THE EFFECTS OF NON-TARIFF BARRIERS ON TRADE PATTERN OF SARAWAK SHRIMP INDUSTRY

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THE EFFECTS OF NON-TARIFF BARRIERS ON TRADE PATTERN OF SARAWAK SHRIMP INDUSTRY

A Research Paper Submitted In Partial Fulfillment Of The Requirement for the Degree Of Corporate Master in Business Administration

Faculty of Economics and Business, Universiti Malaysia Sarawak

2004
I certify that I have supervised and read this Research Paper and that in my opinion it conforms to the standards of scholarly presentation, adequate in scope and quality as a Research Paper for the degree of Corporate Master in Business Administration.

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This Research Paper was submitted to the Faculty of Economics and Business, UNIMAS and is accepted as partial fulfillment of the requirements for the degree of Corporate Master in Business Administration.

(Prof. Madya Dr. Shazali Abu Mansur)
Dean, Faculty of Economics and Business, UNIMAS
DECLARATION AND COPYRIGHT

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Matrix Number : 02-02-0703

I hereby declare that this research paper is the result of my own research works, except otherwise stated. Sources are acknowledged by giving explicit references and a bibliography is appended.

11/5/2004

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Pada Ak Bijo
11/5/2004

Corporate Master in Business Administration,
Faculty of Economic and Business,
Universiti Malaysia Sarawak
and gratitude to
his constructive
his kindness in
research.

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This research paper seeks to assess the effects of non-tariff barriers on trade pattern of Sarawak shrimp industry in term of quantity, value and destination of shrimp export from 1991 until 2002. Non-tariff barriers are any other measures other than tariff that could restrict international trade flows. From the perspective of developing countries, the imposition of regulations on quality and standards like Hazard Analysis Critical Control Point (HACCP) on food product had posed several problems for shrimp exporters as they need to develop infrastructure and capacity to implement it inorder to market their shrimp products in the international market. The t Test results of hypotheses testing indicated that there is no significant difference in quantity and destination of shrimp export as a whole. This means that importing countries continue to buy Sarawak shrimp despite cases of rejection by European Union countries due to food safety standard, prohibition of export to USA in relation to issue on shrimp fishing without installing the Turtle Excluder Device and stricter border inspection by the Australian Quarantine Inspection Service. However, there is limitation to the validity of the t Test result because there are others factors influencing the supply of shrimp for export. The t Test assumed that price, production, natural shrimp resources and demand for shrimp are constant. The writer is of the opinion that rejection of shrimp export by EU, Turtle Case in WTO Disputes Settlement Board and stricter inspection procedures had been taken as positive challenge to Sarawak shrimp industry to come up with policy and regulation to maintain market share and increase competitiveness in global shrimp market. Without such foresight, Sarawak shrimp industry could have suffered the same fate as Thailand in 1996 and Bangladesh in 1997, which experience huge reduction in shrimp export.
ABSTRAK

Penyelidikan ini mengkaji tentang kesan dasar halangan bukan tarif terhadap pola perdagangan antarabangsa industri udang marin negeri Sarawak. Dasar halangan bukan tarif seperti Peraturan Pencabutan Keselamatan dan Kualiti Makanan yang berasaskan HACCP (Analisis Bahaya dan Titik Pengawalan Kritikal), perlaksanaan pemeriksaan ketat ekspor udang marin di sempadan negara pengimport, peraturan pemeliharaan alam sekitar dan pemuliharaan spesis yang semakin pupus boleh menyekat perdagangan antarabangsa udang marin. Keputusan ujian hipotesis menunjukkan bahawa tiada perbezaan ketara arahaliran ekspor udang marin. Ini bermakna, secara keseluruhannya, negara pengimport masih menerima permintaan udang marin dari Sarawak walaupun terdapat kes penolakan ekspor oleh negara Kesatuan Eropah, larangan mengimport udang dari oleh Negara Amerika Syarikat kerana dakwaan kaedah menangkap udang marin yang mengancam penyu dan penahanan ekspor udang bagi pemeriksaan walaupun terdapat dokumen HACCP. Walau bagaimanapun, terdapat kekangan terhadap kesahihan keputusan ujian t kerana data yang digunakan mengandakan faktor lain yang boleh mempengaruhi kuantiti ekspor seperti harga, keupayaan pengeluaran, kadar tariff dan permintaan tidak berubah.

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THE EFFECTS OF NON-TARIFF BARRIERS ON TRADE PATTERN OF SARAWAK SHRIMP INDUSTRY
CHAPTER 1

INTRODUCTION

This chapter is an overview of the research paper, which seeks to assess the effects of non-tariff barrier on trade pattern of Sarawak shrimp industry. It presents the background of the study, problem statement and the different perspectives pertaining to regulations and measures that could restrict international shrimp trade.

1.1. Background of Study

Liberalization of international trade had became major issues in multi-trade negotiations since the Geneva Round (1947) to Uruguay Round (1986-1994) under the General Agreement on Tariff and Trade (GATT). The Agreement on Agriculture (AOA), which was adopted at the conclusion of the Uruguay Round of trade negotiation, became part of the document leading to the formation of World Trade Organization (WTO) in 1 January 1995. The AOA became international rules governing agricultural trade. Under AOA, member countries commit to reduce import tariff and non-tariff barriers and make market access more liberal and predictable.

However, as tariff rate and quantitative restriction to agricultural and fisheries products had been brought down and bound as commitment to the AOA under WTO, there has been growing concern among developing countries that the intended benefit of liberalized trade might be undermined by protectionist use of non-tariff barriers. Non-tariff barriers are any government measures that could restrict trade flows. This includes various government policies, which in their view are legitimate effort toward ensuring food safety and quality,
protection of environment, conservation of natural breeding habitat and extinct species.

Major shrimp markets had implemented Hazard Analysis Critical Control Point (HACCP) certification program as a measure to ensure food safety and quality for their shrimp import. The United State Food and Drug Administration (USFDA) had made it mandatory to implement HACCP program in their fishery sector and imported fisheries products. European Union countries (EU) had tightened their quality requirement based on HACCP and Japan had revised its Food and Sanitation Law in line with HACCP principles.

More than half of international trade in fisheries products originate from developing countries and most of the products are exported to the industrialized or developed countries. Thailand was the leading exporter of fisheries products from 1993-1996 and was exceeded by Norway in 1997. Chile and Peru also benefit from their rich fisheries resources. Japan is the leading importer of fisheries products followed by United States of America (USA) and European Union countries (Dawkins, 1999).

From the perspective of developing countries including Malaysia, the imposition of regulations to ensure quality and standard of fisheries products had posed several problems for exporters. Exporters from developing countries need to develop HACCP infrastructure and the capacity to implement it. However, legitimate use of standard and regulation will benefit the exporting countries through increase market access. Importing countries argued that HACCP certification and compliance to international standard would bring confidence to their products, reduce export documentation and improve export process flow.
1.2. Problem Statement

Rapid progress made in food science technology and knowledge about food, its quality and associated health hazard had resulted in greater awareness about food safety. This had induced consumers to demand their government took legislative action to ensure only safe food of acceptable quality are sold and the risks of food-borne health hazard are minimized. (FAO/WHO, 1998). However, the regulations on standard to ensure food quality and safety had resulted in rejections of shrimp export. From January 2000 until July 2001, there were eighteen (18) cases of Malaysian seafood products rejected by importing countries. Thirteen (13) cases were frozen shrimp export to European Union countries. Three (3) cases were from Sarawak.

The rejections of shrimp export were due to microbiological contamination by vibrio cholerae, vibrio parahaemolyticus, and salmonella. Vibrio parahaemolyticus is water-borne bacteria commonly found in brackish water. Salmonella could have originated from organic fertilizer or animal dropping. Vibrio cholerae and salmonella could also come from human contact in the process of handling in the factory. The data for rejection cases are in Table 1.1.

<table>
<thead>
<tr>
<th>Year</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microbiological Contamination</td>
<td>7</td>
<td>14</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>Chemical Contamination</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>14</td>
<td>13</td>
<td>18</td>
</tr>
</tbody>
</table>

Source: Abdul Rahim, M (January 2004)

A general guideline on the limit of microorganism in shrimp products for export is in Appendix 1.1.
The Australian Quarantine Inspection Service (AQIS) had held consignment of Sarawak shrimp export for inspection and testing on microbiological and chemical level. According to Lee Choon Kheng (2001), the inspection and boarder procedures could act as trade restriction because of the long delay and difficulty encountered by shrimp exporters to Australia.

In 1997, USA had prohibited import of shrimp products from Malaysia, Thailand, India and Pakistan. The reason for the prohibition was the Regulation on Endangered Species Act, as these countries did not use “Turtle Excluder Device” to protect sea turtle from destructive shrimp fishing. According to USA, the prohibition is necessary to protect and conserve animal and plant life (Ramsey, 2001).

In March 2003, 8 Southern USA states (Texas, Louisiana, Mississippi, Alabama, Georgia, Florida, North Carolina and South Carolina) alleged that Indonesia, Thailand, Vietnam, Bangladesh, Ecuador, Mexico, Brazil, Venezuela and Guyana had dumped their shrimp in USA. These 8 states were worried that shrimp prices, the lowest in this decade will hurt their shrimp industry. These southern states demanded the import of shrimp from these countries to be reduced and tariff imposed on their shrimp import. They also threatened to request their government to ban import of shrimp from these countries under the anti-dumping rules (PERASA Bulletin, 2003).

Environmental issues also threatened shrimp farming in developing countries. From an environmentalist’s point of view, many environmental problems were associated with the production and process of shrimp. Environmentalist demand stringent inspection on shrimp import and implementation of regulations to ensure shrimp farming follow a code of conduct for good farming practice in order to protect the environment. Environmentalists are also complaining on the clearing of
mangrove forest which is the habitat and breeding ground for many fish and shrimp species.

1.3. Research Objectives

Based on the problems faced by shrimp exporters due to regulations on food safety and quality, laws to protect the environment and conservation of species and anti-dumping laws to protect domestic producers that could restrict trade and become non-tariff barriers, this study seeks to;

General Objective

i. assess the effects of non-tariff barriers on trade pattern of Sarawak shrimp industry from 1991 until 2002.

Specific Objective

i. assess the effects of non-tariff barriers on quantity, value and destination of Sarawak shrimp export before and after the implementation of regulations on HACCP certification and laws to protect environment and conservation of species.

ii. assess the effects of tariff reduction on Sarawak shrimp export based on the new tariff reduction rate beginning 1995 until 2002.

1.4. Significance of Study

There are ample studies already conducted to assess the effects of non-tariff barriers, particularly regulations on food safety and quality in fisheries products including shrimp in developing countries. This reflects the significant interest on the issue and the attempt made at addressing its effect on affected countries worldwide. However, the writer has yet to find studies done to assess the effects of non-tariff barriers,
particularly on product standard and quality, export regulations and food safety measures on shrimp industry in Sarawak.

In year 2000, with a turnover of US$ 10 billion and 1,087,111 million metric tones, shrimp had became the leading commodity in global seafood market (Infofish, 2001). Thus, any change in international trade policy and regulation will attract response from the governments, producers and exporters.

1.5. Research Limitation and Constraint

This is a secondary research based on published secondary data on quantity, value and destination of Sarawak shrimp export. The data were obtained from Sarawak Fisheries Department's annual report. Though the data were published in format suggesting authority and trustworthy, there could be errors because the data were not published for research purpose. Published data are like the apples in the Garden of Eden, tempting but dangerous (Lewis-Beck, 1994). The reliability of the data is a major concern of this research and reliability is very much a function of the organization that published it.

To assess the reliability of the data, data of Sarawak shrimp export published by the Malaysian Statistics Department will be used as comparison. The comparison of data from the two sources from 1999 –2002 is shown in Table 1.2.
10 billion and time the leading (001). Thus, any attraction will attract exporters.

Table 1.2. Data Comparison from Sarawak Fisheries Department and Sarawak Statistic Department.

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish. Dept.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qtt. (MT)</td>
<td>4,002.38</td>
<td>6,686.36</td>
<td>6,154.96</td>
<td>6,646.35</td>
</tr>
<tr>
<td>RM</td>
<td>81,868,763</td>
<td>150,232,544</td>
<td>144,843,191</td>
<td>135,944,062</td>
</tr>
<tr>
<td>Statistics. Dept</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qtt. (MT)</td>
<td>4,010.40</td>
<td>6,686.36</td>
<td>6,099.00</td>
<td>6,646.35</td>
</tr>
<tr>
<td>RM</td>
<td>82,167,170</td>
<td>150,232,545</td>
<td>147,230,799</td>
<td>135,944,062</td>
</tr>
<tr>
<td>Difference</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>+8.02(0.2%)</td>
<td>-55.96(0.9%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RM</td>
<td>+298,407</td>
<td>+238,760</td>
<td>1.65%</td>
<td></td>
</tr>
<tr>
<td>Difference</td>
<td>+0.36%</td>
<td>0.00%</td>
<td>1.65%</td>
<td></td>
</tr>
</tbody>
</table>


There are little and insignificant differences between the data from the two sources. This implies that the data on the quantity and value of Sarawak shrimp export published by Sarawak Fisheries Department are reliable.

There are limitations to the reliability of the published data for t-Tests and hypotheses testing. The quantity and value of shrimp export were also influenced by other factors such as price, better production technology and change in tariff rate of shrimp export due to trade liberalization.

1.6. Relevant Background Knowledge

Good background knowledge on Sarawak shrimp industry is needed in this research. My working experience for 18 years in Lembaga Kemajuan Ikan Malaysia (Malaysian Fishery Development Authority) and networking with relevant organizations and authorities in the industry eg. Sarawak Fisheries Department, Infofish, Sarawak Inland Fisheries and Sarawak Aquaculture Association will be helpful in gaining
access to data and information that are critical to successful completion of the research.

1.7. Conclusion

The World Health Organization and WTO recognize that member countries have the right to genuine food safety regulations to protect human health. However, they are required to base their food safety regulations on scientific principles and not as disguised restrictions to trade (Southcenter, 2000).
CHAPTER 2

LITERATURE REVIEW

This chapter consists of two parts. The first part is a review of past literatures and studies on non-tariff barriers and the theory and ideology of international trade, which could provide insight into the different perspectives that influence global shrimp trade scenario. The second part provides a background of Sarawak shrimp industry in relation to the global shrimp market.

2.1. Introduction

The materials and sources of literature review in this research paper include reviewing past research, academic writing and WTO documents on Technical Barrier to Trade Agreement (TBT) and Sanitary Phytosanitary Agreement (SPS), Agreement on Agriculture (AOA), internet websites, journals, bulletins and newspaper reports. The initial part of the reviews are mainly from the perspective of developing countries and gradually expand to regional issues on non-tariff barriers and finally from the perspective of developed countries.

2.2. Literature Review

Rokiah Alavi (2002) alleged that non-tariff barriers such as the SPS Agreement were cleverly used by developed countries to protect their agricultural and food sector. The protectionist use were evident by the significant increase in the number of trade disputes on product standard brought to WTO’s Dispute Settlement Board (DSB) on agricultural and food products. The writer also reported that non-tariff barriers could have significant effect on market access for developing and Muslim countries because their exporters lack information.
on standard and regulations and implementation of complicated testing and verification procedures by importing countries.

Since Malaysia is a developing country and also a Muslim country, non-tariff measures could act as barriers to its shrimp trade. Under the National Agricultural Policy (1995-2010), the Malaysian Government had taken preemptive action such as the implementation of HACCP regulation, Shrimp Farm Accreditation Scheme and Good Management Practice in shrimp farming to counter the threat of regulations that could become barriers to shrimp trade.

Most literatures from Asian shrimp exporting countries like India, Bangladesh, Thailand, Malaysia and Philippines were adamant that regulations on HACCP and strict testing procedures had restricted trade and adverse effects on their shrimp industry. A case study by Mustafizur Rahman (2001) on the ban of shrimp import from Bangladesh by EU in 1997, also revealed the growing apprehension in Least Developing Countries (LDC) that certain provision of the SPS measures could act as trade protection instrument. The ban lasted for five months and had serious effects on Bangladesh Shrimp industry as export during the ban was zero. The study estimated US$ 65.1 million as the cost of the EU ban to Bangladesh shrimp industry. During the ban, some of the exporters succeeded in diverting the intended shrimp export to USA and Japan thus cutting down the losses to US$14.7 millions. The diversion of shrimp export from EU countries to USA and Japan had brought up the issue of harmonization of standard by different importing countries because USA and Japan are not known for any lack of vigilance in term of quality and hygiene standard. Therefore the ban was a non-tariff barriers that had restricted trade.

However, there are literatures published by developed and importing countries that perceived the regulations on food safety and quality had restricted trade particularly for
The study by Henson, S etc (1999) on the effects of SPS measures on least developing countries, reported that the measures had impeded trade by constraining the ability of developing countries to export food and agricultural products. The study acknowledged that SPS measures could impede trade in food products in developing and least developing countries. Developing countries considered standard and technical verification procedures imposed by importers, particularly the European Union countries as the greatest impediment to trade in agriculture and food products. The writers alleged that certain requirements in testing and verification procedures are incompatible with the prevailing system of production and marketing in developing countries. The required structural changes and the associated costs would restrict trade in similar manner as tariff. However the study noted that attempt had been made to reduce the distortive effects of SPS measures on food and agricultural trade. (The study covers 10 developing countries namely: India, Zimbabwe, Egypt, Vietnam, Ghana, Ethiopia, Kenya, Cameroon, The Gambia and Guatemala)

In South East Asian countries, PERASA Bulletin (2003) reported ample cases on imposition of regulations on products safety and quality and environmental issues that had led to temporary ban of shrimp import by major shrimp market. These cases support the views that non-tariff barriers could act as disguised restriction to trade. Among the cases was the suspension of shrimp import from Philippines because the authority failed to submit the Residue Monitoring Report in June 2003. The suspension of import resulted in loss of revenue estimated at USD 10 millions.

Thailand experienced reduction in shrimp export due to the regulation on turtle excluder device. Revenues from shrimp export dropped from 51 millions Baht in 1995 to only 43 millions Baht in 1996. The US International Trade Committee had pressured the government to ban import of
shrimp products unless shrimp fishing boats were installed with the turtle excluder device. The ban had been lifted in 1997 after USA was satisfied with Thailand's progress in installing the device.

Southcentre (2000) which is based in India, adopted a liberal approach to non-tariff barriers. Southcenter acknowledged that standard and regulations could promote economic development and trade but also believe that it could become a powerful tool that impede international trade and protect domestic producers through unjustified and different standards for food quality and inspection procedures.

The literature reviews from the perspective of developing countries were not shared by Bruce Silverglade (2001). He argued that the SPS Agreement is not a public health agreement, but a business oriented trade agreement intended to reduce regulations and facilitate international trade. He criticized the application of the SPS agreement that relies extensively on decision by Codex, a United Nation subsidiary supported by FAO. He mentioned that government representing developing countries argued and pleaded with Codex for downward harmonization (lowering of standard) on the ground that they cannot meet high international standard.

Bruce Silverglade also cited cases of downward harmonization, whereby only two third of the 36 countries exporting meat and poultry to USA had an equivalent regulatory and standard as the USA. He further stated that USFDA and the Department of Agriculture support for multinational food and agribusiness companies' trade agenda, is championing the concern of business and not the consumer community. Nonetheless, he agreed that the participation of WTO in matter affecting international trade should be welcomed by supporters of trade liberalization. To him consumer will not support free and liberalize trade unless they