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The Brand Switching Analysis of Thai Rice in China: A Comparison with Vietnam

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Abstract:
This research was undertaken with the aim of finding the brand switching of Thai and Vietnamese rice exporters in the Chinese rice import market. This study explored the rice export data from Thailand and Vietnam to China in 1995 to 2012. The brand switching analysis (BSA) has been implemented to investigate whether there is a brand switching from Thai rice to Vietnamese rice and in-depth interview was used to analyze potential factors related to the switching. It was found that Thai rice export is definitely a problem in China, with a loss of 3% market share for Thailand and no corresponding loss for Vietnam. The plausible reason of brand switching from Thai to Vietnam due to Vietnam has higher yield, lower cost, policy in supporting farmers, cheaper price, "one team" marketing strategy and established rice storage overseas. Therefore, Thai government and farmers should try to lower the production cost, adjust production and come up with new strategies in order to compete with Vietnamese rice.

Keywords: *The brand switching analysis, Thai and Vietnamese rice exporters, Chinese rice import market*

1. Introduction

Rice is one of Thailand's main crops and very important export product. Thailand has exported rice to many countries in the world with China is the number one exporter of Thai rice in 2015 (January – October) both in term of total quantity and total value (Information and Communication Technology Center with Cooperation of the Customs Department, 2015) and China is expected to be the largest importer of rice in the world in 2013-2014 (United States Department of Agriculture, 2013). Because of that, decreasing market share for rice in China market could lead to great reduction of quantity and value of Thai exported rice.

For China, rice is imported from many countries, not just only Thailand, but also Vietnam, Lao, Cambodia, Pakistan, etc. The most important competitor for Thailand in Chinese market is Vietnam because only Vietnam has a potential to compete with Thailand to be the number-one rice exporter in the world as rice export quantity of Vietnam is closed to Thailand. Pakistan is a major rice exporter in China but their potential is far behind Thailand and Vietnam in world market. For India, they have a potential to compete with Thailand and Vietnam but they are not a major player in Chinese market (United States Department of Agriculture, 2015).

The growing presence of Vietnam in the global rice export sector and in China especially, poses a challenge to Thailand's position in the Chinese import market. Vietnam solidified its position in the Chinese import structure last year by establishing ties to the official trading system for its higher-quality rice, including some fragrant rice varieties that compete directly with Hom Mali rice (Xinhua, 2012). This is in addition to the increased rate of informal import of lower-quality rice (including broken rice and other varieties), which has been strong for some time (Xinhua, 2012) and Vietnam has recently taken some Chinese rice market share from Pakistan, based on relatively low costs and higher quality (Oryza, 2013).

Compared with Thailand, Vietnam has higher production output and lower price, which can be a major factor to challenge the competitiveness of the Thai rice industry. Furthermore, the rice export market is likely to have a high level of supply, as crop production across many rice exporting and importing countries is estimated to be significantly higher than average. This means that Thailand will face fierce competition from other countries for a reduced demand (United States Department of Agriculture, 2013).

Therefore, the problem addressed by this research is how Thailand can build competitive advantage in the rice export into China, in order to build its competitive position against competitors like Vietnam. Given this context, this research investigated whether there is a brand switching from Thai rice to Vietnamese rice in China market and what factors contribute to the brand switching? How Thailand can prevent brand switching in order to promote its competitive position against a competitor such as Vietnam?

2. Literature Review

Brand switching refers to the consumer's decision to purchase a different product brand from their usual choice, which can be a temporary or permanent decision (Elena & Jose, 2005; Keller & Lehmann, 2006; Venkatesan, Kumar, & Ravishanker, 2007). There are a number of reasons consumers may switch brands temporarily or permanently, including: price differences or promotions; availability of products or brands; changes in existing products (like changes in quality) or dissatisfaction with current brands; increased perceived risk; in-store display or impulse choice; need for novelty; or promised improvements in other brands (Francis & Collins-Dodd, 2004; Huang, Perloff, & Villas–Boas, 2006; Rajkumar & Chaarlas, 2012). Brand switching may be most common where products are perceived to be similar in functional quality and where there is not a high level of customer loyalty, or relationship between the product, brand, and consumer (Adis, 2010; Sahay & Sharma, 2010; Abdolvand & Nasimi, 2012). The use of brand switching analysis can identify factors like market share, market growth, and loyalty level as well as sales growth or loss, which can isolate issues in brand switching (Chaudhuri & Holbrook, 2001; Uslu & Cam, 2010). Since a significant part of consumer goods value comes from consumers with strong brand loyalty, brand switching from one brand to another can result in loss of market share for an existing firm. At the same time, however, brand switching also typically benefits the existing brand, since consumers may be just as likely to switch away from other brands. Thus, determining the net rate of brand switching is one of the key factors in understanding changes in market share. A framework for analysis of brand switching will be used based on Lambin & Schulling (2012), although there are a number of potential analysis techniques that could be used in this study.

The technique of brand switch analysis is meant to determine the overall rate of change from one brand to another within a defined marketplace (Keller & Lehmann, 2006). It should be noted that customers do not always easily switch the brand based on price as quality also does matter (Afzal, Chandio, Shaikn, Bhand, Ghumro, & Khuhro, 2013). In the meantime, Lambin & Schulling (2012) note that it is not possible to determine the rate of brand switching based on market data alone, since it is possible that a stable market share could indicate either a stable, loyal customer base or a rate of customer attraction that is equal to the rate of customer attrition. Lambin & Schulling (2012) define two criteria for understanding the rate of brand switching, including the loyalty rate (or the rate of customers who continue to buy a given product through a time period) and the attraction rate (or the rate of customers who buy the given product in the time period, having previously purchased a different product). These rates cannot be estimated empirically; instead, data needs to be collected in order to estimate them using a survey technique (Lambin & Schulling, 2012). The collection of loyalty and attraction rates allows for estimation of future market share based on interaction between competitors (Lambin & Schulling, 2012). While in theory this is a simple calculation, in practice it can be very complex, and is estimated using a simplified model considering only a few competitors.

Brand switching analysis has been used in a number of other studies, in addition to being a tool for marketing analysis and practice. While the methods are not always consistent (since brand switching analysis is a loose framework) the theoretical approach routinely shows itself to be useful in uncovering individual and product factors associated with brand switching.

For Choi & Ahluwalia (2013), consumer brand commitment or loyalty depends on perceived risk associated with the new brand, and consumer preferences for a given product (Choi & Ahluwalia, 2013). This is useful because it shows that consumer characteristics, and not just brand characteristics, are likely to influence the outcomes of a brand switching behavior (i.e. the choice to switch or not switch). While Michaelidou & Dibb (2009) found that both consumer and product characteristics associated with brand switching. In terms of personal characteristics, consumers were likely to switch from one brand of clothing to another because of a desire for novelty or new styles. However, product characteristics like product quality and product price also played a role in the decision to switch. There is an interplay between personal preferences and brand characteristics that could provoke brand switching behavior.

A study of specific demographics of consumers has shown that not all consumers are as likely to switch brands, especially for commonly used products (Karani & Fraccastoro, 2010). This study showed that elderly consumers were far less likely to switch brands based on any factor than younger consumers. Furthermore, this resistance could continue even in areas where it might be considered surprising, such as significant increases in price (Karani & Fraccastoro, 2010). Thus, for the purposes of analyzing brand switching, it should be kept in mind that consumers are not undifferentiated. Instead, they are likely to have different reactions to the product, price, and availability variations that may promote brand switching and be more or less likely to switch.

3. Research Methodology

3.1. Research Design

This research employed mixed methods which involves combining or integration of qualitative and quantitative research in a study. Quantitative research is used to test whether there is a brand switching from Thai rice to Vietnamese rice in China market. The brand switching analysis is used for this purpose. Then the qualitative research is used to identify the reason behind the switching behavior and in-depth interview is used for this purpose. It might not be the best way to provide evidence supporting the arguments. But due to time limit and the complexity of a quantitative testing method, in-depth interview is employed.

3.2. Quantitative Research: Brand Switching Analysis

Brand switching analysis (BSA) is a technique introduced by Theil & Rey (1966). This technique is used to uncover preference changes for products and brands in the consumer base for comparable products (MM4XL, 2010). The detection of brand switching can be done by using a computer software to search for the pattern of events in which 1) the sales of one brand increases and the sales of another brand decreases over a specified number of consecutive period of time and 2) the two brands in each of the brand pairs that satisfy the above conditions have a difference in sales below a given threshold value (Wakio, Yoshibayashi and Akaboshi, 2004). The brand switching analysis can be used in this study because:

1) For the concept of brand, it is not applied to products only. A country or a nation is also can be treated as a brand. Anholt (2005) explained that when we express a preference for French holidays or German cars, we are responding to brand images in exactly the same way as when we're shopping for clothing or food. In this study, Thailand and Vietnam is treated as a brand that help supporting rice export in each country.

2) Brand switching is not limited to any kind of specific products. It can be used to study a commodity as well. Lee and Murphy (2005) applied brand switching analysis to study mobile telecommunications service which they concluded that mobile telecommunications are a commodity and using brand switching analysis can provide implications for mobile service providers. Therefore, brand switching analysis is used to analyze the switching of rice import in China from Thailand to Vietnam as a whole and do not analyze any specific type of rice.

For a computer software used in the brand switching analysis, MM4XL is used in this research. MM4XL software is analytical software that is specifically designed for brand switching analysis, and has been used in this case (Theil & Rey 1966). The assumptions that are used in brand switching analysis include that: the market size does not change for the period of analysis; all customers have access to all brands analyzed each time they make a purchase; and there is a fixed quantity of the product purchased by each customer (Theil & Rey 1966).

For the data used in brand switching analysis, the secondary data related to the import and export sector of Vietnam and Thailand to China will be collected. From Global Trade Atlas, the export and import data 1995 to 2012 was retrieved.

3.3. Qualitative Research: In-Depth Interview

For in-depth interview, there were three interviewees selected for the research. Two interviewees were selected from the Thai rice exporters that responded to the survey, in order to deepen understanding of these responses. The third interviewee was a representative of the Thai government dealing with the rice export market and its issues.

4. Research Findings

The BSA articulated the competitive position of Thai rice in China in regard to the market share, the retention (loyalty), the market share forecast and sales gained or lost as compared to Vietnam. The results are explained in the following sub-sections.

4.1. Market Share from 1995 To 2012

From 1995 to 2012, Vietnam's market share had the highest growth rate of 230.4 percent, showing an increase from 27.2 percent to 89.8 percent. Thailand's market share had the negative growth rate of 86.0 percent, decreasing from 72.8 percent to 10.2 percent. There is an indication that Vietnam's market share was the highest in the Chinese market, followed by, Thailand (Global Trade Atlas, 2013). This can be concluded that Thailand's market share decreased, in particular for the period from 2009 to 2012. It has lost the highest competitive position (market share) as compared to Vietnam in the Chinese market.

4.2. Retention (Loyalty) and Switch Rates in 2012

The quadratic programming using MM4XL yielded the result as presented in Table 1. The value is in tons' percent and the percentage is in the bracket. Diagonal values (retention or loyalty rates) indicate the retaining sales show Vietnam rice had the highest retention rate of 100.0 percent, followed by Thailand at 97.0 percent. Row values (switch-to rates) indicate that the outgoing sales show that Thai rice lost 3.0 percent of total sales to Vietnam in 2012, and Vietnamese rice had no sales loss to Thailand. Column values (switch from rates) indicate that the incoming sales show that for instance, Thai rice had no sales gain from Vietnam in 2012, while Vietnamese rice gained 3.0 percent from Thailand. In conclusion Vietnam rice had the highest retention (loyalty) rate at 100 percent, followed by Thailand at 97.0 percent (Table 1).

Country	Thailand	Vietnam	Total
Thailand	170,095 (**97.0**)	5,256 (3.0)	175,351(100.0)
Vietnam	0.0 (0.0)	1,545,078 (**100.0**)	1,545,078 (100.0)
Total (To)	170,095	1,550,334	1,720,429

Table 1: Matrix of rice imports of Thailand and Vietnam in the Chinese market in 2012

Thailand gained 170,095 tons: Thailand gained 0 tons from Vietnam's total sale and 170,095 tons from Thailand retaining sales. While Vietnam gained 1,550,334 tons, Vietnam gained 5,256 tons from Thailand's total sales and 1,545,078 tons from Vietnam retaining sales. Thailand no sales gain from Vietnam's total sales (as described in the row values), while Vietnam gained 5,256 tons from Thailand's total sales (as described in the row values).

As for the market share forecast from 2013 to 2022 it can be concluded that Vietnam rice is forecasted to have much higher market share than Thai rice. These market share rankings are similar to those of previous years from 2011 to 2012 (Table 2).

Year	Thailand	Vietnam	Other	Total
Forecast t+1 (2013)	10.0	89.8	0.2	100.0
Forecast t+2 (2014)	9.9	89.9	0.2	100.0
Forecast t+3 (2015)	9.8	90.0	0.2	100.0
Forecast t+4 (2016)	9.7	90.1	0.2	100.0
Forecast t+5 (2017)	9.7	90.1	0.2	100.0
Forecast t+6 (2018)	9.7	90.1	0.2	100.0
Forecast t+7 (2019)	9.7	90.1	0.2	100.0
Forecast t+8 (2020)	9.7	90.1	0.2	100.0
Forecast t+9 (2021)	9.7	90.1	0.2	100.0
Forecast t+10 (2022)	9.7	90.1	0.2	100.0

Table 2: Market share forecast of rice imports of Thailand Vietnam and Other country in China from 2013 (t+1) to 2022 (t+10)Unit: Percent

The brand switching analysis demonstrated above shows that China has switched their rice import from Thai rice to Vietnamese rice. There are many factors contributed to this situation as the literature and experts explained below.

4.2.1. Export Price of Vietnamese Rice Is Cheaper.

In 2001-2009, Thailand exported white rice 5% and 25 with higher price than Vietnam. The price of white rice 5% from Thailand in 2009 was $123 per ton higher than Vietnamese rice (Thai Rice Exporters Association, 2012). Experts also confirm that price affects the decision to switch from Thailand to Vietnam.

- "If the price of Thai rice were US$100 (Bt 3,063) per ton lower, it would regain its lost market share. Chinese consumers' behavior has changed to lower-quality rice because of high prices of Thai rice and slowing economic growth." (Expert1)

- "Thailand cannot count on its reputation for producing high-quality rice and charge too much for it, as the global market is highly competitive and consumers are more willing to accept slightly lower quality to save money on this staple food." (Expert1 and Expert2)

4.2.2. Rice Production in Vietnam Has Lower Cost and Higher Profit Than in Thailand.

When comparing the cost of rice production in Can Tho (Vietnam) and Ayudhaya (Thailand), which are main rice producing provinces in both countries. The total cost per rai in Ayudhaya is 5,800.0 baht, 821.1 baht higher than in Can Tho (Harald et al., 2012). The reason why cost of rice production in Vietnam is lower than Thailand is because Vietnamese government has many measures which help reduce production cost for Vietnamese farmers. The measures include subsidies for interest for loan to buy raw materials and equipment, exemption or reduction of taxes and fees to help reduce cost of producing agricultural products, and establishing a fund to support rice production and export (Harald, Tilman, & Thi, 2012).

- "China change to buy rice from Vietnam because the rice quality is slightly different while price is a big different. Therefore, Vietnam has an advantage in this regard. In addition, Vietnam has the advantage of using fewer chemicals, the cost of logistics and labor wages lower than Thailand. As a result, the cost of the sale price is set lower than Thailand." (Expert2)

4.2.3. Vietnam Farmers Are Following "The 3 Down 3 Up Policy".

The Vietnamese government has "the 3 down 3 up policy" which includes keeping seeds, chemical fertilizer, and insecticide down while keeping productivity, quality and profit up (By Center for International Trade Studies, the University of the Thai Chamber of Commerce).

From "the 3 down 3 up policy", in 2008/09-2010/11, the yield of Vietnamese rice has increased steadily from 848.0 kilograms/rai to 862.4 kilograms/rai, which is ranked 4th in Asia behind South Korea, Japan, and China, and ranked 1st in ASEAN, while the yield of Thai rice is 447.0 kilograms/ rai, ranked 13th in Asia and 7th in ASEAN. Most of the rice production area are situated at plentiful land and fully prepared irrigation systems suitable for growing rice (VietnamNet, 2013). Moreover, the Vietnamese government has set the price of rice to be sold to middlemen so that farmers profit at least 30 percent and plan to increase profit to 2.5-3 times of the production cost. These policies help Vietnamese farmers gain 15-20% higher in profit and about 5% higher in revenue. (Folkmanis & Nguyen, 2010).

- "The 'three decrease' means lowering the quantity of seed so as to suit the cultivation area, depending less on chemical fertilizer use, and also on herbicide. The 'three increase' is to raise the quantity of rice yield, the quality and profits. From this data, M#1 said Thailand will start to lose more of its market share and ability to compete in the rice market both in China and in other regions, whereas Vietnam will be able to catch up with Thailand within ten years." (Expert1)

4.2.4. Vietnamese Government Has Good Strategies to Support Their Farmers.

Firstly, they use the "one team" marketing strategy and enters quality rice markets. The government leads marketing campaigns with other countries using a G to G method through the Vietnam Food Association which has around 205 companies as its members

(Harald et al., 2012). Secondly, the Vietnamese government set up the rice trade market in Hou Shang province and the storage space in Vin Long province, China. It also set up warehouses in the Philippines, Tanzania, Ghana, South Africa, and Myanmar to support their exporters.

4.2.5. Thailand Has Begun Losing Its Market Share in ASEAN Market to Vietnam Since 2005.

Most of Vietnam's rice export is to ASEAN with more than 50% exported to the Philippines. Other major rice importers such as Malaysia, Indonesia, and Singapore still import more rice from Thailand than Vietnam, but in 2009 Malaysia imported rice from Vietnam 0.9 tons, 0.4 tons higher than the previous year, whereas amount of rice imported from Thailand decreased from 0.5 tons in 2008 to 0.2 tons in 2009 (Tran Thi, 2010). One reason that Thailand has begun losing its market share in ASEAN market because rice-pledging scheme of the Yingluck Shinawatra government raised the paddy price and export price over the market price (Chareonwongsak, 2015). Thus, rice importers turn away from Thailand to buy from Vietnam.

- "Because of pledging scheme from current government, Loan pricing is very high. It makes a farmer want to pledge to government more than sell to Thai's rice Exporter companies. Furthermore, with the government set a price higher than the market price. The rice farmers are willing to give out the pledge. If you want to sell the rice price is not as good as this." (Expert 1)

5. Discussion

The study showed that Thai rice did experience some brand switching in China and this trend is forecasted to continue in the near future, and that Vietnam will continue to dominate Thailand in the Chinese market through 2022 as it showed in Table 2.

There is a number of reasons why consumers might choose to switch brands, including price differences, availability, changes in quality or dissatisfaction with quality, and increased perceived risk (Francis & Collins-Dodd, 2004; Huang, Perloff, & Villas–Boas, 2006; Rajkumar & Chaarlas, 2012). The most obvious reason why consumers would choose to switch to Vietnamese rice, particularly for low-quality white rice, is that there is a price difference between Thai and Vietnamese rice.

The impact of quality and increased perceived risk should not be ignored, particularly given the problem of Chinese and Thai rice mixtures, which could reduce quality perceptions. This may be particularly problematic because rice, as a commodity product, is not likely to encourage much brand loyalty except in premium segments. As already discussed, most rice exported to China is low-quality white rice, with premium rice being a minority. This leaves the product open to a high potential for brand switching (Adis & Razli, 2009; Sahay & Sharma, 2010; Abdolvand & Nasimi, 2012). Although Lamb, Hair, & MacDaniel (2008) suggested that brand switching is likely to go both ways, in this analysis it did not. This suggests that Thailand could have an increasing problem in future if it does not control costs in order to prevent brand switching.

6. Conclusion and Implication

The first biggest implication of this research for government policy makers is that they need to seriously consider revising or even discontinuing the paddy pledging program. The move to increase the price paid to farmers is laudable, but ultimately, it could drive down production and eliminate the competitiveness of the Thai rice market.

In order to remain competitive, firms need to find a way to reduce their costs compared to current production. This could include increasing yields, reducing operational costs like chemical use, reducing labor costs, or improving technology efficiency. Another approach could involve gaining economies of scale through producer consolidation, cooperative resource use, or other approaches. The cost reduction strategy of the farms will need to be worked out on the basis of individual factors, and may require a complex set of cultural and industry structural changes.

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