
Vietnam's Coffee Supply Activities to the EU Market

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ABSTRACT: The article examines Vietnam's ability to supply coffee to the EU market based on data from 2019 to 2023 in the context of digital transformation being applied in many components in the supply chain. The relevant data are obtained from the Trade map, International Trade Center and the General Statistics Office of Vietnam. The article analyzes Vietnam's coffee supply capacity to the EU market, through a survey to examine the factors affecting coffee exports to this region. Research shows that Vietnam's market share in the EU market is gradually decreasing, while the market share of Brazil, Germany and Italy is trending up. Some solutions have been proposed, such as Vietnamese coffee producers needing to focus their resources on production, deep processing, and building a Vietnamese coffee brand to promote regaining their position and increase market share in Vietnam. EU market.

KEYWORDS: Coffee supply chain; EU; Vietnamese coffee, economic management

1. INTRODUCTION

Vietnam is a famous country for its diverse and unique coffee culture. In recent years, coffee is gradually becoming the main agricultural export commodity of the country with the second - largest export volume in the world. With its rich flavor and specialty, Vietnamese coffee is available in many countries around the world and is gradually conquering the fastidious markets, including the European market (EU). According to the GSO (2021), currently, the EU is the world's largest coffee consumption market with consumption demand accounting for about 40% of the total global consumption demand and continuing to grow. However, Vietnam's coffee market share in this region is experiencing unfavorable fluctuations due to the increasing competition of other major coffee export markets in the world such as Brazil, Italy, ect. In the context of the multilateral relationship between Vietnam and Europe is developing with many breakthroughs, more and more free trade agreements have been signed, opening up opportunities and challenges for commodity exports in general and coffee in particular. To be able to appear in this market, Vietnam's coffee industry has made a great attempt in all stages from cultivation to production, processing and export. However, Europe is considered a difficult market, so Vietnam has many difficulties in the export process, requiring improvement in the quality and production process of exported coffee.

A new point in the research is the approach to appreciate the coffee supply chain from the source, current production activities, distribution channels in the coffee supply chain in Vietnam and the study also assesses the clients in the European market. The study carried out a survey of experts in the field of coffee production and export in Vietnam today to find out the limitations and advantages from the perspective of businesses. The scope of the study was also carried out for a long time from 2019 to 2023 when the EVFTA Agreement had certain impacts on Vietnam's coffee exports to this region and affected by the Covid pandemic.

In order to clarify the research results, the article is divided into four parts, in addition to the introduction, part 2 is an overview of the research, part 3 outlines the current situation of Vietnam's coffee supply to the EU market in the period 2019-2023 and part 4 is the conclusion.

2. STUDY OVERVIEW

2.1. Theoretical basis

There are many proposed concepts of supply chain such as Lambert et al. (1998), Mentzer et al. (2001) and Chopra et al. (2015). According to Chopra, the supply chain includes all stages directly or indirectly involved in meeting customer requirements. Chain members include not only manufacturing, supply, and distribution companies, but also transportation companies, warehouses, retailers, and their customers (Chopra et al., 2015). So, supply chain is a very broad concept and includes many relationships between parties. Existing in the supply chain are three flows including the flow of materials, goods, money and information to meet customer requirements. In a globalized context, the flow of goods also takes place in a very wide range. Nowadays, the supply chain is the global supply chain. The flow of goods from the producer to the buyer in another country is the export of goods.

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According to Clause 1, Article 28 of the Vietnam Commercial Law 2005, export of goods means that goods are brought out of the territory of Vietnam or brought into a special area located in the territory of Vietnam, which is considered a customs area. separately in accordance with the law. The main factors affecting the coffee export performance of each country include two main groups of factors. First, the group of factors affecting the exporting country itself includes: Specific characteristics of coffee in each country; Government policies; Economic - political - social environment; Factors related to science and technology applied in farming and processing; Human advantage. Second, factors from the importing country also have a significant impact on export activities: Coffee consumption demand; Policy of importing countries for coffee products; Consumption trends of coffee products in the importing country and competitors.

From the perspective of supply chain management, this flow is considered from the beginning of the supply of raw materials until the goods are delivered to the customer and it will include import and export activities. The supply chain management needs to pay attention to planning activities, upstream supply chain activities in the supply of production inputs - supply management, production and processing activities - operation management, operations. Goods distribution activities include transportation and sales activities (Hugos, 2016).

Supply chain management is always a top concern for managers, especially in the era of Technology 4.0. The emergence of new digital technologies makes supply chain management much more efficient. Supply chain digitization is gradually becoming a trend and increasingly moving towards a number of smarter models such as: IoT (Internet of Things), AI (Artificial Intelligence), Blockchain, MC (Machine learning), SCDT (Supply chain digital twin), Artificial Neural Network (ANN),AI is defined as the ability of machines to communicate and take on behaviors peculiar to humans; as a result, this technology is particularly suited to solving problems that require a high degree of accuracy and speed (Dirican, 2015).

According to Ben-Daya et al. (2019), Internet of Things is a network of physical objects that are digitally connected to sense, monitor and interact within a company and between the company and its supply chain enabling agility, visibility, tracking and information sharing to facilitate timely planning, control and coordination of the supply chain processes. It can be said that the digital supply chain is greatly influenced by IoT. Gupta et al. identifies four key issues: IoT enables improved supply chain reliability through real-time data, information sharing, and object visibility, helping to reduce operating costs incurred in supply chain operations, enabling more efficient resource management by tracking real-time data exchanges, and increasing supply chain flexibility by facilitating information flow (Gupta et al., 2020).

To reach the level of complete supply chain digitization, Machine Learning techniques are crucial. The supply chain environment is particularly well suited to the use of these techniques as it is characterized by large amounts of data that can be read and processed to automate and simplify processes as well as reduce costs. costs and make predictions for the future (Mohamed-Iliasse M et al., 2020).

For supply chain operations, blockchain brings a lot of benefits, especially in product traceability - one of the top concerns. Blockchain has the potential to provide transparency and efficient data sharing among supply chain actors, and the ability to mitigate risk and uncertainty has been identified (Wamba and Queiroz, 2020). In particular, this technology allows product tracking throughout the entire supply chain, preventing the risk of fraud, production of counterfeit and poor quality goods. In addition, using blockchain, customers can verify the origin of ingredients or raw materials and track the entire implementation route of the finished product (Biswas et al., 2017; Durach et al., 2021).

In order for a supply chain to operate smoothly and effectively, the capacity of the chain must also be good. The capacity of a supply chain is the ability to provide products and services to meet customer needs of the whole chain. This has a direct impact on the survival of an entire supply chain.

2.2. Related studies

In Vietnam, there have been many studies on coffee export activities to the European market like: (Ministry of Industry and Trade, 2020), (Nguyen Thi Thu Hien, 2021), ... which have shown the whole picture of this industry. However, the above studies only analyze the approach from the perspective of exporting enterprises and the update time to 2021. Therefore, the research gap allows the author to conduct research approaching from the perspective of supply chain management to consider the coffee supply activities of our country in the period of 2019-2023.

3. The current situation of Vietnam's coffee supply to the EU market in the period of 2019 - 2023

3.1. The general picture of Vietnam's coffee supply activities to the EU market in the period of 2019-2023

Table 1: Vietnam's coffee exports to the EU in the period of 2019 -2023

Viet Nam's exports to Central and Eastern Europe (CEE)					Viet Nam's exports to world				
Value in 2019	Value in 2020	Value in 2021	Value in 2022	Value in 2023	Value in 2019	Value in 2020	Value in 2021	Value in 2022	Value in 2023
34047	38753	34455	49465	55260	2135113	1886972	2060092	2822756	2977955

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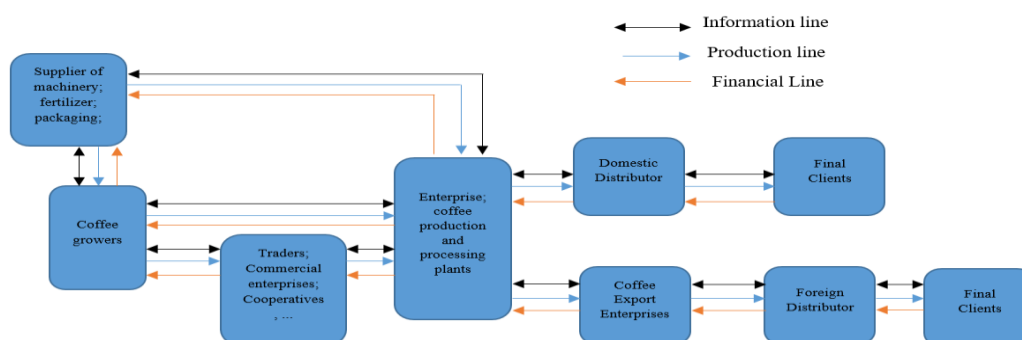
546	480	487	234	407		25107	27635	30709	31731	59234
214	28	29	6	15		48091	56582	60788	93736	139942
56	24	45	10	0		9967	5146	3375	3127	4703
0	0	0	1	0		542	271	543	685	2041

Source: Trademap, 2025

In the period, Vietnam's coffee exports to the EU tend to decrease sharply. On average, each year our country exports more than 607 thousand tons of coffee, worth over 1.4 billion USD. On average, coffee output to the EU decreased by about 13.5%, but the value only decreased by about 11%. This shows that the value of coffee in our country is trending up and the price does not have a great influence on the purchasing decisions of European businesses. They put product quality first. There are many reasons for the change in output and value such as the impact of the Covid 19 epidemic; the replanting scheme causes a temporary decrease in the area of coffee trees for harvest; Vietnam's coffee quality is not high and uneven due to limitations in the cultivation and production process; the structure of our country's coffee products is not diversified; does not meet the needs of businesses in the EU.

The network of participants in the Vietnamese coffee supply chain is quite diverse: suppliers include machinery, fertilizers, packaging, and coffee farmers provide coffee beans. (Some coffee production and processing enterprises in Vietnam now also import raw coffee from many countries, including Brazil). As for distribution channels, currently coffee businesses in Vietnam use both direct and indirect distribution channels; modern and traditional distribution channels. However, to penetrate foreign markets to achieve efficiency and allocate resources appropriately, businesses should use indirect distribution channels.

Figure 1: Vietnam coffee supply chain network

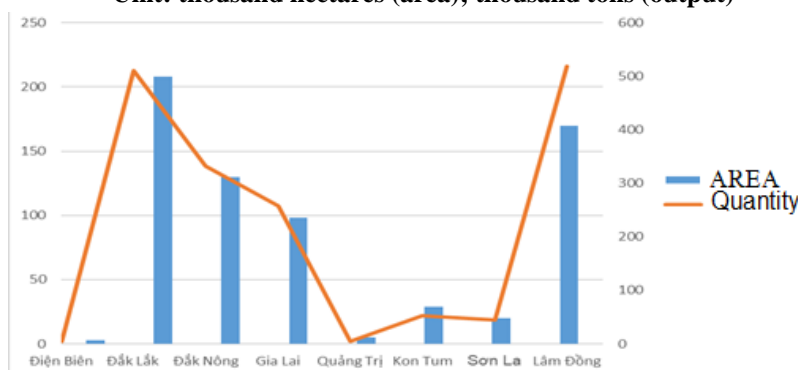


Source: Synthesis

According to the data of the General Statistics Office of Vietnam (2022), coffee is grown in 20 provinces in several regions such as the Northwest with the focus on Dien Bien and Son La; provinces in the Central region: Khe Sanh (Quang Tri), Phu Quy (Nghe An) and the Central Highlands. In which, the Central Highlands is the area with the largest planting area and output in the country. In 2021, 3/5 provinces in the Central Highlands have a coffee area of over 100.000 hectares, especially Dak Lak province with a cultivation area of more than 200.000 hectares. In 2021, the coffee output of these provinces will mainly reach over 200.000 tons. The quality of coffee in the Central Highlands is also the best in Vietnam.

Figure 2: Coffee area and production of some provinces in Vietnam in 2021

Unit: thousand hectares (area); thousand tons (output)

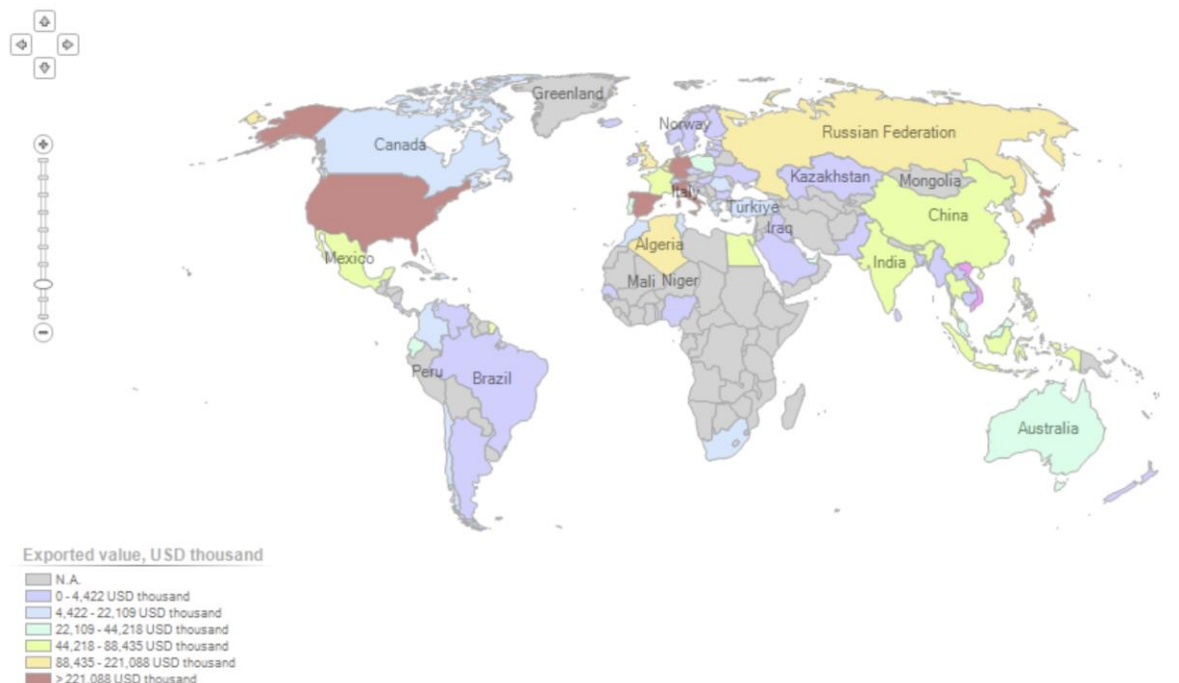


Source: Compiled from the General Statistics Office and the provincial Departments of Agriculture and Rural Development

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In the current period, with the positive effects from the EVFTA, reducing the negative impacts from the Covid-19 pandemic, in just 6 months, the output to the EU has reached 75% of the total output of last year, equivalent to about 83% of total export value in 2021. This is a good foundation for the country's coffee industry towards the goal of export value of the whole industry reaching 4 billion USD by the end of the year. Some major import markets such as Germany, Belgium, Spain, Italy.... In which, Germany is the largest market with an average import volume of more than 22 thousand tons from Vietnam, equivalent to nearly 400 million USD/year, up 13.9% in 2022. Next are Italy and Spain with import volume reaching over 12 thousand tons. Belgium is a new market for Vietnam, but import volume will increase sharply in 2022 when in the first 6 months of the year, output has increased by about 150% compared to the whole year of 2021.

Diagram 1: List of importing markets for coffee exported by Viet Nam in 2023



Source: Trademap, 2025

Table 2: Coffee output and import value of the three largest coffee importing countries in Vietnam in the period of 2018 – 2023

Importers	Exported value in 2019	Exported value in 2020	Exported value in 2021	Exported value in 2022	Exported value in 2023
World	2218821	1976606	2155508	2952035	3183873
Germany	350085	329423	399454	459404	442178
Italy	220286	219648	221129	292381	320758
United States of America	228020	227702	239366	272169	266324

Source: Trademap, 2025

Raw Robusta coffee is the main product of our country's coffee when exported to the EU market. HS code.090111 is the most exported type, followed by HS.090112. Although Code 090112 is only second in turnover, it is the product with the best market share in the EU. In recent years, when the market demand for processed coffee products and high-quality coffee, specialty coffee,... has been increasing, our country has also begun to focus on promoting the development of these products. The three largest markets of countries importing coffee from Vietnam include Germany, Italy and the US. Although our country's quantity of these products exported to the EU still accounts for a low proportion, it is gradually being changed in a positive direction. The quality of Vietnamese coffee is gradually improving to meet the needs of the EU market; the product structure is also more diversified, gradually promoting the export of deep-processed coffee, so the price is raised; greater return value.

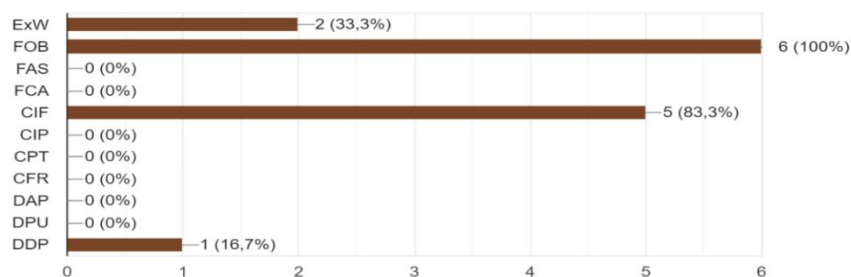
To further clarify the factors affecting the current coffee supply in Vietnam. The study conducted a survey for Vietnamese coffee exporters. According to the survey results, the main incoterm includes: Free on board (FOB); ExWork (ExW); Cost Insurance and Freight (CIF); Delivered Duty Paid (DDP).

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Figure 3: International trade terms used by Vietnamese enterprises

9. Các điều kiện thương mại quốc tế (Incoterms 2020, ICC ban hành) mà Quý Doanh nghiệp đã sử dụng khi xuất khẩu cà phê sang thị trường Châu Âu là:

6 câu trả lời



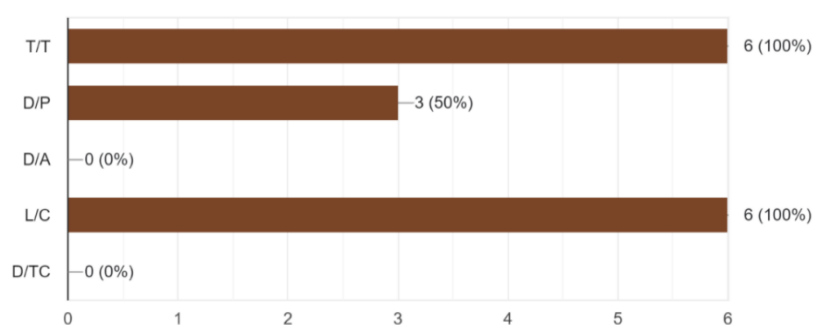
Source: Survey results

In collecting money from buyers, the most commonly used payment terms are T/T (Telegraphic Transfer) ; L/C (Letter of Credit) and D/P (Documents Against Payment)

Figure 4: Payment terms used by Vietnamese coffee exporters

18. Phương thức thanh toán quốc tế mà quý doanh nghiệp sử dụng khi xuất khẩu cà phê sang Châu Âu là gì?

6 câu trả lời



Source: Survey results

In general, the main factors that directly affect our country's coffee exports to the EU include:

Characteristics of Vietnamese coffee: The main type of coffee exported to the EU is raw Robusta coffee, so its value is not high. Besides, the price of coffee in our country

is much lower than in other countries. This is not only an advantage but also a challenge for the industry because the EU market is more concerned about quality than price.

Factors related to transportation: Sea freight costs will increase in the period of 2020-2021; Congestion, difficulty in renting space on ships makes the transit time extend up to about 30-60 days, while on average it takes about 25 days if the ship goes through the Suez Canal or 34 days if the ship goes through the Suez Canal. through the Cape of Good Hope. This leads to failure to meet customer requirements in the EU for speed and flexibility.

Technological factors, science and technology applied in coffee farming and processing activities in Vietnam: Modern science and technology, high technology has not been applied much in coffee farming and processing in Vietnam. Therefore, our country mainly exports raw, unprocessed coffee to the EU of poor quality, violating regulations, so many shipments are returned. However, many businesses are also beginning to realize the importance, so the application of science and technology is gradually developed to change the structure of coffee products and improve the level of customer satisfaction.

The level of recognition of Vietnamese coffee in the European market: Vietnamese coffee accounts for a high proportion in the EU market, but lacks big brand names, so the level of recognition is limited. Vietnam mainly exports raw coffee so it is often not known to consumers. Our country's deep-processed products are exported less, mainly under the names of FDI enterprises, so the level of recognition is not high.

Demand of EU market: According to USDA forecast, EU coffee imports in the 2022-2023 crop year will increase to 46 million bags and account for 40% of the world's imported green coffee. Leading suppliers include: Brazil, Vietnam, Uganda and Honduras. Within the EU, there are a number of strong exporters of coffee in this region, such as Germany and Italy. Meanwhile, these are also two of the countries that import the most coffee from Vietnam. This clearly shows Vietnam's limitation in exporting deep-processed coffee, mostly raw coffee to the EU. For Brazil, there have been breakthroughs in coffee export turnover to the EU with

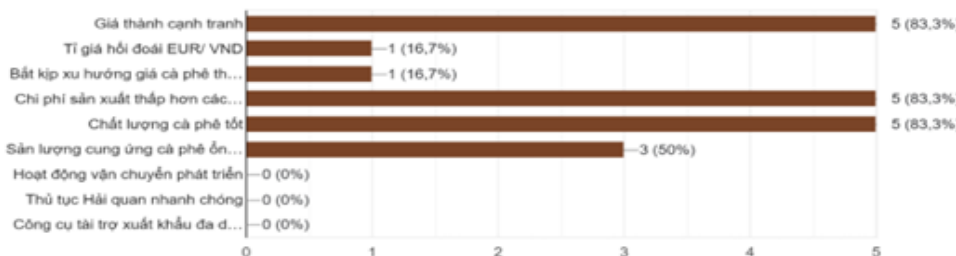
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an increase of nearly three times compared to 2019 and double that of Vietnam. Thus, the EU is still an extremely attractive and potential market. However, high-quality processed Vietnamese coffee products are something that Vietnamese businesses need to invest seriously to continue to maintain and dominate the EU market.

3.2. Assessing Vietnam's coffee supply capacity to the EU market

Every year, the amount of coffee our country produces and exports to the world market is very large. This is a great advantage of Vietnamese enterprises when exporting coffee to the EU. Besides, the number of enterprises participating in the coffee supply chain in our country is also very large and is undergoing positive changes. Through this, it can be seen that Vietnam's coffee supply capacity is large but has not been fully exploited, so there is a lot of potential for further development in the coming years.

Figure 5: Advantages of supplying Vietnamese coffee to the EU



Source: Survey results

The survey results show that, in the process of exporting Vietnamese coffee to the EU, businesses have many advantages such as: low production costs making prices competitive and gradually catching up with world trends; Coffee quality is gradually improving, coffee supply is stable... These advantages will help Vietnamese businesses to be more stable while working with partners in the EU market.

Besides the above advantages, our country's coffee industry also faces many limitations in many aspects as follows:

- Restrictions on farming:

Firstly, the area of old coffee occupies from 140 to 160 thousand hectares, which needs to be planned, accelerated replanting, grafting improvement. The area of new varieties of coffee only accounts for about 10%, so the yield is low, the quality is poor, and it is not uniform between the regions. The scale of coffee production in our country is mainly household, small and scattered production (of which 63% is under 1 hectare/household), so it is very difficult to access capital, technical progress and new farming methods. In addition, some gardeners tend to pick green coffee, which cannot yet be harvested; Manufacturing enterprises also mainly run after quantity, not paying attention to quality. This leads to uneven quality across regions, making it difficult for exporters to negotiate with partners, reducing the credibility of Vietnamese enterprises.

Second, the infrastructure is still weak. The system of drying yards is small, not yet ensuring food safety and hygiene, mainly drying on the ground floor, with many impurities that make the quality unsatisfactory. The storage system is not equipped with equipment to preserve coffee in the long term. The reason is due to lack of investment capital, people and businesses want to sell quickly, so they do not focus on storage.

Third, the application of science - technology in farming and production is still limited; lack of research on preservation and processing processes and production and business organization. Although some places have modernized the farming and coffee production processes, most production households and businesses in Vietnam are still limited in many aspects, lack capital for investment, so they have not widely applied this science. technical study. Lack of modernity in farming and production leads to the traceability of coffee in our country is not good to protect the interests of coffee growers. But this is a very important issue in exporting coffee.

- Restrictions on production - business:

Firstly, the export volume is large but the value is not high: Due to the uneven quality of coffee and violation of technical requirements, the price is often forced, so although Vietnam's coffee output accounts for 10% the world market for green coffee, but the value only accounts for 2%. Compared with other coffee exporting countries in the world, our country's coffee price is considered to be the lowest in the world. The structure of products exported to the EU is mainly raw Robusta coffee with low value. Although it has begun to export high-quality, deep-processed coffee, the output is low, so the value has not changed much.

Second, the supply chain link is loose, the risk of disruption due to the Covid-19 epidemic is high: Smallholder farming households have limited knowledge of standards and regulations when exporting coffee to the EU, so it is difficult to output search for products. The link between farmers and social organizations is not tight and there are many obstacles. The number of enterprises associated

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with organizations as well as households to consume products is also not much. Unable to find output, people have to sell raw coffee to traders, so the price is not high and the quality is not controlled, so the supply is not effective.

Third, our country's coffee exports still depend on a number of large markets with high consumption such as Germany, Italy, Spain, ... The value of Vietnam's coffee exports to these countries accounts for about 40-50% of coffee export turnover. Therefore, many businesses export there, leading to dependence. When demand decreases, Vietnam's coffee exports will be strongly affected, the risk will be higher.

Fourth, the lack of big brand names. Due to limited resources, manufacturing enterprises in Vietnam have not been able to invest in modern machinery and lines to serve standard coffee production, so deep-processed coffee exporters mainly are FDI enterprises. In addition, Vietnamese enterprises have not paid much attention to the brand issue, so they gradually lose market share in the EU market.

4. CONCLUSION

With the advantage of being one of the leading coffee exporting countries in the world, our country's market share of Robusta coffee accounts for nearly 40% of the total market share of this type of coffee in the global market. The EU market is one of the largest in the world and is likely to increase in the future. Therefore, our country's coffee industry needs to develop even more to meet the needs of the market.

In order to promote the export of our country's coffee products to the EU market in the future, the Party and State have given some orientations as follows: Replanting areas will be implemented in many coffee growing areas across the country. The implementation area in 5 provinces of the Central Highlands will reach about 91 thousand ha (replanting 64 thousand ha, grafting and renovating 27 thousand ha); other areas are expected to reach about 16000 ha (11000 ha of replanting and 5000 ha of grafting). Orientation on processing coffee products: focusing on investment in upgrading and building new processing facilities for export green coffee. Installing modern, synchronous and technologically advanced lines and equipment with a high degree of automation. Encouraging domestic and foreign investors to build coffee processing plants with modern technology and equipment, diversified products of high quality, ensuring food safety and meeting customer tastes. About products and product structure: focus on the production of Voi coffee. Improve the quality of products from cultivation, promote the production of high quality coffee, specialty products, ... increase the output of deep-processed coffee. Besides, it is necessary to continue to expand cooperation and promote linkages between domestic and foreign enterprises and organizations in order to expand markets and improve competitiveness; encourage organizations, enterprises and people to participate in training and sustainable human resource development to meet the needs of farming and production. Focus on young human resources to modernize the process in our coffee supply activities. The most important thing is to build a system of area codes for coffee growing to serve the work of traceability.

Growers need to pay attention in the selection of plant varieties, soil improvement and innovation in farming methods; actively participate in the replanting project; proactively eliminate areas that do not meet standards. In particular, it is necessary to change the habit of using chemical pesticides. These will help improve the quality of coffee right from the garden, providing high quality coffee beans to the production plants. Besides, people also need to apply new science and technology to farming activities such as using information recording software for traceability. or use automatic irrigation, etc. to solve the traceability problem to help consumers grasp the supply in Vietnam. or use automatic irrigation, etc. to solve the traceability problem to help consumers grasp the supply in Vietnam. Coffee growers also need to improve their knowledge of foreign market requirements and especially comply with the regulations of the parties in the matter of product traceability.

Coffee producers and exporters need to strengthen links with people, associations and related organizations to improve the efficiency of their supply chain operations. However, businesses also need to step up production innovation and modernize production lines in order to offer more products with higher quality. Moreover, businesses need to invest more in employees by opening courses, sending employees to study, improving knowledge and skills to develop more.

On the State side, it is necessary to improve the legal system, avoid overlapping regulations and documents; simplify administrative procedures for businesses. Encourage and support businesses in all aspects such as funding, providing information about the EU market and coffee industry.

Thus, covering the situation of Vietnam's coffee supply capacity in the period of 2018 - the first 6 months of 2022 will help open up future studies for the author to learn more about customers and development of the industry in the near future.

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