

## COMPETITIVE STRATEGIES FOR VIETNAM'S PANGASIOUS EXPORTS TO THE EU MARKET

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### ABSTRACT

Emerging food safety and agricultural health issues have encouraged Vietnam seafood processors and exporters to adopt strategies to meet the increasing stringent standards set by food importing nations. However, a number of challenges alter the industry's competitive position. Literature search and Hirschman's theoretical framework demonstrate the features of alternative strategic perspectives to meet these tough standards set by developed countries. We evaluate the competitive position of Vietnamese Pangasius export industry and the strategies employed by the private sector to increase market share of Pangasius in the EU and determine the factors that influence the sector's strategic decisions. The authors conducted a literature search, organized focus group discussions, a survey, and interviewed 41 Pangasius processors and exporters to the EU market, and five government officials. The results suggest that exchange rates, interest rates, product standards and rejection influence Pangasius competitive position in the EU market. The most exporting firms had limited voices, compliant and adopted reactive and defensive strategies to maintain market share. However, there are a few firms that employ the proactive/offensive strategies. Those exporting firms adopting the proactive/offensive strategies are larger; they command a larger EU market share; and have more years of experience. The firms are vertically integrated more than the ones adopting an offensive/reactive or reactive/defensive stance. Such firms make considerable effort to up-grade their quality through hygiene and food safety control in order to become more competitive. The outcomes can be used to enhance competitiveness in the global market.

**Key words:** Hirschman, Pangasius, food, safety, strategy, Vietnam

### INTRODUCTION

Vietnam's fisheries sector contributes immensely to the growth in agricultural exports. Aquaculture is responsible for about 53.3% of the total volume of fisheries production and the sector contributes significantly to total fisheries and the GDP (Huong and Cuong 2012). Pangasius is responsible for 27.1 percent of the total fisheries value exports. Globally the acceptance of Pangasius is growing as the fish has found a solid niche as a valued product among white fish (FAO 2014, VASEP 2016). The growth of the fisheries sector is projected at 6 to 7 percent from 2015 to 2020.

The tra or basa (*Pangasius hypophthalmus* and *Pangasius bocourti*) are mostly farmed in the Mekong Delta by a large number of limited resource producers. In 2009 there were 4,416 farm households producing on less than 1.0 ha of surface water; 812 farms between 1 and 5 ha, and 165 farms over 5.0 ha (Duc, 2011) The estimated total amount of land devoted to Pangasius in

2015 was 5,623 ha with an expected increase to 7,800 ha in 2020 (VASEP 2016). There are about 405 industrial-scale processing plants. These plants process about 659,000 metric tons of pangasius per annum (World Fishing and Aquaculture, 2014). Pangasius is exported in the form of fillets that are sold in plastic bags that range in sizes from 6 to 11 ounces. In spite of its rapid growth, fish production and exports face a number of economic challenges such as the effects of exchange rates, interest rates, product rejection, market acceptance, and stringent standard requirements that influence Pangasius competitive position in the global market.

Pangasius products are grown in compliance with strict international standards such as GlobalGAP, ASC and BAP. The rapid growth of food safety private standards has raised serious questions about the role of public standards in food safety management (Henson and Humphrey, 2008; Henson and Caswell, 1999). Researchers and policy makers have associated the impact of these standards to global agricultural markets. Governments can employ the strategies proposed by Hirschman (1970) and modified by Henson and Jaffee (2008) on behalf of exporting firms, or individual exporting firms may themselves embrace these strategies in order to gain a comparative advantage in the value added export market.

Food safety standards imposed by the EU place exporting firms of Pangasius from developing countries under pressure that force some of them that cannot bear the burden to exit the market. In the Vietnam export market, one is not sure of the strategies employed by the public and private sectors to increase or maintain market share in the EU Pangasius market since the many processors act alone in spite of VASEP's overseas representation. Hence, it is important to inquire about efforts made by public institutions and Vietnam seafood processors to meet strict Pangasius export standards for the EU market. What are their short and long term strategic approaches?

In this study, we examine how the various macroeconomic challenges are likely to affect the competitive position of Vietnam in the EU Pangasius market; and the strategies employed by the Vietnamese private sector to increase market share for Pangasius in the EU market. We also determine the factors that influence the sector's strategic decisions. The rest of the paper continues with description of analytical framework, methods, and then results and discussion.

### **Analytical framework**

We use the analytical framework developed by Hirschman (1970) and modified by Henson and Jaffee (2006) to analyze the strategic perspective of the impact of food safety standards on developing countries. Hirschman's modified model states that developing countries can choose: *Exit*, that implies switching to other markets, changing products, or seeking other buyers whose standards are cost-efficient; *Comply* whereby a set of legal, administrative, technical and organizational steps are made to meet product or processing requirements; *Voice* in which developing governments and exporters are urged to influence the standards they are facing through negotiations (with local technical authorities of their business partners, or with a big buyer) or formal complaints (through international sites like WTO SPS Committee) (Henson and Jaffee, 2008).

This framework evaluates the impact of capability enhancement. The ability to use these strategies can generate profits in a competitive market with wider economic and societal outcomes (Neeliah and Neeliah, 2013). Developing countries can use *reactive or proactive strategy* relating to the time when efforts are made to respond to planned actions. Reactive strategy means efforts to comply to standards. Proactive strategy is predicting the development of these standards in the future and efforts to invest in technology, and the management ability to achieve expected outcome (Hirschman, 1970; Henson and Jaffee, 2008; and Lemeilleur, 2012).

Other options to describe the reaction of developing countries to new standards in agriculture and food production in the international markets are *defensive* and *offensive approaches*. Defensive strategy is a plan to maintain the original form and minimize the impact of changes (Neeliah et al. 2013; Jaffee and Henson, 2006). Offensive strategy often involves the efforts to use standards so as to gain competitive advantage, including the case where supplemental investment is required in addition to enjoying the minimum to meet compliance requirements. Proactive/offensive options have advantage in market access and share maintenance (Jaffee and Henson, 2008).

Hirschman's strategic method was used in a number of developing countries for examination of strategies for coping with standards enforced on them by developed countries. There are examples from all countries where exporters used proactive and offensive strategies (Henson et al. 2005). In most cases, these firms represented a relatively small part of all industries (Henson and Jaffee, 2006), but they clearly stuck to their leadership positions.

## RESEARCH METHOD

The study employs secondary data on macroeconomic factors to evaluate the challenges to Vietnamese Pangasius competitive position in the EU market. Information from FAO, World Bank, VASEP and other secondary sources are used to show how the various factors such as interest rate, exchange rate, product rejection, stringent product requirements, and climate change affect Pangasius competitive position in the EU market.

We used designed questionnaires based on the framework of Henson et al. (2002) to collect primary data to determine the strategic stance Pangasius firms are likely to adopt to maintain their market share in the EU market. The content of the questionnaire comprised of two parts: First, production, processing and exporting Pangasius are featured in the following aspects, the enterprise scale, product structure (raw or value added), distribution channels used (directly access to exporting market or via intermediaries) and procurement channels used (the degree of self-investment in the enterprises). The second part involved measuring the reactions of enterprises to categorize the adaptation strategy of these enterprises, given the impact of the standards. Since most firms in Vietnam have limited capacity to react to changes in standards and do not have a unified voice; then we did not maintain this strategy. Most firms tried to remain loyal to a market, but fixity of capital did not allow them to enter and exit the market freely; therefore, the exit strategy was not included and the only strategic option considered was that of compliance.

The study used non-probability sampling method (a process of convenient sampling) to identify participants. Non-probability method is rather appropriate in the form of qualitative research. Regarding sample size, the number of samples collected should be greater than the limit of 30 proposed by Creswell (1998), the minimum for qualitative market research. The number of samples taken was 50 (out of 130 enterprises according to the figures of Vietnam Pangasius Association to date September 23, 2014). The acceptable number of samples used for analysis was 41. Pangasius export firms were interrogated on production and processing of pangasius in An Giang, Can Tho and Dong Thap Provinces. The survey data were collected within three months from October 2015 to January 2016. Data were then coded and analyzed using SPSS 16.0. Since companies could choose more than one response, the percentage of responses for each strategy was determined by dividing the number of responses by the total. In order to group the response by strategic stances we performed cross tabulation of responses by strategic reaction. Then we grouped firm responses by characteristics.

## RESULTS

### The characteristics of Vietnam pangasius processing and exporting industry

The tra or basa (*Pangasius hypophthalmus* and *Pangasius bocourti*) are mostly farmed in the Mekong Delta. There are about 405 industrial-scale processing plants in Vietnam with 74 percent certified to export to Europe and 16 percent have the International Organization for Standards Certification (ISO). These plants process about 600,000 tons of pangasius per annum. Pangasius is exported in the form of fillets that are sold in plastic bags that range in sizes from 6 to 11 ounces (World Fishing and Aquaculture, 2015). The requisite standards put pressure on costs as the profit margin keeps on tightening.

The market has influenced the success of the Pangasius industry in the past ten years. The product price has been volatile and has directly affected market sales and industry growth. The estimated price of a kg of Pangasius fillet in the EU was about \$7.10 USD in 2009 and that left little for farmers to stock their ponds in 2010 after marketing costs considerations. Erratic market prices have trickled down to the farm level, increased farm risks, and caused firms to abandon their operations and forced them to exit the market as the larger firms resort to vertical integration.

### Macroeconomic and product challenges

#### *Exchange rate*

The volume of exports fluctuates with the exchange rate. In 2015, frozen Pangasius fillet imports volume and value to the EU fell. Between March and April 2015, Pangasius import price reached its highest level, US \$2.45 to US \$ 2.48/kg and imports levelled off at 110,000 MT. According to VASEP (2016), the local currency in many export markets, especially in the EU has recently lost against the dollar. Fluctuation in exchange rates affects revenue and profits of farmers, processors and exporting firms. More than 90 percent of Vietnamese seafood enterprises choose the U.S. dollar as the currency for payments for their foreign partners (VASEP 2016). The appreciation of the dollar against other currencies in Vietnam's export markets has negatively affected the competitiveness of seafood enterprises. The recent euro depreciation against the dollar has put European importers of Pangasius at a disadvantage. Therefore, many buyers and sellers of the product had to offer prices 10-15 percent less in order to remain competitive. One of the strategies that exporters may employ to hedge against exchange rate risks is forward contracting. However, it is not easy to organize a large number of small producers to engage in forward contracts. Another possible adaptive measure is vertical coordination and integration. About 80 percent of the surveyed larger exporting firms are engaged in vertical integrated firms.

#### *Interest rate*

Interest rates work hand in hand with exchange rates to influence exports. Farmers and exporters are unwilling to take high interest loans to operate their enterprises. There is a linkage between recent declines in Pangasius production and exports and high interest rates and strict loan policies by lending institutions in Vietnam. The demand for capital to improve production and export standards is high but interest rates at banks are just unaffordable. Farmers face interest rates of up to 30 percent to acquire loans to pay for inputs and raw materials. During the period 2011 to 2012 interest rates were pushed up, placing a burden on Pangasius enterprises. (World Fishing and Aquaculture, 2015). Hence, many Pangasius enterprises were forced to cease operations.

#### *Product standards*

Pangasius exporters are facing an uphill battle in terms of product image in the EU market. The latest figures show that German imports declined by 12 percent in 2014. The products have been in an off the World Wild Life Fund (WWF) red, yellow and green list in the past five

years. The WWF highly recommends not consuming those in the red list (those products are considered unhealthy) and says that consumers can buy products from the yellow list though it is better to choose from a green list. The green-listed products are good for health and pose no risk to the environment, while yellow-listed ones cause concern over overexploitation leading to extinction and cause harm to the environment and biodiversity. VASEP believed *tra* has been moved to the red list because of “problems” relating to the environment, feed, chemicals, medicine and antibiotics used in its farming, but there is no clear evidence for any of this (QUALASA EXPERTISE, 2010). It is believed that *Pangasius* is produced in polluted waters that are contaminated with micro-bacteria and pesticide residues. The latest consumer fish-buying guides by the WWF warned against eating most Vietnamese catfish because of alleged unsustainable aquaculture practices. On a sustainability scale of green, yellow, and red, the group rated Vietnamese catfish as red and not certified by international quality labels.

The recent decline in fish sales in the EU and the U.S. markets have forced exporters to search for other markets in Asia. About 63 percent of the ASC seafood products are *Pangasius* (World Fishing 2014). Various groups set their own standards. In the U.S. retail market, for example, the common standard is the ACC (Aquaculture Certification Council) while the retail market of the EU requires GlobalGAP and ASC (Aquaculture Stewardship Council). Increasing standards/certificates add costs to processors and exporters with no increase in sales. Increase in standards when dealing with a large number of small producers increases transaction costs. Besides these required standards by importers are not stable but evolve over time.

In an effort to improve conditions for the *Pangasius* farming industry, the Vietnamese government issued Decree No. 36/2014/ND-CP on April 29, 2014. The decree outlined a number of specific requirements for producers, processors and exporters. Two notable requirements for producers were that “The breeds, feeds, veterinary medicine, bio-products, microorganisms and chemicals used must be consistent with the law,” and “By December 31, 2015, every commercial *Pangasius* farm must obtain the Certificate of Good Aquaculture Practice according to VietGap or an international certificate that is consistent with Vietnam’s law.” The Deputy Chair of Vietnam’s Association of Seafood Exporters recently stated that roughly 50% of farmers have attained compliance with certification requirements (Lutz 2016).

*Pangasius* processors are obligated to comply with the demands of the decree and with a number of requirements. These requirements include tracing the origins of processed *Pangasius* products, and applying a quality control system. Technical regulations and standards for food safety and hygiene during manufacture and sale of aquaculture products must be followed. Producers and processors must obtain a certificate of food-safety facility issued by a competent authority and ensure the announced quality of *Pangasius* products, carry out inspections and take responsibility for the announced quality, and label goods in accordance with the law Lutz, 2016).

#### *Product rejection*

In the past few years, the reputation of *Pangasius* has been seriously tainted. After 37 years of exporting Vietnam is no more an amateur in the field. However, Vietnam still ranks 9<sup>th</sup> in terms of fishery and fishery product rejections in the EU market. The Rapid Alert System for food and feed (RASFF) offers around the clock service to provide notification of food safety risks before they reach European consumers. Fish and fisheries product seem to face high product rejection compared to overall rejections. In the EU market, veterinary drug residues, bacterial contamination, and heavy metals seem to be the main cause. *Pangasius* products have been on the top of product lists that have been refused in the EU market. *Pangasius* recorded 56 RASFF notifications in its worst year in 2005. The frequency of notifications reduced after but peaked in 2009 and 2010 at 24 and 28 per year, respectively. These later notifications were due to microbial contamination (Little et al. 2012). In October, 11 *pangasius* batches of Binh An

Seafood JSC, Go Dang Seafood, Mekong Seafood JSC and Hung Vuong Seafood JSC were found by the EU RASFF.

### **Stance Strategic**

#### *Strategic perspective*

The strategies adopted by firms to remain competitive in the EU market were classified (Table 1). The classification of strategic groups in table 1 shows the following divisions, proactive/offensive, reactive/offensive and reactive/defensive. The proactive/offensive, had an aggregate of 33 or 18.4%, the reactive/offensive had the highest, 98 or 54.7% while the reactive/defensive had 48 or 26.8% (Table 1),

#### *Firm size*

Firm size and capital are key indicators that influence strategic decisions. Table 2 shows that the size of firms based on the number of laborers employed were in the proactive/offensive category, about 2000 or more, and the least was in the reactive/defensive group that is 2000 or less. Moreover, Vietnam Pangasius processors have been in operation for a long time, for more than 11 years on average. The one that has been operated for the longest while has been in operation for 38 years and the youngest is 2 years. For EU, 90% of firms answered that they had exported their products to that market for more than 5 years, 10% of the firms chose the answer of less than 5 years. Table 2 shows that proactive/offensive group had the most number of years in processing and exporting when compared to the reactive/offensive and reactive/defensive groups. Exporters that have adapted the proactive/offensive marketing strategy are larger, with 2000 or more employees that contribute more than 35% of the EU market share.

#### *Process of achieving EU market requirements*

The second most common requirements are in the area of food safety. The results showed that BRC and IFS are adopted by companies in proportions of 75% and 62.5%, respectively. The proactive/offensive firms adhered to the High standard, ASC, while the reactive/offensive and the reactive/defensive stock to the Global Gap (Table 2). Finally, sustainability standards (ASC) or organic certifications (Naturaland Certified Farms) are seen as niche market requirements. The Vietnamese government and the country's exporter association have made a commitment to certify 100 percent of the country's farmed Pangasius by 2015, with half of that to be subject to rigorous ASC certification.

### **The strategic options of processing companies against the application of stringent food quality standards**

The strategy adopted by the majority of Vietnamese processing companies involves a compliant voiceless attitude. Some companies (26%) tried to maintain the market by reducing costs, but were discouraged by the stringent new quality criterion.

In spite of small market share (19%), the EU is still one of the most important export markets for Pangasius. However, all firms adopted a compliance strategy but reacted by adopting proactive/offensive strategic options (18.4%) that may be considered progressive and the best option to maintain market share, while those who adopted reactive/offensive (54.7%) were the highest, and a number of them adopted reactive/defensive stances (26.8%) (Tables 1 & 2).

**Table 1. Description, frequency and classification of firms based on their reactions**

Reaction name	Description of reaction	Classification of reaction	Adopting frequency/percent
Sufficient export capacity to EU market	Already investing in advance to satisfy market standards	Proactive, Offensive	 33 
Information support from public institutions	Finding information supply sources continuously in order to update and forecast the application of new market standard		
Fish material from contracted farms	Set up the coordination in advance with farmers to control quality of raw material		
Establishing owned farms	Do upstream vertical integration to self-control supply phase in supply chain because of inability to control inputs quality	Reactive, Offensive	 98 
Focusing on value – added product	Restructuring products category from raw to value – added product in order to reduce the competition pressures		
Exploring new markets as contemporary alternatives	Find new market to maintain processing activities, however continuously upgrading processing to satisfy EU market standard		
Exploring capital supporting from the government and financial body	Finding sources of capital for upgrading processing procedures and facilities		
Hiring consulting services and technicians	To understanding and finding the minimal cost in investing in facilities/procedures to obey the standard	Reactive, Defensive	 48 
Upgrading processing facilities	Investing facilities and working conditions just enough to satisfy the standards	Reactive, Defensive	
Exiting EU marketing, finding new target market and concentrating on domestic market	Finding a new target including domestic market which have less stringent standard	Reactive, Defensive	

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There are moderate differences between those who followed proactive/offensive approach and the reactive/offensive or the reactive/defensive approaches. The characteristics of the firms adopting a proactive/offensive stance revealed the underlying reason why they pursued the most challenging but forward-looking approach. Such firms could take advantage of economies of

scale to reduce cost of investing in food safety standards; the benefits of vertical integration; the market forces relating to a large contribution to market share; and their experience in processing and exporting.

The firms also lead in investing, and modernizing their equipment, machines and facilities. They are the first firms that are rewarded by the ASC in Vietnam. Nevertheless, they are the first to vertically integrate backwards and to establish their own farms or contract with other farmers. The survey discovered that nearly 78% of these companies have their own farms.

**Table 2. Characteristics of Pangasius processing and exporting firm under different reactions**

<b>Firm Characteristics/Reactions</b>	<b>Proactive-Offensive</b>	<b>Reactive-Offensive</b>	<b>Reactive-Defensive</b>
Firm size (Number of labor)	>2000	1000-2000	<1000
Experience in processing and exporting	>10 years	<10 years	<10 years
Experience in exporting Pangasius in EU	>5 years	<5 years	<5 years
Capacity of their owned farm	Supply more than 80% demand of raw material	Supply less than 80% demand of raw material	Supply less than 80% demand of raw material
Average % vertical coordination/contract with other farmers	<20%	>20%	>20%
EU market share	>35%	10-35%	<10%
Leadership coordination	Yes	No	No
Private Standard owning	Higher standard (ASC)	Common standard (Global GAP)	Common standard (Global GAP)
Machinery and equipment	New/Modern	New	New

The others source their raw products from contracted farmers, a kind of vertical coordination. The process of backward integration is becoming a common trend in Vietnam Pangasius value chain. The proactive/offensive supply more than 80% of the raw materials processed whereas the reactive/offensive and the reactive/defensive supply less than 80% of their raw materials (Table 2). It helps them to minimize product variance and better control the quality overall. Heavy pressures from importers and food safety requirements have resulted in significant change in Vietnam Pangasius value chain (UNIDO, 2010 & 2013; Khiem et al., 2010).

**DISCUSSION**

The EU lays down harmonized requirements governing hygiene and food safety and the developing countries are supposed to follow. There might not be adequate institutional capacity to ensure that standards are met (Henson and Mitullah, 2004). Hence, some firms may choose to exit. The results show that a large percentage of firms are satisfied with the EU market and may choose to be compliant and remain in production. However, Vietnam’s Pangasius market share is on a decline and the profit margin is tightening. The industry does not have a unified voice (though VASEP makes overseas representation) and does not receive much public support at the exterior. Here there is a need for both unified public and private partnership to undertake joint sector tasks on behalf of collective groups (Neeliah and Neeliah, 2013) to present the circumstances to the more developed world in cases of excessive demands for more stringent

standards. As stated by Henson and Jaffee (2008) and Ponte and Gibbon (2005) there is a recognition of potential efficiencies associated with collective and collaborative actions, while there are increasing interdependences and complementarities between public and private actions.

The larger private companies that adopt more proactive/offensive strategies can take the lead and allow the smaller producers with more reactive/offensive or reactive/defensive to follow. The public sector can provide the voice on behalf of the collective group; thus providing a formidable international force for Pangasius processors and exporters. As stated by Henson and Jaffee (2008) the most positive and potentially advantageous strategy combines 'voice' and 'proactivity'. Group certification is one of the cases in which the formation of collective action group can be helpful (Neeliah and Neeliah, 2011; Lemeilleur, 2012).

Most companies are more likely to be compliant and adopt more reactive/offensive or reactive/defensive strategies because of smaller size and limited capacity. The size of the firm will dictate the strategic options that exporters are likely to adopt. Larger enterprises that benefit from economies of scale may have greater scope to negotiate on standards. Economies of scale will likely lower compliance and administrative costs (Jaffee and Henson, 2004a, 2004b). The smaller firms with less labor; lower economies of scale; lower levels of investment, and less integrated are likely to adopt the compliant choice and the reactive/offensive or the reactive/defensive strategies.

## **POLICY RECOMMENDATIONS**

Given the state of affairs in the Vietnamese Pangasius industry, with falling market share, tighter profit margins, and higher standards enforced upon them it is essential that the various firms cooperate and decide on a strategy that will benefit all. The firms must seek government assistance to bring firms together for collective rather than individual action. The processors must be concerned with the short-run safety and hygienic food standards to ensure that the product refusals remain at the minimum. That means the processors must adopt more proactive/offensive strategies. In the long-run the firms should adopt strategies to ensure that standard enforcement is used to enhance firms' competitive edge in the industry and that they benefit from economies of scope. Finally, the private sector should seize the initiative to educate the public on the importance of the Pangasius industry to Vietnam's economy. The public should contribute to help the firms adjust to the required standards, and be ready to make joint representation with Pangasius exporters.

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