International Journal of Management and Organizational Research

Factors Influencing the Supply Chain in the Export-Import Food Market in Vietnam

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Article Info

ISSN (online): 2583-6641
Volume: 03
Issue: 05
September-October 2024
Received: 15-07-2024;
Accepted: 20-08-2024
Page No: 51-59

Abstract
This study examines the key factors affecting supply chains in Vietnam's food export-import market. Using a mixed-methods approach, including expert interviews, focus groups, and a survey of 400 managers from food export-import companies, the research identifies seven critical factors: food quality and safety, traceability, logistics and transportation management, relationships between supply chain members, enterprise factors, ability to meet market demands, and government policies. Quantitative analysis reveals that food quality and safety has the strongest impact, with a standardized regression coefficient of 0.327. The proposed model explains 56.6% of the variance in supply chain performance. Based on these findings, the study recommends strategies for businesses to enhance their supply chain efficiency, including investing in quality control, implementing traceability technologies, optimizing logistics, building sustainable partnerships, strengthening management capabilities, improving market responsiveness, and leveraging government support. The research contributes to both theoretical understanding and practical management of food export-import supply chains in Vietnam.

DOI: https://doi.org/10.54660/IJMOR.2024.3.5.51-59

Keywords: Food supply chain, Vietnamese exports, food safety, logistics, supply chain technology, sustainability

1. Introduction

In the context of globalization and deeper international economic integration, import-export activities play a crucial role in the economic development of every country. For Vietnam, exports have been considered a main driver of economic growth for many years. Among these, food exports are one of the key sectors, significantly contributing to the country's total export turnover. According to the General Statistics Office, Vietnam's food export turnover increased from 30.02 billion USD in 2018 to 41.07 billion USD in 2022, accounting for approximately 13-15% of the total export turnover of goods (General Statistics Office of Vietnam, 2024) [20].

However, to maintain and enhance the position of the food export sector in the increasingly competitive international market, Vietnamese enterprises need to continuously improve their competitiveness, in which effective supply chain management plays a key role. The supply chain in the food import-export sector has its own characteristics due to the perishable nature of the products, strict requirements for food safety and hygiene, as well as the seasonal nature of the supply. Identifying and effectively managing the factors affecting the supply chain will help enterprises improve their competitiveness and better meet the needs of international customers and markets.

Therefore, I chose the topic "Factors Influencing the Supply Chain in the Import-Export Food Market in Vietnam" for research. This topic is significant both theoretically and practically. Theoretically, the research will clarify concepts and theories related to supply chain management in the context of import-export, and build a theoretical framework on the factors affecting the food import-export supply chain in Vietnam. Practically, the research results will provide a scientific basis for enterprises in strategizing and improving supply chain management efficiency, thereby enhancing competitiveness in the international market.

Additionally, the research will propose some policy implications to create a favorable environment for the development of Vietnam's food import-export sector.

2. Theoretical basis

2.1. Overview of concepts and theories of supply chain management

2.1.1. Definition and classification of supply chain

A supply chain is a network of organizations and activities involved in creating, transferring, and delivering a product or service from suppliers to end consumers (Mentzer *et al*., 2001) [33]. It includes all steps from sourcing raw materials, production, transportation, and storage until the product is delivered to the customer. The supply chain is not limited to the internal activities of a single enterprise but also includes the interaction and cooperation among stakeholders such as suppliers, manufacturers, distributors, and retailers (Chopra & Meindl, 2016) [12].

There are many ways to classify supply chains based on different characteristics and objectives. According to geographic scope, supply chains can be divided into domestic and international supply chains. Domestic supply chains operate within the borders of one country, while international supply chains involve cross-border transportation of goods and face challenges such as cultural differences, trade regulations, and language barriers. Based on the nature of the product, supply chains can also be classified into physical product supply chains and service supply chains. Physical product supply chains focus on the production, storage, and transportation of tangible goods, while service supply chains involve the provision of intangible services such as consulting, healthcare, and education (Ellram, Tate, & Billington, 2004) [18].

2.1.2. Key activities in supply chain management

Supply chain management involves planning, implementing, and controlling activities related to converting raw materials into finished products and delivering them to the end consumer (Mentzer *et al*., 2001) [33]. Key activities in supply chain management include supply management, production management, logistics management, and demand management. Supply management involves selecting, evaluating, and maintaining relationships with suppliers to ensure a stable and quality supply (Monczka, Handfield, Giunipero, & Patterson, 2015) [34]. Production management focuses on planning, organizing, and controlling the production process to optimize productivity, quality, and cost (Heizer, Render, & Munson, 2017) [25]. Logistics management includes activities such as storage, transportation, and distribution of goods, aiming to ensure timely, accurate, and adequate delivery (Grant, 2012). Demand management involves forecasting, planning, and coordinating customer demand to balance supply and demand (Croxton, Lambert, García-Dastugue, & Rogers, 2002) [15].

Additionally, supply chain management includes supporting activities such as information management, risk management, and relationship management. Information management plays an important role in facilitating data sharing and effective communication among supply chain members (Zhou & Benton Jr, 2007) [50]. Risk management involves identifying, assessing, and mitigating potential risks in the supply chain, such as supply disruptions, product quality issues, and financial risks (Manuj & Mentzer, 2008) [33]. Relationship management focuses on building and maintaining long-term cooperative relationships with supply chain partners based on trust, commitment, and shared benefits (Fynes, De Búrca, & Marshall, 2004) [19].

2.1.3. Foundational theories in supply chain management

Supply chain management is based on various theories and models, providing a foundation for understanding and optimizing supply chain activities.

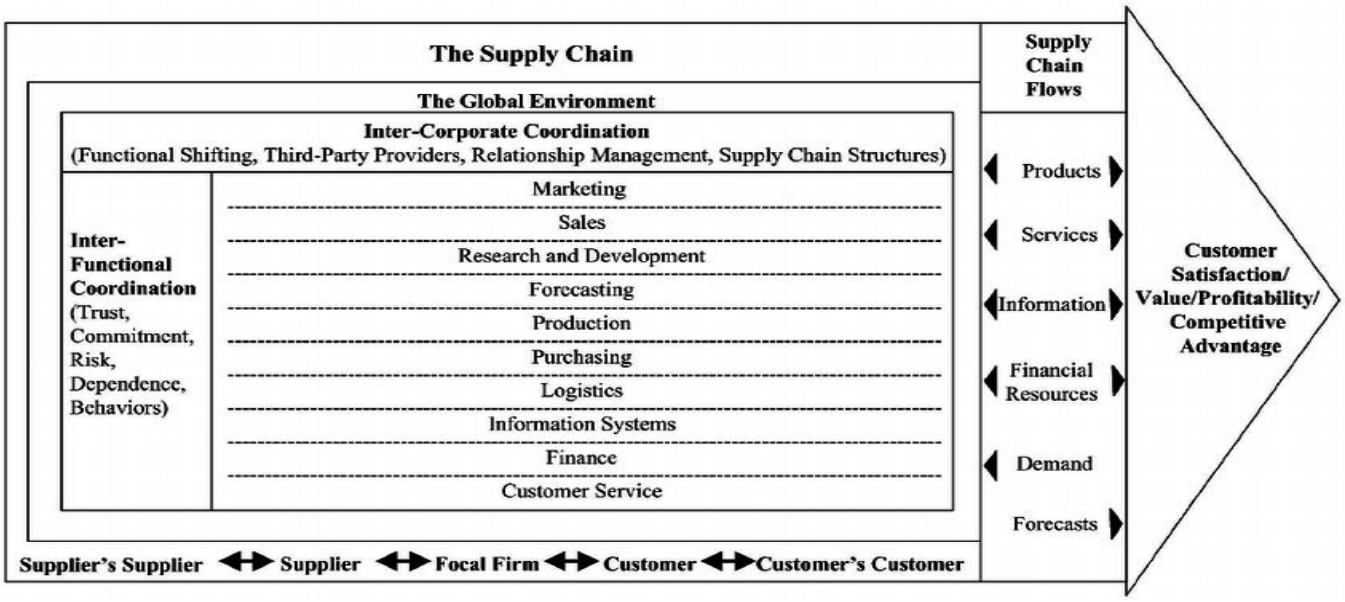


Fig 1: Supply chain management model (Mentzer *et al*., 2001) [33]

One of the prominent theories is the systems theory, which views the supply chain as an integrated system comprising multiple interacting and interdependent components (Mentzer *et al*., 2001) [33]. According to this theory, the efficiency of the supply chain does not solely depend on optimizing individual activities but also requires close coordination and collaboration among all members within the system, from suppliers, manufacturers, distributors to the end customers.

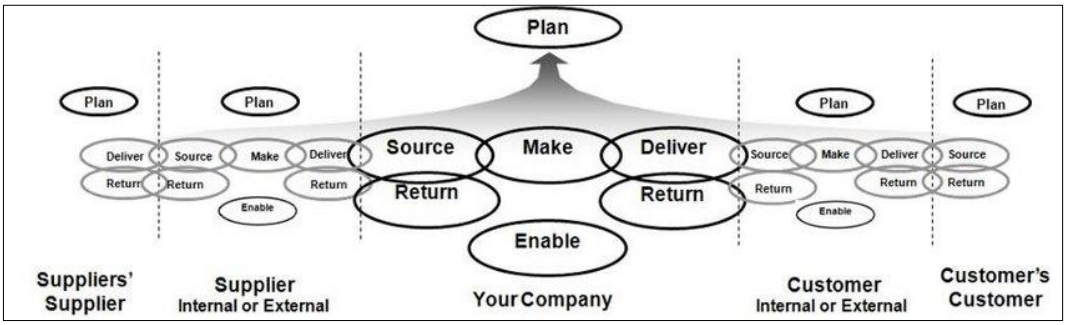


Fig 2: SCOR (Supply Chain Operations Reference) Model

In addition, the SCOR (Supply Chain Operations Reference) model provides a comprehensive framework for describing, measuring, and evaluating the performance of the supply chain (APICS, 2017) [4]. This model divides supply chain activities into five main processes: planning, sourcing, production, delivery, and returns management. The SCOR model helps organizations standardize and compare their performance with other supply chains in the industry.

Another model is the push/pull model, which classifies supply chains based on the production and distribution triggering mechanism (Simchi-Levi, Kaminsky, Simchi-Levi, & Shankar, 2008) [39]. In the push model, production is triggered by demand forecasts, while the pull model is based on actual customer demand. Choosing the appropriate model depends on product characteristics, market conditions, and demand forecasting capabilities.

Moreover, supply chain management theory includes concepts such as lean logistics, green supply chain management, and agile supply chain management. Lean logistics focuses on eliminating waste and optimizing material flow within the supply chain (Womack & Jones, 1996) [48]. Green supply chain management emphasizes minimizing environmental impact and promoting sustainability in supply chain activities (Srivastava, 2007) [42]. Agile supply chain management refers to the ability to quickly adapt to market changes and customer demands (Christopher, 2000) [13].

2.2. Characteristics of the Food Supply Chain

The food supply chain has distinct characteristics compared to other supply chains due to the specific nature of food products. One of the prominent features of food products is their perishability and short shelf life (Ahumada & Villalobos, 2009) [2]. This necessitates stringent time and storage condition management throughout the production, transportation, and distribution processes to ensure product quality and safety when reaching consumers. Additionally, the food supply chain must adhere to strict food safety and hygiene regulations to prevent public health risks (Trienekens & Zuurbier, 2008) [46].

Another characteristic of the food supply chain is the seasonality and variability of supply and demand. Agricultural output depends heavily on weather conditions, seasons, and crop growth cycles, leading to fluctuations in raw material supply (Behzadi, O'Sullivan, Olsen, & Zhang, 2018) [5]. Moreover, food consumption demand can also vary seasonally, during holidays, or due to consumer trends. This requires accurate demand forecasting and flexible production and inventory planning to timely meet market demands.

Traceability and information transparency are also crucial factors in the food supply chain. Consumers are increasingly concerned about the origin, quality, and safety of food, necessitating the ability to trace information about the production, transportation, and distribution processes (Opara, 2003) [36]. The application of technologies such as barcodes, RFID, and blockchain helps improve traceability, enhance transparency, and build consumer trust in the food supply chain.

2.3. Factors influencing supply chain performance in food import-export activities

2.3.1. Internal factors of enterprises

Factors related to the import-export strategy of food enterprises play a vital role in determining the outcomes of import-export activities. These factors include trade liberalization, increasing competition in the global food industry, and challenges faced by food import-export enterprises (Leonidou *et al*., 2004) [29]. Among these, marketing and products are the most researched factors, followed by pricing, promotion, and distribution. Additionally, the size of the enterprise, international experience, capabilities, and resources of food enterprises (such as resource commitment, customer relationships, product uniqueness and quality, agility, and flexibility in responding to market changes) are also determinants of supply chain performance in food import-export activities. These findings align with previous assessments by Aaby and Slater (1989) [1], and Zou and Stan (1998) [51].

Market orientation is also a crucial factor affecting food import-export performance (Cadogan *et al*., 2002) [8]. Market-oriented food enterprises focus on gathering information about customer needs, preferences, and consumption trends in the import-export market, thereby adjusting products and marketing strategies accordingly. Market-oriented import-export activities include searching for valuable information, disseminating information to decision-makers, and designing and implementing customer, competitor, and market-oriented responses (Cadogan *et al*., 2018) [9].

Management characteristics also play an important role in the performance of food import-export supply chains. Studies indicate that management is a key factor for the initiation, development, maintenance, and success of food import-export activities (Leonidou *et al*., 2010) [30]. Management factors affecting import-export activities include commitment and support for import-export, qualifications, international experience, and innovation of the leadership team. Among these, commitment and support for import-export are considered the most important factors for international business performance, consistent with previous studies by Zou and Stan (1998) [51], Cavusgil and Zou (1994) [10], and Madsen (1987) [31].

2.3.2. External factors of enterprises

The characteristics of the food industry also significantly influence the performance of import-export supply chains. Factors such as industry stability, seasonal or cyclical fluctuations, competition intensity, and the entry of new competitors must be considered when evaluating import-export performance (Reis & Forte, 2016) [38].

The characteristics of the import-export market, such as attractiveness, growth potential, and cultural similarity, also positively impact food import-export activities (Zou & Stan, 1998; Sousa *et al*., 2008) [51, 41]. When the export market has cultural similarities with the domestic market, food enterprises find it easier to penetrate the market and communicate with customers and partners. For import activities, cultural similarity with the supplier market helps enterprises easily source supplies and establish partnerships.

Moreover, factors related to the domestic market, such as domestic demand, export-import support policies, local market characteristics, infrastructure, legal and institutional environment, also affect the performance of food import-export activities (Haddoud *et al*., 2018; Sousa *et al*., 2008; Chen *et al*., 2016) [41, 22, 11]. Government support, a favorable business environment, and a developed logistics system will promote the import-export activities of food enterprises.

Thus, the performance of the supply chain in food import-export activities is influenced by many factors, both internal and external to the enterprise. Identifying, evaluating, and effectively managing these factors will help food enterprises enhance competitiveness, optimize supply chain performance, and succeed in import-export activities in the international market.

2.4. Overview of related research on factors affecting the supply chain in the import-export food market

2.4.1. Domestic research

Domestic research on factors affecting the supply chain in the import-export food market has been conducted by numerous authors. The study by Trần Thị Thanh Huyền and colleagues (2019) [44] examined the factors affecting the efficiency of Vietnam's rice export supply chain. The results indicated that rice quality, order fulfillment capability, cooperative relationships among chain members, information systems, traceability, and government support policies positively impact rice export efficiency. Among these, rice quality and order fulfillment capability were the most important factors, explaining 68.7% of the variation in export efficiency.

Phạm Thị Hồng Diễm's (2020) [37] research focused on factors affecting the competitiveness of Vietnam's seafood export supply chain. The results revealed that product quality, competitive pricing, brand reputation, distribution network, processing and preservation technology, stable raw material supply, and state support policies positively influence seafood export competitiveness. Among these, product quality and competitive pricing had the strongest impact, with standardized regression coefficients of 0.312 and 0.275, respectively.

Đỗ Thị Thu Hằng and Nguyễn Thị Minh Phương (2018) [17] studied factors affecting the risk of Vietnam's coffee export supply chain. The study identified that global price volatility, exchange rate risk, quality risk, supply risk, transportation risk, and payment risk are the main factors affecting the coffee export supply chain risk. Regression analysis results showed that these factors explain 73.6% of the variation in supply chain risk.

Bùi Văn Hùng and colleagues (2017) [7] analyzed factors affecting logistics activities in Vietnam's fruit and vegetable export supply chain. The results indicated that logistics infrastructure, logistics service provider capacity, information technology, logistics human resources, and legal environment positively impact logistics activities for fruit and vegetable exports. Among these, logistics infrastructure and logistics service provider capacity were the most important factors, with weights of 0.287 and 0.241, respectively, according to the Analytic Hierarchy Process (AHP) method.

Thus, domestic studies have identified many important factors affecting Vietnam's food import-export supply chain, including product-related factors, market factors, partnership relationships, information and quality management, logistics, and business environment. The results of these studies provide an important basis for enterprises and regulatory agencies to plan strategies and policies for developing the food import-export supply chain effectively.

2.4.2. Foreign research

Many foreign studies have focused on analyzing factors affecting the supply chain in the import-export food market. The study by Handayati *et al*. (2015) [23] highlighted that coordination in the agricultural food supply chain plays a crucial role in improving operational efficiency and enhancing competitive advantage. Factors such as information sharing, joint planning, risk and benefit sharing, and building strategic partnerships were identified as key elements impacting coordination in the agricultural food supply chain.

The study by Ahumada and Villalobos (2009) [2] reviewed planning models applied in the agricultural food supply chain. The results showed that linear programming, integer programming, dynamic programming, and network models are widely used to optimize decisions in the supply chain, such as production, inventory, distribution, and planning. The study also indicated that integrating risk, uncertainty, and sustainability goals into the modeling of the agricultural food supply chain is a future research trend.

Another study by Jonkman *et al*. (2018) [26] analyzed the efficiency of the agricultural food supply chain based on an integrated approach. The study used Data Envelopment Analysis (DEA) to evaluate the efficiency of 492 vegetable supply chains in the Netherlands. The results showed that integrated supply chains achieved higher efficiency than traditional supply chains, with an average efficiency score of 0.93 compared to 0.74. The study also indicated that chain size, vertical integration level, and information technology application positively impact supply chain efficiency.

The study by Zhao *et al*. (2021) [49] analyzed the impact of China's future food demand on global agricultural trade. Using the GLOBIOM model, the study projected that China's food demand would increase by 21-31% by 2050, leading to a 16-21% increase in the value of agricultural food imports. The results also showed that China would become more dependent on imports of soybeans, corn, beef, and dairy products. The study emphasized the importance of ensuring food security and environmental sustainability in the context of increasing food demand and global agricultural trade.

The study by Nguyen *et al* analyzed factors affecting cooperation in the international supply chain of Vietnamese seafood enterprises. Based on a survey of 327 partners in the seafood industry, the results showed that six main factors directly impact international supply chain cooperation: (1)

Trust; (2) Power; (3) Distance; (4) Government policies; (5) Cooperation strategy; and (6) Information sharing. The study proposed that the government, associations, and enterprises should have policies to encourage and simplify export regulations to promote cooperation in the international seafood supply chain.

Thus, foreign studies have identified many important factors affecting the import-export food supply chain, such as supply chain coordination and integration, application of mathematical models and information technology, global demand and trade trends, and cooperation relationships among chain members. These findings provide important theoretical and practical foundations for the sustainable and efficient development of the food import-export supply chain.

2.5. Propose a research model

Based on the information from the compiled studies, I propose the 7 most important factors affecting the supply chain in the food import and export market in Vietnam as follows:

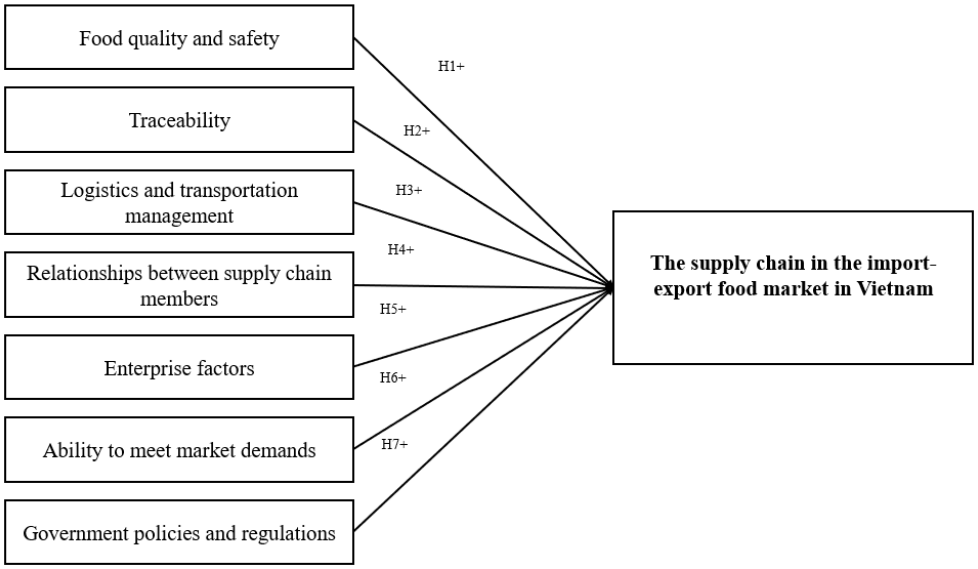


Fig 3: The export model studies the most important factors affecting the supply chain in the food import and export market in Vietnam

3. Research methods

This study uses a combination of qualitative and quantitative research methods:

3.1. Qualitative research methods

The qualitative method is carried out through

- In-depth interviews with 15 experts in the field of food import and export in key provinces/cities on the production and export of agricultural and food products such as the Mekong Delta, the Central Highlands, and the Southeast.
- Organize 2 focus group discussions with the participation of 8-10 experts/managers of food import and export businesses at each event.

The purpose of qualitative research is to adjust and supplement the observation variables used to measure the research concepts, thereby completing the formal survey questionnaire.

3.2. Quantitative research methods

The quantitative study was conducted through a questionnaire survey with 400 managers at food import-export enterprises across the country. The collected data is processed by SPSS 22.0 software with specific steps as follows:

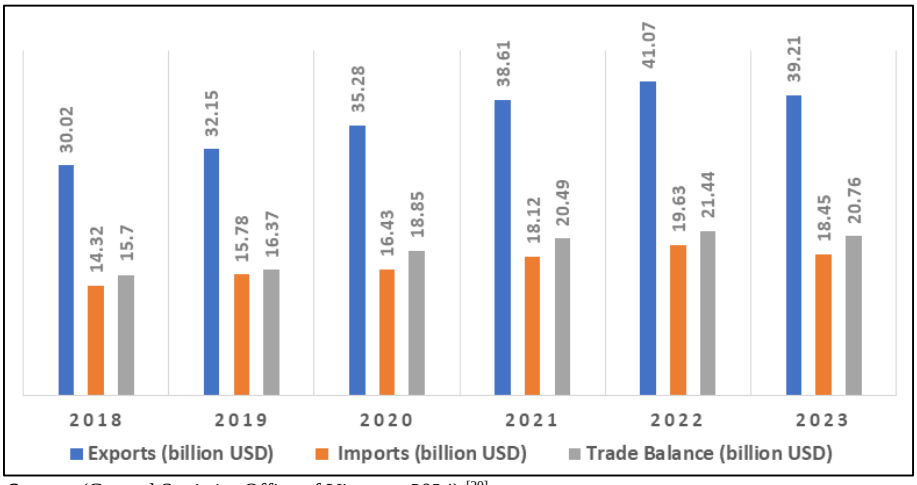
- Evaluate the reliability of the scale using the Cronbach's Alpha coefficient.
- Exploratory factor analysis (EFA) to identify factors that represent the observed variables affecting the food import and export supply chain.
- Multivariate regression analysis to test research hypotheses on the impact of factors on the food import and export supply chain in Vietnam.

The results of the quantitative analysis will help identify the most important factors affecting the supply chain in the food import and export market in Vietnam.

4. Research Results

4.1 Overview of the food import-export market in Vietnam

The food import-export market in Vietnam experienced significant growth during the period from 2018 to 2023. Despite facing numerous challenges due to the impact of the COVID-19 pandemic, this sector managed to maintain a stable growth rate and achieved notable accomplishments. Food export turnover continuously increased over the years, from 30.02 billion USD in 2018 to 41.07 billion USD in 2022, though it saw a slight decline to 39.21 billion USD in 2023 due to the effects of the global economic recession (General Statistics Office of Vietnam, 2024) [20].



***Source*:** (General Statistics Office of Vietnam, 2024) [20]

Fig 4: Vietnam's food import-export turnover from 2018 to 2023

Regarding the structure of export commodities, seafood and vegetables are the two main product groups, accounting for a large proportion of the total food export turnover. Seafood exports increased from 8.8 billion USD in 2018 to 11.1 billion USD in 2022, but decreased to 9.2 billion USD in 2023. Similarly, vegetable exports rose from 3.8 billion USD in 2018 to 3.9 billion USD in 2022, then slightly declined to 3.7 billion USD in 2023. Other items such as rice, coffee, and cashew nuts also contributed significantly to the food export turnover.

In terms of export markets, China, the USA, the EU, Japan, and South Korea remain the largest food export markets for Vietnam. Among these, exports to China saw strong growth from 7.03 billion USD in 2018 to 11.21 billion USD in 2022, although they dropped to 10.57 billion USD in 2023. Exports to the USA also increased from 6.89 billion USD in 2018 to 9.45 billion USD in 2022 but fell to 8.73 billion USD in 2023. As for imports, Vietnam's food import turnover also showed an increasing trend from 14.32 billion USD in 2018 to 19.63 billion USD in 2022, but decreased to 18.45 billion USD in 2023. The main imported items include animal feed ingredients, milk and dairy products, meat, and meat products. The major import markets are the USA, Brazil, Argentina, and Thailand (General Statistics Office of Vietnam, 2024) [20].

4.2. Research results

Reliability

Table 1: Summary of reliability test results

Factors	Indicators	Cronbach's Alpha	Total correlation coefficient of indicators	Results
Food quality and safety	FQ1, FQ2, FQ3	0,925 > 0,6	All > 0.3	Reliability achieved
Traceability	T1, T2, T3	0,857 > 0,6	All > 0.3	Reliability achieved
Logistics and transportation management	LT1, LT2, LT3	0,866 > 0,6	All > 0.3	Reliability achieved
Relationships between supply chain members	SC1, SC2, SC3	0,828 > 0,6	All > 0.3	Reliability achieved
Enterprise factors	EF1, EF2, EF3	0,818 > 0,6	All > 0.3	Reliability achieved
Ability to meet market demands	MK1, MK2, MK3	0.732 > 0.6	All > 0.3	Reliability achieved
Government policies and regulations	GP1, GP2, GP3	0.701 > 0.6	All > 0.3	Reliability achieved
Import-export food market	IE1, IE2, IE3	0,783 > 0,6	All > 0.3	Reliability achieved

EFA Discovery Factor Analysis

The results of the factor analysis show that the KMO index is 0.867 > 0.5, which proves that the data used for factor analysis is completely appropriate. The result of Barlett's test is 6556.552 with a significance level (p_value) Sig = 0.000 < 0.05, so the hypothesis that the correlation matrix between variables is a homogeneous matrix is refuted, i.e. the variables are correlated with each other and satisfy the conditions for factor analysis.

Performing factor analysis according to Principal Axis Factoring with Promax rotation The results showed that the 30 initial observed variables were grouped into 08 groups. Total variance value = 71.182% > 50%: satisfactory; It can then be said that these 8 factors explain 71.182% of the variability of the data. The Eigenvalues coefficient value of all factors is high (>1), the 8th factor has Eigenvalues (the lowest) = 1.258> 1.

Regression Model Results

Table 2: Regression coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig,	Correlation Statistics	
		Coefficient	Standard Error				Tolerance	VIF
Factors	Constant	-,487	0,187		-2,598	0,010		
	FQ	0,211	0,019	0,327	8,756	0,000	0,914	1,327
	T	0,209	0,028	0,214	6,422	0,000	0,980	1,334
	LT	0,191	0,035	0,266	7,443	0,000	0,981	1,238
	SC	0,281	0,026	0,218	7,885	0,000	0,947	1,256
	EF	0,241	0,032	0,216	6,758	0,000	0,999	1,358
	MK	0,217	0,049	0,208	5,899	0,000	0,949	1,351
	GP	0,243	0,025	0,222	5,664	0,000	0,901	1,355

In Table 2, the Sig. significance level column shows that the regression coefficients of all variables FQ, T, LT, SC1, EF1, MK1, and GP have Sig. levels less than 0.05. Therefore, the regression coefficients of the variables FQ, T, LT, SC1, EF1, MK1, and GP are statistically significant, meaning that the variables FQ, T, LT, SC1, EF1, MK1, and GP all have an impact on the dependent variable IE. Additionally, the standardized coefficients are greater than 0, indicating that the influencing factors have a positive correlation with the supply chain in the import-export food market in Vietnam. The model of the factors affecting the supply chain in the import-export food market in Vietnam is constructed as follows:

IE = 0, 487 + 0, 326 × FQ + 0, 205 × T + 0, 256 × LT + 0, 203 × SC + 0, 216 × EF + 0, 208 × MK + 0, 222 × GP **(1)**

Table 3: Model Summary

Model	R	R^2	Adjusted R^2	Standard Error of the Estimate	Durbin-Watson
1	.759a	.566	.561	.51124	1.945

According to the results in Table 3, the R^2 coefficient is 0.566. This means that 56.6% of the variation in the dependent variable is explained by the independent variables in the model. In other words, 56.6% of the factors affecting the supply chain in the import-export food market in Vietnam are explained by the factors in the model.

Based on the research results, the following managerial implications for developing the supply chain in the import-export food market in Vietnam can be proposed:

1. Enhance product quality and ensure food safety: Enterprises should focus on improving product quality and ensuring food safety according to international standards. Investing in advanced technology and production processes will help build customer trust and expand export markets (Trienekens & Zuurbier, 2008) [46].
2. Apply technology for traceability: Implementing technologies such as blockchain can improve traceability capabilities, making product information more transparent (Tian, 2017) [43].
3. Optimize logistics management: Optimize logistics management through cooperation with professional partners and the application of information technology (Christopher, 2016) [14].
4. Build sustainable partnerships: Develop sustainable partnerships within the supply chain based on information sharing and close cooperation (Handayati *et al*., 2015) [23].
5. Enhance management capacity: Strengthen management capacity and invest in research and development to improve competitiveness (Leonidou *et al*., 2010) [30].
6. Be flexible in meeting market demand: Be flexible in responding to market demand through regular research (Cadogan *et al*., 2002) [8].
7. Leverage government policies: Take advantage of government support policies and participate in free trade agreements to expand markets (Haddoud *et al*., 2018) [22].

Regarding the government, it is necessary to continue facilitating businesses by developing logistics infrastructure, improving the legal environment, and supporting access to international markets (Chen *et al*., 2016) [11].

5. Conclusion

The research has identified and analyzed seven key factors affecting the supply chain in the import-export food market in Vietnam, including: food quality and safety, traceability capability, logistics and transportation management, relationships among supply chain members, enterprise-related factors, market demand responsiveness, and government policies. Among these, food quality and safety were found to have the strongest impact, with a standardized regression coefficient of 0.327.

The research results suggest that Vietnamese food import-export enterprises need to focus on enhancing product quality and ensuring food hygiene and safety according to international standards. Additionally, the application of technology in traceability, effective logistics management, and building sustainable relationships with supply chain partners also play crucial roles in improving competitiveness. Furthermore, enterprises should emphasize developing internal capabilities, being flexible in meeting market demands, and effectively leveraging government support policies.

From the perspective of state regulatory agencies, it is essential to continue refining the legal framework, creating a favorable business environment for food import-export activities. Furthermore, there should be increased investment in developing logistics infrastructure, supporting businesses in accessing new technologies and market information, as well as promoting trade activities to expand export markets.

Although important results have been achieved, the study still has certain limitations. The scope of the research has only focused on food import-export enterprises in a few major provinces, not covering the entire industry. Additionally, the study has not deeply analyzed the differences between specific food sub-sectors. These are future research directions that can be pursued to gain a more comprehensive and in-depth understanding of the issue.

6. References

1. Aaby NE, Slater SF. Management influences on export performance: A review of the empirical literature 1978-1988. International Marketing Review. 1989;6(4):7-26.
2. Ahumada O, Villalobos JR. Application of planning models in the agri-food supply chain: A review. European Journal of Operational Research. 2009;196(1):1-20.
3. Ajayi B. The impact of entrepreneurial orientation and networking capabilities on the export performance of Nigerian agricultural SMEs. Journal of Entrepreneurship and Innovation in Emerging Economies. 2016;2(1):1-23.
4. APICS. SCOR Supply Chain Operations Reference Model; c2017.
5. Behzadi G, O'Sullivan MJ, Olsen TL, Zhang A. Agribusiness supply chain risk management: A review of quantitative decision models. Omega. 2018;79:21-42.
6. Beleska-Spasova E, Glaister KW, Stride C. Resource determinants of strategy and performance: The case of British exporters. Journal of World Business. 2012;47:635-47.
7. Bùi VH, Nguyễn THN, Trần TTT. Analysis of factors affecting logistics activities in the export supply chain of Vietnamese fruits and vegetables. Journal of Trade Science. 2017;109(5):25-34.
8. Cadogan JW, Diamantopoulos A, De Mortanges CP. A measure of export market orientation: Scale development and cross-cultural validation. Journal of International Business Studies. 2002;33(4):615-26.
9. Cadogan JW, Kuivalainen O, Sundqvist S. Export market-oriented behavior and export performance: Quadratic and moderating effects under differing degrees of market dynamism and internationalization. Journal of International Marketing. 2018;17(4):71-89.
10. Cavusgil ST, Zou S. Marketing strategy-performance relationship: An investigation of the empirical link in export market ventures. Journal of Marketing. 1994;58(1):1-21.
11. Chen J, Sousa CM, He X. The determinants of export performance: A review of the literature 2006-2014. International Marketing Review. 2016;33(5):626-70.
12. Chopra S, Meindl P. Supply Chain Management: Strategy, Planning, and Operation. 6th ed. Pearson; c2016.
13. Christopher M. The agile supply chain: Competing in volatile markets. Industrial Marketing Management. 2000;29(1):37-44.
14. Christopher M. Logistics & Supply Chain Management. Pearson UK; c2016.
15. Croxton KL, Lambert DM, García-Dastugue SJ, Rogers DS. The demand management process. The International Journal of Logistics Management. 2002;13(2):51-66.
16. Damaren R. Blockchain in food supply chains: A literature review and research agenda. Trends in Food Science & Technology. 2024;133:103-15.
17. Đỗ TTH, Nguyễn TMP. Factors affecting risks in the coffee export supply chain of Vietnam. Journal of Economics & Development. 2018;256(10):68-77.
18. Ellram LM, Tate WL, Billington C. Understanding and managing the services supply chain. Journal of Supply Chain Management. 2004;40(3):17-32.
19. Fynes B, De Búrca S, Marshall D. Environmental uncertainty, supply chain relationship quality and performance. Journal of Purchasing and Supply Management. 2004;10(4-5):179-90.
20. General Statistics Office of Vietnam. Vietnam Import and Export Report 2023. Industry and Trade Publishing House; c2024. Available from: https://chongbanphagia.vn/download/f6945/bao-cao-xuat-nhap-khau-viet-nam-nam-2023.pdf
21. Grant DB. Logistics Management. Pearson; c2012.
22. Haddoud MY, Nowinski W, Jones P, Newbery R. Internal and external determinants of export performance: Insights from Algeria. Thunderbird International Business Review. 2018;61(1):43-60.
23. Handayati Y, Simatupang TM, Perdana T. Agri-food supply chain coordination: The state-of-the-art and recent developments. Logistics Research. 2015;8(1):5.
24. Hasaballah AHA, Genc OF, Mohamad OB, Ahmed ZU. Exploring the interface of relationship marketing and export performance: A conceptual perspective. Journal of Research in Marketing and Entrepreneurship. 2019;21(2):126-48.
25. Heizer J, Render B, Munson C. Operations Management: Sustainability and Supply Chain Management. 12th ed. Pearson; c2017.
26. Jonkman J, Bloemhof JM, van der Vorst JG, van der Padt A. Selecting food process designs from a supply chain perspective. Journal of Food Engineering. 2018;228:103-11.
27. Lambert DM, Cooper MC. Issues in supply chain management. Industrial Marketing Management. 2000;29(1):65-83.
28. Leonidou LC, Katsikeas CS, Samiee S. Marketing strategy determinants of export performance: A meta-analysis. Journal of Business Research. 2002;55(1):51-67.
29. Leonidou LC, Katsikeas CS, Samiee S. Marketing strategy determinants of export performance: A meta-analysis. Journal of Business Research. 2004;55(1):51-67.
30. Leonidou LC, Palihawadana D, Theodosiou M. National export-promotion programs as drivers of organizational resources and capabilities: Effects on strategy, competitive advantage, and performance. Journal of International Marketing. 2010;19(2):1-29.
31. Madsen TK. Empirical export performance studies: A review of conceptualizations and findings. Advances in International Marketing. 1987;2:177-98.
32. Manuj I, Mentzer JT. Global supply chain risk management strategies. International Journal of Physical Distribution & Logistics Management. 2008;38(3):192-223.
33. Mentzer JT, DeWitt W, Keebler JS, Min S, Nix NW, Smith CD, Zacharia ZG. Defining supply chain management. Journal of Business Logistics. 2001;22(2):1-25.
34. Monczka RM, Handfield RB, Giunipero LC, Patterson JL. Purchasing and Supply Chain Management. 6th ed.

Cengage Learning; c2015.
35. Mpunga HS. Examining the factors affecting export performance for small and medium enterprises (SMEs) in Tanzania. Journal of Economics and Sustainable Development. 2016;7:41-51.
36. Opara LU. Traceability in agriculture and food supply chain: A review of basic concepts, technological implications, and future prospects. Journal of Food Agriculture and Environment. 2003;1:101-6.
37. Phạm THD. Research on factors affecting the competitiveness of Vietnam's seafood export supply chain. Journal of Science, Ho Chi Minh City Open University. 2020;15(2):97-111.
38. Reis J, Forte R. The impact of industry characteristics on firms' export intensity. International Area Studies Review. 2016;19(3):266-81.
39. Simchi-Levi D, Kaminsky P, Simchi-Levi E, Shankar R. Designing and Managing the Supply Chain: Concepts, Strategies and Case Studies. 3rd ed. McGraw-Hill; c2008.
40. Smith A. The Wealth of Nations. Aegitas Publisher; c1776.
41. Sousa CM, Martínez-López FJ, Coelho F. The determinants of export performance: A review of the research in the literature between 1998 and 2005. International Journal of Management Reviews. 2008;10(4):343-74.
42. Srivastava SK. Green supply-chain management: A state-of-the-art literature review. International Journal of Management Reviews. 2007;9(1):53-80.
43. Tian F. A supply chain traceability system for food safety based on HACCP, blockchain & Internet of things. In: 2017 International Conference on Service Systems and Service Management; 2017:1-6.
44. Trần TTH, Nguyễn TMH, Lê TTH. Factors affecting the efficiency of the rice export supply chain in Vietnam. Journal of Economics & Management. 2019;30(2):54-63.
45. Trienekens JH. Quality and safety standards in the food industry, developments and challenges. International Journal of Production Economics. 2007;113(1):107-22.
46. Trienekens J, Zuurbier P. Quality and safety standards in the food industry, developments and challenges. International Journal of Production Economics. 2008;113(1):107-22.
47. Van TTQ. The situation of export and import of agricultural, forestry and fishery products in 2023. Department of Information and Trade Promotion – VIOIT; c2024. Available from: https://vioit.org.vn/vn/tin-hoat-dong-nganh/tinh-hinh-xuat--nhap-khau-nong-lam-thuy-san-nam-2023-5712.4056.html.
48. Womack JP, Jones DT. Lean Thinking: Banish Waste and Create Wealth in Your Corporation. Simon and Schuster; c1996.
49. Zhao C, Liu B, Xiao L, Hoogenboom G, Boote KJ, Kassie BT, *et al*. Impacts of climate change on rice food security in China. Climatic Change. 2021;166(1):1-19.
50. Zhou H, Benton Jr WC. Supply chain practice and information sharing. Journal of Operations Management. 2007;25(6):1348-65.
51. Zou S, Stan S. The determinants of export performance: A review of the empirical literature between 1987 and 1997. International Marketing Review. 1998;15(5):333-