

ANALYSIS OF THE CURRENT STATUS OF THE DEVELOPMENT OF VIETNAM RICE INDUSTRY BY SOME INDICATOR FOR COMPETITIVENESS REVIEW

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ABSTRACT

This study is carried to analyze the current situation of the development of the rice sector by indicators to assess the competitiveness of Vietnam's rice sector. The indicators reflecting the competitiveness of this sector will be calculated, from that, evaluating the achievements and limitations in the development of Vietnam's rice sector. The research findings are selected as a basis for recommendations to contribute to further growth of the Vietnam rice sector. Data for the research collected from the annual summary report of the Ministry of Agriculture and Rural Development, General Statistics Office, data collected and analyzed to solve the research problem.

Keywords: Rice sector, Development, Competitiveness, VietNam

1. Introduction

With the international economic integration in the current context of Vietnam, competition becomes an inevitable requirement not only for enterprises but also for industries and countries. The competition takes place not only between units and intra-sectoral but also between industries. Besides, the rival is a necessary factor to help reallocate social resources most effectively. Competition helps regulate the supply and demand of goods in the market, stimulates and promotes the application of science and technology to production in the market.

Research on competitive capabilities not only helps enterprises, industries, and countries get the inevitable trend of the market, thereby making adjustments to meet market requirements. Besides, for enterprises, improving competitiveness helps companies create a position in the market, dominate the market. For industries, when enterprises have good competitiveness, they will grow the competitiveness of the sector, thereby contributes to enhancing the status of nations.

In recent years, agricultural production in general and rice production, in particular, have achieved certain outcomes, contributing to boosting economic growth and development, creating conditions for political stability for the country. According to a report of the General Statistics Office, in the period 2010-2017, Vietnam's rice production continuously increased depend on new rice varieties, short-term, meeting the need to expand the annual cultivated area. Valid farming techniques applied to huge tracts, yield, and yield/unit area (ha) increased significantly. All these factors have brought Vietnam to become one of the top leading rice-producing countries worldwide. In 2017 Vietnam's rice yield reached 42.84 million tons with productivity of 55.50 quintals/ha; At the same time, the rice production area also increased to 7.72 million hectares in 2017.

Besides these achievements, the rice sector is still facing many challenges and competition in both domestic and international markets, restrictions of Vietnam's rice such as rice sector till focus on increasing output without paying attention to quality and branding; the rice that Vietnam export hasn't been highly valued for quality by international importers etc.

Because of the above reasons, it is necessary to research the competitiveness of Vietnam's rice sector, thereby analyzing the development status of Vietnam's rice industry is a requirement, base on that basis, the study will point out the achievements and limitations of the development of Vietnam's rice, from there, there are bases to propose solutions for further development of Vietnam's rice sector.

2. Research Overview

Development of the rice sector, competitiveness and factors affecting competitiveness have been studied in many different aspects in the in studies, specifically as follows:

According to Vu Thi Minh (2004), Nguyen Sinh Cong (2004) and Mwanza (2011), Zhou and Jin (2009), Nguyen Huu Tin and Phan Thi Giac Tam (2008), Agricultural production conditions have a great influence on the competitiveness of the rice industry. Because to comply with these standards, in addition to requirements for household production conditions play important role deciding the competitiveness of the sector. Production conditions include natural conditions such as climate, land, soil and socio-economic conditions such as technical infrastructure, cultivated areas, human resources and initial capital. Meanwhile, in view of Nguyen

Trong Hoai (2010), Bui Quang Binh (2008), Nguyen Quoc Nghi et al (2011), Pham Anh Ngoc (2008), Okurut et al (2002), Dinh Phi Ho (2006), Huynh Thanh Phuong (2011) etc. Households play a very important role in agricultural production in Vietnam. In order to improve the competitiveness of the rice industry, it is necessary to carefully study the household's characteristics to have reasonable methods to encourage and changing investment thinking of households, persuade them to invest in rice production ensuring quality and safety. Characteristics of households include: age, education level, experience, gender, household size.

According to Jayasinghe-Mudalige and Henson (2007), large enterprises have the capacity to implement food safety controls, whereas most small enterprises do not want to do. Small enterprises have afford and capacity is still not really interested in food safety control competence, wherewithal it is even more and more difficult for households to implement food safety control. This has a great effect to the competitiveness of the rice industry.

According to Nelson (1987), government intervention is largely an empirical issue that is not a theoretical issue because there is no normative theory meets the requirements of the appropriate role of government in a mixed economy and no theories about the diversity of institutional arrangements to resolve common problems. Can see the role of the government in promoting and enhancing rice sector competitiveness is expressed in two dimensions. Management roles: Henson and Caswell (1999); Ogus (1994). Supporting role: In addition to the function of issuing and controlling compliance with food safety standards, in developing countries, the state plays an important role in supporting production facilities apply food safety standards including GAP (Hanak et al., 2002; Wannamolee, 2008). State support policies for other actors in the production chain as consumers are also mentioned (Srimanee and Routray, 2012).

3. Research Methods

3.1. Data collection methods

Data in the study was collected from the General Statistics Office's summary report, summary reports of the Ministry of Agriculture and Rural Development, General Statistics Office.... Summary reports on scientific research topics, scientific works published in specialized journals related to the field: the development of the rice sector in Vietnam is also used for research by the author.

3.2. Data analysis methods

The study uses descriptive statistical methods, comparative methods, time series analysis methods in the research to analyze the current situation of the development of Vietnam's rice sector.

4. Research findings

4.1. Current situation of the development of Vietnam's rice sector in the period 2010-2018

In recent years, support policies for rice growers such as price stabilization and producer support policies, and general agricultural support policies such as investment in irrigation development, trade liberalization, exemption irrigation fees, Agricultural extension, scientific research support, credit loans... has created a significant motivation to promote rice production and contribute to increasing Vietnam's rice productivity, the output in 2018 was roughly 43979.2 thousand tons.

Table 1: Annual rice output by season, 2010-2018

Unit: Thousand tons

Year	Yield of Winter-spring rice crop	Yield of Summer-autumn rice crop	Yield of Winter rice
2010	19.216,8	11.686,1	9.102,7
2011	19.778,3	13.402,9	9.217,3
2012	20.291,9	13.958,0	9.487,9
2013	20.069,7	14.623,4	9.346,0
2014	20.850,5	14.479,2	9.644,9
2015	21.091,7	15.341,3	8.658,0
2016	19.646,6	15.232,1	8.286,4
2017	19.415,7	15.461,8	7.886,0
2018	20.597,9	15.111,3	8.264,9

Source: General Statistics Office

There are three main rice crops in a year in Vietnam, the Winter-Spring crop (harvest time from February to April) is the main crop which is the largest; The Summer-Autumn crop (harvested from June to

August) is the second-largest; The crop (harvested from October to December) has good rice quality similar to the Winter-Spring crop, but with the smallest scale.

A yield of Vietnam's summer-autumn rice crop in the period 2010 - 2017 tends to grow steadily. The Summer-autumn paddy production of the country in 2010 reached 11,686.1 thousand tons. By 2017, it increased to about 15,461.8 thousand tons, the average growth rate of the summer-autumn rice yield in this period is approximate 15.03%. During the research period, although the annual summer-autumn rice output of the whole country increases, it was not even by region, there was a rich harvest, but also areas with poor growth.

About Winter crop, Winter crop is a traditional crop and is often planted to serve domestic consumption; therefore, the yield of the Winter crop is usually lower than the other crops of the year. The average annual of Winter crop in Vietnam is about 8,953.65 thousand tons, from 2010 to 2014, the annual rice production increased continuously from 9102.7 thousand tons to 9644.9 thousand tons, though, in the next three years from 2015 -2017, the Winter crop output tended to decrease, specifically, the yield in 2017 reached about 7886 thousand tons.

In Vietnam, Rice cultivated in almost all provinces of the country, the most important rice-producing region in the country is the Mekong Delta (56% of production), the Red River Delta (16% of production).), and the North Central Coast region (15% of production). In 2018, the annual rice area reached 7,570.4 thousand hectares:

Table 2: The annual rice area by season, period 2010 - 2018
Unit: thousand ha

Indicator	Year	Area of Winter-Spring rice	Area of Summer-Autumn rice	Area of Winter rice
Value	2010	3.085,9	2.436,0	1.967,5
	2011	3.096,8	2.589,5	1.969,1
	2012	3.124,3	2.659,1	1.977,8
	2013	3.105,6	2.810,8	1.986,1
	2014	3.116,5	2.734,1	1.965,6
	2015	3.168,0	2.869,1	1.790,9
	2016	3.128,9	2.872,9	1.735,3
	2017	3.117,1	2.878,0	1.713,6
	2018	3102,1	2785,0	1683,3
Development index (Previous year = 100) -%	2010	100,8	103,3	97,5
	2011	100,4	106,3	100,1
	2012	100,9	102,7	100,4
	2013	99,4	105,7	100,4
	2014	100,4	97,3	99,0
	2015	101,7	104,9	91,1
	2016	98,8	100,1	96,9
	2017	99,6	100,2	98,7
	2018	99,5	96,8	98,4

Source: General Statistics Office

Through the table of the annual rice area by season in the 2010-2018 period, can see that the winter-spring rice areas always account for the highest proportion, followed by the summer-autumn rice and the cultivated areas of the winter rice is the lowest. Specifically, in 2018, the area of winter-spring rice reached about 3,102.1 thousand hectares, while the area of winter rice was about 1,683.3 thousand hectares, and the area of summer-autumn rice was about 2,785.0 thousand hectares.

The winter-spring rice cultivated area tends to increase over the years, from 3,085.9 thousand hectares in 2010 to 3,117.1 thousand hectares in 2017, during the study period, in 2015 had the highest winter-spring rice area, reaching 3,168.0 thousand hectares.

Table 3: Area of summer-autumn rice crop by region, period 2010 - 2018
Unit: thousand hectares

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
North Central and Central Coast	333,6	338,6	347,6	343,2	345,6	328,6	337,9	360,1	353,3
Central Highlands	5,9	6,2	6,3	6,2	6,2	6,4	5,6	6,1	5,9
Southeast	91,3	93,7	92,7	91,0	89,5	90,0	87,9	88,6	89,1
Mekong Delta	2.005,2	2.151,0	2.212,5	2.370,4	2.292,8	2.444,1	2.441,5	2.423,2	2336,7

Source: General Statistics Office

The cultivated area of summer-autumn rice in the period 2010-2018 also tends to increase, in 2010, the areas of summer-autumn rice cultivation were 2,436,0 thousand hectares, 2017 the areas increased to 2,878,0 thousand hectares, and here're also the year with the highest summer-autumn rice cultivation area during the study period.

The cultivated area of Winter rice tended to decrease in the period 2010 - 2017, specifically in 2010, the area of Winter rice was 1,967.5 thousand hectares, but in 2017 it dropped to 1,713.6 thousand hectares.

In the Northern provinces, the cultivated area reached nearly 1.17 million hectares, down 15.8 thousand hectares, equivalent to about 1.3%; productivity reached 50.1 quintals/ha, an increase of 0.1 quintals/ha by about 0.3%; the output reached 5.84 million tons, down 61.8 thousand tons, matched to 1% over the same period last year.

In the Southern provinces, the area of Winter rice continues to decrease due to unfavorable weather, in the Central Coast provinces, the Central Highlands, the change of crops and land use purposes in the Mekong Delta provinces. The cultivated area reached 5770 thousand hectares (down 1.7%), the average yield reached 47.8 quintals/ha (up 0.2%), the yield reached 3.68 million tons (down 1.5%).

Currently, Vietnam's rice yields are among the highest in South East Asia, averaging 5.3 tons/ha/crop. For winter-spring crop, many provinces such as An Giang, Can Tho, Dong Thap reach 7.2 - 7.3 tons/ha, equal to the highest yield rice-growing countries in the world such as Japan, Korea etc.

Table 4: Annual rice productivity by region, 2010 - 2018

Unit: quintal / ha

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Nationwide	53,4	55,4	56,4	55,7	57,5	57,6	55,8	55,5	58,1
Red river delta	59,2	60,9	60,4	58,9	60,2	60,6	59,8	56,8	60,5
Northern Midlands and Mountains	46,3	47,7	48,2	47,4	48,5	48,8	49,9	49,1	50,3
North Central and Central Coast	50,7	53,2	54,4	53,6	56,6	56,2	56,3	55,8	57,2
Central Highlands	47,8	47,6	49,6	49,5	52,4	50,9	50,3	54,1	56,1
Southeast	44,8	46,4	47,5	48,0	49,4	50,4	50,6	51,4	52,6
Mekong Delta	54,7	56,8	58,1	57,6	59,4	59,5	56,2	56,4	59,5

Source: General Statistics Office

Through the data table above, it was found that our country's rice yield tended to increase during the entire study period, but the amount was uneven. Specifically, in 2010, the national rice yield reached 53.4 quintals/ha, 2011 the rice yield increased to 55.4 quintals/ha, and the increasing productivity growth trend extends to 2015, reaching 57.6 quintals/ha, this is the year with the highest rice yield in the period, in 2016 and 2017 the country's rice yield decreased to 55.8 tons/ha and 55.5 quintals/ha, respectively.

4.2. Assess the competitiveness of Vietnam rice sector

Based on the author's survey data, the total output is paddy production in 2018, which is 4554.0 thousand tons

The weighted total of all inputs is the farmer's total production cost for rice crops, which is 7,984 thousand VND / kg, so the TFP calculated as follows:

$$TFP = \frac{4554.0}{7.984} = 570.39$$

Compare with the TFP indicator of other countries in the same region according to the Productivity report of Asia Productivity Organization: Malaysia's TFP is about 14 thousand USD. This shows that, for the rice sector of Vietnam, the contribution of TFP to growth is not high. Especially in the agricultural sector.

Labor productivity in Vietnam increased faster than 2 out of 8 countries shown in the table. Vietnam is the only country to experience a decline in agricultural productivity growth. As a result, the labor productivity gap between Vietnam and other countries has increased, and the share of agricultural productivity to total income per capita of Vietnam has also decreased the fastest in Asia.

**Table 5: Growth rate of Agriculture value added per worker
(According to the US dollar price fixed price 2005)**

Unit: %

Countries	1990 – 1999	2010 – 2017
Bangladesh	2,4	4,0
China	3,5	4,3
India	1,8	2,0
Indonesia	0,7	3,2
Korea	6,6	7,1

Malaysia	0,9	4,5
Philippines	0,4	0,6
Thailand	1,9	3,2
Vietnam	2,7	2,5

Source: World Development Indicators

So what is the reason for low agricultural productivity? The main reason is that rice occupies a dominant position, and Vietnam reserves the best land and best irrigated for rice production. Both the value-added from rice production and the water productivity of the irrigation system for rice cultivation is low. Labor productivity in rice cultivation, it is evident in the Red River Delta and other regions due to fragmentation and small farming. In terms of hectares, each hectare requires 150 labor days in the Red River Delta (including travel time between a plot of field). In contrast, in the commercial rice production areas of the Mekong Delta, farmers only spend 35-55 workdays per crop. Even a study by Bordey et al. (2014) showed that in some highly mechanized places, the number of working days per job is only 20 days, so labor productivity is also higher.

Export market share plays an important role in export performance of any country, comparing Vietnam's rice export market share to some countries as follows:

Table 6: Table of market share of rice export of some countries in 2016

Indicators	The export turnover of rice sector	Export market share
UNIT	Million tons	%
All over the world	45,34	
Vietnam	4,91	10,83
Thailand	11	24,26
India	11	24,26
Pakistan	3,6	7,94
USA	3,7	8,16

Source: General Statistics Office

Through the datasheet, it shows that the rice export market share of Vietnam ranks quite high in the world, only behind Thailand and India. This shows that the competitiveness of the rice sector in Vietnam is highly appreciated by the world. Vietnam's export market share reached 10.83% in 2017, which shows great potential for an increase in Vietnam's rice export market share in the future.

5. Some recommendations

From the results of assessing the competitiveness of Vietnam's rice industry, analyzing the current status of Vietnam's rice industry, to further develop Vietnam's rice industry, the author proposes some recommendations as follows:

First, the government needs to open more training courses on rice care techniques for local people to help people access more modern techniques.

Second, for households, they also need to access market requirements for rice products.

Third, households also need to cultivate more professional knowledge and techniques to meet production requirements, thereby creating quality products, meeting the requirements of the market.

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