

# **The Exportation of Vietnamese Lychee to the EU Market under EVFTA: A SWOT Analysis and Policy Recommendations**

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## **Abstract**

*The goal of this study is to investigate the performance of Vietnamese lychee export to EU's market and to identify the main trends in the region's lychee market. Based on this, a SWOT analysis for Vietnamese lychee exportation is conducted. Market Access Map provided by ITC and Access2markets developed by the European Commission is the essential data source for a comprehensive evaluation of the inherent strengths and weaknesses of Vietnamese lychee exports to the EU. Our investigation could help the Vietnamese governments and entrepreneurs to get valuable insights into how to take advantage of trade prospects between Vietnam and the EU. A significant contribution of our study is to provide policy recommendations for the Vietnamese government and businesses to promote lychee exportation to the EU in the years to come.*

**Keywords:** Lychee, Exportation, EU, EVFTA, SWOT, Vietnam

## Introduction

European Union (EU) -Vietnam Free Trade Agreement (EVFTA) was officially signed in June 2019 and came into effect in August 2020. It is envisaged that this agreement would facilitate the flow of trade and services between Vietnam and the EU, notably agricultural products that are heavily reliant on the Chinese market and do not yet meet the stringent and comprehensive global requirements (Le and Lam, 2021). The EU is the fourth largest market for agricultural exports from Vietnam (Anh Tuyet, 2021). Despite its initial modest achievements in the journey of exporting and conquering the EU market, Vietnamese lychees promise to be a new source of profit and a bright spot for high-value agricultural product exporting with its name. In particular, Vietnamese lychee is the first agricultural commodity to be exported to Europe under the EVFTA, which debuted formally in the third quarter of 2020. Lychee is a pioneering product exporting to a high-standard market such as the EU, which is a test of admission for agricultural goods requiring considerably complicated preservation and processing technologies.

It is noteworthy that most recent studies focus on Vietnam's exportation of the main fruit such as rice, coffee, and fisheries, which account for a considerable proportion of the total export volume. Tran, D.T *et al.* (2021) recently examined the influence of EVFTA on fruit trade flows between Vietnam and the EU. This study used the WITS-SMART model and predicted that the export volume of fruits from Vietnam to the EU would grow by USD 8.857 billion by 2024, based on data on export turnover and tariff reductions and other variables. Among that, cashew nuts, coconut, and nuts (HS code 0801) contribute to more than 90% of total fruit exports from Vietnam to the EU. Other HS code groups such as citrus goods (code HS 0805), especially fruits to which lychee belongs (code 0810), are expected to experience a considerable increase with the added export value of USD 2.825 million and USD 3.436 million, respectively. Sharing the same viewpoint, Ha (2016), Vo *et al.* (2018), and Pham (2019) deployed the SMART model to investigate the effects of EVFTA on Vietnam's various export areas, such as the wood sector and textile sector, whereas Pham (2019) examines the trade creation and trade diversion implications for Vietnamese seafood. According to their findings, EVFTA would be expected to bring many benefits to Vietnam's exports. However, there is a need to have more vigorous studies on the analysis of the market, rules of origin, and technical requirements to enhance the storage and process of lychee in accordance with European standards.

This study aims to examine the performance of Vietnamese lychee export to the EU and to identify certain trends in the EU's lychee market. Based on this, a SWOT analysis for Vietnamese lychee exportation under EVFTA will be provided, thereby, making recommendations for the government and businesses to promote the exportation of lychee to the EU. A new contribution of this study is that it focuses on a specific topic, lychee exportation, and puts it under the EVFTA's opportunities and import requirements. For this analysis, we use data from the statistical yearbooks

of the General Department of Customs, the General Statistics Office, and the Ministry of Agriculture and Rural Development, and from the EU Statistical Office and the European Council on Foreign Affairs. Specifically, Market Access and Map Access2markets are also used for cross-checking the completeness and consistency of the data related to tariff-rate comparison, the EU's import volume and its measures. In this research, because lychee is not statistically classified as a single code but combined into the fruit group (HS 081090), the authors will check and narrow down the gap between the Vietnam government and the EU authorities to have consistent data about lychee exported.

The remainders of our paper are as follows. Section 2 addresses key theoretical and legal issues of lychee's exportation in comparison to the provisions of EVFTA. Section 3 focuses on analyzing the lychee production and consumption process. Next, section 4 presents the performance of EU's lychee market and Vietnamese lychee exportation to EU. Based on that, a SWOT analysis of this exportation under EVFTA will be provided in Section 5. The last section concludes the paper and provides main policy recommendations to enhance the sustainability of Vietnam's lychee exportation to the EU in the future.

## **1. Key theoretical and legal issues of the study**

### **1.1 Key factors affecting a fruit/lychee exploration**

The European Union is a large and promising market for Vietnamese agricultural products to penetrate and develop. Lychee is regarded as a pioneering product that leads the way, an entrance test for agricultural products requiring considerably complicated preservation and processing methods given by the EU market. In fact, a wide range of factors influences lychee exports to EU. Firstly, European consumers are paying increasingly growing interested in natural and naturally-friendly products, which might open up a wide market for Vietnamese lychee exports. Indeed, Vietnam's lychee exports to EU are mainly fresh, which is contrary to the trend of many other countries focusing mostly processed fruits (European Commission, 2020). However, when taking these advantages, Vietnam's lychee exportation needs to comply strongly with EU regulations to ensure that food in the marketplace is safe to consume and does not contain contaminants at levels that pose a threat to public health. Aside from this requirement, the EU market has also imposed a slew of technological requirements on the harvesting, storage, processing, and transportation of lychee fruit. In addition, one of the significant factors affecting Vietnam's lychee exports to the EU market is a growing number of rivals from Madagascar (European Commission, 2020). Notably, this market accounts for only one-fifth of the country's total fresh lychee volume (Pullman, 2016). Consequently, when the Union increases its demands for lychee, Madagascar can immediately fill in this extra amount.

### 1.2 Key provisions of Vietnam – EU Free Trade Agreement

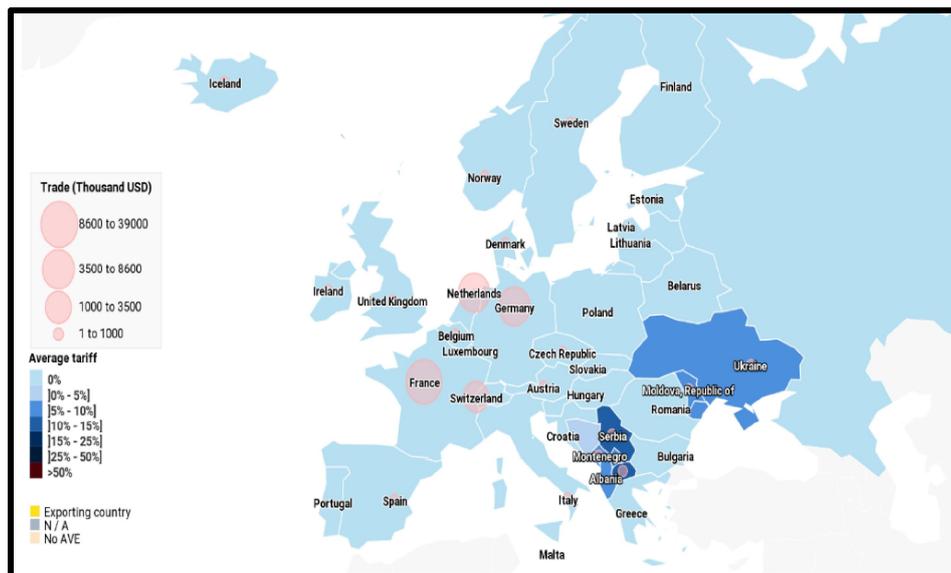
The EVFTA is a new-generation FTA between Vietnam and 27 member states of the EU. Vietnam is the second partner after Singapore in ASEAN and the fourth in Asia to sign an FTA with the European Union. The Agreement has 17 chapters, two protocols, and some understanding.

- *Tariff measures*

Concerning lychee exports, Trade-in goods is a vital commitment that includes both tariff and non-tariff measures (Sanitary and phytosanitary measures (SPS), Technical barriers to trade (TBT), and Rule of Origin (RO)). For details, 85.6% of tariff lines, or 70% of Vietnam's export turnover to the EU, will see a reduction in levies as soon as the EVFTA takes effect. The EU commits to removing 99.2% of tariff lines or 99.7% of Vietnamese export turnover to the EU within seven years of the EVFTA's implementation. Besides, the EU agrees to open the remaining 0,3% of export turnover to Vietnam under tariff quotas, which will be subject to zero-percent import duty (VCCI, 2017). Lychee belongs to the list of goods exempt from customs duties from the date of entry into force of this Agreement. Therefore, Vietnam has become the first lychee exporter in Asia to gain a free tariff rate in the EU market. Thailand, the top five largest lychee exporters in the world, is still in negotiations. This tariff rate is significantly lower than the MFN tariff (5,5%) or GSP tariff (5,3%) that the EU applies to countries with whom it does not have FTAs.

It is important to note that all EU members reduce the duty on Vietnamese lychee exports to zero percent, which is equal to other high-standard markets such as Canada, Australia, Japan, and the UK. Some non-EU countries, such as Russia and Belarus, also have a zero-percent tariff under provisions of the Vietnam - Eurasian Economic Union FTA (2015). Lychees export to countries that do not have FTAs with Vietnam, nevertheless, are still subject to the relatively high tariff, for example, 10% (Ukraine) and 15% (Serbia) (Figure 1).

**Figure 1: Tariffs applied by European countries on product 081090 from Vietnam**



Source: ITC (2020).

- *Non-tariff measures*

Non-tariff measures, in contrast to standard customs duties, are official policy actions on export and import that can alter international commerce in products by affecting volumes exchanged, prices, or both. These include legally binding requirements, norms, or regulations imposed by the government of the exporting, importing, or transiting nation (UNCTAD, 2019). According to the International Trade Center (ITC), there are two kinds of NTMs: technical and non-technical. In EVFTA, there are also a number of specific provisions for both technical ones (technical barriers to trade (Chapter 5) and non-technical ones (government procurement (Chapter 9) and intellectual property (Chapter 12)). This study will only look at the most relevant fields, such as SPS, TBT, and RO.

***Sanitary and phytosanitary measures (SPS)***

According to Annex A of the SPS Agreement (1987), SPS measures aim to protect life or health (whether human, animal, or plant life or health) from specific threats. The WTO allows these measures if they are founded on research, are non-discriminatory, and do not limit trade more than is necessary. If international norms and guidelines exist, the WTO encourages members to implement them.

Approximately 98% of SPS measures are standardized and managed at the Union level, whereas just 2% of additional measures are implemented by individual EU member states (USDA, 2019). The EU legislation is based on international standards and guidelines and relates to the WTO's SPS Agreement (WTO, 2018). Besides, the EU is a member of the Codex Alimentarius Commission (Codex), the World Organization for Animal Health, and IPPC contracting parties. Nonetheless, the EU often establishes stricter standards than those advocated by the aforementioned international organizations, and it is also more stringent in terms of food safety laws than those of other countries. The following factors are making the EU's SPS standards one of the most challenging obstacles for international fruit exporters, particularly those from developing countries (VCCI, 2019), namely: (i) Hygienic practices during production related to SPS conditions; (ii) Regulations on pesticide residues; (iii) Regulations on contaminants; (iv) Plant health controls; and (v) Conformity assessment. The following table outlines the detailed contents of those regulations applying to Vietnamese lychee exports to the EU.

According to WTO (1998), TBT refers to required technical restrictions and voluntary standards that guide certain aspects of a product, such as its design, packing, labelling, etc. Like SPS, TBT measures are permitted by the WTO as long as these regulations are administered without discrimination, do not impose unnecessary trade barriers, and correspond to international standards. For fruit products, the labelling and packaging rules are crucial.

Most EU regulations related to fruit products focus on sanitary and phytosanitary issues and food safety. However, some technical constraints and mandatory criteria can affect

Vietnamese lychees' entry into the EU market. Among TBT measures, the labelling rule is the most important. Regulation (EU) No. 1169/2011 outlines the broad principles, regulations, and obligations that regulate food information, including food labelling. Toxic ink or adhesive cannot use on labels.

**Table 1: Non-tariff measures under EVFTA**

| No. | SPS conditions                       | Detailed contents applying for Vietnam's lychee exportation to the EU  |
|-----|--------------------------------------|--|
| 1   | Hygienic practices during production | GlobalGAP is the prevalent certification for imported fresh fruits in the EU market (CBI, 2021). Most lychee exportation businesses in Vietnam are still unfamiliar with GlobalGAP. Therefore, the growing area in which obtained the GlobalGAP certificate is still limited in comparison with the VietGAP area.  |
| 2   | Regulations on pesticide residues    | The EU maximum residue level (MRL) of pesticides is much more limited than in Canada, the US, and China. For example, the MRL of Pyriproxyfen applied by the EU is 0,05 mg/kg, ten times lower than Canada (0,5 mg/kg) and the US (0,3 mg/kg). The EU accepted amount of Azoxystrobin is 0,1 mg/kg, 200 times lower than others. Therefore, the EU regulatory system of MRLs is much stricter than the common standard.                  |
| 3   | Regulations on contaminants          | Lychee's exportation into the European Union (EU) must conform with EU regulations to guarantee that food in the marketplace is safe to eat and does not contain pollutants at levels that endanger human health. The accepted level of some contaminants for imported fresh fruits to the EU is 0,004 mg/kg for Aflatoxins, 0,05 mg/kg for Cadmium and 0,1 mg/kg for Lead (European Commission, 2007).                                  |
| 4   | Plant health controls                | The lychee exported to the EU must accompany the phytosanitary permit provided by the exporting country's National Plant Protection Organization. Goods and products are received a plant passport once they arrive in the EU to move among all nations in the EU. This new law increases the burden for enterprises from developing countries that lack experiments and market knowledge to fulfil at the beginning of the application. |

***Technical barriers to trade (TBT)***

In general, the EU's labelling rules are intricate and comprehensive. To avoid omitting any needed information, fruit producers must be aware of and comprehend all regulations and adhere to specific criteria regarding the structure and look of each piece of information contained. This information must be provided in the language of the EU member state where the fruit is sold. While the rules are complicated, the EU's tolerance for errors and noncompliance is limited (USDA, 2012). Consequently, labelling regulations are one of the greatest obstacles to imported fruit imports into the EU.

***Rules of origin***

Rules of origin determine whether the good qualifies for the determined tariff offered under the agreement. They are a set of criteria that must be met for a product to be considered as originating in the territory of the trade agreement (ITC, *n.d*). In EVFTA, they are mentioned in Note 4, Annex 1 of Protocol 1, in which lychee is considered as a wholly obtained product that must be “plants and vegetable products grown and harvested or gathered there” (VCCI, 2017).

**Table 2: Quote of Annex I, Protocol 1, EVFTA**

| <b>Heading</b> | <b>Description of the good</b>                          | <b>Required Working or Processing</b>   |
|----------------|---|---|
| Chapter 8      | Edible fruit and nuts; peel of citrus fruits or melons. | Manufacture in which: <ul style="list-style-type: none"> <li>▪ All the fruit, nuts and peels of citrus fruits or melons of Chapter 8 used are wholly obtained.</li> <li>▪ The weight of sugar used does not exceed 20% of the weight of the final product.</li> </ul> |

*Source: VCCI (2017).*

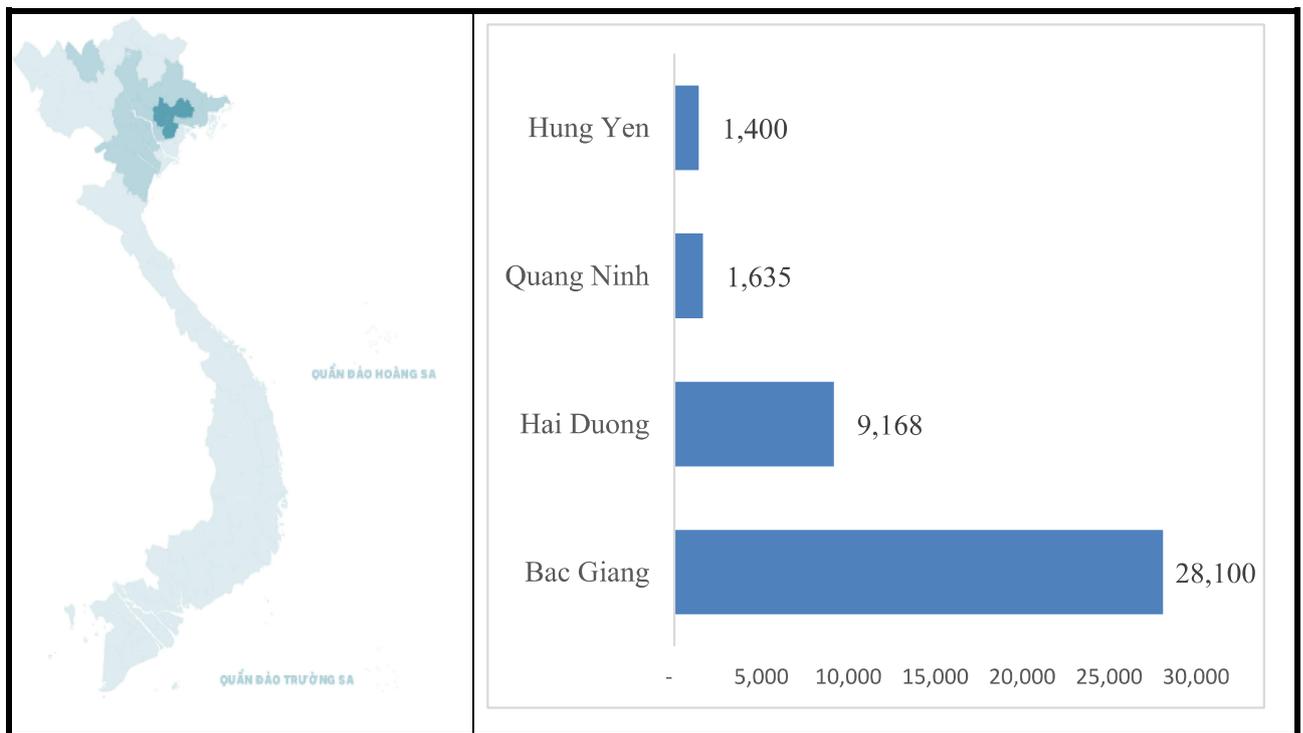
Additionally, the EVFTA does not permit outward processing, which is the temporary removal of an item from FTA territory for processing in a third nation. Therefore, the processing shall take place in Vietnam. Up to the present, Vietnam enterprises and local authorities have been able to manage all these steps with modern processed and preserved technologies imported from Japan and the EU.

**2. An overview of lychee production and consumption****2.1. Lychee production**

Originating in sub-tropical China, northern Vietnam, and the Malay Peninsula, where it has been cultivated for over 3,500 years, lychee has become widely distributed in the tropics and subtropics (Knight, 1980). Lychees have various cultivars. There are 26 main and 40 minor ones

only in Guangdong (China). However, all fresh lychee cultivars are categorized into the harmonized system code (HS code 081090), which also includes other tropical fruits such as passion fruit, tamarinds, jackfruit, and pitahaya. In Vietnam, *Vai Thieu* is the most famous lychee cultivar, which grows mainly in Luc Ngan (Bac Giang) and Thanh Ha (Hai Duong) (Figure 1). In 2021, the country's output reached around 340,000 tons. The amount of lychee production in Bac Giang in 2021 reached 215,852 tons, an increase of 29.3% from the previous year and experienced the third consecutive year of growth. The weather has the greatest influence on lychee production and its quality. In 2017, bad weather conditions caused the output to plummet to 91,500 tons, which is only two-thirds of the quantity produced in 2016 (Figure 2).

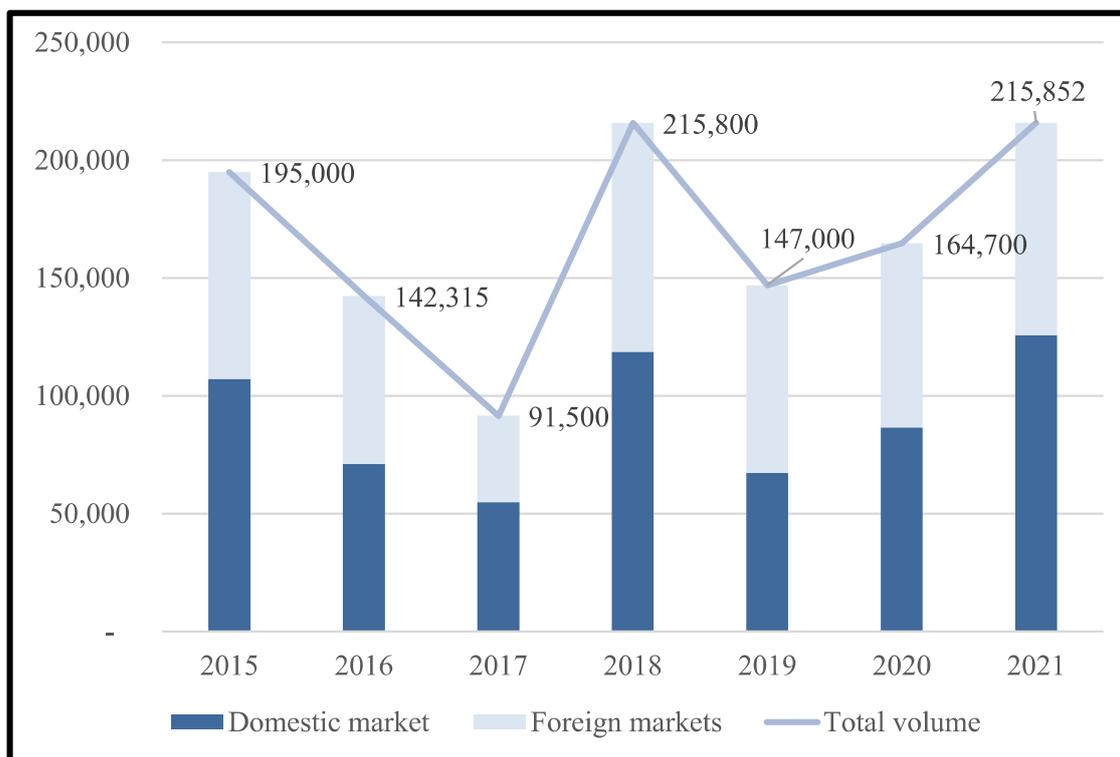
**Figure 2: Areas of growing lychee by province, 2021, hectare**



Source: Compilation from General of Vietnam in Sydney (2015) and TTXVN (2020).

Vietnam's lychee-growing regions are geographically close to those in China, such as Guangdong province. However, *Vai Thieu* and other Chinese cultivars have distinct flavors. Chinese lychees are extremely sweet, which may be too much for certain customers, particularly those on a balanced diet. The lychee from Vietnam is sweetish and refreshing. Therefore, it is appropriate for large groups of consumers.

**Figure 3: Volume of lychee production in Bac Giang (tons)**



*Source:* Authors’ compilations from Dau Tu Online (2015, 2016), Rural Economic Magazine (2017), Bac Giang Portal (2018, 2019, 2020), Bac Giang Department of Information and Communication (2021).

**2.2 Lychee consumption**

The local market accounts for 50% - 60% of total lychee consumption volume. Hanoi, Hai Phong, and Ho Chi Minh City are important domestic markets for consumption. The selling price for lychee from Bac Giang ranges from 20,000 – 30,000 VND/kg for the high-quality lychees and 17,000 – 19,000 VND/kg for the normal-quality ones.

The export market share of Vietnam’s lychee is extremely unbalanced, which China’s proportion accounting for 91% of the export volume (Ngoc Linh, 2018). China is also a precarious market because the time beginning of the lychee harvest in Vietnam is the end of the Chinese lychee season when the market demand starts decreasing. To reduce the dominance of the Chinese market, since 2012, Vietnam has begun to enter new markets, such as the US (2014), Australia (2015), Japan (2019), Singapore, and the EU (2020).

**2.3 Preservation technology**

After harvesting, lychee fruit can rapidly lose its commercial value due to pericarp browning and aril decay (Ray, 1998). The Centre for the Promotion of Imports from developing countries (CBI) suggests fumigating lychee with sulfur dioxide to prevent it from deteriorating after picking (CBI, 2019). According to Phan Huy and Quynh Nga (2021), lychee fruit is fumigated for five

minutes to bleach the fruit peel and disinfest insects and one hour after sulfur dioxide gassing, the lychee can aerate. This fruit's peel is dipped in a liquid to restore its color.

### 3. Performance of EU's lychee market and Vietnamese lychee exportation to EU

#### 3.1. Overview of EU's lychee market

According to CBI (2019), the annual amount of the European lychee import market is estimated to be between 20,000 and 25,000 tons. For lychee imports alone, Madagascar is the most important partner of the EU. This country exported 15.5 thousand tons of exotic fruits (mainly lychees) to the EU in 2017, meeting 62% of the region's demand. Although Vietnam only shipped a small quantity of lychee to the EU compared to its other markets for example China, Australia and Japan, it is one of the major exporters of tropical fruits with HS code 081090 (including containing fresh lychee, jackfruit, dragon fruit, passion fruit, and sapodilla) to the EU (Table 3).

**Table 3: Top 10 countries exporting product code 081090 to the EU (2020)**

| Country        | Export value<br>(thousand USD) | Export quantity<br>(tons) |
|----------------|--------------------------------|---------------------------|
| Colombia       | 42,560                         | 9,074                     |
| <b>Vietnam</b> | <b>30,097</b>                  | <b>4,565</b>              |
| Madagascar     | 29,190                         | 13,581                    |
| South Africa   | 8,894                          | 1,990                     |
| Thailand       | 5,821                          | 1,014                     |
| Malaysia       | 4,521                          | 785                       |
| Ecuador        | 4,332                          | 637                       |
| United Kingdom | 1,848                          | 495                       |
| Ghana          | 1,832                          | 678                       |
| Zimbabwe       | 1,624                          | 489                       |

*Source:* Access2Markets European Commission Data.

The value of Vietnamese exports of the fruits was USD 30 million (2020), nearly equal to that of Madagascar and more than three times that of the fourth nation, South Africa (USD 8 million). Thailand and Malaysia are two Southeast Asian countries in the top 10, along with Vietnam. However, their export value and quantity are approximately four to five times that of Vietnam. Outside of the top three, the other nations all have export values of less than USD 10 million and export volumes of less than 2000 tons. With this gap, Colombia, Vietnam, and Madagascar will continue to dominate the top three nations exporting lychee and other tropical fruits to the EU in the future.

### 3.2 Trends of lychee market in the EU

There are a number of trends in the European lychee market as followings:

Firstly, customers' demand for pure and organic products is growing. European consumers are getting increasingly fond of pure and natural products, such as organic fruits and vegetables. Organic fruits are associated with improved health and flavor, which is one of the key reasons for purchasing them. In 2019, EU customers on average spent EUR 84.2 on organic food. Germany and France are the largest organic food markets in terms of overall value, with retail values of EUR 12 and 11 billion, respectively, representing more than half of the total EU market (CBI, 2019). Bearing in mind that when buying lychees in Europe, customers prefer them to be at their peak of maturity and have a premium taste and aesthetics. This tropical fruit should possess a sweet flavor and a solid texture. Customers also tend to prefer lychees with smaller grains and pulp thicker (higher pulp-to-seed ratio) (CBI, 2021).

Secondly, E-commerce is becoming a new effective and common selling channel. 17% of the consumers in the European Union shopped online for groceries (2019), and this percentage is expected to increase due to the impact of the Covid-19 pandemic. Some websites can sell fresh/processed lychees online, such as Amazon Fresh, which recently launched in Germany, Spain and Italy. Vietnamese lychee exporters appear to adapt rapidly to this trend. In 2021, more than 3 tons of Bac Giang lychee, meeting GlobalGAP export standards, are exported by the Voso E-commerce platform to Germany. This is the first time Vietnamese agricultural products have been sold in Europe using a cross-border e-commerce platform (Phan, 2021). After ordering from Vietnam, consumers in the EU just need to wait 4 -5 days to receive fresh and high-quality lychees. However, there are still existing difficulties in transporting and preserving goods, customs clearance and especially cross-border e-commerce, which Vietnamese businesses and sellers need to learn, grasp and practice proficiently.

### 3.3 Vietnam's lychee export to the EU market

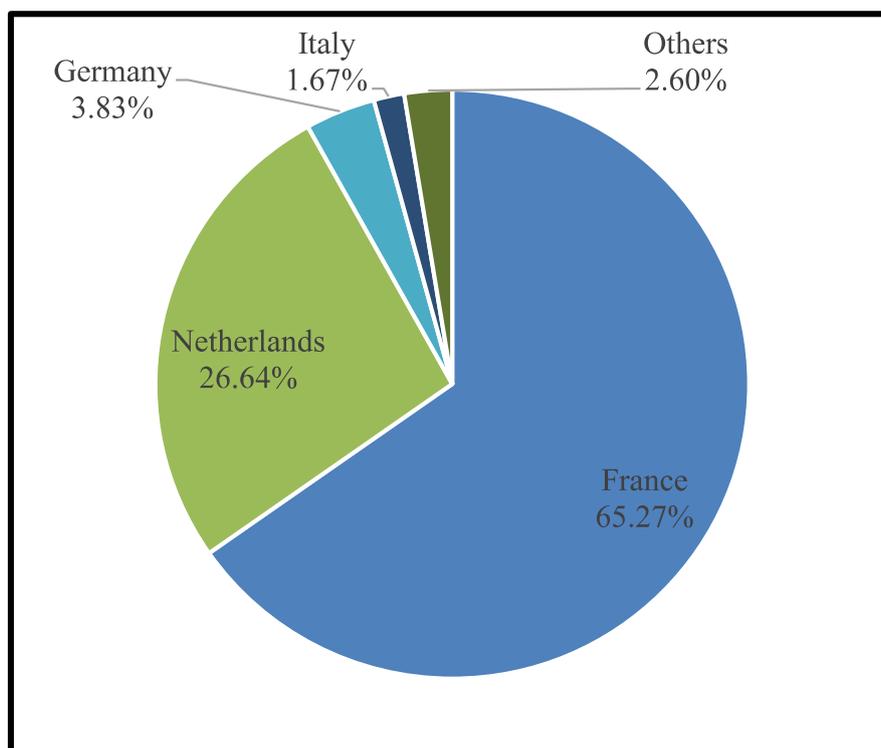
Benefiting from the increased demand for exotic fruits such as lychee, Vietnam's export value of product code 081090 to this market increased dramatically (Table 4). From 2015 to 2020, the export value of product code 081090 climbed progressively, by an average of 16.5%. Significantly, the export value increase in 2019 reached a new high of 32.69 percent, which was already excellent prior to the EVFTA. In 2020, the influence of Covid-19 reduced growth to only 2.04%. The proportion of product code 081090 in exported fruit value in 2020 is consistently greater than 3.5%, which is roughly 1% higher than the percentage between 2015 and 2018. According to the most recent report, the value of lychee exports in 2021 is predicted to be 2.4 times greater than in 2020. It also hit the biggest peak in its history, with USD 72,343.25 thousand. For the first time, lychee's export proportion of total shipped fruit surpassed 4%.

**Table 4: Export growth of product code 081090 from Vietnam to the EU**

| Year | Export value (thousand USD) | Export value growth (%) | Share in total exported fruit (%) |
|------|-----------------------------|-------------------------|-----------------------------------|
| 2015 | 13,944.64                   | 13.76                   | 2.64                              |
| 2016 | 17,100.67                   | 22.63                   | 2.58                              |
| 2017 | 19,785.62                   | 15.70                   | 2.38                              |
| 2018 | 22,229.20                   | 12.35                   | 2.86                              |
| 2019 | 29,496.94                   | 32.69                   | 3.77                              |
| 2020 | 30,097.42                   | 2.04                    | 3.56                              |
| 2021 | 72,343.25                   | 140.36                  | 4.24                              |

Source: Access2Markets European Commission Data.

**Figure 4: Market share of EU’s countries with product code 081090 imported from Vietnam (2020)**



Source: Authors’ compilation from Access2Markets.

In the EU, Vietnam mainly exports lychee and other fruits to France, Netherlands, Germany, Belgium, and Italy. Currently, France is also the largest import market of lychee and other fruits from Vietnam, accounting for 65.27% of Vietnam’s product code 81090 import turnover from the EU and 2.4 times higher than that of the second-ranked country, the Netherlands. The value of exporting lychee to France increased steadily from 2015 to 2020, whereas other markets fluctuated. After France, the Netherlands is the second biggest. In 2020, the Dutch import

value of lychee and other fruits from Vietnam accounted for 26.64% of the EU. These two countries account for 92% of the bloc's total import turnover, while the remaining countries, such as Germany, Belgium, and Italy, have relatively low growth in imports.

### **3.4 Selling price and customer segmentation**

Despite the reduction in import tariff to zero percent, the selling price for Vietnamese lychee is still relatively high in comparison to its competitors. On certain EU marketplaces, the selling price of Vietnamese lychee with proof of CO ranges from 15 to 20 EUR/kg, three times higher than the price of lychee imported from Madagascar and South Africa. The small export quantity and air cargo contribute significantly to the higher price. Therefore, lychee exported from Vietnam is targeted largely at Vietnamese diasporas in the EU members. To increase customer segmentation, Vietnam should maintain stable exported quantity growth and sign contracts to enter the EU's retail networks.

## **4. A SWOT analysis of Vietnam's lychee exportation to the EU market under EVFTA**

The previous sections have analyzed the current situation of the Vietnamese lychee exportation to the EU. This section identifies the strengths, weaknesses, opportunities and threats facing Vietnam's lychee exportation to the EU market under EVFTA.

### **4.1 Strengths**

Even though the exported volume of lychee products to the EU has been modest so far, there are some strengths of Vietnam's lychee exportation as followings. First, the most renowned lychee cultivar in Vietnam (*Vai Thieu*) has significant distinctions in flavor from other cultivars in China, Australia, Florida, Taiwan, Thailand, and Hawaii. The taste of Chinese lychee is, for example, strongly sweet, which may be too much for certain consumers, particularly those following a balanced diet. Meanwhile, Vietnamese lychee is somewhat less sweet and refreshing, making it appealing to a wide range of customers, including Europeans (Hang, 2021). Second, the Vietnamese government is strongly supporting and promoting lychee exporting in terms of proposing steps to increase collaboration among stakeholders engaged in the lychee exportation supply chain.

### **4.2 Weaknesses**

Like other sectors, the majority of lychee farmers and exporters in Vietnam are overwhelmingly small and medium-sized enterprises (SMEs). As such they, have common weaknesses and drawbacks as follows:

#### *Inadequate understanding of the EVFTA*

The majority of lychee farmers and exporters in Vietnam are dominantly SMEs and lack sufficient knowledge of international market rules, particularly EVFTA provisions. Furthermore, although information about EVFTA and NTM measures on the websites of the Ministry of

Agriculture and Rural Development and the Vietnam Sanitary and Phytosanitary Notification Authority are accessible sources, however, it is frequently not updated or not translated into Vietnamese. The workshops and seminars on relevant topics are regularly held in major cities, albeit for a small number of firms. As a result, lychee producers and exporters have extremely limited access to regulations, practical cases, and intensive training programs on EVFTA and the EU market.

#### *Difficulties in obtaining certification*

GlobalGAP is a collection of principles designed to guarantee that agricultural goods are hygienic and safe. Food safety at the primary production stage is a principal concern. Despite the necessity of this certification, the lychee growers are hesitant to apply due to its complexity and high cost, while expected efficiency can be seen only in the long term. To obtain the certificate, lychee growers have to standardize all the production stages, such as harvesting, produce handling, and traceability. These stages are materialized in: the provision of clean water to the farmers for pre-harvest hand washing, construction of latrines, picking platforms, and storage sheds (for improved traceability), and implementation of good picking and packaging practices for the transportation from the farm to processing units (Subervie and Vagneron, 2013).

As a result, GlobalGAP certification costs farmers approximately USD 3,000 to 5,000 and is valid only for a year (VCCI, 2019). The high cost of ensuring and verifying GlobalGAP standard compliance is common for farmers/growers in developing countries. This group is also the most vulnerable in the lychee supply chain. Due to the lack of financial ability, they have to rely on government support to maintain the GlobalGAP area. Lychee growers still regard the implementation of these systems as a need to meet the demands of overseas markets rather than good practices to improve the quality of their products. This is because deploying the measure necessitates an intensive and long-term investment with no immediate payoff (Pham, *et al.*, 2016).

#### *Inadequate infrastructure*

Inadequate transportation infrastructure can increase transit times and production costs and reduce product quality. As a result, it is critical to enhance the highway or railway connecting lychee growing areas to testing laboratories, lychee-processing plants, and export infrastructures like seaports and airports.

Another key element of infrastructure for fruit export to the EU market is food hygiene laboratories for evaluating/detecting pesticide residues and other contaminants in lychees. For example, Hai Duong province has four fumigation chambers in three pre-processing factories serving for exported lychee to Japan, two lychee packing facilities for export to Australia and Thailand, and ten others for export to Japan and Korea (Minh Hieu, 2021). Because the EU market is new with Vietnamese lychee exporters, there is still a shortage of specialized and qualified facilities for preservation and inspection activities of lychee quality under the Union's standard.

This drawback has dampened exporters' excitement for lychee, which requires a sophisticated preservation method.

#### *A lack of cooperation*

Another problem impeding the spread of EU laws/regulations is a lack of collaboration in the lychee export market chain. Fruit processing firms and fresh lychee exporters typically buy a large quantity of this fruit from a variety of farmers without long-term commitments or business contracts. There are also a number of intermediaries who join between lychee growers and exporters, increasing the complexity, cost, and non-transparency. The weak and unpredictable connection between lychee growers, exporters, and authorities makes it challenging for farmers to be advised and coached the latter on the standards needed to comply with EU rules and for enterprises and authorities to control the product quality efficiently.

### **4.3 Opportunities**

Despite EVFTA having no commitments about eliminating or reducing SPS/TBT measures, it promotes the favorable application, which might open the door to special treatment and technical assistance for fresh lychee from Vietnam. Article 6.15 of Chapter 6 on technical assistance states: "The EU should offer technical help to address specific needs of Viet Nam to comply with the SPS measures of the EU such as food hygiene, plants and animals' health, and the application of international standards". The EU also confirms its commitment to providing Vietnam with preferential status as a developing country under the WTO's SPS Agreement. For example, if an EU SPS regulation has a negative impact on Vietnamese lychee exports, Vietnam may request that the EU allow a longer compliance time, alternative import criteria, or technical advice.

EVFTA allows the equivalent recognition of its SPS regulations on specified commodities (Article 10, SPS Chapter, EVFTA). After receiving such a claim, the EU will convene a consultation and analyze the situation to decide comparability. If the EU accepts phytosanitary certificates signed by the competent authority in Vietnam, the exporter can be exempt from further conformity evaluation at the borders of EU countries. It would reduce the likelihood of cargo being denied owing to failure to clear EU border procedures

Aside from EVFTA, Vietnamese lychee exporters can take advantage from the directive 2019/633 on unfair trading practices in B2B relationships in the agricultural and food supply chain (Official Journal of the European Union, 2019). This directive protects better lychee SMEs against the increase and imbalance of buyer bargaining power. Fruit suppliers from outside of the EU, in particular, might benefit from the protection measures if there are any signals of unfair trades when selling their fruits into the EU. According to the directive, some prohibited practices are late payment for suppliers that exceeds 30 days, short notices of cancellation of fewer than 30 days, and any unilateral changes in contracts from more powerful buyers.

#### 4.4 Threats

Vietnamese lychee still faces some threats as a result of EVFTA implementation, one of which is intensifying market competition. Accounting for 80% of the Union's import lychee volume, Madagascar is the fiercest competitor, aiming for the EU as its primary export market. On the contrary, the EU only takes one-fifth of Madagascar's total fresh lychee volume (Pullman, 2016). Especially, while Vietnamese lychee has opportunities to gain EU zero-percent tariff, Madagascar lychee has already gained this tariff rate since 2014 with the accession to the EU - Eastern and Southern Africa (ESA) FTA (Appendix A).

In the global trend of tariffs lowering, NTMs have emerged as serious threats to Vietnamese lychee exports to the EU. Among NTMs such as SPS, TBT or RO, the strictness and complexity of SPS measures create many difficulties for Vietnamese lychee to satisfy. The frequency of updating new laws also requires close monitoring from concerning parties. One violation of exporters, if serious enough as regulated in legal documents, might damage the entire exported chain.

### 5. Recommendations and conclusions

#### 5.1 Recommendations

##### *At the Government level*

Enhancing the accessibility of data and guidance on EU regulations is essential for the training process, which can divide into online training and offline/direct workshops/conference. With online training, all the websites need to be re-organized scientifically and simplified so that the business community can understand. All of the information must be periodically updated and published in the Vietnamese version. The government can apply the E-learning method in explaining documents. Offline workshops and seminars should be organized for more extensive instruction about complying with EU standards. These training courses should focus not only on lychee processors and exporters but also on growers in the countryside, who are in charge of a critical step in the lychee production process but have only a limited understanding of the foreign market laws without government-provided training. Local authorities need to collect data from lychee growers and categorize them according to their understanding of NTMs, and EVFFTA to create detailed training programs.

Upgrading the related infrastructure and technology: Since 2015, transporting infrastructure in northern provinces has undergone dramatic improvements with the completion of the Hanoi – Hai Phong and Hanoi – Bac Giang Expressway. Nowadays, deliveries can move from Bac Giang to the Hai Phong international port within two hours. Together with shortening the delivery time, the government also needs to build specific areas in ports for lychee or other fruits storage with suitable temperature and humidity for better and longer preservation. Building more testing laboratories and preservation centers that satisfy the EU regulations and developing efficient harvesting methods, better preservation technologies, and domestic seedless lychee products should be a priority.

The Government should review and amend legal provisions to harmonize with EVFTA, SPS, and TBT measures; strengthen investment in R&D and testing laboratories meeting the EU's standard to gain an equivalent recognition of SPS regulations. EVFTA is not the end of a negotiation. The government continues using the "technical assistance" right to protect lychee from frequent changes in the EU's stipulations.

*At the enterprise level*

Bolstering the investment in systems for quality management: GlobalGAP, as noted above, has had a good impact on fruit quality, the ability to satisfy the standards of EU markets, customer happiness, and the reputation of Vietnamese lychee in the foreign market (Pham *et al.*, 2016). Despite its high cost causing burdensome for Vietnamese farmers and exporters, the GlobalGAP standard is considered the minimum one to access the EU (Subervie and Vagneron, 2013). In order to reduce its cost, lychee growers and exporters should develop a detailed plan to allocate human and financial resources more reasonably and efficiently, which development of human resources needs to be a priority.

Besides the GlobalGAP certificate, EU importers may require alternative food safety control certificates. Most buyers in northwestern European countries will demand that foreign exporters adhere to the British Retail Consortium global standard, while buyers on the European mainland can request compliance with the International Featured Standards or the Safe Quality Food Program (CBI, 2021). As a result, Vietnamese lychee exporters should confirm ahead of time whatever food safety and quality management certificates the EU client prefers.

Cooperating and building a sustainable market chain for lychee: The EU's technical restrictions are in all stages of lychee production, from the seeds planting to the sale to consumers. Lychee exporters need to play a significant role in collaborating closely with other parties along the lychee market chain to comply with such requirements (Appendix B).

The lychee growers are undoubtedly the most essential, yet weakest, player in the market chain. They frequently cultivate lychee based on personal experience rather than sophisticated growing techniques. To change these habitats, lychee exporters need to make long-term contracts with growers containing terms of financial support and technical assistance. Therefore, growers would have the assurance of a guarantee for their outputs if the contract was in place, and they would be more likely to follow the fruit firms' instructions and recommendations.

Exporters can utilize the market chain better by co-operating with local importers/wholesalers and food stores, who are aware of EU fruit import laws which can play a role as consultants for domestic enterprises. If some EU importers impose their criteria in addition to laws or make any trouble related to payment, or cancellation, Vietnamese exporters should negotiate a mutually satisfactory solution with importers. They also need to consider applying the Directive 2019/633 on unfair trading practices to protect their benefits and interests.

## 5.2 Conclusions

Vietnamese lychee exports have benefited from the elimination of tariffs under EVFTA. Lychee from Vietnam, which has distinctive favor, now can compete fairly against other tariff-free countries like Madagascar on the EU market, where demands for exotic fruits are rising. However, EVFTA does not relax its strictness on non-tariff measures, particularly SPS and TBT regulations that pose difficulties for the government and enterprises. Stringent and complex regulations for the label, the origin, pesticide, and contaminant residues of products have exposed weaknesses of Vietnamese lychee exportation, which are the lack of EVFTA knowledge, certification, infrastructure, and cooperation. Both the government and enterprises should engage in detailed tasks to overcome these challenges. The government should focus on macro-solutions such as strengthening legislative provisions, building facilities and infrastructure to increase regional connectivity, and enhancing lychee's processing and storage capacity. Meanwhile, the enterprises should get access to solutions in a more practical way. The authors believe that rigidly applying global systems for quality management from the first steps, despite their high cost, can significantly increase the product quality and reduce the failures during the EU's strict inspection processes afterwards. Last but not least, cooperation among the stakeholders is vital. A cohesive chain consisting of lychee growers, plants, and exporters under the efficient management of authorities may synchronize the product quality and quick response to changes in foreign markets. It also can help utilize time, finance, and human resources better.

Due to the lack of detailed information on the EU lychee markets, the research findings in this study would help to deepen the understanding of Vietnamese lychee exportation to the EU. Particularly, the research finding, to a different extent, can be generalized to other tropical fruits such as passion fruit, pitahaya, and sapodilla plums to provide a piece on a more accurate picture of Vietnamese agricultural products to the EU.

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Though Phan Huy and Quynh Nga (2021) did not mention the specific name of this liquid, according to Zauberman *et al.* (1991), 1 mol HCl is used for two minutes in this process and then allowed to air dry. At the final stage, lychee should be stored in a cool environment where the temperature is maintained at 5°C.