

Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics



Bachelor Thesis

Foreign Trade

Case study of rice in Vietnam

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Thi Thu Uyen Nguyen

Economics and Management
Economics and Management

Thesis title

Foreign trade – case study of rice in Vietnam

Objectives of thesis

The aim of my bachelor thesis is to introduce the main elements of international trade and its theories and barriers, emphasizing how international trade is important especially for developing countries such as Vietnam.

The first part of the thesis generally provides a theoretical background of international trade. Besides, this study also explains the brief introduction to the World Trade Organization.

The second part mainly expresses the characteristics and structure of the world rice market and Vietnamese rice market, thereby making predictions about trends changing structures of Vietnam's rice market.

Methodology

Comparative and descriptive methods will be used in my thesis. In the first part of my thesis- the theoretical part, I use secondary data collection from books, internet, documents, newspaper, etc. While in the practical part I mainly used descriptive methods to study the characteristics and structure of the rice market that are expressed in graphs and statistical tables.

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Keywords

International Trade, Rice, WTO, export, Vietnam

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Declaration

I declare that I have worked on my bachelor thesis titled "Foreign Trade – case study of rice in Vietnam" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break copyrights of any their person.

In Prague on 23rd March 2020

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However, due to the limited knowledge and the lack of practical experience, the content of the thesis cannot avoid shortcomings. I hope to receive further suggestions and advice from teachers to make thesis more complete.

Once again, I would like to express my sincere thanks

Foreign Trade

Case study of rice in Vietnam

Abstract

The aim of my bachelor thesis is to introduce the main elements of international trade and its theories and barriers, emphasizing how international trade is important especially for developing countries such as Vietnam.

The first part of the thesis generally provides a theoretical background of international trade. Besides, this study also explains the brief introduction to the World Trade Organization.

The second part mainly expresses the characteristics and structure of the world rice market and Vietnamese rice market, thereby making predictions about trends changing structures of Vietnam's rice market.

Finally, from the difficulties and challenges the Vietnamese rice industry is facing, the thesis proposes a number of direct policies that help improve and ensure the sustainable and long-term development of the rice industry.

Keywords: International Trade, Rice, WTO, export, Vietnam.

Zahraniční obchod

Případová studie rýže ve Vietnamu

Abstrakt

Cílem mé bakalářské práce je představit hlavní prvky mezinárodního obchodu a jeho teorie a bariéry a zdůraznit význam mezinárodního obchodu zejména pro rozvojové země, jako je Vietnam.

První část práce obecně poskytuje teoretický základ mezinárodního obchodu. Tato studie kromě toho vysvětluje také stručný úvod do fungování a role Světové obchodní organizace.

Druhá část vyjadřuje zejména charakteristiky a strukturu světového trhu s rýží a vietnamského trhu s rýží. Toto porovnání obou trhů umožňuje vytvářet predikce o trendech a měnících se strukturách vietnamského trhu s rýží.

V závěrečné kapitole jsou prezentovány problémy, ale i výzvy, kterým čelí produkce, zpracování a obchod s rýží ve Vietnamu. Práce navrhuje řadu podpůrných aktivit a technologií, které by vedly ke kvalitativnímu i kvantitativnímu zlepšení produkce a taktéž by zajistily udržitelný a dlouhodobý rozvoj zemědělsko-potravinářského odvětví v oblasti rýže ve Vietnamu.

Klíčová slova: mezinárodní obchod, rýže, WTO, export, Vietnam.

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List of abbreviations

ASEAN: Association of Southeast Asian Nations

CIF: Cost, Insurance and Freight

EU: European Union

FAO: Food and Agriculture Organization of the United Nations

FFTC-AP: Food and Fertilizer Technology Center for the Asian and Pacific Region

FOB: Free On Board

GATT: General Agreement on Tariffs and Trade

GDP: Gross Domestic Product

GSO: General Statistics Office of Vietnam

h: hour

kg: kilogram

MAPCO: Map and Plan Collection Online

MRD: Mekong River Delta

RRD: Red River Delta

UK: United Kingdom

USA: United States of America

USDA: United States Department of Agriculture

VER: Voluntary Export Restraint

WTO: World Trade Organization

1. Introduction

The current practice of trading among countries in the world has clearly shown the trend of trade liberalization and the role of international trade in the economic growth of countries. International trade has become an important area for countries to participate in international labor division, economic development, and enrichment for the country. Today's international trade is not merely a matter of trade, but also an inevitable dependence of nations on the division of international labor. Therefore, international trade is considered as a premise and a factor for domestic economic development.

It is undeniable that the necessary role of international trade for the economic development of countries today. It can be said that international trade is vital for participating countries because it allows countries to consume more items and richer categories. In other words, international trade helps to expand a country's consumption capacity.

International trade can bring about both sides, consumption, and production. Such trade could make countries consume goods and services cheaper, by importing and also obtaining a supply of products not available in the country (for example, rare raw materials, technical products). International trade boosts production efficiency by encouraging the re-export of resources in areas of the economy that can be used to import other resources into the industry.

Thanks to international trade, Vietnam can export and import all materials and commodities worldwide to meet the consumption needs of the people, contributing to the country's economic development. Vietnam is a developing country, with agriculture accounting for a large proportion of the economic structure. In addition to agricultural products that bring great export value such as coffee, tea, cashew nuts, pepper, anise, etc., rice is an agricultural product with a strategic role for Vietnam's agricultural sector. Rice is grown in Vietnam especially the two largest deltas in the Mekong Delta and the Red River Delta. For many years, the rice industry has contributed to the state budget a large amount of foreign currency from exports, creating jobs for millions of workers, contributing to socio-economic development. And more particularly, with its potential position, rice has contributed significantly to

promoting the image of Vietnam to friends around the world thanks to its international trade activities.

2. Objectives and Methodology

2.1 Objectives

The aim of my bachelor thesis is to introduce the main elements of international trade and its theories and barriers, emphasizing how international trade is important especially for developing countries such as Vietnam.

The first part of the thesis generally provides a theoretical background of international trade. Besides, this study also explains the brief introduction to the World Trade Organization.

The second part mainly expresses the characteristics and structure of the world rice market and Vietnamese rice market, thereby making predictions about trends changing structures of Vietnam's rice market. The aim of this study is to contribute to improving labor productivity, the competitiveness of Vietnam's rice industry and the income of rice farmers. To achieve this goal, the study will try to identify the barriers, challenges and difficulties of the current rice industry. On that basis, the study will propose policy recommendations to help solve difficulties in the rice industry in Vietnam.

2.2 Methodology

Comparative and descriptive methods will be used in my thesis. In the first part of my thesis- the theoretical part, I use secondary data collection from books, internet, documents, newspaper, etc. While in the practical part I mainly used descriptive methods to study the characteristics and structure of the rice market that are expressed in graphs and statistical tables.

3. Literature Review

3.1 International Trade

“It is the maxim of every prudent master of a family, never to attempt to make at home what it will cost him more to make than to buy. The tailor does not attempt to make his own shoes but buys them the shoemaker. The shoemaker does not attempt to make his own clothes but employs a tailor. The farmers attempt to make neither the one or the other, but employs those different artificers... What is prudence in the conduct of every private family, can scarce be folly in that of a great kingdom. If a foreign country can supply us with a commodity cheaper than we make it, better buy it of them with some part of the produce of our own industry, employed in a way we have some advantage.”

Adam Smith

International trade is the process of exchanging goods and services across national borders for the maximum economic purpose. It is also possible to understand international trade simply as import and export. Imports mean the goods and services are brought into the territory of a country from abroad. Exports are understood as the sale of goods and services to another country. (REEM HEAKAL, 2019)

In most countries, international trade also represents a significant share of gross domestic product (GDP).

International trade analysis focuses primarily on the real transactions in the international economy, that is, transactions involving a physical movement of goods or tangible commitment of economic resources. (M. -- KRUGMAN, 2015)

Visible trade refers to the buying and selling of goods- solid, tangible things- between countries.¹

Invisible trade, on the other hand, refers to services.

¹ <https://marketbusinessnews.com/financial-glossary/international-trade-definition-meaning/>

Services trade consists of business services, such as transportation and insurance. Individuals also consume international services, with tourism being a prominent example. For example, the consumption of car insurance is considerably less visible than the consumption of car. (SPRINKLE, 2015)

To understand international trade simpler, even if we buy usual things such as perfumes, clothes, a foreign brand of motorbikes, etc. which are come from another country. It is international trade.

International trade is a small but growing part of world economic activity.

3.2 Purpose of international trade

As we know, each country has different characteristics such as natural conditions, economic conditions, remote conditions, etc, therefore, each country has its own economic advantages and special products. Besides, by developing and exploiting domestic resources, countries can produce a surplus but they have a shortage of others. In order to use the best products and services from all over the world, we also can solve the problem surplus and shortage buy using this surplus to buy goods met their needs from abroad, we need international trade. For example, among the various regions of Vietnam, there is a tremendous flow of goods and services. The Central Highlands sells coffee beans to regions where coffee cannot grow. The Mekong River Delta sells seafood to other countries where the cost of this seafood is higher. Another example, the Czech Republic does not have sea, but citizens want to eat seafood, what should they do? It becomes easier when international trade appears. Citizens of the Czech Republic can still taste all kinds of seafood thanks to importing seafood from other countries. According to professor Krugman claims that the country should buy goods from countries that have the lowest prices and sell their goods to the country that has the highest price. This is beneficial for developing countries as well, in this case, they can use their resources for export. Therefore, they can import machinery or technologies. Trading on the international market gives an opportunity to buy goods that are not available in their own country. (KRUGMAN, 2012)

The purpose of international trade also relates to:

- Price: A foreign company can produce and sell its products at cheaper prices compared to a domestic company.

Quality: may be superior abroad. For example, Pilsner Urquell beer from the Czech Republic, in most people's opinion, is superior to any local alternative. That is why many countries accept importing at a high price.

- Availability: there are some products we can buy in our country, therefore, the only way consumers can buy it from another country.
- Demand: when domestic supply is smaller than domestic demand, to solve this problem, it is necessary to import.

International trade has both advantages and disadvantages for each country. There are some advantages such as:

- To promote economic development: International trade creates a favorable environment for production and business.
- Competition: International trade promotes competition. It means consumers can have many choices of products that have the lowest price and the best quality.
- Employment opportunities: we can see the rates of unemployment in great trading nations such as Germany, Japan, the USA, etc is lower than in developing countries.
- Transfer of technology: increases thanks to international trade. Transfer of technology goes from the originator to a secondary user. In fact, the secondary user is often a developing nation.¹
- Enhancing the peace value: International trade brings the countries throughout the world closer. Because these countries strive for friendly relations between themselves.

From the above reasons, we cannot deny the important roles of international trade. Generally, no country is self-sufficient. Therefore, international trade might be at the heart of today's global economy.

3.3 Types of international trade

- Export trade: Export is understood as the sale of goods and services to another country, on the basis of using currency as a payment method. (SPRINKLE, 2015)

This activity takes place in many sectors and industries of the economy both with consumer goods as well as with capital goods. However, in general, all these activities are aimed at bringing benefits to enterprises and import-export countries.

- Import trade: Import is an activity of purchasing goods and services from a foreign country to serve domestic demand. Import is the purchase of goods from economic organizations, foreign companies and the consumption of imported goods in the domestic market. (SPINKLE, R L. -SAWYER, 2015)
- Entrepot trade: Entrepot is an activity of importing goods and services from a foreign country to export to another country for the purpose of making a profit. The goods are imported not for consumption or sale in the country but for re-exporting to the third country. (RC Agarwal)

3.4 Gross Domestic Product (GDP)

Gross Domestic Product (GDP) is the total money value of all final goods and services produced within a nation's border during a year. (MAITAH, 2009)

Gross Domestic Product per capita (GDP per capita) is an approximation of the value of goods produced per person in the country, equal to the country's Gross Domestic Product divided by the total number of people in the country. (MAITAH, 2009)

3.5 Trade theories

3.5.1 Mercantilism

The first theory that explains international trade is the work of mercantilism, which began in England since the end of the 16th century until the second half of the 18th century. (EONLIB, 2001)

The most basic content of this affirms that gold and silver are the main means of assessing the wealth of the nation and play an important role to make trading activities between countries become vibrant. At that time, gold and silver were the currencies in the trade between nations, a country can get gold and silver from exporting goods. Conversely, importing goods from other countries will cause these precious metals to leave the country. Therefore, the central idea of mercantilism is that a trade surplus needs to be maintained,

that is, exports more than imports to bring the best benefits to a country. When a country accumulates a lot of gold and silver, its wealth, prestige, and power will also increase.²

Thomas Mun, an author of the Great British wrote in 1630: “ The ordinary means therefore to increase our wealth and treasure is by Foreign Trade, wherein we must ever observe this rule; to sell more to strangers yearly than we consume of theirs in value.”

In 1752, the Scottish philosopher David Hume pointed out an inherent inconsistency in the mercantilism theory. He argued with the example of trade relations between the UK and France³. Suppose the UK has a surplus trade balance in its trade with France (due to a greater export to France than imports from France), and consequently a significant amount of gold and silver would move into Britain. This causes inflation in the UK. However, in France, the flow of gold and silver flowing out of the country will have the opposite effects. The money supply in France will decrease, and the price in this country will follow. This change in the correlation between prices in the UK and France will encourage the French to buy fewer British goods (because they have become more expensive) and the British will buy more goods of France (because it becomes cheaper). As a result, the UK trade balance will be worse while the French trade balance will be improved. Thus, according to Hume, in the long run no country can maintain a surplus in the balance of trade, this is also one of the reasons for other theories.

3.5.2 Absolute advantage

In his famous book, published in 1776, titled “The Wealth of Nations”, Adam Smith made a counter- view of mercantilism’s view that trade is a game of the total benefit is zero. Smith argues that different countries are about the ability to produce goods effectively. According to him, a country has an absolute advantage in producing a product when it produces that product more effectively than other countries. At this time, the British were the most efficient textile manufacturers in the world with superiority in manufacturing processes. Meanwhile, thanks to the combination of favorable climate, fertile soil, and experience accumulated over generations, the French are the most efficient wine

² https://saylordotorg.github.io/text_international-business/s06-01-what-is-international-trade-th.html

³ <https://www.econlib.org/library/Enc/bios/Hume.html>

producers. Thus, it can be said that the British had an absolute advantage in textile production, while the French had an absolute advantage in wine production.

According to Smith, countries should specialize in producing products that have a comparative advantage and then trade those goods for those produced by other countries. Adam Smith's basic argument is that a country should never produce goods that can actually be purchased from other countries at lower costs. And by specializing in the production of goods for which one country has an absolute advantage, both countries will benefit from participating in international trade.

	Country	Country
	A	B
Rice (kg/h)	6	1
Beef(kg/h)	4	5

Table 1: Absolute Advantage as a Basic for Trade

Source: Vietnam trade promotion agency

(Number in the table denote kg per hour of output)

Let's assume that we have country A and country B. We can see, the country A has an advantage in rice production (yield 6 times, 6/1) compared to country B and country B has an advantage in beef production (yield 1.25 times, 5/4). The country A will specialize in rice cultivation and country B will specialize in raising cows, it means country A will export rice, import beef and conversely, the country B will export beef, import rice.

3.5.3 Comparative advantage

Nature, by giving a diversity of geniuses, climates, and soils, to different nations, has secured their mutual intercourse and commerce as long as they all remain industrious and civilized. The industry of the nations, from whom they import, receives encouragement: Their own is also increased, by the sale of the commodities which they give in exchange.

David Hume

The concept of comparative advantage plays an extremely important role in modern international trade theory. One party (country, region, individual) is considered to have a comparative advantage over the other in producing a product if it can produce that product at a lower opportunity cost. (SPRINKLE, 2015)

The greatest contributor to the theory of comparative advantage was David Ricardo when he gave systematic explanations in his book “On the principles of political economy and taxation”, 1817. With the comparative advantage theory, Ricardo points out that even such countries can find their own place in international trade if they specialize in manufacturing and export products that have a comparative advantage.

	Country	Country
	A	B
Soybeans (h/unit)	3	12
Textiles (h/unit)	6	8

Table 2: Comparative Advantages as a Basis for Trade

Source: Stephen Husted, Michael Melvin, International Economics, p.61

(Number in the table denote labor hours per unit of output)

We can see in table 2, If country A wants to produce soybeans it costs them 3 units compared to 12 units in country B. As well as, producing 6 units of textiles in country A compared to 8 units in country B. Therefore, we can say that country A has an absolute advantage in both goods. According to the comparative advantage, although country A does not have absolute advantages over both commodities compared to country B, there exists a basis for international trade. This means that both countries still benefit from trade. We can determine the respective price of soybeans ($3/6$ in country A, $12/8$ in country B), textiles ($6/3$ in country A, $8/12$ in country B). According to the result, the respective price of soybeans in country A is smaller than the respective price in country B. Whereas, the respective price of textiles in country A is greater than the respective price in country B. We can obtain that soybeans production is cheaper in country A; however, textiles production is relatively cheaper in country B. Hence, country A should focus on soybeans production and country B on textiles production.

3.5.4 World Trade Organization (WTO)

WTO is the abbreviation of World Trade Organization. World Trade Organization officially came into operation on January 1, 1995

The WTO was born on the basis of the successor to the precursor organization, the General Agreement on Tariffs and Trade (GATT). This is the only international organization that sets out rules of trade among countries around the world. The main focus of the WTO is the agreements that have been negotiated and signed by countries.

GATT principles and agreements are inherited, managed, and extended by the WTO. Unlike GATT, which is just a treaty, the WTO is an organization with a specific organizational structure. The goal of the WTO is to establish and maintain a free, transparent and favorable global trade. (FREDRICK, 2006)

WTO promotes the implementation of the Agreements and commitments achieved within the designated framework. At the same time, more future commitments will also be guaranteed to promote and fulfill them. WTO creates a forum for members to continue negotiating and concluding new agreements or commitments on liberalization, and at the same time creating favorable conditions for global trade. Resolve trade disputes if there is any arising among these WTO members. Conduct periodic reviews of trade policies of the members participating in this organization. (FREDRICK, 2006)

Under the WTO, quantitative limits on imports become illegal. The WTO calls for free trade and financial services, shipping, and audiovisual product- movies, television, programs, and musical recordings. (FREDRICK, 2006)

3.6 Barriers of foreign trade

The barriers in international trade are instruments, measures, protection policies of a country in order to limit the negative impacts on the international trade of that country in particular and to the economy in general. (Lawrence J. Gitman, 2018)

3.6.1 Tariff barriers

We up in Massachusetts do not want that duty upon molasses, we trade our fish for molasses, and if you shut out molasses you shut in fish.

US Congressional Debates, 1790

A protective tariff is immoral and dishonest, because its sole purpose is to increase prices artificially, thereby enabling one citizen to levy unjust tribute from another.

Cordell Hull

Tariff is a tax imposed by a government on export or import of goods of each country. (Stephen Husted- Michael Melvin, 2007)

- Import tax is a tax imposed on each unit of import, whereby domestic buyers pay for imported goods an amount greater than the amount received by the foreign exporter.

For example: Country A imposes a 5% tax on the price of imported rice, so if the price of 1 ton of rice is 200USD then the after tax price of rice is $200\text{USD} + 200\text{USD} * 5\% = 210\text{USD}$ / ton of rice

- The export tax applies to exported goods, which substantially lower the domestic price of goods that can be exported.

3.6.2 Non- tariff barriers

The lowering of tariffs has, in effect, been like draining a swamp. The lower water level has revealed all the snags and stumps of nontariff barriers that still have to be cleared away.

Robert Baldwin

Non- tariff barriers are barriers that do not use tariffs instead of using administrative measures to discriminate against the infiltration of foreign goods, protect domestic goods. (EVAN TARVER, 2019)

3.6.3 Import Quotas

Import quota means the limit on the quantity of a given commodity into a given market over a specified period of time. (KNUTSON, R D. –PENN, J B. – FLINCHBAUGH,1998)

Impact of import quotas:

- Limiting imports and reducing domestic consumption like tariffs.
- Controlling import restrictions more than tariffs thus stimulating price increases and increasing domestic production.

Voluntary Export Restraint (VER): Upon request or situation from importing country, the exporting country agrees to limit its exports and creates its own quota. The effects of VER can still be observed in some markets such as automobiles. (SPRINKLE, 2015)

A famous example of VER is the export of Japanese cars to the United States in 1981. Accordingly, the number of cars exported to the United States was controlled from 1.68 million units in 1981 to 1.85 million units in 1984, and up to this day.

3.6.4 Export subsidies

The export subsidies are subsidies or incentives that the government applies to domestic companies enable them to reduce the price of their products or boost exports. (KNUTSON, R D. –PENN, J B. – FLINCHBAUGH,1998)

Export subsidies reduce storage costs, contribute to the development of the domestic industry, promote export. It also contributes to job stability, limits unemployment, and ensures social security.

3.6.5 Exchange Rate Manipulation

In trade, investment and international financial relations, etc requires countries to set up payment with each other. Therefore, most countries in the world have their own currencies. Cross- country payments lead to exchanges between different countries, whereby the concepts of the exchange rate was born. It is the concept used to denote the correlation of prices of two currencies in two different countries. (KNUTSON, R D. –PENN, J B. – FLINCHBAUGH, 1998). In other words, exchange rate is the number of currency units required to buy one unit of foreign currency.

Exchange rates affect import and export activities: If the domestic currency depreciates (the exchange rate increases), it means that the country's export prices become cheaper, leading to an increase in the competitiveness of goods in the international market. The increase in the exchange rate makes the economy gain more foreign currencies, thereby helping to improve the trade balance and international payment balance.

3.6.6 Technical barriers

Technical barriers in trade are measures applied to goods circulating domestically and across borders (imported or exported), such as technical regulations and standards, safety and quality requirements, requirements on labeling and consumer information, importing registration procedures, etc. (SPRINKLE, 2015)

3.6.7 Sanitary and Phytosanitary

Sanitary and phytosanitary barriers are created to ensure food safety, protect human health, and to prevent the spread of plant and animal diseases. (KNUTSON, R D. –PENN, J B. – FLINCHBAUGH, 1998)

4. Practical Part

4.1 Characteristics and structure of the world rice market

Rice is one of the basic grains consumed worldwide, especially in Asia⁴. Long white Indica rice is produced and consumed the most, followed by Aromatica rice, and Japonica rice.

4.1.1 World rice production and consumption

➤ Types of rice in the world

World rice can be classified into two main groups: Japonica (round grain rice) and Indica (long- grain rice). Japonica rice is usually grown in temperate temperatures, like Japan, while Indica rice is usually grown in hot climates, such as South Asia, Southeast Asia, and South China. (FAO, 2006)

Indica rice is the most produced and consumed, accounting for about 87% of total production and 90% of total world trade. Of which, long white rice accounts for about 75% and aromatica accounts for about 15% of the world's total rice trade. (FAO, 2006)

Japonica rice accounted for about 13% of total production and 10% of world trade in 2005. According to statistics, there are more than 40,000 different varieties of rice cultivated in the world (excluding wild rice varieties). (FAO, 2006)

Indica rice can be divided into three groups: long white rice, fragrant rice, and sticky rice (sticky rice). Fragrant rice has two famous types: Hom Mali of Thailand and Basmati of India and Pakistan. Japonica rice also has a variety of fragrant and sticky rice, but the amount is quite small so it is often not small in the world production and trade statistics. (FAO, 2006)

Total world rice production in 2014 was estimated by USDA (2015) at about 476.9 million tons. The countries that produce and consume the most rice are China (30.4%), India

⁴ Rice is the earliest cultivated food crop and has become one of the most commonly grown crops in the world. Rice accounts for about 20% of calories consumed worldwide. In Asia, where more than 50% of the world's population, rice consumption provides up to 50% of the calories needed by humans (FAO, 2006).

(21.6%), and countries in Southeast Asia. Among ASEAN countries, the rice production of five countries in Indonesia, Vietnam, Thailand, Philippines, and Cambodia alone accounts for 21.2% of the world market share.

Country	Production	Consumption
China	142.530	146.300
India	106.540	99.180
Indonesia	36.300	38.500
Vietnam	28.161	22.000
Thailand	20.460	10.900
Philippine	12.200	12.850.
Cambodia	4.725	3.650
Other countries	125.964	146.713
World total	476.880	480.093

Table 3: The situation of rice production and consumption of some countries in the world, 2014 (tons)

Source: USDA, 2015

In the last half century, world rice production has increased incessantly, from over 200 million tons in the early 1970s to 650 million tons in 2010. To achieve that, countries improved rice varieties and farming conditions effectively.

Rice demand in the world is determined by factors such as population growth rate, especially of countries consuming rice, prices, income and urbanization. Because it is a basic commodity, the demand for rice is less influenced by prices but strongly influenced by income, especially the pace of urbanization. For developing countries, income and demand are positively related, while in relatively developed countries (such as Malaysia or China), the relationship is opposite.

Also according to FAO research (2006), the trend of population growth in Asia is an important factor helping rice demand continue to increase. However, improved living standards in these countries are the factors that cause reduced demand for rice. Specifically, rice consumption per capita in Asia decreased from 87 kg in 1996 to 83 kg in 2005 (Timmer, 2010). Considering the aspect of continued demand growth in Africa, FAO

forecasts global demand for rice will continue to increase until 2030 but will then turn to a downward trend.

4.1.2 Import and export

Import and export of rice had a great jump in the 1990s. From around 500 thousand tons/year, the amount of rice import and export in the world has increased from 6 to 7 times to 3,000 - 3,500 thousand tons/year. When this level is reached, the export and import of rice no longer have a strong growth (Kang et al., 2009).

Despite such a large export growth, the proportion of commercial rice to world production of rice was only 7% between 2000 and 2005. Much lower than the 18% for wheat and 11% of maize in the same period (FAO, 2006).

4.1.3 Rice importing and exporting countries

		Main export			Main import	
	Country	Production (million tons)	Proportion (%)	Country	Production (million tons)	Proportion (%)
1	India	10	24.44	China	3.4	8.3
2	Thailand	8.5	20.76	Nigeria	3.0	7.33
3	Vietnam	7.5	18.31	Iran	1.65	4.03
4	Pakistan	3.4	8.3	Indonesia	1.5	3.66
5	USA	3.35	8.18	Philippines	1.4	3.42
6	Burma	1.3	3.17	Iraq	1.4	3.42
7	Cambodia	1.0	2.44	EU	1.35	3.3
8	Uruguay	0.9	2.2	Ivory Coast	1.25	3.05
9	Brazil	0.85	2.08	Saudi Arabia	1.25	3.05
10	Egypt	0.85	2.08	Senegal	1.15	2.81

Table 4: 10 major rice exporting and importing countries in the world, 2013-2014

Source: USDA, 2014

Each rice exporting country usually has its own major export markets and competes in other markets. Stemming from the reasons for the taste of rice, the migrant community, the

cultural similarities of rice-consuming countries with rice-exporting countries. Indian rice is usually exported to Africa (Nigeria, Senegal, Cote d'Ivoire, Benin) and Arab and Muslim countries (Saudi Arabia, U.A.E, Indonesia). While Pakistan's rice is strongly directed to the markets of the Middle East, Northern Europe, North America, and some other Asian countries (China, Bangladesh). American rice is mainly consumed in Latin America, Japan and Canada. Vietnam and Thailand are the two countries that export much to Asia (China, ASEAN) and Africa (South Africa, Cote d'Ivoire). Thailand also has the ability to penetrate into the rice markets of the developed countries like Japan, USA, Canada, etc. Meanwhile, Vietnam can export rice to EU countries.

Long grain white rice is the main export rice, accounting for a large market share in the international market. All countries in the top 5 largest exporting countries export long grain white rice (USDA, 2014). Aromatic rice is exported with a proportion of about 15 - 18% of rice exported worldwide. Thailand, India and Pakistan are the main exporters of this type of rice. Aromatic rice brands such as hommali of Thailand or basmati of India and Pakistan are very famous in the world.

Basmati fragrant rice of India and Pakistan is exported mainly to Saudi Arabia, EU, Kuwait, United Arab Emirates and the USA. Thailand's fragrant hommali rice is exported to China, Hong Kong, Singapore, USA, EU and Macau. Vietnam has also begun to shift to aromatic rice production and export. However, Vietnam's aromatic rice export has not yet created its own brand.

4.1.4 Prices of rice

Imported and exported rice is usually shipped by sea. Compared to the FOB price at the export port, the freight for transporting rice is quite expensive. For example, as of December 2006, the cost of transporting 1 ton of rice from Pakistan's Karachi port to South Africa's Durban port was the US \$ 44, to Ukraine's Odesa port was the US \$ 58, and to Abidjan of Ivory Coast was 132 USD (FAO, 2006). This is an important reason why exporting countries tend to target neighboring countries. For example, the US is aiming for the South American market, while Asian countries are heading towards the Asian and African markets. The European market can be supplied by both Asian and American countries. Besides shipping costs, the final price of rice in importing countries also incurs additional costs such as insurance (usually equal to 1%). FOB price, loading and unloading

cost (usually equal to 2% of CIF price), and taxes, government charges and other costs. In addition to the above economic factors, rice is also subject to the intervention of domestic protection policies of most countries producing and consuming rice, from developed countries to developing countries. Many countries include rice in the category of special treatment or special safeguards in their WTO accession terms. With this form, rice imported into these countries can be taxed at a very high level, usually over 50%. For example: Angola, Brazil, Bulgaria, Morocco, Nigeria, Peru, etc. (FAO, 2006)

	Thai White 100% B Second grade	Thai Parboiled 100%	U.S. Long Grain #2, 4%	Thai 5%	Viet 5%	Uru 5% 1/	India 25%	Pak 25%	Thai 25%	Viet 25%	Thai A1 Super 2/	U.S. California Medium Grain #1, 4%	Pak Basmati 3/	Thai Fragrant 4/
	US \$/tonne, f.o.b.													
2014	435	435	571	423	410	599	377	366	382	377	322	1 007	1 324	1 150
2015	395	392	490	386	353	541	337	318	373	334	327	857	849	1 008
2016	407	410	438	396	347	473	333	327	385	332	348	651	795	768
2017	415	421	456	398	372	499	361	350	384	351	334	673	1 131	843
2018	445	431	531	421	412	497	374	360	408	391	365	888	1 023	1 167
2018														
February	463	454	537	436	419	500	390	357	419	398	363	885	1 095	1 169
March	453	439	539	427	415	500	385	362	415	394	376	896	1 072	1 174
April	478	459	543	451	431	499	384	394	436	409	385	900	1 053	1 178
May	477	449	550	451	450	501	381	397	437	427	388	904	1 043	1 191
June	456	437	550	431	446	500	380	392	419	421	378	990	1 042	1 246
July	420	407	546	398	393	494	388	368	390	370	363	988	1 040	1 150
August	427	415	535	405	388	493	373	363	393	369	349	900	1 029	1 158
September	427	418	519	405	396	493	362	348	393	374	352	893	995	1 164
October	432	419	510	410	404	494	350	343	398	382	358	848	961	1 143
November	423	410	509	402	406	492	354	325	391	387	356	807	938	1 159
December	425	412	511	404	381	490	358	316	395	370	365	780	921	1 170
2019														
January	432	422	519	410	354	490	360	319	402	345	377	849	919	1 201
February	427	425	497	411	335	494	356	318	403	323	379	870	901	1 223
2018 Jan.-Feb.	462	456	531	436	416	501	387	357	418	394	358	873	1 091	1 134
2019 Jan.-Feb.	429	423	508	410	344	492	358	318	403	334	378	859	910	1 212
% Change	-7.1	-7.2	-4.4	-6.0	-17.3	-1.9	-7.4	-10.9	-3.6	-15.3	5.7	-1.5	-16.6	6.8

Table 5: Prices of some types of rice export worldwide

Source: FAO

Among all types of rice, fragrant rice has the highest price. This is a common type of rice exported by Thailand as Thai Fragrant or Hom Mali (1150 US \$/ tonne) and by Pakistan as Basmati (1324 US \$/ tonne). Next is high- quality long-grain white rice (5% broken), then low- quality long- grain white rice (25% broken), parboiled rice, and broken rice.

We also can see in figure 1, the same type of rice but Thai rice is often priced higher than Vietnamese rice. For example, the same high- quality long grain rice in December 2018, but Thailand is priced at 404 USD / ton, while Vietnam's only 381USD / ton.

With characteristics such as a lack of standardization, high transportation costs, difficulty in storage, and high domestic protection, rice exports are highly competitive, regardless of whether the export or import activities. focus on a few countries.

4.1.5 Recent trends in rice import and export in the world

In addition to the traditional group of import and export countries, a number of emerging countries have appeared in the world rice import and export market in recent years.

Regarding exports, the Asian region has more abundant rice supply and is a competitor for traditional rice exporting countries. It is Cambodia and Myanmar. Cambodia has increased its export output from 100.000 metric tons of milled rice in 2010 to 635.679 metric tons in 2017 (Food and Fertilizer Technology Center for the Asian and Pacific Region). Cambodia's main rice export markets in 2013 were European countries, Malaysia, Thailand and China. In particular, Cambodia is gradually approaching the US and South Korean markets.

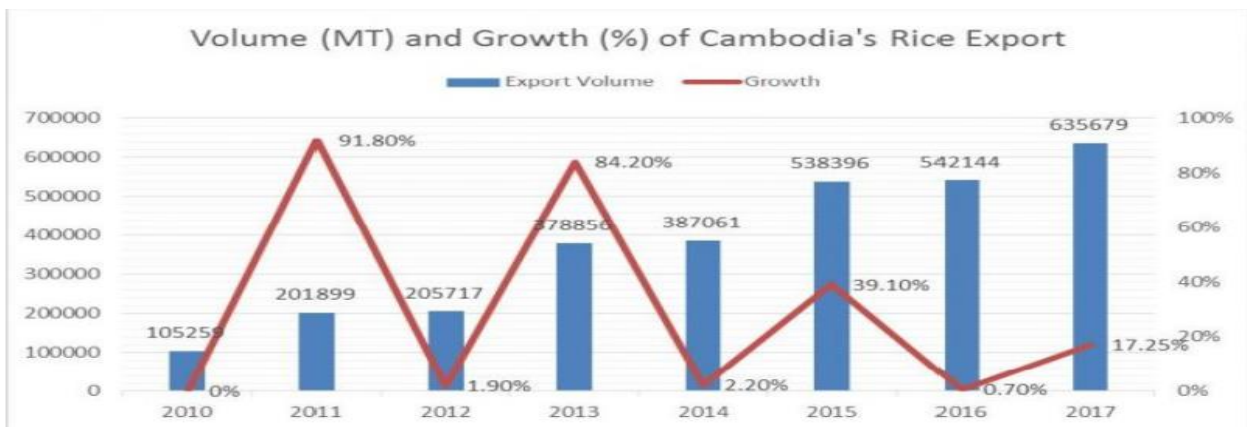


Figure 1: Cambodia rice export volume from 2010 to 2017

Source: FFTC-AP

Myanmar also nearly doubled its export output from 1018550 metric tons to 1812332 thousand tons between 2011-12 and 2014-15. Currently, Myanmar has been able to export

rice to regional markets such as China, Thailand and the Philippines, Africa, Japan and Indonesia.

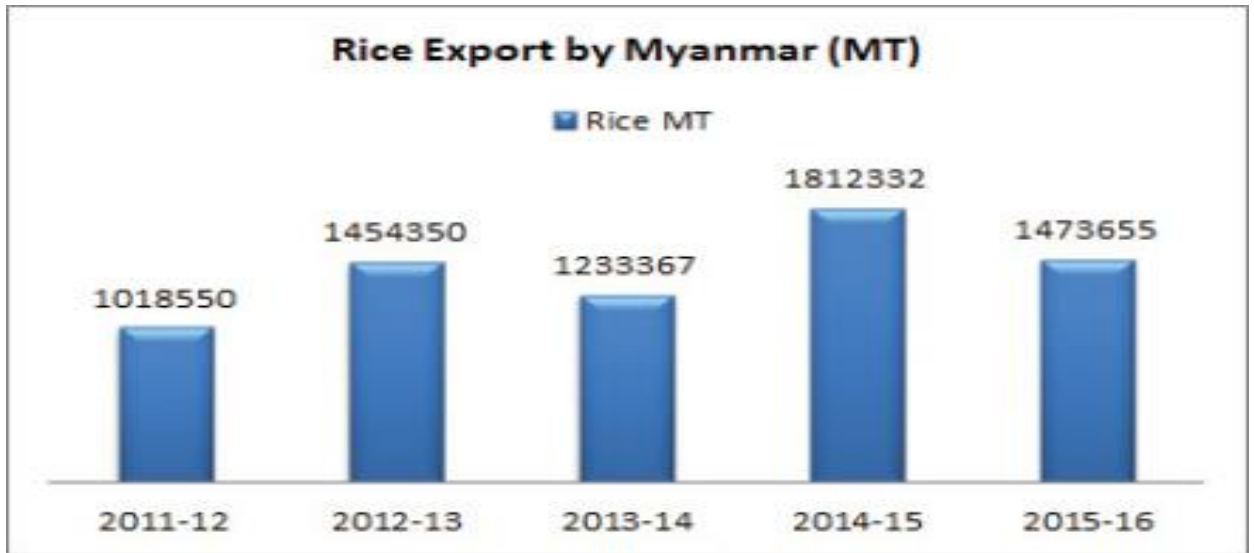


Figure 2: Myanmar rice export volume from 2011-12 to 2015-16

Source: Myanmar Agribusiness Public Corporation (MAPCO)

In terms of imports, China is becoming a major rice importer with the import size increasing nearly 10 times, from 675.074 tons in 2009 to 6.036.376 tons in 2018. (Trademap)

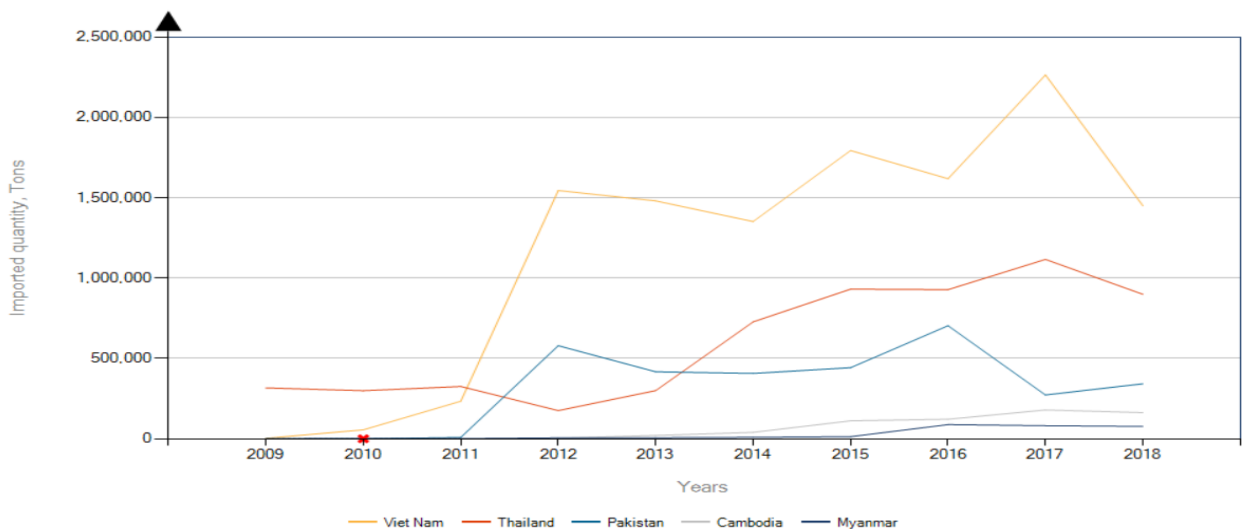


Figure 3: China rice import from some countries from 2009 to 2018

Source: Trademap

Many African countries have also become strong importers. The most typical is South Africa. The country increased its import output by 1.5 times between 2009 and 2018 (1.494.554 tons in 2009 and 2.150.481 tons in 2018). (Trademap)

Another trend that has emerged recently is the self-reliance trend in rice supply in rice importing countries. Philippines and Indonesia are two typical countries in the ASEAN region. The Philippines was the largest rice importer in the world in 2010 with an import of 2.6 million tons of rice. However, the import level dropped sharply to 1.4 million tons in 2013-14 (REUTERS, 2011).

African countries have shown quite clearly this self-reliance trend, making the demand for imported rice in Africa tend to decrease. According to FAO (2006), Egypt in 2012 imported 100 thousand tons, down from 350 thousand tons in 2011. Nigeria is now one of the world's largest rice importers, which also reduced imports by 8% in 2012 due to increased production and the government imposed measures to protect domestic production with the goal of becoming a national. self-sufficiency in rice in 2015. (To encourage domestic use, the Nigerian government applies a 25% tax on imported rice from July 1, 2012. In addition, the government plans to raise the rice import tax from 20% to 40% (Vietrade, 2012).

4.2 Characteristics and structure of Vietnam's rice market

Rice production plays a particularly important role in the development of Vietnam's agricultural and rural economy. About 71.1% of the 15.3 million farming households are involved in rice production, mainly based on traditional manual farming. (GSO, 2011) Because rice production is the main source of income and food for farmers, the policy of agricultural and rural economic development is closely linked to the development of the rice industry. Over the past three decades, thanks to the renovation of management mechanisms, Vietnam has achieved great achievements in rice production, not only meeting domestic demand but also annually exporting 3- 4 million tons of rice. (Vietnam Food Association) However, Vietnam's rice industry still faces many difficulties and challenges, especially under the increasing competition pressure of international integration. Currently, the average rice yield of the whole country is about 4.3 tons/ha, but there are significant differences in rice productivity among different ecological regions. In

the delta areas, a number of rice farmers have achieved very high yields, 10-12 tons/ha, while rice yields in the mountainous midlands and coastal sandy areas are often very low, only reach an average of over 2.4 tons/ha. (Asian Development Bank) The volume of rice participating in the circulation is mainly from the two main sources of supply: the Mekong River Delta (MRD) and the Red River Delta (RRD). In fact, there is no surplus rice in agricultural production areas outside of the major deltas, except for the last few years in some upland areas, farmers have a good harvest due to favorable weather. Rice production has exceeded local consumption. Rice production in the coastal and midland areas mainly aims to meet local food needs, is self-sufficient, and there are still some farmers who do not have enough food for their families from one to two months of the year.



Figure 4: Terraced fields and ripe rice seedlings in Vietnam

Source: Bestpricetravel

4.2.1 Rice production

During the last quarter century, Vietnam's rice industry has been developing rapidly and sustainably. This result is due to an increase in land productivity and production

intensification. Domestic rice production basically doubled from 1990 to 2010, although the area of rice land only changed slightly (Figure 5). Rice production increased from about 19.25 million tons in 1990 to over 34.5 million tons (equivalent to about 26 million tons of rice), in 2013. (GSO)

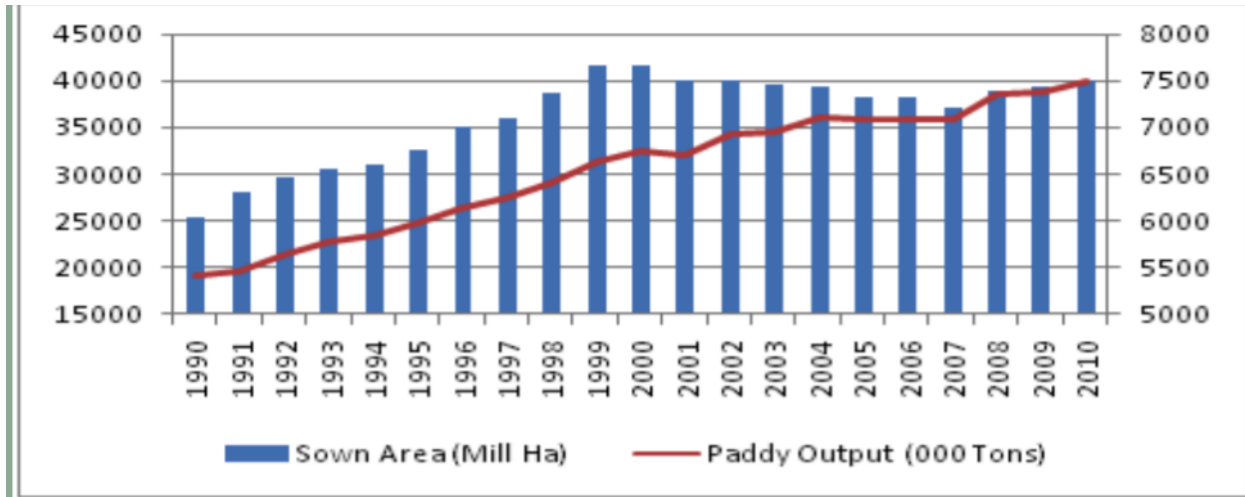


Figure 5: National paddy output and planted area, 1990 to 2010

Source: GSO, Vietnam

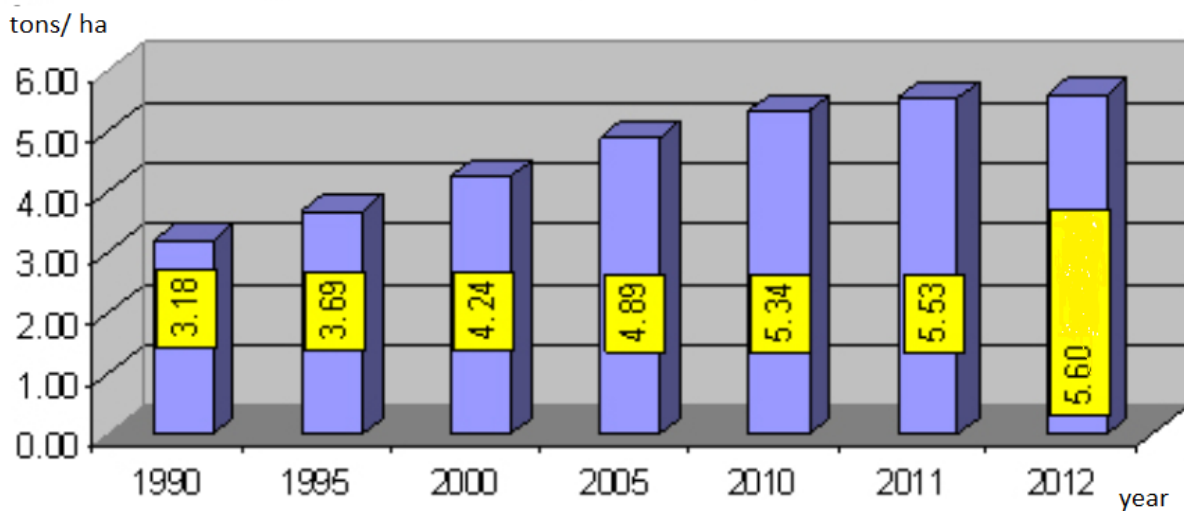


Figure 6: Average rice yield in Vietnam, 1990 to 2012

Source: Vien lua, 2012

The average rice yield increased from 3.18 tons/ha in 1990 to 5.6 tons/ha in 2012. This level is much higher than other rice exporting countries such as Thailand, India and Pakistan. (Vien lua, 2012)

Rice is cultivated in most provinces across the country. The most important rice production areas in the country are the Mekong Delta (accounting for 52% of production), the Red River Delta (accounting for 18% of production), the North Central and Central Coast regions (15% of production). (The International Rice Research Institute)

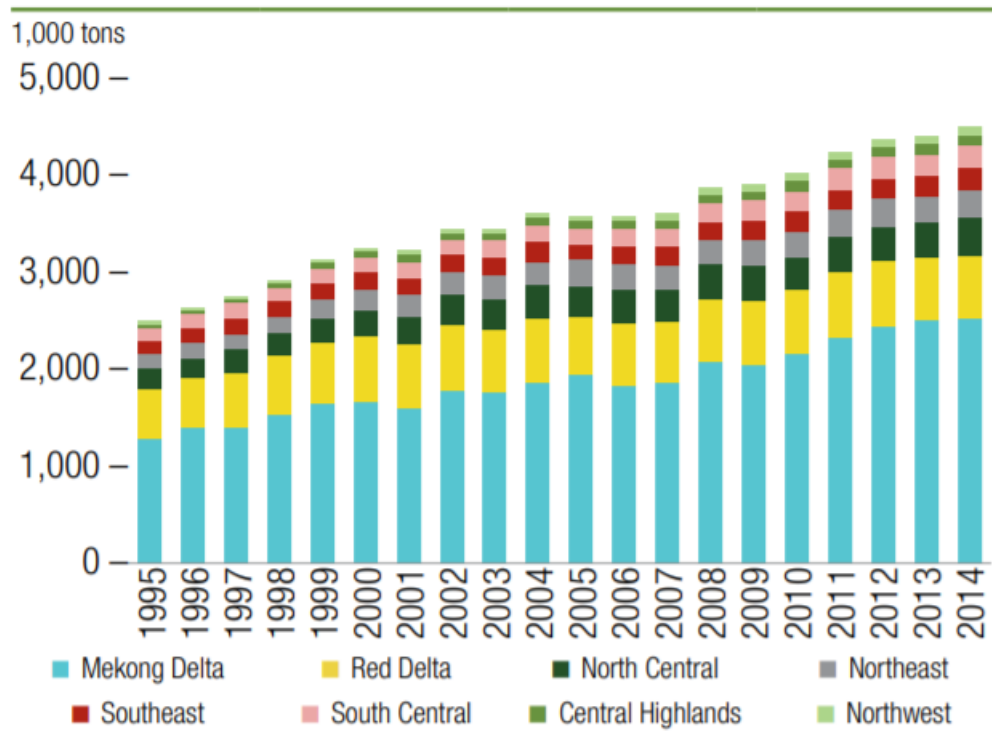


Figure 7: Rice production by region, 1995–2014

Source: Based on GSO data

The rice crop in Vietnam is strongly dependent on climate and weather. Currently, there are 3 main rice crops: winter-spring, summer-autumn and “Mua” rice crop. However, in each region, the rice growing time is not the same.

4.2.2 Export

Rice production and export play an important role in Vietnam's socio-economic development. In recent years, Vietnam's rice industry has developed and achieved positive results. Not only is rice self-sufficient, but Vietnam has also become a rice exporter since 1989 and is now the third largest rice exporter in the world (World’s top export, 2019)



Figure 8: Vietnam rice exports quantity from 1989 to 2017

Source: Viet Food Association, 2018

From 1989 to 2017, Vietnam's rice export volume increased from 1.37 million tons to 5.77 million tons. In 2012, Vietnam's rice export volume reached 7.72 million tons, marked a successful year with the highest rice export volume from 1989 to 2017. Rice is also Vietnam's largest export of food products, valued at US \$310.28- 2.539 million.

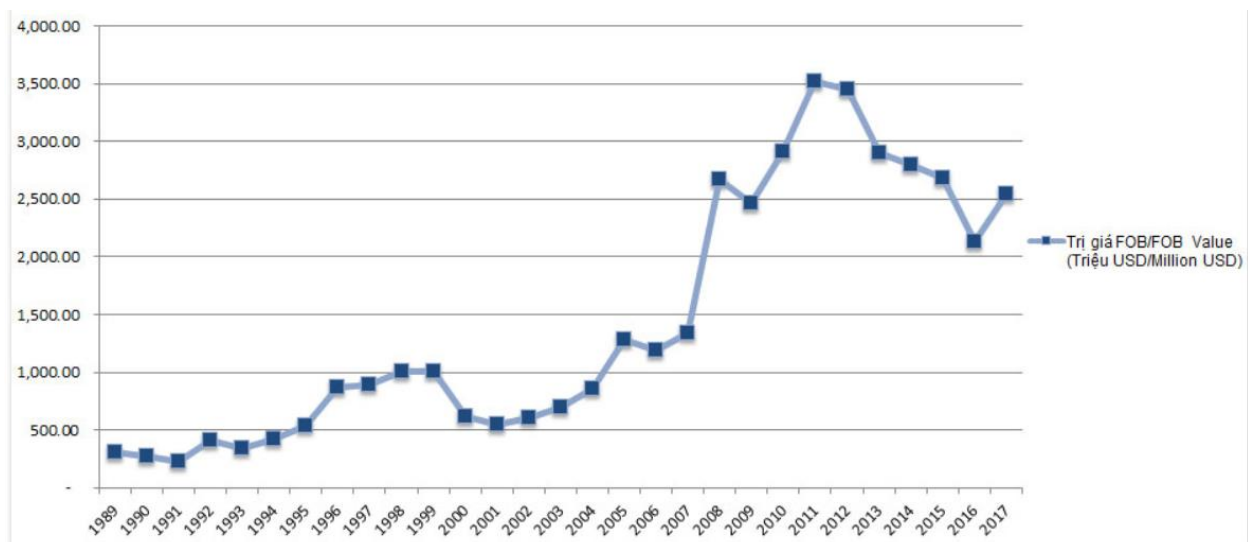


Figure 9: Vietnam rice export value from 1989 to 2017

Source: Viet Food Association, 2018

Today, Vietnamese rice accounts for more than 20 percent of the world's rice exports (the Asia Pacific, 2008). The Mekong Delta plays an important role in exporting. Every year, the Mekong Delta contributes more than 90% of Vietnam's exported rice (World Bank, 2017).

In recent years, Vietnamese rice has been exported to a number of markets such as Hong Kong, Singapore, Australia and Japan. However, Vietnam's main export markets are Asia (accounting for 66.68%) and Africa (accounting for 18.86%) (Viet Food Association, 2018)

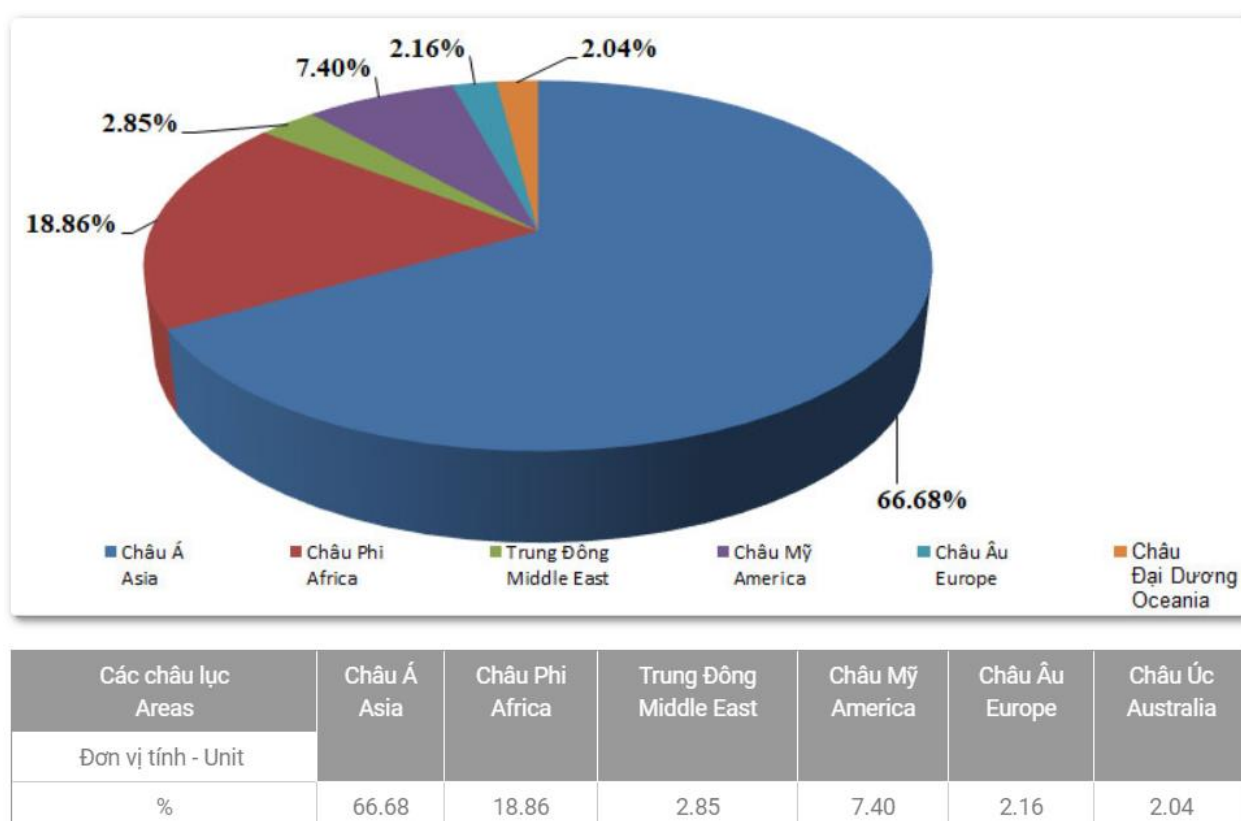


Figure 10: Vietnam rice export by destinations from 1989 to 2017

Source: Viet Food Association, 2018

Regarding the type of exported rice, the value of white rice exports accounts for 65% of the total turnover. Jasmine rice and fragrant rice account for 22%, among the aromatic rice varieties, Jasmine was the largest product. Sticky rice, Japonica rice, Japanese rice account for 8%.

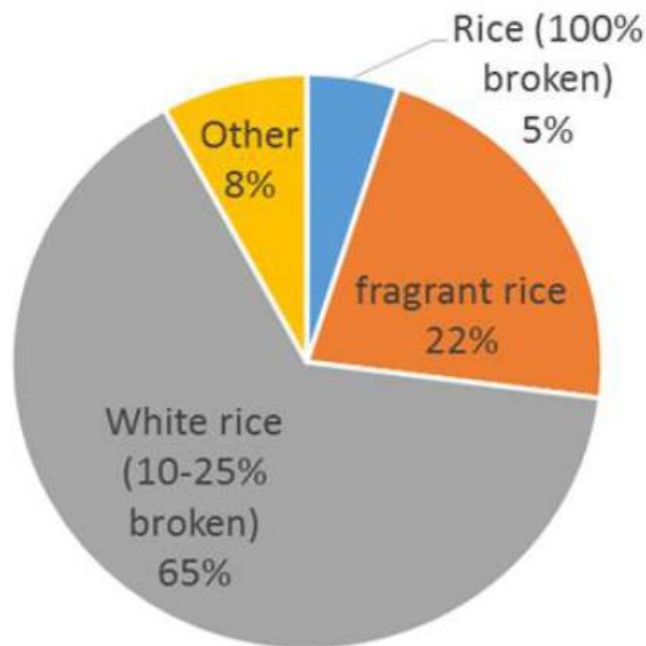


Figure 11: Export rice by types in Vietnam

Source: General Department of Vietnam Customs, 2016

4.2.3 Comparative advantage

- **Climate**

Vietnam is located in the inline belt, with high temperatures and great humidity year-round. The climate of Vietnam is a tropical monsoon climate. It is characterized generally by a warm, well-watered climate, which might be expected to offer outstanding opportunities for agriculture, especially rice. (HOBBS, 2009)

The land in the two major deltas is the Mekong Delta and the Red River Delta, which is largely fertile alluvial soil deposited by large rivers.

Vietnam has a dense river system providing sufficient irrigation water for agriculture in general and rice industry in particular. (Government of the Socialist Republic of Vietnam)

- **Labour**

The majority of Vietnamese people, accustomed to hard work, hard work, know how to rely on natural laws and always want peace to build a better life. Especially Vietnamese people have a long experience of growing rice. With a literacy rate of up to 98%, many of

these farmers should have access to basic technology, new varieties and new equipment. (Minh Duyen, 2019)



Figure 12: Farmers harvest rice in Vietnam

Source: Cafebiz, 2015

4.2.4 Role of government

The rice industry helps to ensure food security and serves as an important source of livelihood for rural households. For this industry, the Government intervenes deeply to ensure rice supply, stabilize markets, and farmers' incomes.

- Securing land fund for rice production: ensuring national food security has set a goal by 2020 to protect rice land fund of 3.8 million ha, to achieve the output of 41-43 million tons of rice, meeting domestic demand and exporting about 4 million tons of rice/year; to ensure rice farmers with an average profit of over 30% compared to production costs. (The Socialist Republic of Vietnam, 2009)

- Supporting farmers in rice cultivation: The Government also has a series of other support policies such as 500,000 VND/ha/year support for paddy rice fields; support 50% of the cost of fertilizers and plant protection drugs when rice production is damaged by 30-70%, support up to 70% if the damage level is up to 70%; support reclamation costs, improve rice cultivation land. (Republic of Vietnam, 2012)

- Providing public services: The agricultural extension system is built from central to local levels, providing counseling, production and consumption services at no charge. In the 2008-2017 period, the State's total investment capital for the rural agriculture sector was about VND 705,000 billion, equaling 50.46% of the total development investment capital of the whole country. (Phuc Nguyen, 2018)

4.3 Impact of WTO on the rice market in Vietnam

4.3.1 Opportunities

Before joining the WTO, Vietnamese rice was limited in market access for some countries that consider rice as sensitive products, subject to high protection by tariff quotas. However, when entering the WTO, Vietnam will have the opportunity to enjoy the same treatment as other countries, the access to the market will be more favorable and the export of Vietnam's rice to WTO members will increase sharply. (Ministry of planning and investment, 2006)

In addition, when joining the WTO, Vietnamese businesses will also have the opportunity to access and transfer advanced technologies in rice processing from developed countries such as the US and Japan. The technologies of treating moisture, milling and polishing export will help reduce intermediary costs, reduce export rice prices, giving Vietnamese exporters the opportunity to increase the value of rice before export, raise the selling price and competitiveness of Vietnamese rice in the world. (Ministry of planning and investment, 2006)

Accession to the WTO also creates opportunities to access concessional loans, credit forms, grants from international financial institutions such as the World Bank, IMF, etc. Vietnamese exporters can invest in rice processing facilities, which are fully integrated from the rice purchasing stage to the following stages. (Ministry of planning and investment, 2006)

4.3.2 Challenges

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4.4 The future risks and challenges of Vietnam rice industry

4.4.1 Climate

Climate change poses great challenges for countries, especially for developing countries like Vietnam. According to international organizations, Vietnam is one of the five countries most seriously affected by climate change.

The impacts of climate change such as sea level rise, floods, drought, saline intrusion, extreme weather ... are more and more pronounced, causing damage to the agricultural economy in general and rice industry in particular.

Firstly, floods and sea level rise will cause loss of arable land in agriculture. If the sea level rises by 1m, there is no effective preventive measure, then about 40% of the Mekong River Delta area, 11% of the Red River Delta area and 3% of the other provinces' coastal areas The sea will be flooded. Flooding will cause nearly 50% of the agricultural land in the Mekong Delta to be submerged and unable to cultivate. (Worldbank, 2010; Tran Tho Dat, Vu Hoai Thu, 2012; Vietnam institute of meteorology, hydrology and climate change)

Second, saline intrusion in coastal areas will also reduce the area of agricultural land. A significant portion of arable land in the Red River Delta and the Mekong Delta will be saline because these two deltas are all lowlands compared to sea level.

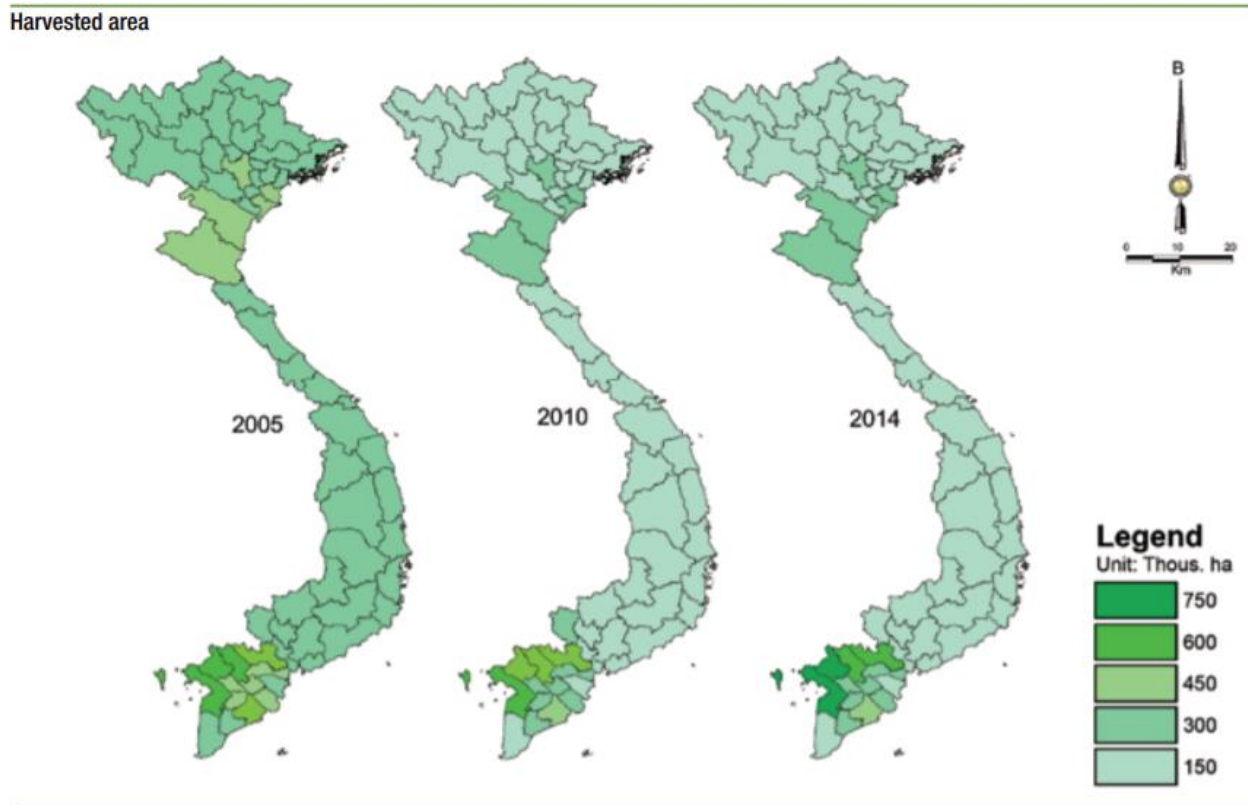


Figure 13: Rice harvested, 2005-2014

Source: Based on GSO data

Thirdly, the increase in temperature and drought will affect the distribution of crops, especially reducing productivity. Higher temperatures make soils in some areas be less fertile, which causes a drop in average yield. Besides, increased temperatures make plants mature faster but have lower food yields. (FOSTER, 2009)

4.4.2 Labour

Currently, the trend of labor migration from agriculture to the industrial and service sectors continues to take place strongly. The shortage of labor in agricultural production is increasingly fierce. The reason is the increasing number of people of working age in big cities, industrial parks, factories and labor export. In addition, agricultural production is

seasonal and potentially risky, uncertain markets are difficult to compete with other industries.

	Total	Urban	Rural
Total - Thous. persons			
2009	49,322.0	13,271.8	36,050.2
2010	50,392.9	14,106.6	36,286.3
2011	51,398.4	15,251.9	36,146.5
2012	52,348.0	15,885.7	36,462.3
2013	53,245.6	16,042.5	37,203.1
2014	53,748.0	16,525.5	37,222.5
2015	53,984.2	16,910.9	37,073.3
2016	54,445.3	17,449.9	36,995.4
2017	54,823.8	17,647.3	37,176.5
Prel. 2018	55,354.2	18,071.8	37,282.4
Structure - %			
2009	100.0	26.9	73.1
2010	100.0	28.0	72.0
2011	100.0	29.7	70.3
2012	100.0	30.3	69.7
2013	100.0	30.1	69.9
2014	100.0	30.7	69.3
2015	100.0	31.3	68.7
2016	100.0	32.1	67.9
2017	100.0	32.2	67.8
Prel. 2018	100.0	32.6	67.4

Table 6: Labour force at 15 years of age and above by residence, 2009-2018

Source: GSO

4.4.3 Pests and diseases

Rice production in 2017, especially in the North, faced many difficulties due to weather and pests and diseases, and the black-striped dwarf disease spread badly during the rice growth period. The country's cultivated area of seasonal rice reached 1.76 million hectares, down 17.5 thousand hectares from the previous year's crop; productivity is estimated at

46.4 quintals/ha, down 1.4 quintals/ha; estimated production reached 8.18 million tons, down 327.3 thousand tons. (GSO, 2017)

4.4.4 Outdated agricultural production technology

Mechanization of production and processing has been applied in the links of the rice supply chain, but the uniformity is not high. Many stages of production and processing, which are still done manually, have caused a lot of waste and high loss rates in the supply chain, affecting the quality of rice.

Although the cultivation industry in general and the rice industry, in particular, have to use a lot of fertilizer (about 11 million tons of all kinds), the technology of chemical fertilizer production in our country is mostly old from the 1970s. , 80 of the 20th century. (HUYNH XAY, 2019)

Vietnam has not mastered the technology of producing pesticide materials but mostly imported from China.

4.4.5 Lack of investment

The specific feature of the rice industry is the seasonal, peak harvest of the amount of goods to be released in a short time increased by 2-3 times compared to the low season. The pressure of harvesting, drying, transporting, purchasing is always overloaded.

The capital demand is the main factor that helps businesses accelerate the purchase and purchase of large quantities of commodity rice in order to keep prices from falling deeply (the newly harvested rice must be dried and stored immediately, if it is more than 1-2 days old) will spoil and reduce recovery rate). This is a great pressure for the rice industry to take place every year.

The capital demand is high, but because the rice business is risky, banks have only offered loans when they have collaterals for a long time.

The lack of capital in the rice industry is one of the main reasons for the decline in the price of rice when farmers enter the harvest, while businesses miss business opportunities because they cannot afford to buy fast, buy a lot of rice.

4.5 Trend changing the structure of Vietnam's rice market

Changes in the world rice market will have a certain impact on Vietnam's export rice industry. Competitive pressure is increasing when countries such as India, Myanmar and Cambodia are implementing policies to strongly develop rice production and export. Traditional importing countries such as the Philippines and Malaysia also pay more attention to increase production to meet domestic demand, reducing dependence on imported supplies. These pressures require not only Vietnamese rice exporters, but all other actors in Vietnam's rice market, to adjust their business operations to adapt to the new business environment and to improve labor productivity, the competitiveness of Vietnam's rice industry and the income of rice farmers.

4.5.1 Farmers

At present, the trend of the labor movement from agriculture to industrial and service sectors continues to be strong.

In the current Mekong Delta region, the stages in the manufacturing process have been greatly specialized. As a result, the time the growers spend on production has been significantly reduced.

For farmers with small areas of rice land, they are more likely to diversify their livelihood sources. For large-scale farming households, which accumulate sufficient financial resources to build warehouses, they will tend to expand the area or switch to growing high-quality rice varieties to supply for domestic consumption. and export.

The trend of voluntary linkages among farmers will also increase. This helps them increase information exchange, resources, increase opportunities for business cooperation, and increase bargaining power when buying and selling products.

4.5.2 Exporters

In the coming time, Vietnamese rice exporters will face strong competition pressure, not only from Thailand and India but also from Myanmar and Cambodia. This competition will force Vietnamese businesses to seek more markets besides traditional markets. With competitive pressure on quality, exporters will have to mandate to collect and control the quality of rice through milling businesses instead of directly buying from existing traders.

Only a few exporting enterprises have the ability to build material zones by themselves due to high output risks.

4.5.3 Traders

Traders currently play an important role in the process of purchasing rice. With the trend of growing milling area, the trading area will tend to associate its activities with milling enterprises.

4.5.4 Domestic rice distributors

When the conditions for rice export business are tightened, many businesses will turn to serve the domestic rice market if they are not eligible for export licenses. In addition, the trend of increasing competition in the world market will make exporters pay more attention to the domestic market. In rural areas, rice consumption is still mainly concentrated on ordinary rice varieties, from locally available sources and nearby areas.

People with middle and high incomes tend to reduce the portion of rice for meals, so businesses promote the consumption of high quality rice in the domestic market.

4.5.5 Milling and polishing factory

In the future, millers, with the ability to accumulate capital and technology, will invest in expanding their existing plants and warehouses. They will seek to integrate more closely with traders and export companies as well as distribute rice domestically to ensure smooth operation and increase competitiveness.

4.6 Policy directions for Vietnam's rice industry and recommendations

By 2020, Vietnam aims to build a rice brand associated with Vietnam's cultural history, traditions, product quality, and advantages. To bring the image of Vietnamese rice to be promoted and widely introduced at home and abroad, synchronously and in combination with promoting tourism, cuisine, agricultural culture, the country, and people. By 2030, Vietnam plans to build stable, efficient and sustainable export rice production areas, making Vietnam rice a world-leading brand in terms of quality and food safety.

Vietnam develops 3 specialty rice varieties into a regional rice brand. To prioritize the selection of 03 specialty rice varieties in the Mekong river delta region to support the building and development of a regional and local rice brand towards becoming a national brand including jasmine variety, aromatic rice variety, and sticky rice, etc. By 2030, white rice will account for 25%, average rice less than 10%, Japonica rice 40%, sticky rice 25%, and other nutritious rice accounts for more than 10%. (Riceonline, 2017)

Rice exports are expected to bring about US \$ 2.3-2.5 billion per year to Vietnam in the period 2021-2030. (HAI HA, 2018)

Regarding export market structure, the decision still focuses on Asian, American and African markets; in which, the Asian market is still the main importing country of Vietnam such as China, Bangladesh and ASEAN countries such as the Philippines, Malaysia, Indonesia. (The Hoang, 2018)

- Policies to protect the rice land fund to ensure national food security: Land policy is one of the core elements of agricultural production in general and rice production in particular. Improving the value of agricultural land is the core solution for agricultural credit and the need to naturally invest in agriculture.
- Policies on rice production: Encourage business linkages and farmers to form large sample fields, using high quality rice varieties, apply clean cultivation methods to produce high-quality and high-value products. (TRAN CONG THANG AND DINH THI BAO LINH, 2015)
- Export policy: Supporting rice exporting enterprises to establish a direct commercial presence in foreign markets. Overseas deals can be the place to display Vietnamese rice products and support business groups to set up warehouses and direct distribution. The Government needs to have a department in charge of marketing rice in particular and agricultural products, in general, to support exporters as some countries have implemented. For example: in the United States, there is the Agricultural Marketing Service under the Department of Agriculture (USDA), in South Africa, there is the National Agricultural Marketing Council and India has the Marketing Institute (National Institute of Agricultural Marketing).

In order for the rice industry in Vietnam to achieve its goals in the future, some recommendations are as follows:

- Reducing the impacts of climate change and strengthening the management of risks, natural disasters and epidemics: It is necessary to develop synchronous coping solutions corresponding to each climate change scenario in the direction of adjusting seasons and localities. suitable production tables; research and apply rice varieties that are resistant to drought and salinity; encourage and create favorable conditions for farmers to apply solutions to save water sources, fertilizers and plant protection drugs in rice production.
- Training and fostering rice researchers, policy researchers and extension workers and especially farmers.
- Help businesses when in difficulties, support to increase the loan limit for businesses (businesses) to consume products of farmers, specifically export enterprises.
- Improving post-harvest and processing technology, focus on post-harvest management and storage of rice; processing by-products and by-products from rice in specialized areas; developing logistics services for export and domestic consumption.
- Focusing on management, use of rice land and reasonable conversion of crop structure on rice land; orientation and planning of rice production by region (key areas for export, domestic consumption, combined export and domestic consumption, ...); switch seed structure in line with production planning; support sustainable farming techniques.
- State capital invested and more support for rice farmers.

5. Conclusion

The analysis has shown the importance of foreign trade to the world in general and to Vietnam in particular.

In 2019, the world economy experiences many challenges. Vietnam's economy has still grown steadily and achieved positive results with an estimated GDP growth rate of 6.8%. Especially, the import-export turnover of the whole year is expected to exceed USD 500 billion, of which exports are expected to increase by 8%, the trade balance will continue to be in surplus. (THANH NGUYEN, 2019)

Vietnam, a country that lacked food in the 1980s and 1990s, has now become a major rice exporter in the world. (NGUYEN DINH LUAN, 2013) Thanks to foreign trade, rice exports of Vietnam have been present in more than 150 countries and territories around the world. Vietnam also becomes the third largest rice exporter in the world. (World's top export, 2020). Besides, there are still some problems with Vietnam's rice export. I would like to offer some awards solutions to improve prices and improve the quality amount of rice to keep the traditional market and develop new markets as follows:

Propagandize widely about the relationship between production and export.

Branding for Vietnamese rice

There are policies to support businesses to buy rice for temporary export and price subsidies policy for farmers.

This thesis also emphasizes the role of WTO organization, the opportunities, and challenges this organization brings, especially in a developing country like Vietnam.

This paper has pointed out a range of challenges and potential risks that already have or will have an unwanted influence on the rice industry.

The first issue to mention is to ensure a sufficient supply of rice for consumers. Because the world's population is still increasing, the demand for rice is also increasing. (NGUU VAN NGUYEN AND ALDO FERRERO, 2006)

One of the most pressing issues is climate change. The rice industry in Vietnam and in the world will be seriously affected by this danger. Climate change is also a cause of reduced rice yield, shrinking land area and pests also increase rapidly.

In order to solve these challenges, we need concrete and effective measures. For the government, there should be policies to expand rice cultivation on a large area, ensuring

that the land is not intrusive or illegally narrowed. For scientists who need to research and transfer advanced farming solutions, improve productivity, quality and save costs. For businesses need to ensure stable output for farmers. And the most important thing to do right now to ensure the rice industry in particular and our life, in general, is to protect the environment. One of my proposals is to protect forests and prevent illegal deforestation. In addition, improving knowledge for the people about the importance of rice for food security and the economy is very important.

Another challenge now is that fewer resources for rice cultivation. One of the main reasons is that the area of agricultural land is shrinking to change the purpose of use to build new urban areas, industrial parks, commercial services and technical infrastructure, etc. Water resources for agricultural production are becoming increasingly scarce, and agricultural labor resources also have a decreasing trend. (OANA, 2017). I have some solutions for these negative factors such as:

- To provide the intensification of rice production on selected fertile soils and lands of particular regions of Vietnam.
- To provide proper water management including water recycling and purification technologies
- To provide the best technologies for rice production including the high tech farm machinery for basic soil preparation, plant protection, harvest technologies, post-harvest technologies including the rice processing and storage technologies. These technologies will replace the increasing labor shortages in agriculture in Vietnam. Moreover, the application of technology in agriculture will help farmers reduce work pressure, save time and bring maximum economic efficiency.

One of the difficulties for the future of Vietnam's rice industry is the lack of investments. To solve this problem, recommendations are obvious that the government needs more support not only for professionals but also for rice farmers. If people have the opportunity to learn from experts, they will not only increase the quality of rice but also increase their yield. This means that it will help increase income for farmers. In addition, the government should help businesses when in difficulties, support to increase the loan limit for businesses (businesses) to consume products of farmers, specifically rice export enterprises.

In short, the world rice industry and Vietnam's rice industry have been and will be facing many opportunities and challenges. International trade brings great achievements to the rice industry but at the same time poses enormous challenges. With appropriate policies and measures, the rice industry in the world in general and Vietnam, in particular, will always maintain and promote its effectiveness and role in ensuring food security and economy.

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