

The Impact of Dynamic Capacity's Factor on Business Performance: A Case Study of The Fishery Product Processing Industry in The Mekong Delta, Vietnam

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ABSTRACT

Purpose: This study investigates the impact of dynamic capability's factors on business performance in the mediation of innovation capability in Fishery Product Processing Industry in the Mekong Delta, Vietnam

Design/Methodology/Approach: Impact of dynamic capability's factors on business performance in the mediation of innovation capability was confirmed by 527 directors who operated directly Fishery Product Processing Industry in the Mekong Delta, Vietnam applying the CB-SEM estimation method.

Findings: The results shows that dynamic capability's factors (**knowledge-oriented leadership, adaptive capacity, cooperation capacity, absorption capacity, creative capacity**) have impacted on business performance via the mediation of innovation capability.

Conclusion: Business performance and innovation capability are directly impacted by dynamic capability's factors. Besides there also confirmed the mediating role of innovation capability towards the relationship between **knowledge-oriented leadership, adaptive capacity, cooperation capacity, absorption capacity, creative capacity** and business performance.

Practical Implications: The study's investigation has implications for both managers when to build performance oriented strategies for Fishery Product Processing Industry in the Mekong Delta, Vietnam.

Limitations: this study has been examined in fishery product processing industry in the Mekong Delta – Vietnam; therefore, there could impact the generalization in research scope.

Contribution to literature: This study focuses to examine the impact of the knowledge-oriented leadership, adaptive capacity, cooperation capacity, absorption capacity, creative capacity on business performance in the mediation of innovation capability that previous studies haven't still referred yet.

Keywords: knowledge-oriented leadership, adaptive capacity, cooperation capacity, absorption capacity, creative capacity, dynamic capability, business performance, fishery product processing enterprises.

JEL Classification Code: L74, M11, M51, O31, P25

1. Introduction

Up to now, the impact of **knowledge-oriented leadership, adaptive capacity, cooperation capacity, absorption capacity, creative capacity** on business performance in the mediation of innovation capability of fishery product processing enterprises in the Mekong Delta - Vietnam haven't still paid attention yet. Therefore, under the impact of the Covid-19 epidemic, many fishery product processing enterprises in the Mekong Delta - Vietnam were severely impacted on business performance.

The aquaculture industry formed and developed in the Mekong Delta is associated with favorable natural conditions, but the shaping and development of the seafood processing industry is attached to the needs and development of the export market (Loc, 2020). This partly explains the fluctuations of the seafood processing and export industry in the past period due to enormous impact the volatility of the world's export market, especially on export prices (Loc, 2020). In addition to its outstanding strengths in suitable soil conditions and water resources, the Mekong Delta also has the advantage of a highly experienced and qualified workforce in the fisheries sector that meets business and competition needs (Loc, 2020). However, the shortage and aging of the workforce in farming areas will be a major hindrance to the industry in the long term (Loc, 2020). As for farming, the industry's largest challenge is to ensure a stable and plentiful supply – and highly variable fish seed (Loc, 2020). The current dependence on seed supply outside the region is also an important limitation, the impact of climate change and saline intrusion can limit the growth rate of clusters (Loc, 2020). The output market of the cluster in the past 10 years has grown and diversified, but the problem is how to deal with the increasingly fierce competition in the international market (Loc, 2020). It requires close the coordination of actors in the supply chain, in the cluster, and from relevant ministries to solve this problem (Loc, 2020). The achievements of the cluster should be also attributed to the promoting role of the government, The Ministry of Agriculture and Rural development and especially VASEP. However, the role of these central agencies has not been fully optimized, especially in overcoming the difficulties and challenges of the industry.

The current and future competitive of the cluster is mostly constrained by three important factors (Loc, 2020). First, there is the weakness in building vertical links between actors in the chain, as well as horizontal linkage between members in the same group (between farming household in cooperation economic organizations, among seafood export enterprises); second, the transport infrastructure and logistics system in the region have not been properly invested and aligned, raising the cost, product price, and transportation time significantly (Loc, 2020). Third, there is a limitation in research and development of value – added products as well as Mekong Delta's own brand (Loc, 2020).

Furthermore, the emergence and spread of the Covid-19 pandemic and the subsequent government reactions, such as the introduction of lockdown measures or social distancing, have worldwide caused disruptions in supply chains (Au & Speelman, 2023). This significantly affected all the sectors of the economy (Au & Speelman, 2023), including the aquaculture sector (Au & Speelman, 2023). International trade of aquaculture products dropped due to the closure of international borders (Au & Speelman, 2023), with inputs and market accessibility being constrained in some countries because of the reduced mobility of producers (Au & Speelman, 2023). To make the situation even more precarious, fish demand was reported to decrease as well (Au & Speelman, 2023). As a result of this decreased fish demand, output prices declined (Au & Speelman, 2023), while at the same time input prices increased sharply (Au & Speelman, 2023) due to constrictions in the input supply. Consequently, income from aquaculture was reported to decrease significantly (Au & Speelman, 2023).

Pangasius farming in Vietnam was also affected by the Covid-19 pandemic, particularly because the species is mainly grown for export (Au & Speelman, 2023). The production and export costs of the sector have increased significantly, while its demand in key markets has been uncertain or has even decreased (Au & Speelman, 2023). In 2021, more than 103 seafood factories in the south of Vietnam had to temporarily shut down in response to a large local outbreak of Covid-19 (Au & Speelman, 2023). Moreover, pangasius processing factories and farms had to close because they failed to implement the “3-on-site” model (in which workers had to work, eat, and sleep within the plants and farms and which aimed at isolating their workers from the public and families) (Au & Speelman, 2023). As a consequence, the pangasius farming activity decreased dramatically (Au & Speelman, 2023). This all helps to explain why the export value of Vietnamese pangasius decreased by 23% in 2021, compared to the 2019 figures (Au & Speelman, 2023). Other reported impacts were an increase in the pangasius inventories and in the mortality in pangasius farming, overall leading to lower production efficiency (Au & Speelman, 2023).

So how can we help seafood processing enterprises achieve business performance; particularly, what should we do to help the fishery product processing enterprises to obtain the goal of business performance at present?

There obtains the business performance to need to focus the supply chain management (Palandeng et al, 2018). However, it is said that total quality management, entrepreneurial orientation, and market orientation were significant predictors of performance of small and medium enterprises (Asad et al, 2020). Furthermore, people say that both of product and process innovation have a strong and positive association with firm performance (Ar & Baki, 2011). On the other hand, Migdadi et al (2016) confirm that organizational factors influence e-business implementation. Moreover, e-business implementation

affects organizational performance (Migdadi et al, 2016). Parallel with that, Turulja & Bajgorić (2016) reveal that information technology capability to some extent determines firms' business performance but it plays more important role in enhancing Human resource management capability. In addition, Human resource management capability significantly impacts business performance.

In summary, there are still many debates, there are many different and conflicting opinions about the factors affecting business performance, so there exist limitations on the business performance. Therefore, further studies are needed to increase the generalizability of factors affecting business performance; especially factors impact on business performance of fishery product processing enterprises that it is rarely; Therefore, research subject of the impact of dynamic capacity's factor on business performance: a case study of the fishery product processing industry in the Mekong Delta, Vietnam is urgent now.

2. Literature review

2.1. Theory Dynamic Capabilities

Capability is the ability to implement an activity or task. There exist an organization in the competitive environment to depend on operational capabilities (Helfat et al, 2007). A dynamic capability is ability to create, enhance, or change its resource base (Helfat et al, 2007). Dynamic capabilities include absorption capability, adaptive capability, cooperation capability, creative capability, knowledge-oriented leadership (Easterby-Smith et al, 2008; Crossan and Apaydin, 2009; Zhou and Li, 2010; Gemunden et al, 1996). Some of dynamic capabilities support enterprises to enhance competitive advantage and business performance through acquisitions, strategic alliances and internal growth (Helfat et al, 2007). Other capabilities enable a firm to develop new products and production processes (Helfat et al, 2007).

2.2. Absorptive capability (ABS)

Absorptive capability is the "ability to assimilate, apply and confirm the value of new information to commercial ends" (Duodu & Rowlinson, 2020). The ability to acquire the value of new outside knowledge and to confirm it is an exploration process that opens companies to new opportunities in the environment (Duodu & Rowlinson, 2020). Even though the process of identifying and acquiring knowledge may not affect innovation directly, it is considered an essential part of the innovation process as firms need to be able to sense opportunities and make use of them to develop competitive advantage (Duodu & Rowlinson, 2020). To measure the **Absorptive capability**, Duodu & Rowlinson, (2020) use observation items such as;

- Encourages employees to utilize information sources from within and outside our industry
- Identifies the relevance and usefulness of external knowledge
- Communicate ideas and concepts across divisions
- Periodic meetings to exchange new knowledge across divisions
- Prepares absorbed knowledge for future use
- Integrates existing knowledge with new insights from outside the organization

Furthermore, Batarseh et al (2017) confirm that absorptive capability is an essential capability to generate an innovation. Besides, Liu et al (2013) also affirm absorptive capability affects firm performance. Especially,

Phuong et al (2022) find that the significant impact of absorption capability on retailers performance by an indirect mechanism through innovation capability. Therefore, proposes is suggested such as:

- **Proposition 1:** Absorptive capability has a positive significantly impact on innovation capacity
- **Proposition 2:** innovation capabilities have an impact significantly on business performance
- **Proposition 3:** Absorptive capacity has an indirect impact on business performance through the mediation of innovation capacity.

2.3. Adaptive capability (ADAP)

Organizational adaptive capability focuses on searching and balancing exploration and exploitation strategies (Chen et al., 2019). Adaptive capability allows organizations to identify and capitalize on emerging market opportunities in a relatively quick and flexible way (Chen et al., 2019). Organizations can then reconfigure resources and coordinate processes promptly to produce more innovative products (Chen et al., 2019). To measure the Adaptive capability, (Chen et al., 2019) use observation items such as;

- The management systems in this organization encourage people to challenge outmoded traditions/practices/sacred cows.
- The management systems in this organization are flexible enough to allow members to respond quickly to changes in your markets.
- The management systems in this organization evolve rapidly in response to shifts in your business priorities.

Besides, Oktemgil & Greenley (1997) find that adaptive capability has impact on business performance. On the other hand, adaptive capability have a positive and significant effect on financial performance (Algarn et al, 2022). Especially, Phuong et al (2022) find that the significant impact of absorption capability on retailers performance by an indirect mechanism through innovation capability. Therefore, proposes is suggested such as

- **Proposition 4:** adaptive capability has a positive impact on business performance
- **Proposition 5:** adaptive capability has an impact on innovation capability

Because of Proposition 3 (above) shows that absorptive capacity has an indirect impact on business performance through the mediation of innovation capability; therefore, innovation capability has impact on business performance (Proposition 6).

Base on Proposition 4, Proposition 5 and Proposition 6; the author suggests the Proposition 7 that adaptive capability has an indirect impact on business performance through the mediation of innovation capability.

2.4. Cooperation capability (COOP)

Cooperation capability, which can be defined as a firm's ability to leverage other actors' resources and knowledge (Choi & Hwang, 2015). Cooperation relationships have helped firms to reduce transaction costs and create a sustainable competitive position in highly uncertain business environments (Choi & Hwang, 2015). There measures the Adaptive capability, Choi & Hwang (2015) use observation items such as;

- We rely on our partners' engineering capability.
- Our partners' tools and machinery are customized to our needs.
- Our partners spend a significant amount of time and effort to our relationship.
- Our partners' knowledge of our procedures, culture, and technological know-how are difficult to replace.
- The frequent contacts between our partners and our engineers are important.
- The direction of our communication is bilateral rather than unilateral.
- Our engineers and sales staff work closely with our partners' staff.
- We share our high level of engineering capability with our partners

Especially, Pongsathornwiwat et al (2019) confirm that innovation capability has a direct impact on performance and Cooperation capability also impact on firm performance; furthermore; Pongsathornwiwat et al (2019) also affirm Cooperation capability have a direct impact on innovation capability. Therefore, proposes is suggested such as

- **Proposition 8:** Cooperation capability has a significant positive impact on business performance
- **Proposition 9:** Cooperation capability has a significant impact on business results
- **Proposition 10:** Cooperation capability has an indirect impact on business performance through the mediation of innovation capability.

2.5. Creative capability (CRE)

Creation capability refers to a firm's abilities to create new knowledge by itself, and it is the internal source of new knowledge (Su et al., 2013). Scholars have tested the importance and antecedents of knowledge creation capability. For example, Su et al (2013) found that knowledge creation capability is positively related to the number of new products and services. To measure the *creation capability*, Su et al (2013) use observation items such as;

- Employees meet frequently to discuss work-related ideas and new developments
- Employees do not have difficulty getting together to exchange new ideas and developments;
- Employees are always available to discuss new ideas or developments;
- Employees feel free to contact anyone to discuss new ideas or developments;
- Employees are proficient at combining and exchange ideas to solve problems or create opportunities;
- Employees do a good job of sharing their individual ideas to come up with new ideas, products, or services;
- Employees have learned to effectively pool their ideas and knowledge;
- Employees often exchange and combine ideas to find solutions to problems;
- Employees see benefits from exchanging and combining ideas with one another;
- The most valuable ideas seem to come when employees pool their effort;
- Employees believe that, by exchanging and combining ideas, they can create value for the company;
- Employees believe that, by pooling their efforts, they can create value for the company

Furthermore, Raisal et al (2019) clearly affirm that creative capacity has a positive impact on the innovation. Especially, Stephens & Carmeli (2016) confirm that creative capacity has a positive impact on the business performance. There are, some proposition is suggested such as

- **Proposition 11:** creative capabilities have an impact on business performance
- **Proposition 12:** creative capacity has an impact on innovation capacity

Because of proposition 3 is that Absorptive capacity has an indirect impact on business performance through the mediation of innovation capacity; therefore, author suggests **Proposition 13** that creative capacity has an indirect impact on business performance through the mediation of innovation capacity.

2.6. Knowledge-oriented leadership (KOL)

Knowledge-oriented leadership (KOL) includes knowledge creation, transfer, storage, and application (Donate & Pablo, 2014). Knowledge-oriented leadership is thus a necessary instrument that is based on a mixture of transformational and transactional leadership styles, along with communication and motivational elements (Donate & Pablo, 2014). Knowledge-oriented leadership thus implies affording knowledge management a prominent role in the firm so as to sense and seize opportunities to innovate (Donate & Pablo, 2014). In this regard, knowledge-oriented leaders should champion the development of Knowledge management channels and initiatives for both knowledge exploration and knowledge exploitation (Donate & Pablo, 2014). To measure the KOL, Donate & Pablo (2014) use observation items such as;

- Leadership has been creating an environment for responsible employee behavior and teamwork

- Managers are used to assuming the role of knowledge leaders, which is mainly characterized by openness, tolerance of mistakes, and mediation for the achievement of the firm's objectives
- Managers promote learning from experience, tolerating mistakes up to a certain point
- Managers behave as advisers, and controls are just an assessment of the accomplishment of objectives
- Managers promote the acquisition of external knowledge
- Managers reward employees who share and apply their knowledge

Furthermore, Gürlek & Çemberci (2020) find that knowledge-oriented leadership improves organizational performance; On the other hand, knowledge-oriented leadership enhances organizational performance through the mediation of innovation (Gürlek & Çemberci, 2020). Besides, Naqshbandi & Jasimuddin (2018) confirm that knowledge-oriented leadership has a direct, positive impact on innovation. There are, some proposition is suggested such as

- **Proposition 14:** knowledge-oriented leadership has a direct impact on business performance
- **Proposition 15:** knowledge-oriented leadership has a direct impact innovation capacity
- **Proposition 16:** knowledge-oriented leadership has an indirect effect on business performance in the mediation of innovation capabilities.

2.7. Innovation capability (INNO)

Innovation is usually defined as a set of ideas, practices or objects perceived as innovative by an individual or a group of people (Navarro et al., 2020). The capacity for innovation refers to the application of technology by an organization to develop pioneering systems, policies, software, products, processes, devices and services (Navarro et al., 2020). These capabilities also integrate a company's ability to assimilate and use external data to obtain knowledge and commercial information oriented to success (Navarro et al., 2020). To measure the innovation capability, Navarro et al (2020) use observation items such as

- Our company frequently tries out new ideas
- Our company seeks new ways to do things
- Our company is creative in its methods of operation
- Our company is often the first to market with new products and services
- Innovation in our company is perceived as too risky and is resisted
- Our new product introduction has increased over the last 5 years

Especially, Navarro et al., 2020 also explain that innovation capability has a direct, positive effect on business performance. There, proposition is suggested

- **Proposition 17:** innovation capability has a direct, positive effect on business performance

2.8. Business performance

Business performance refers to those activities, which are under the control of the individuals, contribute to the organization's goals and objectives and can be measured according to the individual's level of skills (Chahal et al., 2016). In other words, it is the quantity and quality of the achievement that an individual or a group contributes to the organization (Chahal et al., 2016). Furthermore, Firm performance measurement is divided into three categories: profitability, productivity and market value, with results showing that out of four other components, physical capital influences profitability and productivity positively, which also stimulates corporate profits (Xu & Liu, 2020).

Through research overview, it is clearly that the factors of dynamic capabilities impact business performance via main directions such as: (1) there directly impact on business performance (2) there impact on business performance through mediating variables and (3) there impact on business performance through moderating variables. In particular, the direct impact of dynamic capabilities' factors on business performance is the research direction that has attracted the most attention of researchers, but there are still many controversies there need to be studied further in other cultures and in different fields that there are suggested by Demirbag,

Koh, Tatoglu & Zaim (2006); Ar & Baki (2011); Bañales & Andrade (2011); Mahmood, Qadeer & Ahmad (2015); Migdadi, Zaid, Hujran & Aloudat (2016); Ho, Ahmad & Ramayah (2016); Turulja & Bajgorić (2016); Zhang, Kara, Spillan & Wimsatt (2017); Liu, Zhao & Zhao (2018); Ros, Sánchez & Romero (2018); Bykova & Jardon (2018); Hsu (2019).

At the same time, the impact of factors of dynamic capabilities on business performance through mediating factors there also attract attention of the researchers, but there is still much controversy and finally the impact of factors of dynamic capabilities via moderating variables is still limited and suggested by Demirbag, Koh, Tatoglu & Zaim (2006); Ar & Baki (2011); Bañales & Andrade (2011); Mahmood, Qadeer & Ahmad (2015); Migdadi, Zaid, Hujran & Aloudat (2016); Ho, Ahmad & Ramayah (2016); Turulja & Bajgorić (2016); Kashif Corresponding, & Ilyas (2017); Zhang, Kara, Spillan & Wimsatt (2017); Liu, Zhao & Zhao (2018); Ros, Sánchez & Romero (2018); Bykova & Jardon (2018); Hsu (2019) that there should continue to do more research in different cultures and in different fields to increase the generalizability of dynamic capabilities' factors on business performance in Asian Nations.

Therefore, there are still many debates and no modeling of factors affecting business performances in a comprehensive and complete way; Especially in the fishery product processing industry in the Mekong Delta - Vietnam, there apply the factors of dynamic capabilities to create the business performance that is still too rare; Therefore, there need to fill this gap at the fishery product processing industry in the Mekong Delta – Vietnam; so the author proceeds with test the directly impact of the knowledge-oriented leadership, absorptive capacity, creative capacity, cooperative capacity, and adaptive capacity on business performance and innovation capacity and in which there also tests the mediating role of innovation capacity in the relationship between knowledge-oriented leadership, absorptive capacity, creative capacity, cooperative capacity, adaptive capacity and business performance that previous researches of Demirbag, Koh, Tatoglu & Zaim (2006); Ar & Baki (2011); Bañales & Andrade (2011); Mahmood, Qadeer & Ahmad (2015); Migdadi, Zaid, Hujran & Aloudat (2016); Ho, Ahmad & Ramayah (2016); Turulja & Bajgorić (2016); Kashif Corresponding, & Ilyas (2017); Zhang, Kara, Spillan & Wimsatt (2017); Liu, Zhao & Zhao (2018); Ros, Sánchez & Romero (2018); Bykova & Jardon (2018); Hsu (2019) have not paid attention and implemented yet.

Therefore, there base on above propositions (from proposition 1 to proposition 17) and research gap that has just analyzed. The author suggests some hypothesis and research model such as;

H1: Creative capacity has a positive impact on business performance

H2: Creative capacity has a positive impact on innovation capacity

H3: Collaboration capacity has a positive impact on business performance

H4: Collaboration capacity has a positive impact on innovation capacity

H5: Knowledge-oriented leadership has a positive impact on innovation capacity

H6: Knowledge-oriented leadership has a positive impact on business results

H7: Adaptive capacity has a positive impact on innovation capacity

H8: Adaptive capacity has a positive impact on business results

H9: Absorptive capacity has a positive impact on innovation capacity

H10: Absorptive capacity has a positive impact on business results

H11: Innovation capacity has a positive impact on business results

H12: Creative capacity has a positive indirect impact on business results through the mediation of innovation capacity

H13: Collaboration capacity has a positive indirect impact on business results through innovation capacity

H14: Knowledge-oriented leadership has a positive indirect impact on business results through the mediation of innovation capacity

H15: Adaptive capacity has a positive indirect impact on business results through innovation capacity

H16: Absorptive capacity has a positive indirect impact on business results through the mediation of innovation capacity

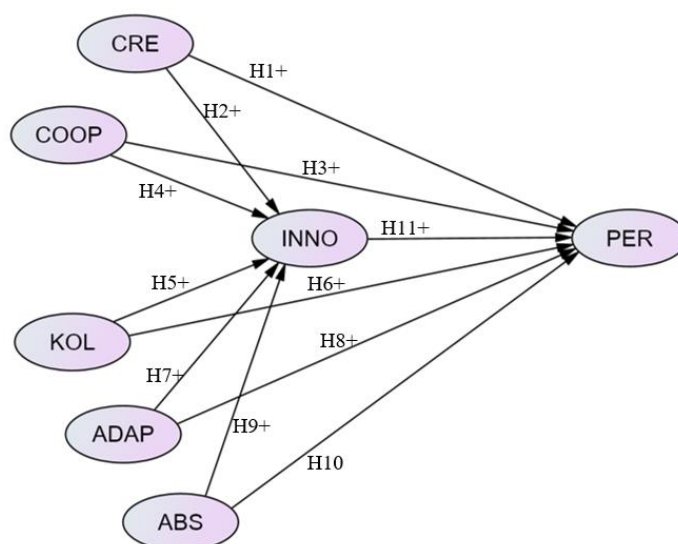


Figure 1: Suggestion research model

3. Research Methods

3.1. Sample

Data is collected to validate the measure and examine the effect as well as the necessity of knowledge-oriented leadership, absorptive capacity, creative capacity, cooperative capacity, adaptive capacity, innovation capacity – for business performance. There insure to be level of reliability, the author used 580 survey questionnaires in fishery product processing industry in the Mekong Delta area - Vietnam. The reliability answer sheets were 527 to obtain successful ratio of surveys was 90,86%. Key informant approaches (a senior manager) were used face-to-face and discussion group interviews. Self-completed questionnaires are sent directly managers who directly operate fishery product processing industry in the Mekong Delta area.

3.2. Measures

The research model includes 6 factors that are tested to impact business performance: knowledge-oriented leadership, absorptive capacity, creative capacity, cooperative capacity, adaptive capacity, innovation capacity; particularly, knowledge-oriented leadership (four items from Donate and Pablo, 2015); absorptive capacity (four items from Duodu and Rowlinson, 2020); creative capacity (four items from Su et al, 2013); cooperative capacity (four items from Choi and Hwang, 2015); adaptive capacity (three items from Chen et al, 2019); innovation capacity (five items from Navarro et al, 2020); finally, business performance was measured by five items (Liu et al, 2020).

3.3. Data Analysis

Tho and Trang (2011) changed and examined the measures applied at Vietnamese firms. This research reconfirmed their validity and reliability (CFA) and reused these scales. Measure validation was practiced in one

stage. Knowledge-oriented leadership, absorptive capacity, creative capacity, cooperative capacity, adaptive capacity, innovation capacity and business performance to shape a final measurement model.

4. Results and Discussion

4.1. Construct Validity of KMO

To test the validity, this research used Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) (Hair et al., 2017). The Promax rotation was used for EFA. Every item loading must be higher than 0,7 for precise validity due to convergent validity and 0,5 for adequate validity. Furthermore, the indexes of Average Variance Extracted (AVE) must be greater than 0,5 to ensure reliability and validity. Discriminant validity obtained the reliability when the square root of the AVE must be greater than the shared variance (table 1 & table 2).

Table 1 Constructs Validity of Knowledge-oriented leadership, absorptive capacity, creative capacity, cooperative capacity, adaptive capacity, innovation capacity and business performance

	CR	AVE	MSV	MaxR (H)	PER	INNO	CRE	COOP	KOL	ADAP	ABS
PER	0,914	0,679	0,183	0,915	0,824						
INNO	0,927	0,717	0,183	0,927	0,427	0,846					
CRE	0,916	0,731	0,301	0,92	0,364	0,349	0,855				
COOP	0,901	0,694	0,144	0,902	0,308	0,284	0,380	0,833			
KOL	0,909	0,713	0,301	0,909	0,403	0,404	0,549	0,348	0,845		
ADAP	0,903	0,757	0,108	0,904	0,282	0,299	0,284	0,172	0,328	0,870	
ABS	0,872	0,633	0,183	0,884	0,305	0,289	0,280	0,262	0,428	0,232	0,796

CMIN/df=1.513; TLI=.980;CFI=.983; GFI=.936;RMSEA=.031

Table 2 shows the items to mean for every factor with Alpha, CR, and AVE scored and reports that factors are exact, with AVE significantly larger than 0,5. (Fornell & Bookstein, 1982); both Alpha and CR values exceed 0,7 (Nunnally & Bernstein, 1994). Furthermore, Table 2 show that standardized factor loadings exceed the required > 0,50 threshold (Gefen et al., 2000).

There use five incremental fit indices to evaluate model fit: Root Mean Square Error of Approximation (RMSEA), Tucker Lewis index (TLI), chi-square/degree of freedom (CMIN/DF), Comparative Fit Index (CFI), Goodness-of-Fit Index (GFI). Particularly, $RMSEA < 0,08$; $TLI > 0,9$; $2 < CMIN/df < 5$; $CFI > 0,9$; $GFI > 0,9$ (Hair et al, 2014)

Clearly, the CFA model in this study obtained reliability: $RMSEA = 0,031$; $TLI = 0,980$; $CMIN/DF = 1,513$; $CFI = 0,983$; $GFI = 0,936$; thus, strong support for confirmatory factor analysis.

Table 2: Constructs with Cronbach's alpha, Composite Reliability (CR), AVE and MSV

	AL PHA	CR	AVE	MSV	SQR T AVE	Max R(H)	PER	INN O	CRE	COO P	KOL	ADA P	ABS
PER	0,913	0,914	0,679	0,183	0,824	0,915	0,824						

INNO	0,926	0,927	0,717	0,183	0,846	0,927	0,427	0,846					
CRE	0,914	0,916	0,731	0,301	0,855	0,92	0,364	0,349	0,855				
COOP	0,900	0,901	0,694	0,144	0,833	0,902	0,308	0,284	0,380	0,833			
KOL	0,908	0,909	0,713	0,301	0,845	0,909	0,403	0,404	0,549	0,348	0,845		
ADAP	0,903	0,903	0,757	0,108	0,870	0,904	0,282	0,299	0,284	0,172	0,328	0,870	
ABS	0,870	0,872	0,633	0,183	0,796	0,884	0,305	0,289	0,280	0,262	0,428	0,232	0,796

CMIN/df=1.513; TLI=.980;CFI=.983; GFI=.936;RMSEA=.031

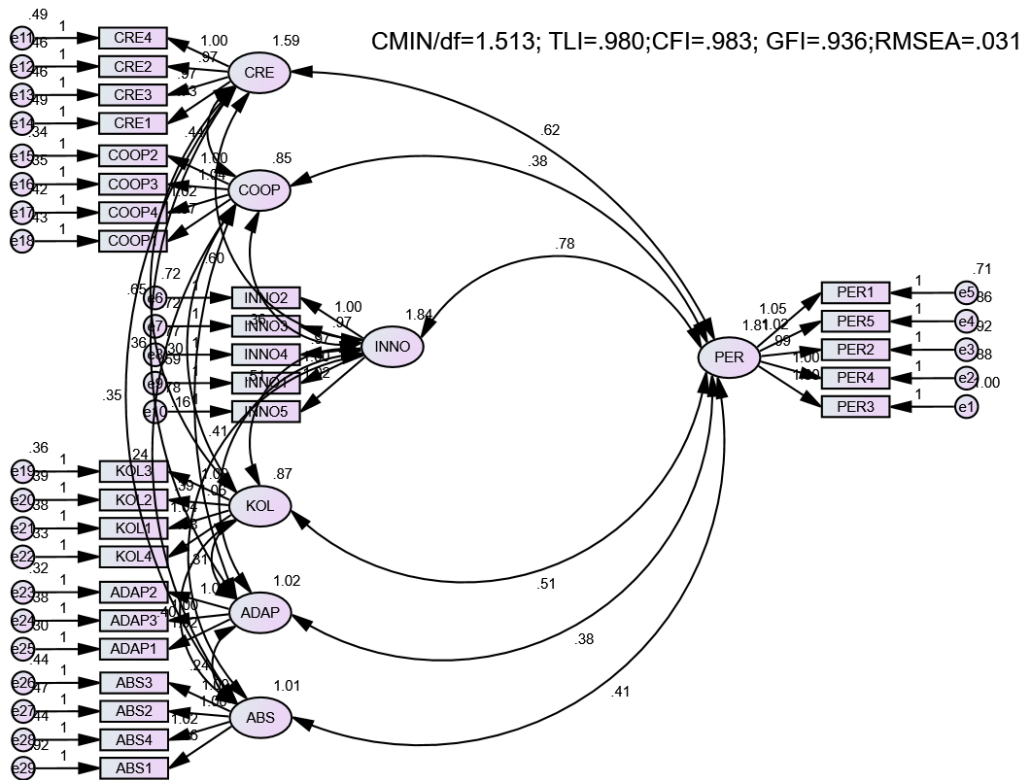


Figure 2: CFA model of Knowledge-oriented leadership (KOL), absorptive capacity (ABS), creative capacity (CRE), cooperative capacity (COOP), adaptive capacity (ADAP), innovation capacity (INNO) and business performance (PER).

4.2. Structural Model Results

Table 2 shows that the mean, standard deviation and bivariate correlation, KMO and Cronbach’s values for all factors exceeded the required value of 0,7; cronbach’s alphas ranged from 0,870 to 0,926; the CR ranged

from 0,872 to 0,927; it mean well that scale stability and internal consistency. The AVE for all factors was higher than 0,60.

The model fit is well: *CMIN/DF* = 1,513; *TLI* = 0,980; *CFI* = 0,983; *GFI* = 0,936 and *RMSEA* = 0,031. Therefore; all hypotheses (H1, H2, H3, H4, H5, H6, H7, H8, H9, H10, H11, H12, H13, H14, H15, H16 in table 3) are supported and statistical meaning statistical significance. These findings favor the whole of the empirical research to related the dynamic capability theory. Knowledge-oriented leadership, absorptive capacity, creative capacity, cooperative capacity, adaptive capacity, innovation capacity appeared that considered the most important hypothesis, which is compatible with earlier empirical research related to the dynamic capability theory (Helfat et al, 2007).

Table 3: Structural Model Results

Hypothesis	Effect	Coefficient	P-value	Conclusion
H1	PER \leftarrow CRE	0,118	0,039	Accepted
H2	INNO \leftarrow CRE	0,132	0,024	Accepted
H3	PER \leftarrow COOP	0,157	0,023	Accepted
H4	INNO \leftarrow COOP	0,167	0,018	Accepted
H5	INNO \leftarrow KOL	0,295	0,000	Accepted
H6	PER \leftarrow KOL	0,191	0,021	Accepted
H7	INNO \leftarrow ADAP	0,207	0,000	Accepted
H8	PER \leftarrow ADAP	0,123	0,044	Accepted
H9	INNO \leftarrow ABS	0,138	0,039	Accepted
H10	PER \leftarrow ABS	0,128	0,048	Accepted
H11	PER \leftarrow INNO	0,247	0,000	Accepted
H12	INNO mediate CRE & PER	0,031	0,020	Accepted
H13	INNO mediate COOP & PER	0,028	0,011	Accepted
H14	INNO mediate KOL & PER	0,051	0,001	Accepted
H15	INNO mediate ADAP & PER	0,038	0,002	Accepted
H16	INNO mediate ABS & PER	0,025	0,047	Accepted

CMIN/df=1,513; TLI=,980;CFI=,983; GFI=,936;RMSEA=,031

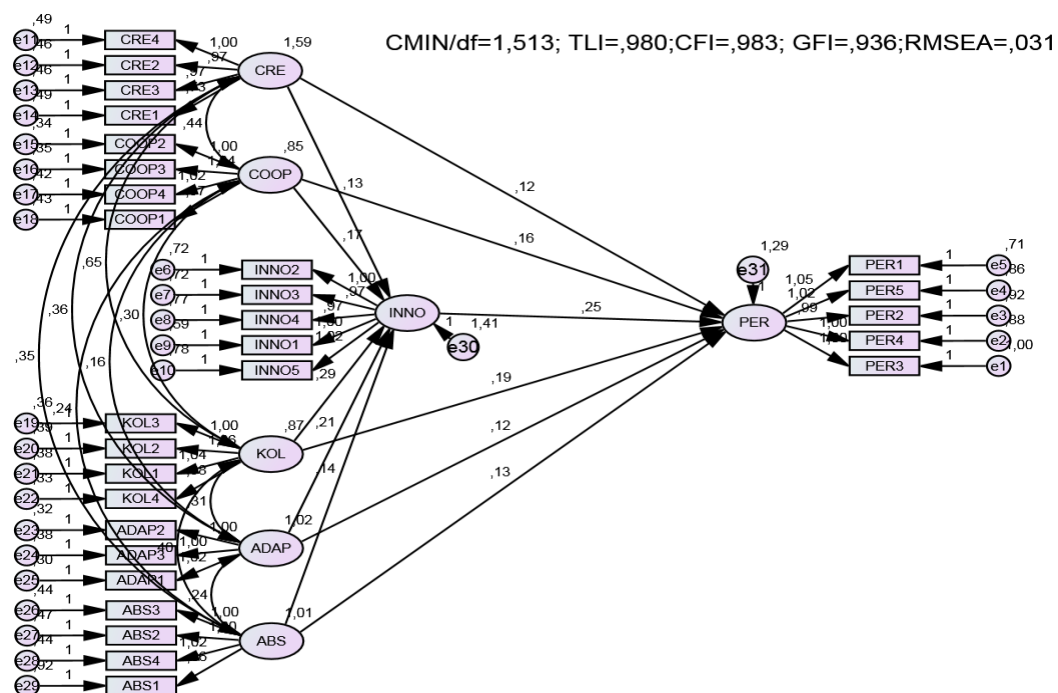


Figure 3. Result of structural equation modeling

These findings showed the relationship between INNO and PER at Fishery Product Processing Industry in the Mekong Delta, as well as the mediation role of innovation capability between Knowledge-oriented leadership, absorptive capacity, creative capacity, cooperative capacity, adaptive capacity and business performance (PER).

5. The Implications of improving business performance through innovation capabilities for businesses in the Fishery Product Processing Industry in the Mekong Delta - Vietnam

Firstly, there bases on the research result, it shows that the creative capacity has a positive and directly impact on business performance (H1). Therefore, managers need to focus the;

- There create the conditions for employees to meet each other to discuss work-related ideas regularly.
- To organize the meetings at the enterprise and in which there permit employees to contribute the comments and discuss the problem solved ways
- When Fishery Product Processing Companies have the intend to launch new products, there need to create opportunity for employees sharing their opinions

Second, there bases on the research result, it shows that the cooperation capacity has a positive and directly impact on innovation capability (H2). Therefore, managers need to focus the;

- To improve the innovation capabilities that managers need to organize the discussion meeting to relate the innovation tasks and ideas. Thereby there choose the good ideas to increase the innovation capacity.
- When Fishery Product Processing Companies have the problem, it is necessary to gather employees and discuss with them so that managers can choose good solutions to change innovation capacity.

Third, there bases on the research result, it shows that the cooperation capacity has a positive and directly impact on business performance (H3). Therefore, managers need to focus the

- There need to improve the cooperation with technical partners and ask for partners to help technical aspects related to machine operation.
- To need to maintain the relationships with partners after purchasing the equipment so that partners support to repair the equipment when to be necessary
- There should develop a partnership policy.

Fourth, there bases on the research result, it shows that the cooperation capacity has a positive and directly impact on innovation capability (H4). Therefore, managers need to focus the

- To exchange the information with partners about the features and characteristics of machinery and equipment to create innovation capacity.
- Adjusting and operate the production used machinery, tools and equipment and business activities in an innovative manner.
- To build the mechanism to maintain the partnerships in production and business activities
- It's important that there need to consider the relationships with partners as core value
- To negotiate and sign bilateral cooperation agreements with important partners

Fifth, there bases on the research result, it shows that the knowledge oriented – leadership has a positive and directly impact on innovation capability (H5). Therefore, managers need to focus the

- To consider the spirit of teamwork that is important value and in which there build a responsible working environment.

- It's necessary to improve and pay attention to effusiveness, tolerance and harmony worked spirit
- To evaluate highly the responsibility worked spirit and that there dare to do and take on responsibility

Sixth, there bases on the research result, it shows that the knowledge oriented – leadership has a positive and directly impact on business performance (H6). Therefore, managers need to focus the

- To promote the teamwork spirit and take on responsibility
- There has a effusiveness and harmony worked mechanism with everyone
- To have a mechanism that there clearly defines the responsibilities and rights of each person for every job.
- There always motivate and encourage the self-study employees to improve their qualifications
- To create the opportunities for employees to share and apply their knowledge at work.

Seventh, there bases on the research result, it shows that the adaptive capacity has a positive and directly impact on innovation capability (H7). Therefore, managers need to focus the

- To improve the management system in the adaptive direction but there must be easy to understand and remember.
- There to be flexible in handling all enterprise's activities related situations
- To improve the enterprise management system.

Eighth, there bases on the research result, it shows that the adaptive capacity has a positive and directly impact on business performance (H8). Therefore, managers need to focus the

- There should encourage employees to change and adapt to traditional business regulations.
- There should flexibly take advantage of and operate the management systems to respond to market changes and fluctuations.
- To invest quickly to develop management systems to keep up with the market in the global integration context.

Ninth, there bases on the research result, it shows that the absorptive capacity has a positive and directly impact on innovation capacity (H9). Therefore, managers need to focus the

- To encourage the employees that use information inside and outside.
- It is necessary to evaluate the usefulness of external knowledge to help the enterprise's innovation
- There communicate the ideas to each department .
- It is necessary to organize the conference for employee to exchange the ideas

Tenth, there bases on the research result, it shows that the absorptive capacity has a positive and directly impact on business performance (H10). Therefore, managers need to focus the

- It is necessary to evaluate the interior and exterior information to determine useful information for applying the enterprise.
- There always communicate the new ideas daily or periodically weekly or monthly.
- To organize the meeting and conferences regularly at the enterprise.

Eleventh, there bases on the research result, it shows that the innovation capacity has a positive and directly impact on business performance (H11). Therefore, managers need to focus the

- To generate new and important ideas in product or service innovation regularly
- There should encourage the employees to do in new ways for their task
- To create new methods that help the enterprise
- It is necessary to develop the innovation policies in all aspects of the enterprise's production and business activities.

Limitation: The sample size in the study was only 527, so the representativeness was not high. The research was only conducted in **Fishery Product Processing Industry in the Mekong Delta**, Vietnam, so generalization was limited. In addition to this study focus only the Knowledge-oriented leadership, absorptive capacity, creative capacity, cooperative capacity, adaptive capacity in this study.

Future suggestion: there need to use the bigger sample size than for the next research. There extends research scope larger than this study, such as Northern Region or another area in Vietnam. There need to use other factors as brand image, leadership style, company culture, digital marketing capacity, learning capacity, human resource management capacity for next research.

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References

1. Algarn, M. A, Ali, M., Morant, G. A., Rodríguez, A. L. L., Latan, H., Ali, I., & Ullah, S. (2022). Make green, live clean! Linking adaptive capability and environmental behavior with financial performance through corporate sustainability performance. *Journal of Cleaner Production*, 1–59.
2. Ar, I. M., & Baki, B. (2011). Antecedents and performance impacts of product versus process innovation: Empirical evidence from SMEs located in Turkish science and technology parks. *European Journal of Innovation Management*, 14(2), 172–206. <https://doi.org/10.1108/14601061111124885>
3. Asad, M., Chethiyar, S. D. M., & Ali, A. (2020). Effect of entrepreneurial orientation, market orientation and total quality management on performance: Evidence from Saudi SMEs. *Paradigms*, 14(1), 102–108. <https://doi.org/10.1108/BIJ-08-2019-0391>
4. Au, T. N. H., & Speelman, S. (2023). Understanding vulnerability and resilience of Vietnamese pangasius farming in the context of the Covid-19 pandemic. *Aquaculture*, 575, 1–10. <https://doi.org/10.1016/j.aquaculture.2023.739733>
5. Batarseh, F. S., Daspit, J. J., & Usher, J. M. (2017). The collaboration capability of global virtual teams: relationships with functional diversity, absorptive capacity, and innovation. *International Journal of Management Science and Engineering Management*, 13(1), 1–10. <https://doi.org/10.1080/17509653.2016.1275865>
6. Batarseh, F. S., Daspit, J. J., & Usher, J. M. (2017). The collaboration capability of global virtual teams: relationships with functional diversity, absorptive capacity, and innovation. *International Journal of Management Science and Engineering Management*, 13(1), 1–10. <https://doi.org/10.1080/17509653.2016.1275865>
7. Crossan, M. M., & Apaydin, M. (2010). A multi-dimensional framework of organizational innovation: A systematic review of the literature. *Journal of Management Studies*, 47(6), 1154–1191.
8. Chahal, H., Jyoti, J., & Rani, A. (2016). The Effect of Perceived High-performance Human Resource Practices on Business Performance: Role of Organizational Learning. *Global Business Review*, 17, 107S–

- 132S. <https://doi.org/10.1177/0972150916631193>
9. Chen, C. H. V., Yeh, P. W., & Madsen, J. (2019). Contingent worker and innovation performance in electronics manufacturing service industry. *Chinese Management Studies*, 13(4), 1003–1018. <https://doi.org/10.1108/CMS-09-2018-0676>.
10. Choi, D., & Hwang, T. (2015). The impact of green supply chain management practices on firm performance: the role of collaborative capability. *Operations Management Research*, 69–83. <https://doi.org/10.1007/s12063-015-0100-x>
11. Donate, M. J., & Pablo, J. D. S. (2014). The role of knowledge-oriented leadership in knowledge management practices and innovation. *Journal of Business Research*, 1–11. <https://doi.org/10.5267/j.msl.2018.1.003>
12. Duodu, B., & Rowlinson, S. (2020). The effect of social capital on exploratory and exploitative innovation: Modelling the mediating role of absorptive capability. *European Journal of Innovation Management*, 23(4), 649–674. <https://doi.org/10.1108/EJIM-08-2018-0178>
13. Easterby-Smith, M., Lyles, M. A., & Peteraf, M. A. (2009). Dynamic capabilities: Current debates and future directions. *British Journal of Management*, 20(1), 1–8. <https://doi.org/10.1111/j.1467-8551.2008.00609.x>
14. Gemünden, H. G., Ritter, T., & Heydebreck, P. (1996). Network configuration and innovation success: An empirical analysis in German high-tech industries. *International Journal of Research in Marketing*, 13(5), 449–462. [https://doi.org/10.1016/S0167-8116\(96\)00026-2](https://doi.org/10.1016/S0167-8116(96)00026-2)
15. Gürlek, M., & Çemberci, M. (2020). Understanding the relationships among knowledge-oriented leadership, knowledge management capacity, innovation performance and organizational performance: A serial mediation analysis. *Kybernetes*, 49(11), 2819–2846. <https://doi.org/10.1108/K-09-2019-0632>
16. Helfat, C. E., Finkelstein, S., Mitchell, W., Peteraf, M. A., Singh, H., Teece, D. J., & Winter, S. G. (2007). *Dynamic Capabilities Understanding Strategic Change In Organizations*. Blackwell Publishing Ltd.
17. Liu, H., Ke, W., Wei, K. K., & Hua, Z. (2013). The impact of IT capabilities on firm performance: The mediating roles of absorptive capacity and supply chain agility. *Decision Support Systems*, 54(3), 1452–1462. <https://doi.org/10.1016/j.dss.2012.12.016>
18. Loc, V. T. (2020). Annual Economic Report Mekong Delta 2020: Enhancing Competitiveness for Sustainable Development. *VCCI and Fulbright*.
19. Migdadi, M. M., Zaid, M. K. S. A., Hujran, O. S. Al, & Aloudat, A. M. (2016). An empirical assessment of the antecedents of electronic-business implementation and the resulting organizational performance. *Internet Research*, 26(3), 661–688. <https://doi.org/10.1108/IntR-08-2014-0203>
20. Naqshbandi, M. M., & Jasimuddin, S. M. (2018). Knowledge-oriented leadership and open innovation: Role of knowledge management capability in France-based multinationals. *International Business Review*, 1–13.
21. Navarro, V. G., Badenes, R. O., Gomez, H. G., & Gomez, J. A. G. (2020). Research model for measuring the impact of customer relationship management (CRM) on performance indicators. *Economic Research-Ekonomska Istraživanja*, 1–23. <https://doi.org/10.1080/1331677X.2020.1836992>
22. Oktemgil, M., & Greenley, G. (1997). Consequences of high and low adaptive capability in UK companies. *European Journal of Marketing*, 31(7), 445–466. <https://doi.org/10.1108/03090569710176619>
23. Palandeng, I. D., Kindangen, P., Tumbel, A., & Massie, J. (2018). Influence Analysis of Supply Chain Management and Supply Chain Flexibility to Competitive Advantage and Impact on Company Performance of Fish Processing in Bitung City. *Journal of Research in Business, Economics and Management*, 10(1), 1783–1802.
24. Pongsathornwivat, A., Jeenanunta, C., Huynh, V. N., & Udomvitid, K. (2019). How collaborative routines improve dynamic innovation capability and performance in tourism industry? A path-dependent learning model. *Asia Pacific Journal of Tourism Research*, 24(4), 281–295. <https://doi.org/10.1080/10941665.2018.1564341>
25. Phuong, L. N., Tuan, K. C., Duc, N. N., & Thi, U. N. (2022). The Impact of Absorption Capability, Innovation Capability, and Branding Capability on Firm Performance—An Empirical Study on Vietnamese Retail Firms. *Sustainability (Switzerland)*, 14(11), 1–17. <https://doi.org/10.3390/su14116422>

26. Raisal, I., Tarofder, A. K., & Haleem, A. (2019). Interplay of Knowledge Creation Capability and Organizational Forgetting on Absorptive Capacity and Innovation Performance among SMEs: A Symmetrical Approaches. *Asian Journal of Economics, Business and Accounting*, 11(4), 1–12. <https://doi.org/10.9734/ajebe/2019/v11i430135>
27. Su, Z., Ahlstrom, D., Li, J., & Cheng, D. (2013). Knowledge creation capability, absorptive capacity, and product innovativeness. *R and D Management*, 43(5), 473–485. <https://doi.org/10.1111/radm.12033>
28. Turulja, L., & Bajgorić, N. (2016). Human Resources or Information Technology: What is More Important for Companies in the Digital Era? *Business Systems Research Journal*, 7(1), 35–45. <https://doi.org/10.1515/bsrj-2016-0003>
29. Xu, J., & Liu, F. (2020). The impact of intellectual capital on firm performance: A modified and extended vaic model. *Journal of Competitiveness*, 12(1), 161–176. <https://doi.org/10.7441/joc.2020.01.10>
30. Zhou, K. Z., & Li, C. B. (2010). How strategic orientations influence the building of dynamic capability in emerging economies. *Journal of Business Research*, 63(3), 224–231. <https://doi.org/10.1016/j.jbusres.2009.03.003>