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### Building a Model to Study the Impact of Social Capital on Product Innovation at Food Firms

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#### Abstract

Products produced and processed by food firms still have certain shortcomings, are not competitive enough, are not really attractive enough even for the domestic market, and are even more difficult to access when accessing foreign markets. Food firms have been conducting research and inventions according to market needs to create new products, which requires food firms to spend more resources on a product innovation process. Organic and natural product lines and new raw material sources, especially materials from sustainable agriculture, are focused on being exploited by F&B firms in VIE10. Firms have widely deployed the application of new technology and modern management systems to improve production processes, operations, and customer service. In addition, the

application of artificial intelligence (AI) and machine learning has helped firms learn consumer preferences and trends, thereby creating suitable products and services. This study developed a theoretical model based on the theory of social capital, where the independent variable is social capital and the dependent variable is product innovation. This paper presents the theoretical model through a review of existing literature and related studies and provides a more specific direction for the ensuing empirical analysis. Researching the influence of social capital on the product innovation of food firms has many practical implications and contributes to perfecting the theoretical framework for product innovation in Vietnam today.

**Keywords:** Social Capital, Product Innovation, Food Firms, Economics, Social Work

**JEL codes:** M10, A14, M10, O15

#### 1. Introduction

Social capital plays an important role in the development of many firms, such as helping to minimize risks, maintain existing economic strength, and affect business performance (Casey, 2022) <sup>[5]</sup>; improve material benefits, increase output and profits, and bring long-term benefits, contributing to the development of human capital; social capital affects business opportunities and success (Davis *et al.*, 2013) <sup>[9]</sup>; social capital affects innovation in firms (Jiménez *et al.*, 2016) <sup>[11]</sup>; and social capital also affects entrepreneurship (Chen *et al.*, 2007) <sup>[6]</sup>, so it helps firms overcome difficulties and maintain effective, stable, and sustainable operations. Social capital helps firms operate harmoniously and smoothly by strengthening standards, simplifying cooperation, and providing a template for cooperation (Kurt, 2000) <sup>[12]</sup>, thereby bringing solutions to firms' difficult situations (Putnam, 2000) <sup>[18]</sup>, and social capital also helps firms improve their adaptability (Aldrich & Meyer, 2015) <sup>[2]</sup>.

Products produced and processed by food firms still have certain shortcomings, are not competitive enough, are not really attractive enough even for the domestic market, and are even more difficult to access when accessing foreign markets. Food firms have been conducting research and inventions according to market needs to create new products, which requires food firms to spend more resources on a product innovation process. Therefore, food firms need to identify the factors that influence new innovation in order to use resources more effectively, launch more successful new products, and increase competitiveness in the market. One of those factors is social capital.

Researching the influence of social capital on the product innovation of food firms has many practical implications and contributes to perfecting the theoretical framework for product innovation in Vietnam today.

## 2. Literature Review

### 2.1 Social Capital Theory by Bourdieu (1986) <sup>[4]</sup>

Bourdieu (1986) <sup>[4]</sup> distinguishes three types of capital, including economic capital, cultural capital, and social capital. The author believes that the concept of economic capital in current economics is too narrow, only seen as something that can be immediately converted into money or institutionalized into ownership rights. Regarding cultural capital, Bourdieu understands it as an achieved social position (regardless of high or low rank). He believes that people with "cultural capital" are people who come from a relatively high "cultural class" in society, not necessarily people with a lot of education.

Social capital is the aggregate of actual or potential resources associated with possessing a durable network of relationships, more or less institutionalized through mutual acquaintance and recognition. In other words, membership in a group provides each of its members with the backing of a collectively owned element of capital, a credit "mandate." Thus, social capital, in Bourdieu's (1986) <sup>[4]</sup> ideology, is all the resources (actual or potential) that come from direct or indirect networks of acquaintances (such as members of the same religion, the same place of birth, or the same school). In most cases, this network has been around for a long time and is somewhat institutionalized. Thanks to it, individuals, families, or groups that have many connections will have more advantages. In other words, this network has a use value; it is a type of "capital".

Bourdieu (1986) <sup>[4]</sup> asserted that society is an arena for competition for status. The winner is the one with abundant economic capital, social capital, and cultural capital. According to the author, many people cannot get ahead because of a lack of social capital. Thus, Bourdieu means that social capital is not positive for everyone; the value of each person's social capital depends on the degree of difference between their own capital and that of others.

### 2.2 Product Innovation

According to the OECD (2005) <sup>[17]</sup> classification, organizational innovation is divided into 4 types as follows: (i) product innovation; (ii) operational process innovation; (iii) management system innovation; and (iv) innovation in marketing activities.

Several studies have asserted that social capital facilitates knowledge development, which, in turn, provides the foundation for generating corporate innovation and competitive advantage (Sanchez-Famoso *et al.*, 2017 <sup>[19]</sup>). Additionally, social capital facilitates innovation by promoting cooperation and coordination among members inside and outside the firm (Adler & Kwon, 2002 <sup>[1]</sup>; Dai *et al.*, 2015 <sup>[8]</sup>). Furthermore, empirical research by Cuevas-Rodríguez *et al.* (2014) <sup>[7]</sup> also shows that internal social capital has a stronger impact on product innovation than external social capital when studying 142 firms in the mechanical industry, manufacturing, and information technology software services in Spain.

### 2.3 Internal Social Capital and Product Innovation

Internal social capital fosters strong internal bonds (Tsai, 2000) <sup>[20]</sup> that facilitate cooperation between employees and different departments within the enterprise (Adler & Kwon, 2002) <sup>[1]</sup>.

Internal social capital helps create a friendly work environment through trust and mutual understanding among employees (Yang *et al.*, 2011) <sup>[24]</sup>.

The mutual understanding and trust of employees allows knowledge or information to be regularly exchanged through informal conversations, leading to improved product innovation efficiency (Cuevas-Rodríguez, 2014) <sup>[7]</sup>. Through internal social capital, employees and units cooperate and coordinate closely, sharing knowledge and information about many areas of enterprise operations in general, especially product innovation or research to introduce new products to the market (Dai *et al.*, 2015) <sup>[8]</sup>.

### 2.4 External Social Capital and Product Innovation

If a firm has broad, sustainable relationships with customers, business partners, and stakeholders, it will have a positive effect on business performance. Thanks to this relationship, firms can mobilize each other's resources, reduce transaction costs, open up many business cooperation opportunities, and share knowledge and information smoothly (Yang *et al.*, 2011) <sup>[24]</sup>.

The more cohesive the quality of external relationships, manifested in trust, mutual help, and support, will facilitate a better outcome because both parties are committed to sharing a significant amount of their resources (Laursen *et al.*, 2012) <sup>[13]</sup>.

Social capital theory posits that a firm's external networks allow it to gain resources from the environment in search of new opportunities (Cuevas-Rodríguez *et al.*, 2014) <sup>[7]</sup>.

Through relationships with buyers, suppliers, strategic partners, joint ventures, and stakeholders, they are able to exchange a variety of complementary information and knowledge to create new products with low costs, overcoming risks related to product innovation (Cuevas-Rodríguez *et al.*, 2014) <sup>[7]</sup>.

External social capital reflects the relationships between firms and individuals representing externally related organizations (Dai *et al.*, 2015) <sup>[8]</sup>.

External social capital strongly influences enterprise product innovation, meaning when people in the enterprise always keep their promises, maintain relationships (Nguyen and Huynh, 2012) <sup>[16]</sup>, introduce new business opportunities, and avoid harm to each other (Dai *et al.*, 2015) <sup>[7]</sup>, it will promote firms to quickly receive information and knowledge from the market, thereby promoting product innovation and thereby contributing to business performance.

Research by Appold and Nguyen (2004) <sup>[3]</sup> on start-up loans for small and medium-sized enterprises also mentioned the impact and influence of social capital.

Tran (2006) <sup>[22]</sup> believes that social capital is a characteristic implementation of the connections between people in a community or society.

Tran (2006a) <sup>[21]</sup> points out the relationship between social capital and economic development, social capital and economic policy. By reviewing existing arguments, the author emphasizes that social capital helps save transaction fees and increase investment levels.

Le (2008) <sup>[14]</sup> says that social capital plays an important role in economic transactions and warns that it can be counter-functional or high-risk because firms often rely mainly on social capital from social networks.

### 3. Research Methods

This study uses a qualitative research method. The literature search included works published from 1986 to the present.

A total of 22 sources were reviewed, abstracted, and analyzed to facilitate this review. The studies that were reviewed were chosen using the following criteria: (i) Those addressing the resources that can help us learn more about social capital and product innovation. (ii) Research focusing on the importance of social capital and product innovation. We also conducted interviews with leading experts in social capital and product innovation. They are business managers of food firms and senior lecturers with practical experience working for leading universities in Vietnam.

This study developed a theoretical model based on the theory of social capital, where the independent variable is social capital and the dependent variable is product innovation. This paper presents the theoretical model through a review of existing literature and related studies and provides a more specific direction for the ensuing empirical analysis.

### 4. Proposed a Research Model

Inheriting the conclusions of previous studies and based on the opinions of interviewed experts, we propose a research model (see Fig 1).

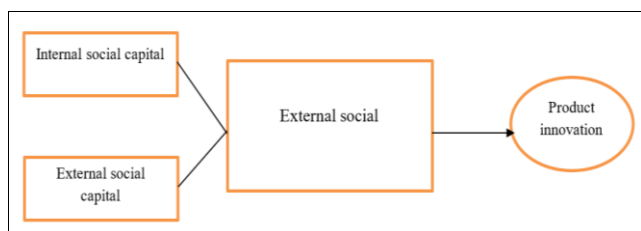


Fig 1: Research model

### 5. Discussion and implications

Currently, the business lines of food firms include (see table 1).

Table 1: Business lines of food firms

S. No	Description
1	Food processing industry: milling, instant food, cakes, vermicelli
2	Seafood processing industry
3	Meat and milk processing industry and meat and milk products
4	Sugar, cocoa, chocolate, and confectionery processing industries
5	Canned vegetables and fruits
6	Cooking oil, sauces, and spice processing industry
7	Other industries, as prescribed by law

When a food firm builds trust with customers and business partners, it will receive many comments on product designs, styles, patterns, and materials to help the firm. Improved food and product innovation to perfect the firm's product strategy. In addition, experts also believe that external social capital helps firms have many ideas for product innovation, especially in the food industry.

Food firms that focus on creating close coordination mechanisms between units or departments to solve tasks will promote increased product innovation.

In the food sector, firms need to quickly detect changes in the business environment, regularly survey customer opinions, and quickly discover new trends in healthy and unique foods. In particular, it is necessary to conduct a lot of internal research on new products (Hult *et al.*, 2007) [10]. This is the key to helping firms quickly find solutions for product improvement and innovation.

Vietnam's food consumption market is growing rapidly and contributes about 15% of GDP value. Processed food consumption in Vietnam increases by an average of nearly 10% per year, and Vietnam's food processing industry has strong growth. Stable growth at nearly 7% per year in the last 5 years (Xuan Anh, 2017) [23].

According to Statista, in 2021, the food and beverage (F&B) manufacturing industry will contribute 17 billion USD to Vietnam's GDP and create 3 million jobs. Meanwhile, the food service industry is expected to achieve a compound annual growth rate (CAGR) of 8.5% from 2022 to 2027, with the trend of eating out increasing. It is estimated that Vietnamese people spend from 20 to 48% of household income on food and beverages (Ngoc Van, 2023) [15].

It is a middle-income country with a high growth rate in the world and large purchasing power, with a population of about 99.8 million people, of which about 55% are under 30 years old and have the habit of shopping for processed foods. Increasingly popular, Vietnam has been attracting foreign investors to invest 100% capital in Vietnam or to buy, sell, and merge large Vietnamese enterprises. Therefore, Vietnamese food processing enterprises must compete increasingly fiercely in the domestic market during the process of international integration. Competition helps customers have more choices; on the other hand, customer food needs also change faster thanks to quick access to information in the internet age.

To better meet customer needs and survive in a fiercely competitive market, Vietnamese food processing enterprises need to innovate products and improve business performance.

Innovation is crucial for food and beverage firms to stay ahead in a rapidly growing market with growing demand for nutritious, healthy, and sustainable products.

During the product innovation process, smaller firms need expertise and need to invest more in production equipment, while established firms do not want product innovation to disrupt production, and they also lack the facilities to carry out product innovations on a small scale.

In Vietnam, in recent years, the food and beverage (F&B) industry has achieved high growth rates. Vietnam's economic development, population growth, and changes in people's consumption habits have boosted consumer demand. Vietnam's F&B industry is characterized by the diversity of products, from processed foods and beverages to fresh food items and specialty foods, meeting the diverse consumer needs of people. People and create competition in the market. Besides, Vietnam's F&B industry places great emphasis on developing a safe and sustainable supply chain. Firms are improving production technology and applying international standards to ensure food safety and meet the requirements of domestic and international markets.

Organic and natural product lines and new raw material sources, especially materials from sustainable agriculture, are focused on being exploited by F&B firms in VIE10. Firms have widely deployed the application of new

technology and modern management systems to improve production processes, operations, and customer service. In addition, the application of artificial intelligence (AI) and machine learning has helped firms learn consumer preferences and trends, thereby creating suitable products and services.

Along with the development of technology and supportive policies from the government, the improvement of the business environment has created favorable conditions for F&B firms to innovate. Flexibility, creativity, and the application of advanced technology are important factors that have helped improve product quality and the customer experience.

In the future, the opportunities to develop innovation in Vietnam's food and beverage industry are huge. Grasping consumer trends, applying advanced technology, and creating products that meet customer requirements will create sustainable development opportunities for this industry. At the same time, improving quality management, ensuring food safety, and building brands will help firms increase competition and rise in the market.

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