

VIETNAMESE AGRICULTURE PARTICIPATION IN GLOBAL VALUE CHAIN: OPPORTUNITIES AND CHALLENGES

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Abstract: The article examines the opportunities and challenges of Vietnam's agricultural industry when participating in global value chains. Using qualitative research methods, the research team collects data from websites and reports and analyzes from websites, as well as reports and analyzes the opportunities and challenges of Vietnam's agricultural industry. The article points out that Vietnam's agricultural industry participates in the global value chain through the two stages of creating the largest added value for the economy: "organization of production" and "consumption of products." In which "production organization" is associated with the association between enterprises, farmers, and cooperatives. Regarding "consumption of products," the research team realized the potential extent of the agricultural industry in the digital economy, applying e-commerce to reduce costs and increase value. Besides, the research team also raised the challenges faced by the industry when participating in the global value chain. Based on the analysis, the research team proposes a number of solutions to promote and enhance Vietnam's agricultural industry position in the global value chain.

Keywords: Agriculture; Global value chain; Opportunities; Challenges; Vietnam

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1. Introduction

Agriculture plays an important role in Vietnam's economy, providing input materials for many other economic sectors. In the context of Vietnam's participation in the global value chain, the research and determination of the position of the agricultural sector in the value chain play a vital role. Some empirical studies on the global value chain and the participation of the agricultural sector in the global value chain in some developing countries, including Vietnam. The research of Trienekens (2011) on Agricultural Value Chains in Developing Countries

analyzed The value chain of countries consisting of 3 components, which are Limitations for value chain upgrading, value chain elements including added value, horizontal and vertical chain network structure, and value chain governance mechanism; value chain upgrading options. Huong et al. (2022) researched comparative advantage and participation in the global value chain of Vietnam in the electronics and food industries, showing that the electronics and food industries are two industries that play an important role in socio-economic development. Vietnam is developing businesses, bringing in revenue

for employees and the state budget, accounting for a large proportion of Vietnamese exports. Research on the global value chain of the agricultural sector, for the case of African countries, Jean Balié et al. (2018) showed that the countries of Sub-Saharan Africa (SSA) are not like most Latin America and Asian countries, not profoundly integrated into the global production network. At the same time, the article pointed out the participation of bilateral and sectoral SSA countries in the global value chain for food and agriculture, demonstrating that trade policies have an impact on the upstream and downstream linkages of the value chain. Ryan Vroegindewey & Jennifer Hodbod (2018) researched the resilience of agricultural value chains in the context of developing countries. Research showed that agricultural value chain resilience is crucial to food security and sustainable food systems in developing countries. However, research papers on the agricultural sector and value chains are very limited, most of which focus on global value chains in general. Some research articles on the global value chain in Vietnam only stop at the general analysis of the value chain or research on the value chains of other fields, such as industry and services, with little mention of agriculture. Recognizing the importance of the problem, the research team chose to study the opportunities and challenges of the agricultural sector participating in the global value chain. Therefore, it is possible to promote opportunities and advantages while overcoming limitations and difficulties to improve Vietnam's agricultural position in the global value chain.

2. Literature review

The value chain is a set of activities focused on creating or adding value to a product. Chains of goods are not simply about production processes: many of the inputs to the chain and many of the final goods produced will be in the form of intangible services. In the production of a tangible product or a service, the different activities are linked together in a chain fashion, with each stage adding value to the production process.

According to Kaplinsky's (2000) value chain research paper, the value chain includes the necessary activities of a product or service production cycle from the research stage to other production processes,

distribution to the final consumer, and waste disposal after use.

The value chain of the digital economy is the product of integrating the digital economy and the value chain. It is the value system and operational chain organizational structure of digital economy activities and value chain innovation driven by data elements. These production and operations activities are data-driven and rely on information and communication technology. Moreover, the output activities of the value chain of the digital economy are different and interrelated, forming a dynamic process of value creation and added value (Zhenlong Miao, 2021).

E-commerce is a form of conducting, managing, and operating commercial business of members in a rapidly developing market in the world through and with the help of electronic means, computers, information technology, and communication networks (Phuong, 2016).

3. Research methodology

Data collection methods: The research team used the document research method to systematize the theoretical basis of the agricultural value chain, digital economy, and e-commerce. The article overviews theories from databases such as Google Scholar, Research Gate, and online libraries of ministries and departments.

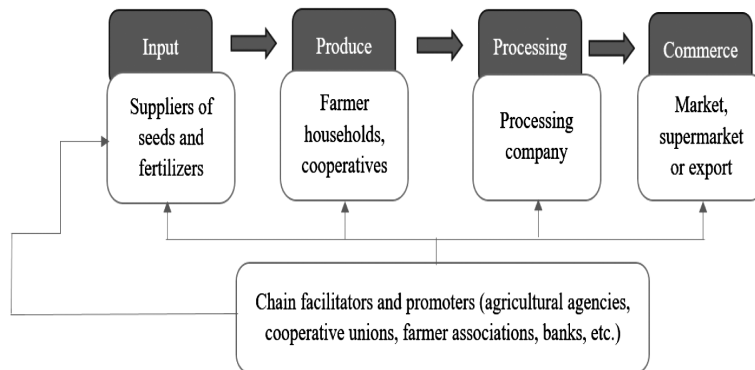
To study the opportunities and challenges of Vietnam's agricultural industry in the global value chain, the research team focused on reviewing the current situation of Vietnam's agricultural industry participating in the value chain. The data presented in this article are collected from domestic and foreign books and scientific journals, data compiled by the General Statistics Office, and electronic information channels of provinces and cities in Vietnam. From the collected data, synthesizing and selecting information relevant to the research content, the authors use a combination of descriptive statistical methods to clarify the current situation.

Data processing method: Data collected is compiled from websites such as the General Statistics Office and electronic information channels and then reflected in figures. To evaluate and analyze data, the article also uses qualitative research methods, analyzing data on the export value of the agricultural industry and retail sales of agricultural products. From there, we draw on the industry's opportunities and challenges in participating in the global value chain.

4. Research results

4.1. Overview of Vietnam's agricultural value chain

Table 1. Vietnam's agricultural Value chain



Source: Tien Giang Department of Agriculture and Rural Development (2020)

Vietnam's agricultural value chain is a set of activities many people perform to produce agricultural products and then sell them to consumers. The agricultural value chain model helps discrete development links link together to increase value, improve the competitiveness of agricultural products, and create a new production ecosystem in the countryside with new opportunities for everyone. The agricultural value chain model is a collection of activities related to the agricultural industry, including interrelated activities: "supplying inputs => organizing production => processing => consuming agricultural products."

Vietnam's agricultural industry mainly participates in the value chain through two stages that bring the highest value to our economy: "**organizing production**" and "**consuming agricultural products**."

4.2. Opportunities and some achievements of Vietnamese agriculture in the global value chain

Opportunities:

Firstly, "**organizing production**" is a potential stage for Vietnam's agriculture. The organization of production in the agricultural value chain in our country is shown through special forms of linkage. *Cross-linking* between farmers – farmers, Cooperatives – cooperatives, Enterprise – Enterprise. This form helps to reduce costs, increase the selling price of products, and increase the number of goods sold. *Vertical linkage* between farmers - cooperatives - enterprises in the production chain. This form arises due to the requirement to adapt to the modern market, leading to the formation of agro-food value chains, optimizing costs, eliminating waste in the process, increasing efficiency, helping to

increase productivity and product quality, creating competitive advantages in the domestic market as well as the export market... Especially along with the development of science and technology, many national and provincial key products with high science and technology content are applied from seed production, farming, and processing, such as shrimp, Pangasius, wood products... In addition, the internet and digital transformation applications have simplified and streamlined the collection, inspection, and distribution of agricultural resources.

Secondly, the "**consuming agricultural products**" of Vietnam has many advantages in both traditional and modern consumption methods. In terms of the *traditional consumption plan*, according to the report of the Ministry of Industry and Trade (2022), many important achievements have been recorded in the export of agricultural products, such as signing many Free Trade Agreements (FTAs) – this is an opportunity for Vietnam's agricultural value chain when participating in the global value chain, in the current context of deep international integration. Some of the FTAs mentioned are the Regional Comprehensive Economic Partnership (RCEP), the Free Trade Agreement between Vietnam and the UK (EVFTA), The Free Trade Agreement between Vietnam and the EU (EVFTA)... Along with improving supply capacity in the context of deep integration, Vietnam's agriculture has been affirming its position in the international trade market. Regarding *modern consumption plans*, e-commerce has seen significant growth in the agricultural industry. The consumption

of agricultural products has advantages based on the current strong trend of e-commerce development. The advantage of e-commerce is that it is fast, has a global scope, and can connect directly from sellers to consumers, which is an important factor in expanding the scope of product groups, products, and sales objects at a much lower cost than traditional trade. Therefore, the application of e-commerce to support and expand the agricultural product consumption market is becoming an indispensable business trend in the current integration context towards a modern and sustainable consumption distribution channel (Hai Thanh, 2021).

Global retail e-commerce sales are currently valued at around \$3 trillion and continue growing rapidly. E-commerce sales accounted for 11.9% of total retail worldwide in 2018, expected to reach 10.2 billion by 2023 (Innovative Hub, 2021). And the role of e-commerce is mainly to maximize the consumption of agricultural products. With the available potential, Vietnam has many opportunities to promote the consumption of agricultural products in the current integration conditions with the support of the digital economy. The formation of an e-commerce platform to promote the consumption of agricultural products is and will bring many expectations in the future. In particular, e-commerce is increasingly becoming a trend when the agricultural industry and Vietnam's general economy are negatively affected by the COVID-19 pandemic. According to Minh, N.B (2023), E-commerce has helped the agricultural industry to have the most changes in recent years. Many business households and cooperatives have put their products on e-commerce platforms such as Shopee, Alibaba, Lazada, and VN Post... so that agricultural products can go far

and quickly reach consumers. The digital transformation skills of people in mountainous, remote, and isolated areas have been improved. Tools to put local products and services on e-commerce floors are increasingly being applied, not only to serve the domestic market but also towards export, mainly to fastidious markets like the US, Japan, Europe. This consumption option brings much greater added value than traditional agricultural product consumption because of the high increase in B2C (Business to Consumer) revenue, direct link with domestic and foreign consumers, and reducing many other costs, such as transportation, storage, etc.

Achievements:

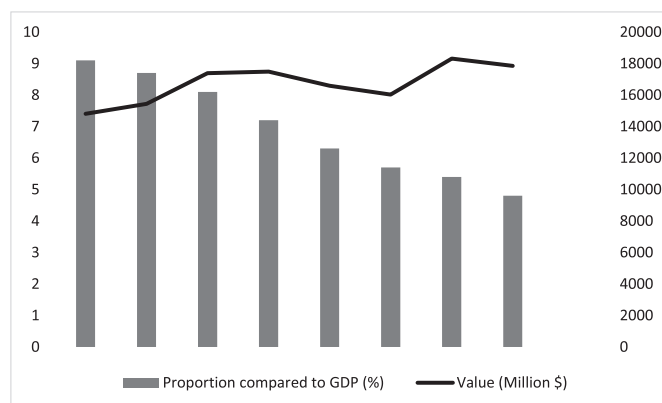
In terms of organizing production, the structure of agriculture has shifted towards promoting advantages to suit the market and adapt to climate change, developing according to VietGAP standards, with over 62% of communes meeting new rural standards (Innovative Hub, 2023). At the regular press conference for the first six months of 2023 of the Ministry of Agriculture and Rural Development, Deputy Minister Phung Duc Tien said that the GDP growth rate of the agricultural sector increased by 3.14% (Khoi, 2023).

Currently, Vietnam's rice yield is the highest in Southeast Asia, reaching 5.6 tons/ha, nearly double that of Thailand and 1.5 times that of India. In particular, in 2020 alone, when the whole world was heavily affected by the COVID-19 pandemic, Vietnam also suffered heavy consequences from natural disasters epidemics for livestock... but thanks to the application of science and technology, restructuring production and disease control ability, the output of agricultural products is stable and increased compared to 2019.

In terms of consuming agricultural products

Figure 1. Value and proportion of agricultural exports to GDP

Unit: %, \$ million

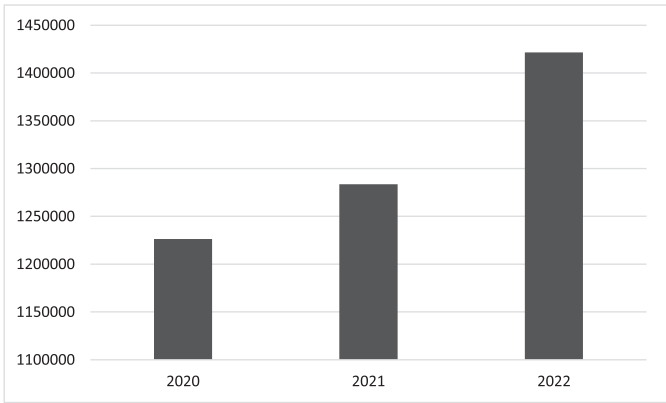


Source: General Statistics Office (2020a)

According to Figure 1, It can be seen that although the proportion of the agricultural sector to gross domestic product (GDP) tends to decrease, the export value tends to increase over the years. This

confirms that Vietnam’s agriculture participation in the global value chain not only creates added value for the industry but also contributes to Vietnam’s economic growth in general.

Figure 2. Retail sales of agricultural goods
Unit: Billion VND



Source: General Statistics Office (2020b)

According to Figure 2, retail sales of agricultural products in Vietnam tend to increase gradually over the years. Specifically, in 2020, retail sales of agricultural products were 1226259.1 billion VND, growing over the years and reaching an impressive figure of 1421614 billion VND in 2022. This is one of the outstanding achievements of consuming agricultural products of the agricultural value chain when participating in the global value chain.

Regarding the consumption of agricultural products through e-commerce platforms, e-commerce has not had a significant impact on the agricultural industry for reasons such as the supply chain of agricultural products often being under the control of intermediaries. ; challenges from the preservation process... and the psychology of consumers who prefer to buy directly because of the concern between online and reality. However, this is rapidly changing as e-commerce solutions aimed at overcoming barriers around customer preferences and logistics drive online groceries worldwide. In developed markets, online orders for large quantities of fresh produce, such as hotels and restaurants, have become commonplace. In the consumer market, online grocery orders are also starting to gain traction. For example, Bac Giang lychee has been successfully uploaded to the Alibaba.com e-commerce platform, reaching many countries worldwide. According to survey data from Vietnam E-commerce Report (2023), the percentage of

consumers participating in the survey continues to tend to buy goods on e-commerce platforms at 70%; the rate of enterprises continuing to deploy agricultural products on the e-commerce trading floor in the future is 81%. These numbers show the great achievements and potential of the agricultural sector when participating in the global value chain of the digital economy.

4.3. Challenges of Vietnam’s agriculture in the global value chain

However, the consumption of agricultural products in Vietnam still has many major limitations. First of all, we are still only exporting unprocessed raw products with low scientific and technological content, reducing the competitive advantage of the agricultural value chain compared to domestic and foreign countries, especially compared to direct competitors. At the same time, the export of agricultural products in Vietnam is highly dependent on a few markets. In the period 2010 - 2021, the export of agricultural products depended on two markets, China and the United States, accounting for 47.2% of the total value of agricultural exports in the first five months of 2021. The level of dependence on markets such as China and the United States is increasing. The proportion of Vietnam’s agricultural, forestry, and fishery export value to China increased from 14.7% in 2010 to 22.6% in the first five months of 2021. In which, Vietnam exports over 70% of vegetables and fruits to China (General Department of Customs, 2021). The quality of agricultural products

is still uneven. At the same time, the requirements of the importing countries are increasingly high, such as requirements on food hygiene safety and traceability; many export orders are still being returned due to the use of banned substances during production and processing. The proportion of products produced according to sustainable standards and international certification is still small, only about 10%. Although many agricultural products are exported in the leading position in the world, more than 80% have not yet built a brand name and do not have a logo or label for Vietnam. This is a major limitation, reducing the competitiveness of products and, at the same time, limiting the deep participation in the retail distribution system of the importing countries.

From the above analysis, it can be seen that Vietnam's agricultural exports are still contributing a relative amount of value to the economy but not commensurate with the inherent potential. Meanwhile, high profits belong to foreign enterprises that import raw products from Vietnam through processing and applying advanced technology to become products of higher value and continue exporting to other countries for consumption, including ours. Vietnam's agriculture is still weak in terms of having a comprehensive understanding of international quality standards, the preservation stage, and the high content of banned substances in the products. Our country's agricultural products have not yet addressed the modern concerns of international consumers regarding environmental protection and sustainable development. In addition, businesses that purchase and export domestic agricultural products still have difficulties in assessing the overall core factors that create competitive advantages in the value chain and capabilities in approaching each stage. Currently, most of Vietnam's agricultural products only bring natural value through the production process but lack entirely the stages that create most of the added value, such as product research, innovation in the production process, packaging design as well as focusing on designing, distributing and commercializing those agricultural products. Vietnam's agriculture still has not well shaped the concept of participating in the international market, leading to the consequences of Vietnam still being at the bottom of the global value chain and having a lower risk of falling in the following years. In the global value chain, the key factor that brings competitive advantage is not where

the manufacturing plant is located but where the most value is retained. Vietnamese agriculture has not been able to decipher this principle even though our country is known as one of the largest exporters of agricultural products in the world.

Coffee exports in recent years are still considered a "backbone" sector, contributing greatly to Vietnam's total agricultural export turnover. However, the lack of big brands and the lack of standard production and processing processes to meet the requirements of importing countries are major barriers to Vietnam's coffee exports. Besides, our country's coffee industry also faces the challenge of having more and more competitors in the export of processed coffee with high scientific and technical content; logistic transportation costs fluctuate a lot.

In the international coffee market share, Vietnam ranks 2nd in the world in terms of coffee exports. Every year, through exporting to more than 80 countries, mainly green coffee, Vietnam earns billions of USD. However, if only such a raw export were possible, the value of coffee beans would be much lower than that of roasted and ground coffee exports. In the global value chain of coffee, including "production of raw materials – cultivation – rudimentary processing, roasting – marketing and distribution of products," Vietnam mainly focuses on cultivation and production. Meanwhile, this stage only contributes about 10% to the value chain. In the export structure of Vietnam's coffee sector, the export of green coffee, mainly robusta, accounts for 90.7% and roasted and ground coffee and instant coffee are 2% and 7.2%, respectively. Vietnam's robusta coffee is only considered as filler coffee for the world's consumption needs. In the world's value-added chain, green coffee is only entitled to 1/20 (Hien, 2022).

The paradox here is that despite being known as a powerhouse of coffee production and export, Vietnam still imports an average of 60,000 tons of processed coffee from Brazil, the US, and China each year. Although the number of businesses in Vietnam's coffee business is very large, in reality, only a few enterprises have a good name, have built a brand name, and have a processing factory like Trung Hoa Group Joint Stock Company. Nguyen, Nestle Vietnam Co., Ltd., and Ngon Vietnam Coffee Co., Ltd. have to compete directly with big foreign business brands such as Starbucks, Highland... Therefore, it is inevitable that our country will export

raw coffee to foreign countries and then continue to import finished coffee for domestic consumption. That process needs to improve the comparative advantage, the competitive advantage of Vietnamese coffee beans compared to competitors around the world.

Vietnamese agricultural products also have many shortcomings and face many challenges. According to experts, over 80% of our country's agricultural products to the world market must go through intermediaries by foreign "brands."; Up to 90% of Vietnam's agricultural products are still exported in raw form or with limited processing content, and the quality of the export value is lower than similar products of many other countries (Financial Journal, 2017). That makes the competitiveness and participation level in the global value chain of our country's agricultural products still low, especially those with high added value.

4.4. Solutions to improve the position of Vietnam's agriculture in the global value chain

In terms of enterprises and cooperatives, farmers produce and export agricultural products.

Firstly, When participating in the global value chain, enterprises must actively and proactively choose stages that create high-added value to exploit comparative advantages and develop quickly, effectively, and sustainably in export activities and consumption on the world market. Promote linkage activities when participating in global value chains, linking farmers with cooperatives, businesses with cooperatives or enterprises - cooperatives - farmers..., overcoming the situation of small-scale, lack of linkage between parties leads to inefficient participation in global value chains and little added value.

Secondly, in the production organization stage, enterprises, farmers, and cooperatives must focus on selecting agricultural products that Vietnam has a comparative advantage over and are in high demand in the world to focus on developing. At the same time, it is important to plan and rearrange agricultural areas towards modernization and the application of scientific and technological achievements to production and farming activities.

Thirdly, regarding product consumption, with the advantages and potential of e-commerce platforms, cooperatives and farmers need to promote the consumption of agricultural products on e-commerce platforms directly to consumers. This can reduce transportation, storage, and intermediary costs.

Applying tools in the context of the digital economy helps the agricultural sector to create more added value. In addition, enterprises that distribute and export agricultural products must also promote distribution, consumption, and export through e-commerce platforms to apply technology and digital transformation to raise prices and position the agricultural sector in the global value chain. In addition, the branding and promotion of agricultural products are also issues that need to be focused, focused on promoting and developing.

In terms of the Government

Firstly, in the stage of production organization, the link between enterprises, cooperatives, and farmers in the agricultural value chain plays an important role in creating added value for the chain, so the government needs to understand the effectively combine actors and systems in the value chain system of the digital economy and improve the value creation ability of the value chain system. This is an important way to promote value addition, value transfer of production and business, and activities of the digital economy. In the product distribution and consumption stage, e-commerce floors and digital marketing are inevitable trends that increase added value for the chain thanks to the B2C model, cut costs, and maximize profits. Therefore, the government needs to accelerate the construction of a new generation of information application bases, building Internet infrastructure in rural and remote areas...

Secondly, the government needs to have financial support policies. Supporting businesses in accessing financial resources is an important factor that affects their ability to participate in global value chains. Prioritize capital investment in the agricultural sector so that cooperatives, farmers, and businesses have conditions to access high technology and apply high technology to production activities.

Thirdly, the government needs to create favorable conditions for producers and exporters of agricultural products to participate in the non-production stages and to approach foreign consumers more closely. In particular, the government needs to facilitate and support information on market demand and promote agricultural products in the open market. Create favorable conditions to attract foreign direct investment in the agricultural sector. Thereby, Vietnam's agriculture can access capital and technology as well as participate in the global distribution and consumption

network of agricultural products, contributing to enhancing its position and creating more value for the agricultural value chain when participating in the global value chain (Quyet, 2020).

5. Conclusions

In summary, the research has pointed out the opportunities and challenges of Vietnam's agricultural industry when participating in the global value chain. Through qualitative research methods, data collected from official websites such as the General

Statistics Office, documents from Google Scholar, and Research Gate..., the article sheds light on the level of participation of the agricultural sector in the global value chain, clarifying opportunities and challenges from the current research situation. Thereby, the research team proposes solutions to improve the value efficiency of the agricultural value chain. The article inherits the theoretical basis from previous studies and serves as a foundation for future research on agricultural development in the global value chain.

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