	Product innovation	5	Brabieri, Farnese & Benevene (2021); Expert discussion				
QT	Process innovation	5	Barbieri, Farnese & Benevene (2021); Expert discussion				
MA	Marketing innovation	5	Barbieri, Farnese & Benevene (2021); Expert discussion				
TC	Organizational innovation	4	Barbieri, Farnese & Benevene (2021); Expert discussion				
KQ	Business results	4	Barbieri, Farnese & Benevene (2021); Expert discussion				

Scale for measuring research concepts

Source: Compilation of author's research

#### **3.2.** Research stages

#### 3.2.1. Qualitative research

In the preliminary research stage, the author used qualitative research methods with target group discussion techniques. Specifically: the author used the convenience sampling method, selecting 10 employees and 10 managers who are leaders of businesses located in provinces and areas in the Mekong Delta. All interviews were in the form of face-to-face interviews lasting 30 to 60 minutes, with an average of 45 minutes. Interview time is in July

2023. The goal of interviewing groups of employees is to evaluate and edit the content of observations and models, research hypotheses, ways to measure variables and results of the model. The goal of interviewing a target group of managers is to find out their views on the impact of intellectual capital on innovation and results in their businesses. At the same time, investigate their level of understanding and contribution to the observations in the research scale.

#### 3.2.2. Quantitative research

In the quantitative research stage, the author uses a non-probability sampling method which is a convenience sampling applied when implementing sampling, accordingly a list of small and medium enterprises classified into the business type of the enterprise used to conduct the survey. The survey subjects were employees at small and medium-sized enterprises in the Mekong Delta divided by gender, age, qualifications and job position, with at least 2 years of seniority working at the enterprise, in order to Re-test the accuracy and suitability of the model, evaluate the reliability of the scale, variables, and included observations and remove inappropriate indicators. Data will be collected by distributing direct survey questionnaires from August 2023 to September 2023, with an expected research sample size of 253 employees.

#### **3.3.** Data analysis

- Testing scale reliability and descriptive statistics: Using Cronbach's Alpha coefficient to evaluate the quality of the constructed scale. The scale is assessed as having good quality when: (1) The overall Cronbach's Alpha coefficient is greater than 0.6; and (2) The variable-total correlation coefficient of observed variables is greater than 0.3 (Corrected Item - Total Correlation) (Nunnally & Bernstein, 1994).

- Exploratory factor analysis (EFA)
- Confirmatory factor analysis (CFA)
- Test the model using linear structural equations (SEM)

#### 4. RESEARCH RESULTS

#### 4.1. Research sample information

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The research sample was selected using the non-probability sampling method of convenience sampling, with relative stratification by provinces and localities to increase the representativeness of the research sample including Can Tho City and Dong Thap, Vinh Long, An Giang, Kien Giang, Tien Giang and classified by business type, gender, age, qualifications and job position. The investigation unit in the study is defined as employees in small and medium-sized enterprises and with at least 2 years of seniority working at the enterprise, including those who work directly and not directly with customers in different departments within the enterprise.

#### Table 2.

Research sample structure		Number of survey samples	Number samples collected	of Ratio %
Local	Can Tho city	51	45	20.1
investigation	Dong Thap province	51	47	20.6
	Vinh Long province	41	37	16.2
	An Giang province	40	36	15.6
	Kien Giang province	40	37	16.0
	Tien Giang province	30	26	11.5
Business	Agriculture forestry seafood	86	76	33.5
	Industry and construction	86	79	34.4
	Trade and services	81	73	32.1
Gender	Male	99	89	38,6
	Female	154	139	61,4
Age	Under 25 year	74	67	29,5
	25-35 year	67	60	26,6
	35-45 year	62	56	24,4
	Over 45 year	50	45	19,5
Level	High school	16	10	6,0
	College	45	40	17,6
	University	157	142	62,5
	After university	35	37	13,9
Total		253	229	100

Distribution of research survey sample



<sup>(</sup>Source: The author's data collection and analysis results)

From the 253 surveys initially sent out, the author received 235 surveys with a response rate of 92.9%. After eliminating invalid questionnaires, 229 survey questionnaires were included in the analysis. Some characteristics of the study sample are summarized in Table 2. The study sample was mainly female, accounting for more than 60%, and had a relatively young age with more than 50% of surveyed people under 35 years old. Most employees' qualifications are at university level or higher. To ensure the reliability and accuracy of the scale, the collected data was tested based on Cronbach's Alpha coefficient and EFA exploratory factor analysis. The analysis coefficients all confirm that the scale has an appropriate level of reliability. The data is then entered into SPSS 22 and Amos 24 software to test the scale, analyze descriptive statistics, confirmatory factor analysis (CFA), and test the model using linear structural equations (SEM).

#### 4.2. Research results

Regarding the current status of the factors in the model, the descriptive statistics results show that the human capital factor reached 2.891 points, the organizational capital factor reached 2.834 points and the social capital factor reached 3.466 points. The current status of innovation in small and medium-sized enterprises in the Mekong Delta is at an average level, product/service innovation activities reach 3.630 points, process innovation activities reach 3.552 points, marketing innovation activities reached 3.511 points; Organizational innovation activities reached 3.06 points; Finally, the performance results of small and medium-sized enterprises in the Mekong Delta is at medium-sized enterprises in the Mekong Delta and medium-sized enterprises reached 3.511 points; Organizational innovation activities reached 3.523 points.

Regarding the relationship between factors in the model, we tested the linear structural model and obtained the results that the model has 606 degrees of freedom (df=606). The results show that the model achieves compatibility with the research data set: Chi-square= 1511.308 (p=0.000); cmin/df = 2.489; GFI = 0.848; TLI = 0.918; CFI = 0.925; and RMSEA = 0.056. The standardized weights of the observed variables are all greater than 0.5 (the smallest is 0.588) and the unstandardized weights of the variables are all statistically significant, thus confirming the convergent validity of the scales. The correlation coefficients of the concepts are all less than one unit, so the concepts achieve discriminant value. The measurement model is suitable for the research data set, there is no correlation between measurement errors, so unidimensionality is achieved. The main results of the model are shown in the following table 3:

### Table 3

Results of standardized estimation of parameters in the theoretical model

Relationships between	Estimates not	Standardized	Standard	Value	Value (p)					
concepts	standardized	estimates	deviation	<b>(t)</b>						
R2 of product innovation of SMEs in the Mekong Delta = $0,060$										
$\overline{\text{CN} \rightarrow \text{SP}}$	0,088	0,090	0,048	1,818	0,068					
$TC \rightarrow SP$	0,211	0,193	0,057	3,637	***					
$\overline{XH \rightarrow SP}$	0,059	0,053	0,049	1,201	0,228					
R2 of process innovation of SMEs in the Mekong Delta = $0,303$										
$\overline{\text{CN}} \rightarrow \text{QT}$	0,132	0,160	0,036	3,597	***					
$TC \rightarrow QT$	0,331	0,360	0,045	7,226	***					
$XH \rightarrow QT$	0,256	0,273	0,038	6,586	***					
R2 of marketing innovation of SMEs in the Mekong Delta = $0,248$										
$CN \rightarrow MA$	0,423	0,460	0,050	2,236	0,024					
$TC \rightarrow MA$	0,112	0,109	0,044	9,468	***					
$\overline{XH \rightarrow MA}$	0,031	0,030	0,043	0,742	0,457					
R2 of organizational innovation of SMEs in the Mekong Delta = 0,224										
$\overline{\text{CN} \rightarrow \text{TC}}$	0,206	0,254	0,035	5,813	***					
$TC \rightarrow TC$	0,218	0,241	0,041	5,199	***					
$XH \rightarrow TC$	0,199	0,216	0,037	5,484	***					
R2 of business results of SMEs in the Mekong Delta $= 0.464$										
$SP \rightarrow KQ$	0,048	0,052	0,037	1,303	0,191					
$QT \rightarrow KQ$	0,596	0,543	0,051	11,502	***					
$MA \rightarrow KQ$	0,106	0,108	0,041	2,551	0,010					
$TC \rightarrow KQ$	0,251	0,225	0,044	5,965	***					

Source: Compiled from analysis of data processing results on Amos 24

Model 1: The impact of intellectual capital on product/service innovation of small and medium-sized enterprises in the Mekong Delta has an estimated result of the model giving the value R2 = 0.060, which means only 6.0% of the variation in product/service innovation of small and medium-sized enterprises in the Mekong Delta is explained by intellectual capital. This is also relatively easy to understand when among the three components of intellectual

capital, only organizational capital has the strongest impact on product/service innovation of small and medium-sized enterprises in the Mekong Delta with the coefficient Standardized Beta reaches 0.193 and is at a statistical significance level of 98%, while the Human Capital component has a standardized Beta coefficient of 0.190 and is at a statistical significance level of over 90%, while the Social Capital component is not significant enough let the conclusion have an impact on product/service innovation of small and medium-sized enterprises in the Mekong Delta.

Model 2: The impact of intellectual capital on process innovation of small and medium-sized enterprises in the Mekong Delta has an estimated result of the model giving the value R2 = 0.303, which means there are 30,3% of the variation in process innovation of small and medium enterprises in the Mekong Delta is explained by intellectual capital. In particular, the components of Intellectual Capital that impact process innovation of small and medium-sized enterprises in the Mekong Delta all have statistical significance reaching over 98% and are ranked in order from highest is Organizational Capital with a standardized Beta coefficient of 0.273; The third is Human Capital with a standardized Beta coefficient of 0.160.

Model 3: The impact of intellectual capital on marketing innovation of small and medium-sized enterprises in the Mekong Delta has an estimated result of the model giving the value R2 = 0.248, which means there is 24.8 % of variation in marketing innovation of small and medium enterprises in the Mekong Delta is explained by intellectual capital. Of these, only two components, Human Capital and Organizational Capital, have an impact on marketing innovation of small and medium-sized enterprises in the Mekong Delta with statistical significance levels of over 94% and 98%. Social capital is not enough basis to draw conclusions. Specifically, the Human Capital component has a strong impact on marketing innovation of small and medium-sized enterprises in the Mekong Delta with a standardized Beta coefficient of 0.460, while the Organizational Capital component has a standardized Beta coefficient. reached 0.10.

Model 4: The impact of intellectual capital on organizational innovation of small and medium-sized enterprises in the Mekong Delta has the estimated results of the model giving the value R2 = 0.224, which means there are 22, 4% of the variation in organizational innovation of small and medium-sized enterprises in the Mekong Delta is explained by intellectual capital. In particular, the components of Intellectual Capital that impact

organizational innovation of small and medium-sized enterprises in the Mekong Delta all have statistical significance reaching over 98% and are ranked in order from highest is Human Capital with a standardized Beta coefficient of 0.254; The second is Institutional Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; The third is Social Capital with a standardized Beta coefficient of 0.241; T

Model 5: The impact of innovation on the performance of small and medium-sized enterprises in the Mekong Delta has an estimated result of the model giving the value R2 =0.464, meaning 46.4%. The change in the performance of small and medium-sized enterprises in the Mekong Delta depends on the innovation of small and medium-sized enterprises in the Mekong Delta, the remaining 53.4% will be due to other factors. Factors other than the model or random error explain. In particular, all four components of innovation have a positive impact on the performance of small and medium-sized enterprises in the Mekong Delta. However, the level of impact and statistical significance are different. Specifically, the strongest impact is "process innovation" with a standardized Beta coefficient of 0.543 and a statistical significance level of over 98%; The second is "organizational innovation" with a standardized Beta coefficient of 0.225 and also at a statistical significance level of over 98%; The third is "marketing innovation" with a standardized Beta coefficient of 0.108 and a statistical significance level of over 95%. Finally, there is "product innovation" with a standardized Beta coefficient reaching a fairly low level of 0.052 and with a statistical significance level of only over 85%. In many studies, one can conclude that there is no impact relationship of factors when the statistical significance level is below 90%. However, this study examines the impact relationship of factors "product innovation" to "performance results of small and medium enterprises". Clearly, product improvements will be linked to business performance. Therefore, this study still accepts this hypothesis at a significance level of over 85%.

#### 5. DISCUSS THE RESULTS

Model estimation results show that most components of intellectual capital have a positive impact on innovation activities of small and medium-sized enterprises (only the social capital component does not have a clear impact on product innovation and marketing innovation). This result is similar to the results of studies such as: Xiaobo Wu and Sivalogathasan (2013) when confirming that human capital, organizational capital and social

capital have a positive impact on innovation and innovation have a positive impact on business performance (Xiaobo WU & V. Sivalogathasan, 2013), Barbieri and colleagues (2021) confirm that organizational capital has a positive impact on innovation activities with standardized Beta = 0.47; p=0.000 (Barbieri et al., 2021). Specifically:

For product innovation, organizational capital with standardized Beta = 0.193 and p = 0.000 has a stronger and more obvious impact than human capital with standardized Beta = 0.090 and p = 0.068, while social capital does not impact product innovation (P\_vale=0.228). Sharing this view, Beltramino and colleagues (2020) studied the impact of intellectual capital on product innovation, process innovation and performance of small and medium-sized enterprises in Argentina also showed that human capital has a positive impact on product innovation with standardized Beta reaching 0.407 and P\_value = 0.000, organizational capital has a positive impact on product innovation with standardized Beta reaching 0.198 and  $P_value = 0.004$ , social capital also does not impact product innovation ( $P_value = 0.544$ ) in small and medium-sized enterprises (Beltramino et al., 2020). Thus, to promote product innovation, businesses need to focus their efforts on human capital and organizational capital. Human capital and organizational capital themselves also have a close relationship with each other in each organization, businesses need to design a lean apparatus and create policies to promote the creativity of individuals at work. Even the smallest creations need to be stored and exchanged within the organization, considered as an intellectual property of the organization. Product innovation activities need to start with direct production workers and be developed with engineers and managers in the research and development department, under the support of the business leadership.

For process innovation activities, organizational capital has the strongest impact (standardized Beta = 0.360; p = 0.000), followed by social capital (standardized beta = 0.273; p = 0.000), and Finally, human capital (standardized beta = 0.160; p = 0.000). According to Beltramino and colleagues (2020), human capital positively impacts process innovation with standardized Beta reaching 0.329 and P\_value = 0.000, organizational capital positively impacts process innovation with Beta. Standardized at 0.250 and P\_value = 0.000, social capital does not impact process innovation (P\_value = 0.781) (Beltramino et al., 2020). In modern production and business, products are created by processes, which are the combination of stages, the steps in a chain of links in a process can be within a business or between businesses. According to Martin Christopher (2003), organizational management is

shifting from a functional model to process-based management (Christopher, 2003). Therefore, small and medium-sized enterprises need to redesign their operating processes, develop their unique "genome", pay attention to intellectual property protection and constantly foster and build organizational culture to create the invisible power of the organization.

For marketing innovation activities, only human capital and organizational capital have a clear impact and human capital has a very strong impact (standardized Beta = 0.460; p = 0.024), while organizational capital is moderate. lower level (standardized beta = 0.109; p=0.000); Social capital does not have an impact relationship on marketing innovation activities of small and medium-sized enterprises in the Mekong Delta because the P\_vale value reaches 0.457. It can be seen that the marketing activities of small and medium-sized enterprises in the Mekong Delta are currently focused on sales, market research activities and market orientation are still left open and receive little attention, partly the reason here is because businesses in the Mekong Delta are mainly small, newly established businesses (Truong Duc Thao & Nguyen Duc Xuan, 2020). Therefore, businesses need to focus a lot on knowledge management to exploit human capital resources well, such as innovating thinking about recruitment, work arrangement, training and development...establish specialized departments for research and development, promoting the application of e-commerce and digital marketing in the enterprise's business activities.

For organizational innovation activities, all three components of intellectual capital have a positive impact and in order from the highest is human capital (standardized Beta = 0.254; p = 0.000), the second is organizational capital (standardized beta = 0.241; p=0.000) and finally social capital (standardized beta = 0.216; p=0.000). As stated above, the organizational structure of businesses is becoming increasingly streamlined, functional organizational structures are gradually shifting to process, then, the organizational capital of the business is considered a form of intellectual property that creates competitive advantage and is a source of great strength that urges organizations to constantly innovate to perfect their apparatus and operate value creation activities in the most optimal way.

Also according to the model's estimation results, all components of innovation activities have a positive impact on the performance of small and medium-sized enterprises in the Mekong Delta. This result is similar to the research results of Barbieri and colleagues (2021) confirming that a business's innovation activities have a positive impact on operating



results with standardized Beta = 0.47; p=0.000 (Barbieri et al., 2021). Details of the estimated results are as follows:

The strongest impact on the performance of small and medium-sized enterprises in the Mekong Delta is process innovation activities (standardized Beta = 0.543; p = 0.000), this research result is consistent with the author's research results such as: Nham Phong Tuan (2016) when good process innovation will lead to good innovation results with standardized Beta reaching 0.304, P\_value = 0.000 and has the most positive impact on business performance both in terms of market (standardized beta reaches 0.294, P\_value = 0.000) and finance (standardized beta reaches 0.291, P\_value = 0.001). Research by Beltramino and colleagues (2020) also confirms that process innovation has a positive impact on business performance with standardized Beta reaching 0.310 and P\_value = 0.001.

Competitive pressure on businesses is increasing. To do so, small and medium-sized enterprises need to have high productivity, quality products and quickly respond to customer needs. Therefore, perfecting the production and business process is very necessary, especially today's business activities are not closed within four business walls but are open-ended enterprises. The process is not only a closed process within each business but the process of the entire supply chain. Businesses need to focus on building and perfecting the supply chain, applying e-commerce to market research, distribution, and improving current processes by applying new knowledge about lean management, quality management...

The second highest level of impact on the performance of small and medium-sized enterprises in the Mekong Delta is organizational innovation activities with standardized Beta = 0.225 and p = 0.000. This result is also similar to the research results of Nham Phong Tuan (2016) with the conclusion that organizational innovation has a positive relationship with innovation results (standardized Beta reached 0.435, P\_value = 0.000) and has a positive impact on market results (standardized beta reaches 0.340, P\_value = 0.000) and financial results of the business (standardized beta reaches 0.265, P\_value = 0.002). One of the problems that exists in Vietnam is that the organizational structure of businesses is often "bulging" regardless of whether they are public or private organizations, makes management costs very high and coordination of activities is also difficult and entangled with different functions, slowing down the decision-making process. Therefore, restructuring and designing the organization in a lean and process-oriented direction is essential to enhance business performance.



The third level of impact is marketing innovation activities with standardized Beta = 0.108 and p = 0.000. Similar to process innovation, the results of marketing innovation are also similar to the research results of Nham Phong Tuan (2016) with the conclusion that marketing innovation has a positive relationship with innovation results (Standardized Beta reaches 0.164, P\_value = 0.033) and has a positive impact on market results (Standardized Beta reaches 0.235, P\_value = 0.002) and business financial results (Standardized Beta reaches 0.242, P\_value = 0.004). In fact, in small and medium-sized enterprises in the Mekong Delta for many years, marketing activities have not been given enough attention, marketing activities are mainly concerned with product consumption without the need for other activities market research. That's why the story of "good season losing value" often happens. Production not based on market demand parameters has led to this situation. Therefore, to increase business performance, production must start from market research, from the downstream of the supply chain with information flowing backward and the flow of goods to create a synchronized supply chain.

Finally, product innovation activities have a positive impact on business performance with standardized Beta = 0.052 and p = 0.000. This result is consistent with the research of Beltramino and colleagues (2020) who confirm that product innovation has a positive impact on business performance with standardized Beta reaching 0.199, P value = 0.038. This result has a certain difference with the research of Nham Phong Tuan (2016) when the hypothesis of good product innovation does not lead to good innovation results and also does not lead to good operating results ( $P_value = 0.325$ ), and in the case of considering the 95% significance level, this result is consistent with the research results of author Nham Phong Tuan (2016). The reason for this problem is because the competitive products of small and medium-sized enterprises in the Mekong Delta are often very similar due to mutual imitation, due to focusing too much on researching competitors but forget what customers really need, what their needs are (Truong Duc Thao & Nguyen Duc Xuan, 2020). That's why awareness of the importance of product innovation among small and medium-sized enterprises in the Mekong Delta is still low, lack of initiative in product innovation, little attention to intellectual property... These research results create very strong foundations both in theory and practice to propose implications for promoting innovation activities to improve the performance of small and medium-sized enterprises in the Mekong Delta through impact on intellectual capital.



# 6. FINAL CONSIDERATIONS: PROPOSAL IMPLICATIONS FOR MANAGEMENT

Firstly, focus on innovating operational processes. Implementing a good workflow will help increase labor productivity, increase work quality, and reduce costs due to downtime at work.

Second, focus on organizational innovation. The head of the organization along with members of the leadership board need to create a very flexible mechanism, empower employees so they can participate in decision making, freedom to be creative at work so they can fully develop their abilities and potential in the field of responsibility.

Third, innovate marketing activities. The focus of this content is to convert from a "push" business model to a "pull" business model, meaning that market research and identification of customer needs will be the starting point for all activities aimed at meet demand instead of focusing on production and then finding ways to consume as traditional.

Fourth, properly evaluate the role of product/service innovation in business performance. Small and medium-sized enterprises in the Mekong Delta are often small businesses, so the costs for product innovation will not be much and it is difficult to maintain a separate department dedicated to research and development. Therefore, small and mediumsized enterprises in the Mekong Delta need to clearly identify that product/service innovation research mainly originates from the production department itself, only those who directly produce, only those involved in production and service provision understand clearly how their products need to change for the better and more complete.

Fifth, fully exploit the human capital of small and medium-sized enterprises through knowledge management: Rearrange current job positions to ensure the right people, right jobs; innovate recruitment thinking; Set up funds for innovation activities...

Sixth, promote the role of organizational capital in value creation activities: need to clearly recognize the organization's intellectual assets to find ways to store them; View corporate culture as an intellectual property of the organization; Pay attention to building and protecting brands; Building the organizational structure of an enterprise is like describing the "genetic" structure, the knowledge and information of the organization are concretized in the structure, systems and processes of the enterprise.

Seventh, strengthen activities to improve the social capital of businesses: create a friendly working environment, create a comfortable atmosphere in the workplace, encourage

sharing and exchange at work; Training employees in communication skills at work, communicating with customers, partners...; Build a code of conduct in the company, guide employees in performing their functions, duties and powers through the corporate culture handbook.

Thus, through collecting and analyzing data from 253 small and medium-sized enterprises in the Mekong Delta, we found that innovation activities have a positive influence and explain 46.4%. changes in operating results at these enterprises. Among them, the strongest impact is on process innovation (standardized Beta = 0.543), followed by organizational innovation (standardized beta = 0.225), third is marketing innovation (standardized beta = 0.108) and low especially product innovation (standardized Beta = (0.052). Besides, the components of intellectual capital also have a positive impact on each component of innovation, in which the components of intellectual capital explain 30.3% change of process innovation; 24.8% of the change in marketing innovation; and 22.4% of the change in organizational innovation... From the results of model testing, the study has proposed a number of management implications to improve the performance of small and medium-sized enterprises in Mekong Delta and lays both a theoretical and practical foundation for continuing to research this issue in specific industries and fields today. Besides the results achieved, this study is also limited in the survey subjects as it does not consider FDI enterprises or start-up enterprises. Research has also not examined the mechanism of intellectual capital's impact on innovation in different industry contexts or different forms of ownership...Therefore, future studies can conduct comparative research on innovation in businesses in different fields in Vietnam in general and in the Mekong Delta in particular or on innovative startups in Vietnam.

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