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Food Processing Enterprises Performance: Roles of Dynamic Capabilities and Competitive Advantage

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Abstract

Purpose: Dynamic capabilities are acknowledged as pivotal factors facilitating the generation of competitive advantage and performance for enterprises across diverse sectors, notably within the food processing industry. This study endeavors to explore and examine the direct and indirect impact of dynamic capability factors, encompassing innovation capability, market orientation (customer orientation, supply chain orientation, competitor orientation), and digital orientation on the business performance of Vietnamese food processing enterprises. **Research design, data and methodology:** Research data was collected from 239 food processing enterprise managers and analyzed using partial least square – structural equation modeling. **Results:** With the exception of digital orientation, the study found evidence of the role of innovation capability and market orientation (customer orientation, supply chain orientation, competitor orientation) in the overall competitive advantage of Vietnamese food processing enterprises. Furthermore, the study underscores the contributions of innovation capability, market orientation and digital orientation in fostering performance of Vietnamese food processing enterprises. It also identifies the mediating role of competitive advantage in the relationship between dynamic capabilities and performance. **Conclusions:** Consequently, the study proposes a number of implications for food processing enterprise managers with the aim of establishing and enhancing competitive advantage and business performance in the future.

Keywords: Food Processing Enterprises; Market Orientation; Distribution Science; Competitive Advantage; Digital Orientation; Innovation

JEL Classification Code: M10, L66

1. Introduction

The Vietnamese government considers the food processing industry a priority for development, aiming to boost both output and export value of processed food products in the country (USAID, 2023). As an integral part of the global food processing sector, which has experienced rapid growth in recent years, and at the same time being

strongly affected by the Covid-19 pandemic and economic crisis, Vietnamese food processing enterprises are facing fundamental challenges from: (1) Changes in consumer behavior, including a shift from direct shopping to online shopping, and a growing concern for the origin and safety of food; (2) Competitive pressure and the need to increase production efficiency and reduce costs to create a competitive advantage over international companies

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(Azeem et al., 2021); (3) Implementing machinery and technology in production to enhance productivity and product quality; và (4) Disruptions in the food supply chain (Meisya & Surjasa, 2022a). This presents significant market opportunities but also places food processing enterprises under pressure to meet the demands for high-quality food products and employ modern, specialized technology. Therefore, in order to survive and develop, food processing enterprises must constantly innovate to deliver superior products that meet customer needs while also gaining a competitive edge over their rivals (Porter, 2008). In particular, with the development of the Fourth Industrial Revolution, technology is constantly evolving, which further increases the role of dynamic capabilities as enterprises need to combine new inventions with existing technology (Tece et al., 1997). Simultaneously, the global economy is rapidly evolving and continuing to transform rapidly, driven by the platform of information technology, wherein the food processing industry plays a vital and indispensable component (David, 2019). While the subject of business competitive advantage has been explored in some individual studies, there remains a lack of in-depth research, particularly in investigating the factors that contribute to competitive ability and drive business performance within the food industry. To address these research gaps, this study aims to examine the impact of dynamic capabilities, such as innovation capability, market orientation, and digital orientation, on the competitive advantage and business performance of enterprises. At the same time, it seeks to identify the indirect impact of these dynamic capability factors including market orientation, digital orientation, and innovation capability on business performance through the competitive advantage of enterprises.

This study is anticipated to make several theoretical and practical contributions: (1) it provides further evidence on the role of dynamic capabilities including market orientation and innovation capability, specifically adding the role of digital orientation to competitive advantage and business performance; (2) it examines the mediating role of competitive advantage in the relationship between dynamic capability factors and enterprise performance; (3) the study approaches market orientation as a second-order construct comprising customer orientation, competitor orientation, and supply chain (4) Building on this framework, it identifies dynamic capability factors that are specific to the food processing industry, contributing to improving the enterprises' competitive advantage and performance. The remainder of the paper is structured as follows: theoretical background and development of research hypotheses, research methodology, research results and conclusion.

2. Literature Review and Research Model

2.1. Fundamental Theory

Dynamic Capability Theory

Dynamic capability theory, developed by Teece et al. (1997) based on Barney et al. (2001)'s resource theory, defines dynamic capability as the ability to integrate, build, and reconfigure an enterprise's potential to respond to environmental changes. Aimed at creating, expanding, and modifying enterprise resources sustainably for better business performance, according to Helfat and Peteraf (2009), the dynamic capabilities framework includes: (1) using absorptive capacity to detect and pursue perceived opportunities in the internal and external environment; (2) learning to identify capabilities requiring improvement, development, and reconfiguration into new knowledge; (3) using integrated capabilities to implement necessary changes consistent with operational capabilities; and (4) coordinating the use of reconfigured capabilities and continuing to seek internal and external opportunities, as proposed by Peteraf and Maritan (2007). Dynamic capability theory confirms the abilities of businesses to grasp environmental changes, thereby carrying out capacity restructuring activities to align with environmental demands.

Market orientation

Market orientation is a customer-centric approach to business that prioritizes the creation and delivery of superior value to customers (Osuaquwu, 2019). Accordingly, market orientation represents a company's capacity to monitor and respond to challenges from the business environment, including customers, competitors, and the macro-environment (Ngo & O'Cass, 2012).

Digital orientation

Digital orientation arises from the technological advancements brought about by the Fourth Industrial Revolution như IoT, such as IoT, big data, and artificial intelligence (Wamba et al., 2017). It represents a strategic approach adopted by enterprises to gain a competitive edge by pursuing the opportunities created by the achievements of digital technologies. From there, enterprises integrate digital technologies into their business philosophies, apply new technologies to utilize resources flexibly and efficiently to establish a competitive advantage. The digital orientation of enterprises is demonstrated by the application scope of digital technology, digital capacity, and digital infrastructure (Kindermann et al., 2021).

Innovation capability

Innovation refers to the application of new ideas, behaviors, systems, policies, programs, devices, processes, products, or services to adapt to changes in the environment and enhance the economic efficiency of an enterprise (Fariborz, 1991). It serves as a tool that enables enterprises to create dynamism for their capabilities. These systematic activities occur throughout the processes of market, production, operation, organization, knowledge transfer, and technology, both within and outside the enterprise in the above invention process (Wang & Ahmed, 2007).

Competitive advantage

Competitive advantage represents the ability of a business to emerge when it implements a value creation strategy that no current or potential competitor can replicate at that time (Barney, 1991). Previous studies argue that competitive advantage is achieved through the superiority of a business's position in the market compared to its competitors, typically driven by two key characteristics: low cost and differentiation (Porter, 2008).

Business performance

Kaplan and Norton (1992) defined the business performance of an enterprise by four basic groups of components, including finance, customers, internal processes and learning development. Businesses utilize business performance management and measurement to create a consistent understanding of competitive strategy by translating it into a set of business performance metrics. According to Neely et al. (2005), business efficiency is a set of criteria used to assess the productivity and effectiveness of all aspects of enterprise operations. It demonstrates the extent to which the business achieves its organizational goals through effective resource utilization (Gavrea et al., 2011).

2.2. Model and Research Hypotheses*Market orientation, digital orientation, innovation capability and competitive advantage*

Market orientation is the process of transferring knowledge among businesses, encompassing information exchange between businesses and competitors, businesses and customers, and businesses and suppliers, with the aim of new product development or creative advancement. Ultimately, market orientation is an activity carried out by companies in creating superior customer value (Bamfo & Kraa, 2019). Therefore, market-oriented businesses focus on transferring knowledge between the organization and its stakeholders, including customers, competitors (Meisya & Surjasa, 2022), and the supply chain (Gligor et al., 2020).

Market-oriented businesses tend to use market information to identify market gaps and then adjust their resources to optimize customer and stakeholder value (Lee et al., 2015). Customer insights drive product and service innovation, enabling businesses to cultivate strong relationships with customers and foster new ideas and perspectives in new product and service development, thereby creating a competitive advantage (Rakthin et al., 2016). Furthermore, supply chain orientation enables businesses to establish a unified, coordinated, and proactive response mechanism to innovate and adapt in order to meet customer needs (Rosell & Lakemond, 2012). Supply chain orientation refers to the extent to which a business focuses on the activities and flows within the supply chain, facilitating information exchange and synchronization among businesses in the chain (Gligor et al., 2020). Lastly, competitive pressure from industry peers compels businesses to continually benchmark against their competitors, leading to innovation through product development, process innovation, or marketing activities aimed at achieving superiority over competitors (Lukas & Ferrell, 2000). On the other hand, competitor orientation allows businesses to gather market information and identify areas where capabilities need improvement, thereby shapes their competitive advantage (Ramirez et al., 2014).

Innovation involves significant improvements in products, services, processes, marketing, and organization to demonstrate innovation in business practice (OECD & Eurostat, 2018). Innovation allows businesses to introduce new or enhances products ahead of competitors and thus increases market share. Some organizations have achieved success and growth through innovation, thereby generating a competitive advantage (Goksoy et al., 2013). Innovation serves as a strategic tool for companies to establish a competitive edge, by pioneering unique offerings, outperforming competitors, or introducing premium, cost-effective, and expedited services (Aziz & Samad, 2016). This strategic approach facilitates the organization to create long-term competition through the acquisition of knowledge, technological skills, experience in creativity and development, enabling the new ideas via product innovation, process innovation, or business model innovation. Innovation is one of the determinants of a company to survive because innovation will make the company different from its competitors (Porter, 2008).

In the era of the Fourth Industrial Revolution, the digital transformation of business production processes is becoming important (Park & Kim, 2021) Implementing digital transformation helps businesses in minimizing organizational and management procedures, fostering flexibility, cost-effectiveness, efficiency, high-quality outcomes, and competitiveness (Ardito et al., 2021). It serves as a tool to simultaneously mitigate innovation

challenges and foster product and service differentiation, forming a competitive advantage for businesses (Zhong et al., 2020). Digital transformation is a dynamic capability that combines with innovation to enhance overall performance and forms a competitive advantage for businesses (Konopik et al., 2022). From there, the following hypotheses are formed:

- H1a:** Innovation capability has a positive impact on the competitive advantage of Vietnamese food processing enterprises
- H2a:** Market orientation has a positive impact on the competitive advantage of Vietnamese food processing enterprises
- H3a:** Digital orientation has a positive impact on the competitive advantage of Vietnamese food processing enterprises

Market orientation, digital orientation, innovation capability, and business performance

Market orientation is the dynamic capability of the enterprise to encompass all the elements (Teece et al., 1997) referred to as "sensing", "capturing", and "reconfiguring" (Sett, 2017). Market orientation plays a crucial role in delivering superior value to customers through a customer-centric approach (Osugwu, 2019), while also monitoring, analyzing and responding to challenges in the dynamic business landscape by aligning internal and external resources with established goals. Market orientation encompasses activities and coordination among functional departments to meet customer needs, respond to competitive actions, and also monitor and react to competitive moves (Tse et al., 2004). Therefore, it encourages businesses to capture market share and enhance their competitiveness (Schweiger et al., 2019). Tajeddini (2010) investigated the influence of market orientation on innovation and performance, and their findings show that customer orientation has a positive impact on the performance and innovation of businesses.

Innovation capability plays a critical role in fostering a superior competitive advantage for businesses (Cho & Pucik, 2005), while also serving as a cornerstone in establishing a robust and sustainable business model (Hofmann et al., 2012). It represents the capacity for continual innovation, enabling the restructuring and revitalization of resources, transforming them into core assets to address challenges arising from shifts in the business landscape (Wang & Ahmed, 2007). Innovation plays an important role in business operations. Salisu and Goni (2019) observed that innovation capability positively influences both product innovation and firm performance.

Digital orientation is confirmed as a resource constituting a dynamic capability that enterprises must cultivate to align with the VRIN criteria, helping to adjust

and use the internal and external resources of the enterprise with the environment to achieve good business results (Kindermann et al., 2021). Through the application of the new technology adoption acceptance model, it demonstrates a positive influence on the market performance of enterprises, specifically including increasing sales transactions, increasing sales volume, amplifying sales inquiries, and enhancing customer loyalty (Selase et al., 2019). Implementing digital transformation streamlines organizational procedures, offering flexibility, cost-effectiveness, efficiency, quality, and competitive advantage. However, research on the relationship between digital orientation and business performance of enterprises is still in its early stages. Therefore, the following research hypothesis is proposed:

- H1b:** Innovation capability has a positive impact on the business performance of Vietnamese food processing enterprises
- H2b:** Market orientation has a positive impact on the business performance of Vietnamese food processing enterprises
- H3b:** Digital orientation has a positive impact on the business performance of Vietnamese food processing enterprises

The mediating role of competitive advantage

In terms of creating a competitive advantage, dynamic capability acts as a "mediator" (Lin & Wu, 2014) facilitating the transformation of resources (as a precursor) through the process of business configuration/adjustment to form sustainable competitive advantage, consequently creating superior long-term business outcomes (Wu, 2007). Therefore, competitive advantage is explored and studied under the role of a mediating variable in the process through which dynamic resources influence the business performance of the enterprise (Su et al., 2017), expressed through three capabilities: cost leadership, differentiation, and innovation capability differentiation (Porter, 1989). In addition, digital orientation, market orientation, and innovation capability represent dynamic resources for enterprises and contribute to building superior competitive advantages (David, 2019). Building upon this premise, along with insights from research on the mediating mechanism of dynamic capability theory, the study proposes that dynamic capabilities (digital orientation, market orientation, and innovation capability) have an indirect impact on enterprise performance through competitive advantage (Anwar & Li, 2021). On the other hand, competitive advantage plays an important role in guiding and creating ways to achieve business performance in enterprises (Latifah et al., 2020). Competitive advantage enables enterprises to enhance the competitive position of their products and services within the industry, while also

facilitating continuous innovation, thus creating opportunities for market penetration and ultimately enhancing business performance. Based on this premise, the research hypotheses are formulated:

- H4a,b,c:** Competitive advantage plays a positive mediating role in the relationship between market orientation, digital orientation, innovation capability, and the business performance of Vietnamese food processing enterprises.
- H5:** Competitive advantage positively influences the business outcomes of Vietnamese food processing enterprises.

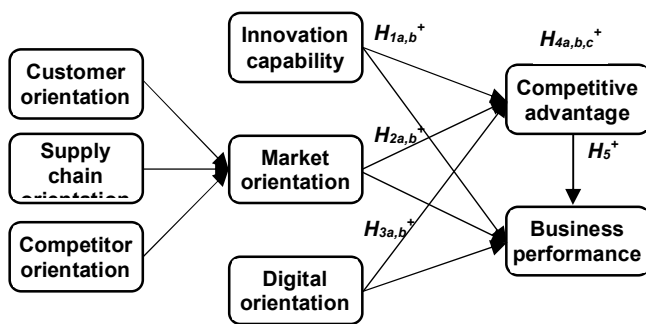


Figure 1: Research Model

3. Research Methodology

Measures

Based on theoretical synthesis and previous studies' components and scales, the research model on the impact of dynamic capability factors, including market orientation, digital orientation, and innovation capability, on competitive advantage and business performance of enterprises is developed, along with the proposed scales. The research model includes 7 first-order scales and 1 second-order scale with a total of 35 observed variables inherited. Through in-depth interviews with 8 experts and managers of food processing enterprises, the scales were adjusted to ensure their suitability for the specific characteristics of the food processing industry. The concept of market orientation is a second-order variable with 3 components and 15 observed variables inherited from the study of Alsadi and Aloulou (2021), Patel et al. (2013), Meisya and Surjasa (2022b), and Narver and Slater (1990), the concept of digital orientation includes 5 observed variables that were modified from the study of Yu et al. (2023), the concept of innovation capability inherited in the study of Ngo and O’Cass (2012), the inherited competitive advantage scale of Su et al. (2017) and business performance includes 3 observed variables modified from the study of Laihonen et al. (2014).

Research samples

The research subjects of this study are enterprises in the food processing industry in Vietnam. The survey sample comprises 239 enterprises in the industry, encompassing both manufacturing enterprises and enterprises engaged in trading processed food items. A questionnaire was designed with two main parts: (1) General information of the respondents and (2) Questions regarding the variables in the study were posed using a 7-point Likert scale to assess participants' feedback. The questionnaire was sent to business representatives primarily through two methods: direct and email. The survey sample structure includes: 14,644% of businesses operating for less than 3 years, 38,91% of businesses established for 3-5 years, 32,22% operating for 5-10 years and the remaining 14,23% of businesses established for over 10 years; Regarding scale, 87,03% of the sample businesses are small and medium-sized and 12,97% are large-scale enterprises; Male respondents account for 76,15% while female respondents constitute only 23,84%; Directors account for 37,66% of respondents; deputy directors 36,4%; department heads 17,15% and the remaining 8,79% hold other positions (deputy department heads, section heads); Respondents with less than 1 year of work experience at the enterprise make up 6,69%, those with 1-3 years account for 30,54% and the majority have been working for over 3 years, constituting 62,76%.

Analysis methods

To test the research hypotheses, we used the partial least squares (PLS) structural equation model on SmartPLS 4.0 software using the two-step approach of (Anderson et al., 1988): (1) measurement model assessment and (2) structural model assessment. The selection of PLS-SEM over CB-SEM is attributable to the following considerations: (i) Due to the complexity of the proposed model in the study, including first-order, second-order, and mediating variables; (ii) PLS-SEM is an appropriate model for both exploratory and confirmatory research, as exemplified in this study, and (iii) a tool that allows for the exploration and evaluation of specific paths within a research model (Ringle et al., 2012). This study used a data analysis method that employed a two-step approach proposed by Anderson et al. (1988): (1) The first step involves analyzing the measurement model, while the second step tests the structural relationships between the latent constructs. The objective of this approach is to evaluate the reliability and validity of the observed variables, as well as the measurement scales, prior to their incorporation into the complete model; and (2) Analysis of the relationships among the factors in the proposed research model. To accomplish this goal, employed the structural equation modeling method based on the PLS-SEM technique to assess the reliability and validity of the measurement scales.

4. Research Results

4.1. Measurement Model Analysis

For the first-order variable, the results indicate that the convergent validity of DIO and COA has not been achieved as $AVE < 0.5$. Therefore, it is necessary to consider removing the observed variables that do not meet the

requirements, namely DIO_1 and COA_3 . After removing DIO_1 and COA_3 , the reliability, convergent validity, and discriminant validity of the scales all meet the criteria. The reliability of the first-order variable scale is assessed based on the external loading factor shown in Table 2, revealing a value of 0,858, which is higher than the recommended level of 0.7 of Hair et al. (2019) and Hulland (1999). The results indicate that all scales are reliable.

Table 1: The Results of Assessing Composite Reliability, Outer Loading Coefficients and AVE

Source	Scale	Outer loading coefficients	Cronbach's alpha	CR	AVE
Customer orientation (CUO) (Alsadi & Aloulou, 2021)	CUO ₁ . We have a strong commitment to our customers	0.881	0.949	0.950	0.832
	CUO ₂ . Customer satisfaction is the objective of our company's operations	0.923			
	CUO ₃ . We regularly conduct customer satisfaction assessments	0.926			
	CUO ₄ . We always strive to ensure customer satisfaction	0.912			
	CUO ₅ . After-sales service is an important part of our business strategy	0.918			
Supply chain orientation (SUO) (Patel et al., 2013)	SUO ₁ . Our company is concerned about relationships with members in the supply chain	0.894	0.933	0.933	0.789
	SUO ₂ . Our company acknowledges the importance of supply chain management activities	0.889			
	SUO ₃ . Our company is concerned about integrating between members in the supply chain	0.891			
	SUO ₄ . We actively seek to understand and update information about members in the supply chain	0.907			
	SUO ₅ . Our company always focuses on the overall operations of the supply chain rather than individual members	0.858			
Competitor orientation (COO) (Meisya & Surjasa, 2022b; Narver & Slater, 1990)	COO ₁ . We regularly monitor marketing programs of our competitors	0.88	0.935	0.936	0.794
	COO ₂ . We frequently gather information about our competitors	0.893			
	COO ₃ . Our company responds promptly to actions by competitors	0.874			
	COO ₄ . We regularly collect information about the strengths and strategies of our competitors	0.919			
	COO ₅ . We often discuss competitors' actions	0.889			
Innovation (INN) (Ngo & O'Cass, 2012)	INN ₁ . Our company frequently introduces new products to the market	0.876	0.932	0.932	0.787
	INN ₂ . Our company frequently innovates production processes	0.906			
	INN ₃ . Our company frequently implements management innovations	0.894			
	INN ₄ . Our company frequently innovates distribution system	0.895			
	INN ₅ . Our company frequently innovates pricing method	0.863			
Digital orientation (DIO) (Yu et al., 2023)	DIO ₂ . Our company aims to digitally transform all business operations	0.89	0.943	0.945	0.814
	DIO ₃ . Our company has a digital transformation plan	0.909			
	DIO ₄ . Our company is ready to allocate resources for digitization	0.901			
	DIO ₅ . We are driving processes through technologies such as big data, AI...	0.907			
	DIO ₆ . We are transitioning to using digital technologies in our business operations such as big data, cloud computing, AI...	0.905			
Competitive advantage (COA) (Su et al., 2017)	COA ₁ . The enterprise's product provides superior benefits to customers compared to competitors.	0.91	0.912	0.913	0.851
	COA ₂ . The product offered by the enterprise is unique in the market	0.927			
	COA ₄ . The company has built a strong and difficult-to-replicate brand	0.931			
Performance (PER) (Laihonen et al., 2014)	PER ₁ . Our company has higher sales volume compared to the main competitors	0.888	0.896	0.902	0.827
	PER ₂ . Our company has a higher market share compared to the main competitors	0.931			
	PER ₃ . Our company has higher profits compared to competitors	0.909			

Source: Data analysis results

The composite reliability of the constructs in the model ranges from 0.869 to 0.949, all exceeding the threshold of 0.7 recommended by Hair et al. (2019). This result shows that the consistency of the scale reaches reliability. The AVE value reflects the convergence of the scales, all of which are greater than 0.6 (ranging from 0.787 to 0.851), which are all higher than the recommended value of 0.5 by Fornell and Larcker (1981). This confirms that the scale meets the convergence criterion. Discriminant validity: The HTMT coefficient was proposed by Hair et al. (2019) to test the discriminant validity of the scales for first-order variables. The results show that the correlation values of the first-order variables are all less than 0.847, which is lower than the threshold of 0.90 (Henseler et al., 2015). Therefore, all first-order scales in the model ensure discriminant validity.

After assessing the fit of the first-order measurement model, ensuring internal consistency reliability, convergent validity, and discriminant validity, the evaluation proceeded to the second-order measurement model. Analysis results indicated that the second-order variable MAO demonstrated consistency, convergent validity, and discriminant validity. Furthermore, VIF values for all service quality measures fell within the range of 2.598 to 3.841, all below the threshold

of 5, ensuring the absence of multicollinearity (Henseler et al., 2015).

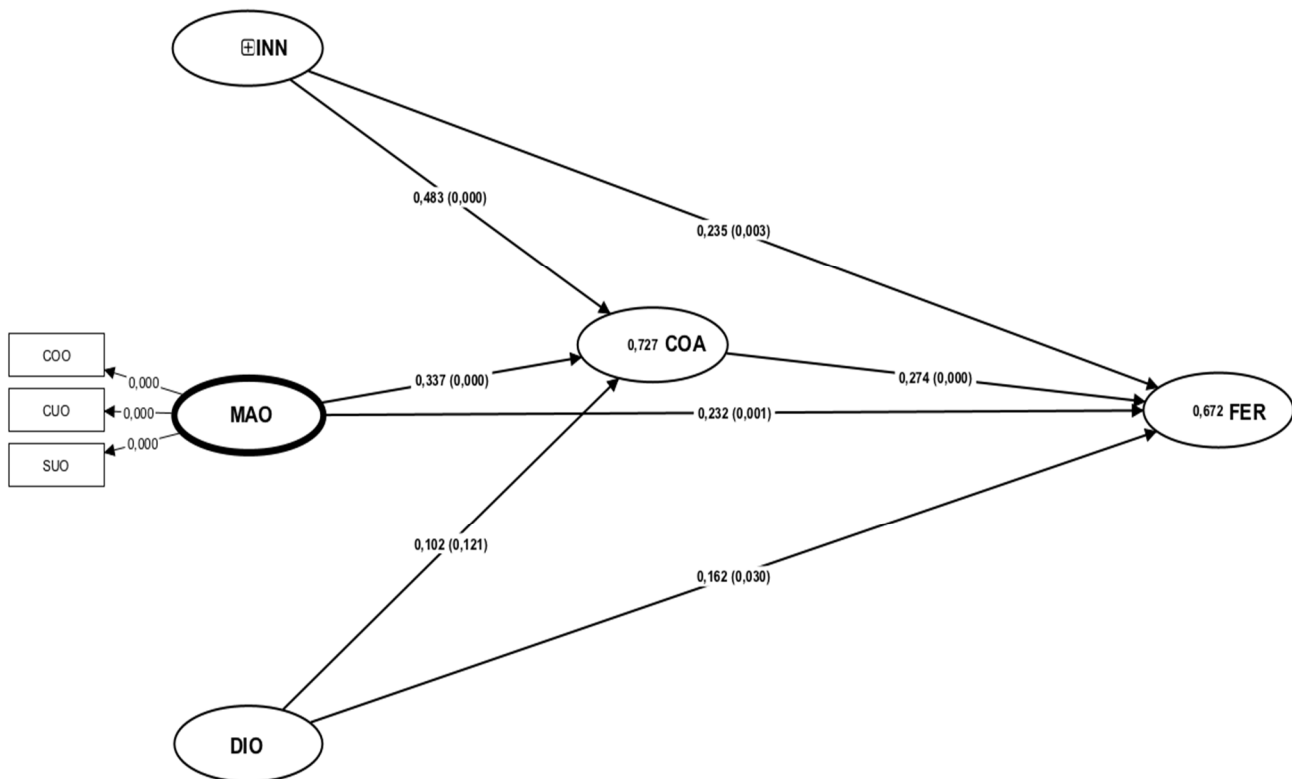
Table 2: Results of the discriminant validity assessment of the second-order variable

	COA	DIO	FER	INN	MAO
COA					
DIO	0.782				
FER	0.841	0.779			
INN	0.88	0.78	0.82		
MAO	0.881	0.894	0.856	0.839	

(MAO: Market orientation; INN: Innovation; DIO: Digital orientation; COA: Competitive advantage; FER: Performance)

4.2. Structural Model

The analysis results showed that the adjusted R₂ coefficient predicted the effect of the independent variable on the dependent variables COA and FER with values of 0,727 and 0,672, respectively, indicating a good explanatory ability of the variables in the model. The values of Q_{2COA}=0,722 and Q_{2PER}=0,645 indicate a high level of prediction of the dependent variables in the research model.



(MAO: Market orientation; INN: Innovation; DIO: Digital orientation; COA: Competitive advantage; FER: Performance)

Figure 2: Structural model

The results of the direct impact hypothesis test (Table 3) show that hypotheses H_{1a}, H_{2a} on the positive impact of innovation capability and market orientation on the competitive advantage of food processing enterprises are accepted ($\beta_{INN} = 0.483$, $p_{INN} = 0.000$; $\beta_{MAO} = 0.337$, $p_{MAO} = 0.000$). Meanwhile, hypothesis H_{3a} on the impact of digital orientation on the competitive advantage of food processing enterprises is not accepted ($\beta_{DIO} = 0.102$, $p_{DIO} = 0.121$). Next, hypotheses H_{1b}, H_{2b}, H_{3b} are supported ($\beta_{INN} = 0.235$, $p_{INN} = 0.003$; $\beta_{MAO} = 0.232$, $p_{MAO} = 0.001$, $\beta_{DIO} = 0.162$, $p_{DIO} = 0.03$), showing the role of dynamic capability on the business performance of food processing enterprises. Hypotheses H_{4a}, H_{4b}, H_{4c} on the mediating role of competitive advantage in the relationship among competitive capability, market orientation, and digital orientation are accepted at the 5% ($\beta_{INN-PER} = 0.367$, $p_{INN-PER} = 0.000$; $\beta_{MAO-PER} = 0.324$, $p_{MAO-PER} = 0.000$, $\beta_{DIO-PER} = 0.19$, $p_{DIO-PER} = 0.016$).

Table 3: Hypothesis Testing Results

Direct	β	t	p	Results
H _{1a} . INN -> COA	0.483	7.936	0	Accepted
H _{2a} . MAO -> COA	0.337	4.566	0	Accepted
H _{3a} . DIO -> COA	0.102	1.549	0.121	Rejected
H _{1b} . INN -> FER	0.235	2.978	0.003	Accepted
H _{2b} . MAO -> FER	0.232	3.194	0.001	Accepted
H _{3b} . DIO -> FER	0.162	2.173	0.03	
Mediating	β	t	p	Results
INN -> FER	0.235	2.978	0.003	
INN -> COA -> FER	0.132	3.512	0	
H _{4a} . INN -> FER	0.367	5.156	0	Accepted
MAO -> FER	0.232	3.194	0.001	
MAO -> COA -> FER	0.092	2.687	0.007	
H _{4b} . MAO -> FER	0.324	4.7	0	Accepted
DIO -> FER	0.162	2.173	0.03	
DIO -> COA -> FER	0.028	1.41	0.159	
H _{4c} . DIO -> FER	0.19	2.415	0.016	Accepted

(MAO: Market orientation; INN: Innovation; DIO: Digital orientation; COA: Competitive advantage; PER: Performance)

5. Discussion

The study was conducted in the context of the Vietnamese food processing industry. The research results show the role of innovation capability, market orientation, and digital orientation factors on the competitive advantage and business performance of enterprises. This is consistent with the results of the studies by Galati et al. (2016) and Meisya and Surjasa (2022b) which suggest that market orientation is directly or indirectly related to the needs of

customers, competitors, and suppliers. Enterprises need to innovate based on the acquisition and exploitation of knowledge from external sources such as customers, competitors, the supply chain, among others, and combine it with the company's internal knowledge (Jiménez-Jimenez et al., 2008) to create new products and services that are in line with market changes. This will help enterprises create a competitive advantage over their competitors and achieve their business performance goals. In particular, the study confirms that customer orientation plays the most important role, through continuous research and evaluation of consumer trends, allowing enterprises to innovate products and services to meet customer needs (Alsadi & Aloulou, 2021).

This study found evidence of a positive impact of innovation on the competitive advantage and business performance of food processing enterprises. This conclusion supports the views of Bayona-Saez et al. (2017) and Bigliardi et al. (2020) and simultaneously emphasizes the application of innovation models that lead to significant changes in the business model of the enterprise. Specifically, it reduces costs, mitigates risks, shortens time to market, and expands the range of products offered to the market, while also tracking technological changes. As a result, it enhances the competitive advantage of the enterprise (Galati et al., 2016). In particular, the innovation of food processing enterprises is shaped by an outward orientation, towards adapting to market and stakeholder needs. Innovation based on ideas that meet customer needs, respond to competitors, or achieve balance and alignment within the supply chain allows businesses to enhance their business performance.

However, the notion of a direct impact of digital orientation on competitive advantage is dismissed. This contrasts with the findings of the study conducted by (Shehadeh et al., 2023), which concluded that digital orientation does not contribute to creating a competitive advantage. This is attributed to the fact that digital orientation incurs costs, requiring food processing enterprises to invest capital in this activity when they undergo digital transformation. Specifically, Vietnamese food processing enterprises, typically perceived as possessing a modest level of technological advancement, necessitate innovation, primarily centered on cost optimization, while disproportionately neglecting customer demands. In the short term, this does not yield a positive effect on the competitive advantage of enterprises, particularly those focusing on cost-based competitive advantages. However, in the long term, digital orientation does play a role in predicting the business performance of enterprises. This is because digital orientation is a strategic initiative through which enterprises implement advanced technological solutions (such as IoT, AI, big data,...) in

production, integrate/exchange information within internal systems, conduct research and development for new products, and explore emerging customer needs, aiming to exploit and cater to evolving markets and tastes (Yu et al., 2023). This significantly contributes to enhancing the future business performance of food processing enterprises.

The analysis results indicate that competitive advantage plays a partial mediating role between dynamic capability and the business performance of food processing enterprises. Competitive advantage is gauged by the enterprise's ability to differentiate and achieve low costs through innovation. Innovation capability, market orientation, and digital orientation, when combined, are implemented collectively to transform and generate creative and differentiated values or cost-optimized values. Upon completion, these values create a competitive edge that is challenging for competitors to imitate or achieve. Consequently, the enterprise attains its business objectives in terms of revenue, profit, and market share. The empirical study by Khan et al. (2019) on the mediating role of sustainable competitive advantage in driving superior business performance, derived from the enterprise's resources (both tangible and intangible), further reinforces the findings of this study.

6. Conclusion and Limitation

In terms of theory, the study contributes to enriching the theoretical basis of competitive advantage and the business performance of enterprises based on dynamic capability. It emphasizes the roles of innovation capability, market orientation, and digital orientation as dynamic capabilities that can enhance the relationship between innovation (ordinary capability) and the competitive advantage of the enterprise. Successful digital transformation is expected to serve as a tool for enterprises to achieve improved business performance.

In terms of practice, the conclusions of this study offer practical implications for managers of food processing enterprises in Vietnam in organizing activities to achieve optimal performance and improve customer satisfaction through: First, within an industry experiencing significant changes in the food production and consumption chain, coupled with a slow pace of innovation, enterprises must intensify innovation activities to meet and exceed customer needs while reducing production costs. Innovation activities should be designed in an "open" manner, focusing on incorporating changes from customers, the supply chain, and competitors to form an adaptive mechanism. Second, to adopt a market-oriented approach, managers need to conduct regular market research to understand changes in customer habits, needs, substitute products, and evaluations of current products. They should also monitor changes in

new materials, traceability of raw materials, and cultivation technologies for raw materials from suppliers, as well as information on competitors' production capacity, prices, and promotional programs. This information will assist businesses in designing innovations in their products, processes, organization, and marketing activities. Third, in the digital age, managers of food processing enterprises need to enhance digital orientation to improve the effectiveness of market-oriented activities, innovation, and competitive advantage. Specifically, this involves conducting market research using online tools and applying big data technologies for data collection and analysis. Food processing enterprises can leverage data collection and analysis technologies to identify consumer trends and needs, thereby identifying product ideas, building product development strategies, facilitating sales, and planning production. Additionally, there should be collaboration and information sharing with suppliers and members of the enterprise's supply chain. Finally, managers of food processing enterprises can promote innovation activities based on market orientation, innovation, and digital transformation to gain a competitive advantage over competitors.

The first limitation of this study is the small sample size and selection method, which may impact the significance of the findings. Additionally, there are numerous factors influencing the competitive advantage of enterprises; however, this study only focuses on the roles of innovation, market orientation, and digital orientation without addressing other potential factors. Finally, the study solely examines competitive advantage and overlooks the aspect of sustainable competitive advantage within the enterprise. Consequently, future research is warranted to address these gaps in this study.

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