



Identifying the Factors Affecting the Competitiveness of Rice Industry in Vietnam

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Abstracts

This research was conducted to identify the factors affecting the competitiveness of rice industry in Viet Nam. Research findings show that there are five groups of factors affecting the competitiveness of rice industry, including: the conditions of production factor group; household characteristics; State support; Market signals; and support of enterprises and traders. Based on the analysis results, the author has proposed some recommendations to improve the competitiveness of the rice industry in Vietnam.

Keywords: Competitiveness, rice, Vietnam

1. Introduction

In recent years, agricultural production in our country has achieved remarkable achievement which including the rice industry. Vietnam's rice always has high rankings in the world. Currently, Vietnamese rice has been exported to 135 countries and territories around the world; and for the first time Vietnam surpassed Thailand to become the top rice exporter in the world. However, the rice industry is still facing many challenges and competition in both domestic and international markets. In addition, when the level of integration of Vietnam becomes more and more extensive, bilateral and multilateral agreements signed and implemented will open up great opportunities for Vietnam's rice industry to penetrate into difficult markets like the US, Japan, EU ...But it also face many challenges such as: concerns about quality, food safety and the

level of product positioning in the markets of countries, technical barriers in the developed countries.

Improving capacity of rice industry competitiveness is an urgent requirement in the current period when competitive market is increasingly fierce. If not improving competitiveness, the rice industry is at risk of failure at domestic market. To improve the rice industry's competitiveness, the identifying of the factors affecting and quantifying the impact of those factors on the competitiveness of the rice industry is issues should be top priority. At the same time, this study approached the competitiveness of producers.

2. Research overview

Competitiveness of rice farming households is affected by many different factors. In particular, the characteristics, knowledge and skill level of the head of household are the first basic factors affecting the production decisions and business of the household. Next, resources (land area, labor, and other household assets) directly affect competitiveness. The accessibility to capital resources to production and business of households, seed starting supplies from trusted organizations such as enterprises, Research Institute, Extension agency also have greatly affects to the productivity and quality of products of household production. Market access to consume products is also a factor affecting household competitiveness.

Factor group of agricultural production conditions

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. Vu Thi Minh (2004), Nguyen Sinh Cong (2004) and Mwanza (2011), Zhou and Jin (2009), Nguyen Huu Tin and Phan Thi Giac Tam (2008).

Factor group of household characteristics

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, etc. 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.

Factor group of market signals

According to Vu Thi Minh (2004), "The market is the most important factor which has a great impacting to all activities of commodity production in general and producing and trading agricultural crops in particular. The market in agricultural production of households consists of two types: the output market and the input market.

Factor group of support of enterprises and traders

Restrictions of households such as market access is weak, little capital, scientific and technological knowledge is still limited, ability to take risk still low, etc. These limitations are becoming major barriers to the investment process of agricultural production and improve the competitiveness of the rice industry. The support of enterprise, trader may be good complement households which many shortcomings areas. It is necessary symbiosis to improve the efficiency of investment and development in agricultural production in general and the rice industry in particular. Investment of enterprises, traders and household ' investments will become a combination of complementary values for each other, in which enterprises's investment, traders will supplement capital and input materials which responsible for searching output markets and households will be responsible for the main production to producing quality products. 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.

Factor group of government support

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 Methodology

3.1. Data collection methods

Primary data was collected through direct interviews with questionnaires for 350 rice farming households. The results after removing unreliable observations left 329 observations (a good response rate of 94%), specifically:

Table 1: Statistics Survey Samples

Stt	Research areas	Number of observations	Structure
1	Northern (Red River Delta)	119	36,2%
2	South (Mekong Delta)	121	36,8%
3	Central (Central Coast)	89	27,0%
Tổng		329	100%

Source: Survey results from 329 rice farming households in Vietnam

3.2. Data Analysis Methods

The study uses exploratory factor analysis (EFA) to perform this analysis. After performing data analysis, the author performed data analysis using the method of comparing and interpreting research findings.

4. Research findings

Before analyzing the exploratory factor, the author performs a scale test, the results are as follows:

Table 2: Quality test of scale

Factors	Item	Cronbach's Alpha
Production conditions	DKSX1, DKSX2, DKSX3, DKSX4, DKSX5, DKSX6, DKSX7	0,944
Household characteristics	DDNH1, DDNH2, DDNH3, DDNH4,	0,938

	DDNH5	
Market signals	THTT1, THTT2, THTT3	0,763
Support of enterprises and traders	DNTL1, DNTL2, DNTL3	0,719
Government support	HTNN1, HTNN2, HTNN3, HTNN4, HTNN5,	0,863
Competitiveness of rice industry	NLCT1, NLCT2, NLCT3, NLCT4, NLCT5,	0,833

Source: Analysis from survey results

One factor is rated well when the Cronbach's alpha coefficient is greater than or equal to 0.8, the Cronbach's alpha coefficient of 0.6 or higher is usable (Peterson, 1994). Thus, through the table we see Cronbach's Alpha of the factors are greater than $0.719 > 0.6$, so the scale quality is good. After that, the author performed the exploratory factor analysis:

Table 3: Exploratory factor analysis

Rotated Component Matrix^a

	Component				
	1	2	3	4	5
DKSX5	0,918				
DKSX4	0,906				
DKSX2	0,905				
DKSX3	0,903				
DKSX7	0,896				
DKSX6	0,830				
DKSX1	0,636				
DDNH4		0,936			
DDNH2		0,914			
DDNH5		0,879			
DDNH3		0,869			
DDNH1		0,869			
HTNN4			0,822		
HTNN3			0,811		
HTNN2			0,797		
HTNN1			0,780		

HTNN5			0,756		
THTT1				0,970	
THTT2				0,769	
THTT3				0,739	
DNTL2					0,808
DNTL1					0,792
DNTL3					0,785
Eigenvalues	5,774	4,346	2,769	2,036	1,840
Cumulative (%)	25,103	43,997	56,036	64,887	72,888
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.					0,793
Bartlett's Test of Sphericity	Approx. Chi-Square				5979,124
	Df				253,000
	Sig.				0,000

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Source: Analysis from survey results

According to the results in the table above, KMO = 0,793 factor analysis is appropriate. Testing the hypothesis H0 Bartlett review: correlation between the observed variables equal zero in the overall. If this test is statistically significant (Sig 5 0.05), the observed variables are correlated with each other overall (Hair et al., 2006). Accordingly, the sig of the above test is 0,000 <0.05, so the variables are correlated with each other in the overall. With the results of KMO coefficient and Bartlett testing in the above table, it shows that there are enough conditions to conduct factor analysis.

Five factors have Eigenvalues (the amount of variation explained by the factor) greater than 1 is extracted from the original 25 items; and Cumulative with a value of 71.1% tells us that these 5 factors explain 71.1% of the variability of data (Gerbing and Anderson, 1988).

Thus, based on Rotated Component Matrix from EFA analysis 5 factors have been created from 23 items are: Factor 1 includes 7 items, named DKSX: Production conditions; Factor 2 includes 5 items, named DDNH: Households characteristics; Factor 3 includes 5 items, named HTNN: Government support; Factor 4 includes 3 items, named THTT: Market Signals; Factor 5 includes 3 items, named DNTL: Support of enterprises and traders

5. Recommendations

To enhance the competitiveness of Vietnam's rice industry, from research findings, the authors propose a number of recommendations as follows:

First, the government should open further training courses on techniques of rice for the people care to help people gain access to more modern techniques.

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

Third, households also need to improve more specialized knowledge, techniques to meet the production requirements, thus creating quality products, meeting the requirements of the market.

6. Acknowledgement

Author would like to express my special thanks to Thai Nguyen University of Technology for giving me the permission to use all required equipment and the necessary materials to complete the report.

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