
Graduate School of Development Studies

# The SWOT Analysis of Exports Activities of Shrimp Products: The Case of Indonesia

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# Chapter I

# Introduction

## 1.1. Introduction

Indonesia as the biggest archipelagic country in the world has huge resources in marine sectors. One of the most promising marine resources which can be exploited for the continuation of economical development of Indonesia is the exploitation on fishery. The fishery sector has absorbed 6.1 million people. In the fishery processing industry, the manpower absorbed in 2006 reached 310,000 people. If added to those engaged in marketing activities (i.e. transportation, distribution, wholesaler and retailer handling) the total manpower absorbed in the fishery processing and marketing is 600,000 people. The commodity value of fisheries and oceanic products are considerable. Despite the fact that it is not yet being fully explored, currently, this sector is capable of contributing as much as 2.51% to the GDP in 2006. The export value of fishery products in 1996 was substantial, reaching US$ 2.1 billion. This indicates a rise of 9.1% compared to that of 2005. In the meantime, the world's consumption of sea fish is increasing from time to time. Demand for fish in 2010 was projected to reach a figure of 7.5 million tonnes per year, while the supply was well below. (Bank export Indonesia, 2007)

Shrimp, with an upward trend in its export volume, is undeniably one of the prime export commodities in the fishery sector. Based on the data of the Ministry of Marine Affairs and Fisheries, in the year 2003, the export volume of Indonesian shrimps in the global market reached an amount of 139,450 tons

valuing at US$ 887.13 million per year. In the year 2004, the export volume increased to 143,550 tons, valuing at US$ 1,086 billion per year. While in 2006, it has been estimated to increase up to 300,000 tons per year. In fact, by 2009, the government has targeted the export volume of domestic shrimps to break the 540,000 tons-per year level.

So far, Indonesian shrimps have been exported to Japan, European Union and the United States. These countries are known to be the world's major consumers of seafood, especially those originating from Indonesia. Nevertheless, it does not imply that the export of Indonesian shrimps thereto can run smoothly without any obstacles. On the contrary, many local government policies seem to be the hindrance. For instance, Japan and European Union have now started to enforce a tight policy on Indonesian shrimps. Export of fishery product to Japan should comply with the new implemented regulation which is 1 mg per tons (1 part per billion/ppb) maximum limit of antibiotics and residue floating rate. This tight prerequisite started to be demanded by Japan upon their rejection of Indonesian shrimps at the end of 2005. Those rejected frozen shrimps were indicated to have contained antibiotics and residue higher than 1 ppb. Actually, this prerequisite was a follow-up of their previous policy. As of January 1, 2004, Japan had tightened their import policies by requiring the antibiotics content in shrimps to be less than 0.01 part per million (ppm) as compared to the preceding level of 0.05 ppm. The tightening of import policies undertaken by Japan was then followed suit by the European Union. The European countries now also enforce the standard maximum limit of antibiotics and residue floating rate of 1 ppb instead of 1 ppm (part per million). This prerequisite has been

announced by the European Union, upon completion of their inspection in several fishery ports, laboratories and 12 fishery processing units in Indonesia. The above regulation perfected the previous European Union's import policies on shrimps. In 2001, the European Union countries required that the imported shrimps ought to be free from any antibiotics element. As regards the local policies imposed by governments of the export destination countries, domestic shrimp's producers should not sit on their laurels on the account of the opportunities still open for them. A consistent production of shrimps with high quality standard should always be maintained. More researches and cultivation technologies should be performed and more laboratory testing tools should be added. These actions should be taken to prevent any possible obstacles in the sales of shrimps in the global market. The domestic shrimp production rate is considered quite high and the growing trend from year to year is impressive. For instance, in the year 2003, the production of cultivated shrimps amounted only to 192,935 tons per year. This annual quantity rose to 238,843 tons, 281,049 tons and 327,260 tons in 2004, 2005 and 2006 accordingly. Even this year, the shrimp production has been estimated to reach the 410,000 tons-per year level. In view of the above facts, this high potential should not be foregone. (Bank Ekspor Indonesia, 2007)

## 1.2. Research Question:

What policy recommendation should be taken to increase the export of shrimp product in the global market?

Sub questions:

- What is strengths, weaknesses, opportunity and cost of the shrimp export

production to the global market?

- What internal and external factor influencing the export of shrimp production to global market?

## Chapter II:

## Theoretical Framework

### 2.1. SWOT Analysis

The SWOT analysis approach (also referred to as the “design school model”; Mintzberg 1994) seeks to address the question of strategy formation from a two-fold perspective: from an external appraisal (of threats and opportunities in an environment) and from an internal appraisal (of strengths and weaknesses in an organisation). The two perspectives can be differentiated by the different degree of control attainable within each. The dynamic and unrestricted nature of the external environment can seriously hamper the process of detailed strategic planning, whilst internal factors are – or at least should be – more easily manageable for the organisational entity in question. The model originally stems from the business management literature, where such an analysis has a clearly identifiable, strategic goal, as it is intended to shed light on outside opportunities and threats that can affect the future of a business, thereby suggesting some possible remedial actions that might be appropriate in certain circumstances. The internal analysis of a company’s strengths and weaknesses is in turn intended to highlight certain strategies that the company can exploit, in particular, drawing attention to certain practices that the company may need to correct. (Kotler 1988: 80.) Analogous to this business strategy, public institutions may also use a similar method to outline the internal and external factors relevant to their strategic planning process. During the 1980s, public administration embraced this classical model of strategic planning, adopting the basic managerial model across such areas as regional development and municipal planning (Sotarauta & Linnamaa 1997: 75, European Commission 1999, Bryson and Roaring 1987).

Four Elements of a SWOT analysis:

A strength = a resource or capacity the organisation can use effectively to achieve its objectives

A weaknesses = a limitation, fault or defect in the organisation that will keep it from achieving its objectives

An opportunity = any favourable situation in the organisation's environment

A threat = any unfavourable situation in the organisation's environment that is potentially damaging to its strategy

The actions to be undertaken that can be deduced from these four elements are:

· Build on strengths

· Eliminate weaknesses

· Exploit opportunities

· Mitigate the effect of threats (Dealtry 1992: 2).

## 2.2. Analytic Hierarchy Process

Analytical Hierarchy Process (AHP) is an approach to decision making that involves structuring multiple choice criteria into a hierarchy, assessing the relative importance of these criteria, comparing alternatives for each criterion, and determining an overall ranking of the alternatives. (Saaty, 1982)

Steps of the analytical hierarchy process

1. Decomposing

   The goal is to structure the problem into humanly-manageable sub-problems. Iterating from top (the more general) to bottom (the more specific), split the problem, which is unstructured at this step, into sub-modules that will become sub-hierarchies. Navigating through the hierarchy from top to bottom, the AHP structure comprises goals (systematic branches and nodes), criteria (evaluation parameters) and alternative ratings (measuring the adequacy of the solution for the criterion).

   Each branch is then further divided into an appropriate level of detail. At the end, the iteration process transforms the unstructured problem into a manageable problem organized both vertically and horizontally under the form of a hierarchy of weighted criteria.

   By increasing the number of criteria, the importance of each criterion is thus diluted, which is compensated by assigning a weight to each criterion.

2. Weighing

   Assign a relative weight to each criterion, based on its importance within the node to which it belongs. The sum of all the criteria belonging to a common direct parent criterion in the same hierarchy level must equal 100% or 1. A global priority is computed that quantifies the relative importance of a criterion within the overall decision model.

3. Evaluating

   Score alternatives and compare each one to others. A relative score for each alternative is assigned to each leaf within the hierarchy, then to the branch the leaf belongs to, and so on, up to the top of the hierarchy, where an overall

score is computed.

4. Selecting

   Compare alternatives and select the one that best fits the requirements.

## Chapter III

## World Market

Study of shrimp marketing conducted by ADB, FAO and INFOFISH, 1993 shows that most of the shrimp producer country consuming about 50% form their production. in Indonesia the consumption per-capita of shrimp is low, because of the low income and the price of the shrimp relatively high compared to the other substitute commodities. The domestic consumption of shrimp usually the tiny types shrimp and not for export market.

For the export market, Indonesia exporting commodity of shrimp to several countries. The majority of Indonesia shrimp commodity are exported to Japan, European countries and United States. The others market for Indonesian shrimp are Hong Kong, and Singapore. (FAO, 1999)

Table I. World Shrimp Production

| Country | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|---|---|---|
| China | 574.10 | 488.70 | 603.40 | 665.60 | 751.80 | 829.60 | 970.90 | 1,222.70 | 1,241.90 |
| India | 290.40 | 363.00 | 446.60 | 406.10 | 415.60 | 366.60 | 413.10 | 423.30 | 405.70 |
| Thailand | 300.60 | 343.10 | 385.00 | 389.30 | 370.80 | 350.80 | 345.40 | 370.90 | 398.50 |
| Indonesia | 312.10 | 300.70 | 317.10 | 334.70 | 343.30 | 382.20 | 345.50 | 384.50 | 398.40 |
| USA | 156.50 | 137.90 | 130.20 | 140.20 | 145.00 | 132.90 | 128.00 | 140.10 | 153.00 |
| Vietnam | 86.20 | 94.60 | 111.70 | 138.10 | 135.90 | 147.70 | 148.40 | 148.90 | 151.10 |
| Canada | 43.10 | 47.40 | 53.20 | 63.10 | 65.70 | 82.10 | 113.10 | 120.00 | 130.60 |
| Malaysia | 129.40 | 109.80 | 106.40 | 99.60 | 108.00 | 101.00 | 57.10 | 102.70 | 111.90 |
| Mexico | 66.20 | 79.80 | 77.30 | 85.90 | 78.90 | 88.50 | 90.30 | 95.60 | 95.10 |
| Greenland | 81.90 | 76.50 | 79.80 | 81.90 | 72.00 | 63.90 | 69.60 | 79.20 | 81.50 |
| Philippines | 118.80 | 130.10 | 126.60 | 127.50 | 113.20 | 74.50 | 72.30 | 73.10 | 79.40 |
| Norway | 49.10 | 49.00 | 38.20 | 39.30 | 41.50 | 42.00 | 57.10 | 64.20 | 66.20 |
| Bangladesh | 21.00 | 28.50 | 28.80 | 34.00 | 49.30 | 56.50 | 66.10 | 81.10 | 58.20 |
| Brazil | 44.00 | 38.40 | 38.50 | 43.00 | 38.90 | 44.10 | 42.80 | 47.70 | 56.60 |
| Ecuador | 127.00 | 97.50 | 98.70 | 112.10 | 112.90 | 137.20 | 147.40 | 121.00 | 51.40 |
| KoreaRep. | 67.10 | 68.00 | 58.10 | 42.50 | 40.90 | 41.10 | 47.60 | 44.70 | 37.20 |
| Others | 529.30 | 542.00 | 551.70 | 594.50 | 622.90 | 633.70 | 647.40 | 599.20 | 651.70 |
| **Total** | **2,996.80** | **2,995.00** | **3,251.30** | **3,397.40** | **3,506.60** | **3,574.40** | **3,762.10** | **4,118.90** | **4,168.40** |

Source: Globefish, 2000

Shrimp production that is capture and aquaculture has expanded over the past decade from 2.9 million MT in 1992 to 4.2 million MT in 2000. In this level, shrimp production has stabilized. The world main shrimp producing country is China with 1.2 million MT. This country is the main responsible for the strong increase. The other three major shrimp producing countries: Indonesia, India and Thailand have experienced many up-and-downs during the period with production oscillating between 300 000 and 400 000 MT each. (Helga Josupeit, GLOBEFISH, 2004). The share of aquaculture production in total shrimp production grew during the 1980s. In 1988 this share already exceeded 20%, and the positive trend continued until 1992, when farmed shrimp accounted for almost 30% of total shrimp output. Since then, disease problems and the positive trend of shrimp capture fisheries led to a decline in the role the aquaculture plays. At present, only 25% of total shrimp production comes from aquaculture, and this share has been stable over the past years.

Total shrimp exports have increased almost steadily in the last 15 years, Thailand is the world's major shrimp exporter, however in 1997, Thailand shipments declined as a result of disease problems. In 1998, the disease problem came under control, and Thailand exports were back to normal which is 240 000 MT. In recent years, Thailand exports have been negatively influenced by EU bans on antibiotics found in shrimp. Indian shrimp exports are about stable at 100 000 MT.

Shrimp imports have also grown strongly in the last three years. Value of shrimp trade was quite stable at US$ 10 billion over the past 6 years, which indicates a steady decline in shrimp prices. The main shrimp importing countries have always been Japan and the USA, with the USA taking over in recent years.

In the last years, Japanese imports have declined, due to the low demand caused by economical un-certainty. The shift from Japan to the USA as main importer created substantial problems for the main traditional exporters to the Japanese market, mainly from Asia. Shrimp imports into Europe continues to grow, with Spain as the main market, followed by France and UK. The Danish shrimp imports are mainly re-exported. (Helga Josupeit, GLOBEFISH, 2004).

### 3.1. Japanese Market

Japanese shrimps imports in 2004 more than 300,000 tons (240,000 of frozen unprocessed shrimp). The market focused on imports of high quality large *P. monodon* which has favored Indonesia given its production of this larger sized species of shrimp. Indonesia was the second most important exporter to Japan with 48.6 thousand tons in 2004, but its share has been falling since 2001, with China, Thailand and Vietnam all showing rapid penetration into the Japanese market.

### 3.2. US Market

Despite anti-dumping tariffs, imports in 2004 at 518,000 tons were up 3% compared to 2003, largely due to lower unit values boosting domestic demand in the US. The imposition of tariffs against China, Thailand, Ecuador, India, Vietnam, and Brazil following the anti-dumping case, had a significant impact on individual countries. China, Brazil, and India, that hit with the highest tariffs from the anti-dumping case, had declines of 80%, 68% and 18% respectively in shipments of raw shell on shrimp to the US. But Thailand, Ecuador, and Vietnam, all with relatively low tariffs, had increases for shell on headless shrimp of 55%, 39% and

32% respectively. The anti-dumping tariffs have also had an impact on product types in the US market. The major category that saw a large increase was in breaded product, which is exempt from anti-dumping duties, mostly coming from China. Indonesia was the third largest exporter of shrimp to the US market in 200436, after Thailand and China. The decline in Indonesian exports to Japan was more than made up for by an increase in Indonesian exports to the USA in 2004. However, Indonesia did not perform as well as would have been expected in the US market in 2005. Because of relatively little Indonesian value-added production in breaded products compared to other producers, exports to the US were virtually unchanged in 2005. And raw headless shipments were up only 3%, which is of concern given its favorable position with respect to higher tariffs and Continuous Bond Policy in the US that Thailand, Ecuador, China, India and Vietnam have to comply with. (FIAS-World Bank, 2006.)

### 3.3. EU Market

Shrimp consumption in 2004 was boosted in EU markets by lower Euro prices, and the first half of 2005 showed similar import volumes to 2004. Key markets are Spain, Germany, Italy, France, and the UK. Thailand, Ecuador, Brazil, Madagascar, India and Bangladesh are especially important exporters of shrimp to EU markets. Noticeable is the relative lack of penetration into the EU market by Indonesian suppliers. With the reinstatement of Thailand's GSP privileges, and the diversion of Chinese, India, Brazilian shrimp exports from US markets due to effects of antidumping duties, Indonesian shrimp farmers can expect a lot more competition in the EU market. Thai firms expect to increase their exports to EU

markets by about 7 - 8% up to 450,000 tons in 2006, with particular emphasis on improvements in compliance to food quality and safety standards.

In other emerging markets (Canada, Australia) Indonesia also faces rising degree of competition – especially from Vietnam. Vietnam's exports to Australia, for example, showed strong growth increased by 60% in 2004 and by 37% in 2005 – partly driven by trade diversion effects of US anti-dumping tariffs imposed on Vietnam. Demand within the industry is very responsive to changes in price, hence more efficient producers that can charge lower prices are able to increase market share. This might be beneficial to Indonesia because of its comparative advantage in farmed shrimp production due to its access to all year-round warmer water that prevent outbreaks of White Spot Syndrome Virus.

In the medium to longer-term, both demand and prices of shrimp are expected to rise. Based on the most likely set of assumptions, global food fish production will increase slightly faster than global population through 2020, with per capita consumption projected to rise, and real prices are also expected to rise by 16 percent for crustaceans. Demand for shrimp is determined by many factors, but especially important are both population and income. While population in the key markets of EU, USA and Japan may not rise significantly in the coming years, other countries' populations will do so providing expanding markets in other areas, and income increases in the USA, EU and Japan are also likely to increase demand and prices. This is especially true for a high value product such as shrimp. Indonesia can position itself well to take advantage of these opportunities, if certain constraints and challenges confronting the industry are promptly addressed (FIAS-World Bank, 2006.)

## Chapter IV

## SWOT Analysis

Shrimp is Indonesia prime commodity in aquaculture and contributes 80% of total fishery export commodities. This fact has made the shrimp commodity as the favourite business investment in Indonesia, and also for traditional farming for Small and Medium Scale Enterprises.

Shrimp industry in Indonesia relies on the comparative advantages. The Japanese market not impose high requirement for Indonesia shrimp which is most of the shrimps are exported in frozen and fresh. Therefore most of Indonesian shrimp are exported to Japan, while the USA and the European markets were not easy to export the shrimps product, because USA and European countries impose high requirement for the products imported.

The objective of this study was to formulate the strategies to find out alternatives solutions that can be applied to solve the Indonesian shrimp industry problems by the Government of Indonesia and the shrimp entrepreneurs. SWOT analysis was used to identify the environmental assessment of shrimp industry to evaluate strengths, weaknesses, opportunities and threats. Meanwhile, in order to obtain the priority or weight for each element in internal and external factors using analytical hierarchy process.

### 4.1. SWOT Matrix

Strengths

1. Indonesia has big resources in shrimp production in aquaculture.

   In aquaculture the total of shrimp ponds farming 1,224,076 ha, spreading in

almost all provinces in Indonesia. This area are only 20% of the total areas that potential for shrimp farming. Currently 64,21% of the total potential ponds area still available to be developed as shrimp ponds.

The main producers of shrimp farming in Indonesia are South Sulawesi province with the effective area 142,255 ha and more than 711,000 ha are potential to be developed as shrimp farming. Aceh province and East Kalimantan province are also has more than 100,000 ha effective area and areas about 600,000 ha can be developed as shrimp ponds. The others area that productive province are Lampung, provinces in Java Island and in Kalimantan Island.

**Table-2. Potential Area and Effective Area for Shrimp Culture**

| NO | Provinces | Potential Areas (Ha) | Effective Areas (Ha) |
|---|---|---|---|
| 1 | Nangroe Aceh Darusalam | 601,545 | 120,309 |
| 2 | North Sumatera | 222,840 | 44,568 |
| 3 | West Sumatera | 164,945 | 32,989 |
| 4 | Riau | 114,975 | 22,995 |
| 5 | Jambi | 108,355 | 21,671 |
| 6 | South Sumatera | 143,370 | 28,674 |
| 7 | Bangka Belitung | 275,420 | 55,084 |
| 8 | Bengkulu | 12,860 | 2,572 |
| 9 | Lampung | 498,480 | 99,696 |
| 10 | DKI Jakarta | 1,250 | 250 |
| 11 | West Java | 260,345 | 52,069 |
| 12 | Banten | 97,555 | 19,511 |
| 13 | Central Java | 160,140 | 32,028 |
| 14 | DI Yogyakarta | 3,375 | 675 |
| 15 | East Java | 311,035 | 62,207 |
| 16 | Bali | 13,215 | 2,643 |
| 17 | West Nusa Tenggara | 246,805 | 49,361 |

| | | | |
|---|---|---|---|
| 18 | East Nusa Tenggara | 56,620 | 11,324 |
| 19 | West Kalimantan | 199,395 | 39,879 |
| 20 | Central Kalimantan | 445,860 | 89,172 |
| 21 | South Kalimantan | 193,830 | 38,766 |
| 22 | East Kalimantan | 595,580 | 119,116 |
| 23 | South Sulawesi | 711,275 | 142,255 |
| 24 | Central Sulawesi | 210,470 | 42,094 |
| 25 | South East Sulawesi | 259,635 | 51,927 |
| 26 | North Sulawesi | 3,190 | 638 |
| 27 | Gorontalo | 58,375 | 11,675 |
| 28 | Maluku | 116,000 | 23,200 |
| 29 | North Maluku | 3,735 | 747 |
| 30 | Papua | 29,905 | 5,981 |
| | **T o t a l** | 6,120,380 | 1,224,076 |

Source: Direktorat Jenderal Budidaya, 2003

Total shrimps ponds area in Thailand as competing countries has only 460.000 rai or equivalent with 73.600 ha in 1998 and continually growing every years. China as the biggest shrimp producer in the world has shrimp ponds area 147.150 in 1991 and increased to 243.009 ha in 2003. Comparing to Indonesia both of these countries shrimp ponds are still below the half of Indonesia’s shrimp ponds.

Table 3. Thailand Shrimp Ponds Area

| Year | Farmers | Area (rai) |
|---|---|---|
| 1988 | 11,838.00 | 417,071.00 |
| 1989 | 14,253.00 | 474,551.00 |
| 1990 | 15,072.00 | 403,787.00 |
| 1991 | 18,998.00 | 470,826.00 |
| 1992 | 19,403.00 | 454,975.00 |
| 1993 | 20,027.00 | 449,292.00 |
| 1994 | 22,197.00 | 448,000.00 |
| 1995 | 26,145.00 | 468,386.00 |
| 1996 | 16,000.00 | 500,000.00 |
| 1997 | 15,500.00 | 450,000.00 |
| 1998 | 12,800.00 | 460,000.00 |

Source : Thailand Department of Fisheries (1998)

Table 4. China Shrimp Ponds Area

| | |
|---|---|
| Northern China | |
| 1991 | 108.570 |
| 2003 | 131.824 |
| Sourthern China | |
| 1991 | 38.580 |
| 2003 | 111.185 |

Source: Wang Qingyin, 2005

2. Big resources of manpower in Indonesia.

   Fishery sector in Indonesia mostly used the human power in processing the shrimp product. This conditions will absorb large number up employment in fishery processing industry in Indonesia. In total, fishery sector has absorbed 6.1 million people. In the fishery processing industry, the manpower absorbed in 2006 reached 310,000 people. If added to those who engaged in marketing activities such as transportation, distribution, wholesaler and retailer handling

the total manpower absorbed in the fishery processing and marketing is more than 600,000 people. The total employment rate in Indonesia has reached 108,13 million people in all sectors. (BPS, 2007). Increasing need of manpower in the shrimp industry will be fully covered, in fact that the manpower absorbed in the fishery sector is not highly skilled or educated people.

Weaknesses

1. The small production due to the limited technology, especially for small scale and medium farmers.

   The number of shrimp farmer in Indonesia is 2,459,356 in 2004, increasing from 1,877,814 in 1999. (Statistik Perikanan, 2005). But, most of these farmer are traditionally used their ponds for cultivating shrimp, causing the low output of shrimp production. Only few medium and big company using the highly technology on their farming. Most of the biggest shrimp farming company in Indonesia doing their activities in Lampung province, East Java province and South Sulawesi province. This company has integrated farming and processing industry. This company has also absorb the shrimp production from traditional farmers to be processed in their processing unit.

2. Small asset to expand and increase the production

   Most of the shrimp farmer in Indonesia are doing their farming traditionally because of the lack access to the finance or credit. There are limited farmer that can access the formal capital from the banking sector in Indonesia, this

caused by:

(1) Inability of farmers to provide required collateral,

(2) Inability of farmers to provide full proof of tax payments and other documentation

(3) The fishery sectors previously has poor performance and risk profile and this may have slowed down the ability of traditional farmers to change to the modern farming practices

3. Cost of shrimp feed is high relative to competing countries

Costs for feed used about 60% of the variable costs of operating a shrimp farm in Indonesia. The use of feed and fertilizers is higher in countries such as China, Indonesia, Thailand and Philippines, compared to Bangladesh, India, and Vietnam because of high stocking density practices (*Madan Dey et al, 2006*). Furthermore, feed prices are higher compared to many other key farmed-shrimp producers in other countries.

Table. 5 : Cost of shrimps feed

| Country | Cost/ton |
|---|---|
| Indonesia | $900/ ton |
| Panama | $440/ton |
| Honduras | $460/ton |
| Vietnam | $1000/ton |
| Thailand | $780/ton |
| China | $650/ton |

Source: FIAS, 2006

Highly relative feed price comparing to others countries has an impact to the selling prices of the shrimp product. This condition also has an impact for competing in international market.

4. Poor quality and diversification of the product and value added product.

   The poor quality of the shrimp farming industry is related to the poor of the farmers and the investment problem. This also cause by the lack of the farmer to access the financial credit to the banks sector, that slow down the ability to increased or expand the their farming industry.

Opportunity

1. Shrimp business is profitable and has potential in export that attracts related people to get involved.

   In fact that the shrimp industry is highly risk and need a lot of capital in their production, the shrimp businesses are profitable especially for export market and value added product. This profitable industry can attract other people to involved in this sector, and also attract foreign investor to invest in the shrimp farming and processing industry.

2. Demands for shrimp product are increasing significantly each year

   Demand for shrimp for consumption is increasing over time, the most valuable markets for shrimp product are Japan, USA and European Market.

   World demand for shrimp in 1999 has reached 2.1 million metric tons per years against the supply that only 800,000 tons. (Bangkok Bank Research Department, 2000). The demand for fish is also increasing, in 2010 demand for fish was projected to reach a figure of 7.5 million tonnes per year, while the supply was well below. (Bank Export Indonesia, 2007)

Threats

1. Shrimp industry may face severe competition from other countries (China, Thailand, India, Vietnam).

   Shrimp industry facing severe competition in the international market. Indonesia shrimp product are competing with other shrimp producer countries such as China, Thailand, India and Vietnam. The strategy to face this problem is differentiation of the product, produce the value added product, and also promoting in the global market.

2. Disease that occurred in the aquaculture.

   Diseases frequently occurs in the shrimp farming, so that why the shrimps industry is highly risk. Introducing new technology and good selection of brood stock can lower the risk of disease that can occurred. Using antibiotic sometimes useful, especially for traditional farmers, but for some countries like European market rejected the shrimp product that using antibiotic in their farming processed.

3. Trade barrier and highly quality requirement for some countries like in European Market.

   Trade barrier also faced for the shrimp product, with high tariffs, so the product cannot compete in the world market. Other factor that faced by shrimp farmers is highly quality requirement for shrimp product to entered the market, for example the European countries set highly quality for food product.

**4.2. Key issues:**

1. Weak enforcement of existing product and process standards, technical and other regulations

   At present there is concern about the potential for food safety and environmental standards, traceability, etc to marginalize poor/small-scale producers due to the associated costs involved. Certainly, increasing standard of production by importing countries on the quality of product originating from shrimp farms, affecting to the farmers, shrimp processing industry and also exporters to pay increasing attention to the quality of their products if they are to maintain their access to diverse markets. But requirements in importing countries apply to all exporters (traders and processors), and if health/hygiene and environmental standards can be maintained/improved, then higher standards can help in maintaining current markets, and access to the others market. The country can not be competing to others countries that has applied new standard that the importer has set up.

2. Poor quality of domestic brood stock used by domestic hatcheries to produce shrimp, significantly lower the survival rates of the shrimp that cultivated, and will also lower the productivity and quality of output from many farms. Production form bad quality brood stock usually have higher mortality rate that can lower the ouput of the production. That usually occurred in the small scale shrimp farmers industry, because they cannot provide the good brood stock in their farming.

3. Cost of shrimp feed is high relative to competing countries

   Cost of shrimp farming mostly used for the feed for shrimp cultivated. This cost will directly affect to the cost of final product. This cost also determined by the price of shrimp feed market which is external factor to the farmer. The change of this price will affect directly to the cost production, and finally the cost for selling product, and their benefit. This will determining whether their product can compete in the international market or not.

4. Poor management practices at the farm level significantly lowering shrimp farming productivity.

   Management practices at the farm level are most important to improving production and quality of shrimp exports in Indonesia. In aquaculture world, implementation of safety assurance systems in fish-processing are becoming very advanced, yet good practices and enforcement of standards at the farm level are lagging behind in many countries. This only can be implemented to the big shrimp farming company or farmer that have high capital to implement this good management practices.

5. Increasing business environment costs/constraints the cost of shrimp farming production

   The costs of production can be reduced by lowering risk of disease, improving productivity, and by reducing the investment climate constraints. In an industry where productivity is already compromised due to poor management practices and standards, amidst increasing costs of doing business, the impact on competitiveness is worsening, and the product can not compete in the

international market.

6. Need to develop a stronger image and market information and promotion strategy

   The important thing in marketing the shrimp production is that shrimp product can be accept by the buyers. The good product will easily entered the market, even they faced a lot of competitors. The marketing system and promotion activities can help the producer to sell or introduce their product the international market.

## Chapter V

## Conclusion and Policy Recommendation

The production activity and processing industry of the shrimp product in Indonesia still need to be maintained in order to increase the value and quantity of export product to the global market. Several technical measures should be applied by the government to help the farmers and processing industry to increase and control their production in the best way.

1. Improve the productivity

   Improve and apply best management practices (BMPs) at farm level (stressing biosecurity and the use of disease free stocking material). Government and private sector supply companies should establish a working group to consider how best to allocate extension activities between them, and between areas, so as to ensure best use of resources and as wide a coverage as possible, and so as to avoid duplication.
2. Reduce cost and constrain to production
3. Improve application and enforcement of quality standards

   Improve the hatchery standard production to support the good quality brood stock.
4. Improve branding and image in key market

   Improve the promoting activities world and also expanding and promoting the product to the new market, Improve the image branding and diversified the product to compete to the global market.

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