Implementation of SPS/TBT agreements- experiences from other countries and lessons for Vietnam*

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Abstract

Although Vietnam has been an official member of WTO since 2007, non-tariff measures such as Technical Barriers to Trade (TBT) and Sanitary and Phytosanitary (SPS) measures in WTO agreements are not familiar to many corporate or governmental entities. Therefore, TBT and SPS measures[1] are not consistently implemented and the advantages of such agreements are not realized. It was determined that international policy learning, searching international experience for transferable 'best practice' and identifying common trends and pressures that affect other systems, would be an avenue toward amending domestic policy to facilitate compliance with TBT and SPS agreements.Given that the plastics and agricultural industries are fast emerging markets of particular importance to Vietnam's economy, they were chosen as the focus of our study. Two other Southeast Asian countries, Malaysia and Thailand were selected for our policy learning study. Historical to date trade data with country specific policy development trends and strategies were collected and processed. Local experts in Malaysia, Thailand and WTO were consulted. It was discovered that the plastics industry is not an industry with a long history of development in Malaysia but which is one of the

[1]WTO Agreement on Technical barriers to trade; WTO Agreement on Sanitary and phytosanitary Measures

most important export products of Malaysia. Thailand is a leading agricultural products exporter even to markets which set up strict TBT and/or SPS measures. Export value, product structure and export market structure were all analyzed. Results suggest that the achievements of Malaysia and Thailand area attributable to well-engineered Government policy, as well as corporate compliance with TBT and SPS measures in both countries. In order to determine how the products of this study might reasonably inform domestic policy and industry practice a better knowledge of the current state of the industries with regard to implementation of TBT and SPS measures was required. Questionnaires were submitted to traders, producers and industry associations in Vietnam to document SPS and TBT agreements compliance practices. Results of the questionnaire illustrate how and to what extent lessons garnered from the policy learning study can be successfully employed in Vietnam.

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1. Introduction

Vietnamese exporters are required to meet technical regulations and/or sanitary and phytosanitary measures set by importing countries. However, such measures may vary from country to country. Having many different regulations and standards makes life difficult for producers and exporters. If regulations are set arbitrarily, they could be used as an excuse for protectionism. Many potential Vietnamese product exports have been disallowed by such non-tariff measures. Implementing SPS and TBT agreements consistently will enable Vietnamese exporters to clear obstacles to international trade.

A large body of academic research studies the TBT and SPS agreements themselves, the experiences of implementation of the agreements in some countries and the realities of implementation of SPS and TBT agreements in Vietnam[2]. However, almost all empirical studies in the literature to date study the issues separately or report only generally the experiences of countries overcoming TBT and SPS. The following are reasons why we chose to study Malaysia's experiences of overcoming technical measures, and sanitary and phytosanitary measures to exporting plastic products and chose to study Thailand's implementation of TBT and SPS measures for exported agricultural products. First, we implement a corporate survey with Vietnamese enterprises to determine the critical target products, markets and current impediments to implementation of TBT and SPS measures. Through our research we discovered that both agricultural and plastics exports, critical emerging industries, suffered from trade measures making them an ideal focus of our study. Second, the literature to date[3] has shown that Malaysian and Thailand not only share many similarities to Vietnam (e.g., developing countries, export features) but have also been successful in overcoming SPS

[2]For a review and summary, we refer to, e.g. Pham Thi Hong Yen (2011), Peter van den Bossche (2008), Paolo R. Vergano (2003)

[3]Ken Togo, "The Development of the Malaysian Plastics Industry", *Malaysian Journal of Economic Studies*, vol. XXXXIII, Nos. 1&2, 2006, p. 98; Othman, K. and Y. H. Eng, An Overview of the Plastic Industry in Malaysia, Paper presented in *Special Technical Extension Workshop on Plastic Technology*, 8-24 July, 1986, Malaysia Industry,Development Authority (MIDA), Malaysia, p.3.; Economic and Social Development Department, *WTO Agreement on Agriculture: The Implementation Experience*, available at: http://www.fao.org/DOCREP/005/Y4632E/y4632e0w.htm

and TBT to bring their products to strict EU, Japanese and US markets. Third, most of the studies on Vietnam's limited success at implementing SPS and TBT agreements, to the best of our knowledge were conducted only shortly after Vietnam joined the WTO. Therefore, an updated study was required to gauge the current state of the industry and determine effective strategies for implementation of SPS and TBT measures.

In this paper, we present an examination of the realities of implementation of SPS and TBT agreements in Vietnam from the perspective of corporations and associations. Our study is one of a very limited number Vietnamese firm-level studies. Other studies, to the best of our knowledge, consist of Pham Thi Hong Yen (2011) on implementation of SPS in food area, and Halloran and Pham (2011) on TBT- related difficulties for associations. Our study shows what plastics and agricultural industry successes in overcoming international trade barriers specific to implementation of SPS and TBT measures in Malaysia and Thailand can be applied to Vietnam. Our paper also presents the assessment of producers/manufacturers and associations of study results.

When carrying out the paper, we tried our best to contact the main export markets and enquiry points in USA, EU and Japan by all reasonable means (emails and international calls) to collect their comments on usual problems they face with Vietnamese products. However, there has been no response so far. Therefore, information from the paper is from our own surveys and existing publications.

2. Literature

Restrictions on international trade primarily in the form of non-tariff barriers have multiplied rapidly in the 1980s. Coughlin and Wood (1989); Disdler, Fekadu, Murillo and Wong (2008) show that developing countries and least developed countries protest regularly against the increasing use of SPS and TBTs by developed countries and view this use as a disguised form of protectionism. Trade agreements recognize countries' rights to set their own standards and regulations on trade in order to protect human,

animal or plant health or life. However, in practice some countries impose stricter than necessary condition on importing goods to isolate domestic producers from international competition. Most empirical studies have identified technical regulations and sanitary and phytosanitary measures as the barriers commonly abused (e.g., Yue and Beghin, 2006; Calvin and Krissoff, 1998). According to Häberli (2008), international agreements like SPS and TBT agreements address these difficulties. They can protect exporters from abuse or discriminatory over- regulation by the importing country. Manufactures and other operators need to obtain adequate information on the regulations applying to their products on their export markets.

Importers such as the EU, Japan and US have set up strict regulations on technical measures, sanitary and phytosanitary measures. According to Disdler, Fekadu, Murillo and Wong (2008), there are differences between importing countries. They do not use exactly the same measures; they adduce different motives to impose SPS and TBTs on tropical products. The authors also suggest that exporting developing countries should be supported to comply with SPS and TBT requirements so that they can take advantage of the agreements.

As for Vietnam, many Vietnamese studies have shown that traders and producers in Vietnam have experienced with such regulations when exporting. For example, major Vietnamese export products such as dragon fruit were forbidden as a US import due to overly strict SPS requirements. Most studies work out the common reasons including but not limited to poor understanding of the regulations (e.g., Pham, 2009; Nguyen, 2009), lack of the harmonization among governmental authorities and out of date infrastructures for production in Vietnam (e.g., Gascoine and Nguyen, 2009).

According to Pham (2011), although Vietnam has promulgated various legislations relating to SPS and TBT, the legislations seem not adequately mitigate existing problems in Vietnam. Many reasons lie behind the scene, including but not limited to shortages of financial and human resources. Both Pham (2011) and Nguyen

(2007) point out that the application of the legislations relating to SPS and TBT by different authorities are inconsistent, resulting in conflicts and disputes mainly due to bureaucracy and a lack of cooperation among authorities. According to MOT (2009), Gov (2009), producers/manufacturer/traders either show a lack of awareness of TBT and SPS or ignore them.

Many authors emphasize the importance of learning from the experience of other countries regarding implementation of SPS and TBT. Most of them study the macro-level experiences of Thailand, China, EU or Japan (e.g., Pham, 2011; Dinh, 2012). There are three approaches applied by Thailand, China and Japan, which are promulgation of necessary legislations, strengthening the capacity of authorities and implementation of public awareness programs. Naray, Vergano and Kostecki (2006) offer instruction regarding a workable SPS and TBT network for Vietnam.

3. Data and methodology

We used data obtained from the survey conducted in 2011. We interviewed 314 exporting enterprises in various business lines in Hanoi and Ho Chi Minh City, the location of the majority of exporting enterprises (see details in Figure 1). They are carefully selected trade and producer associations and companies in Hanoi and Ho Chi Minh City. The aim is to find out the main market access problems (non-tariff barriers of all kinds) for Vietnamese exports.To ensure the accuracy of the data collected, the project team arranged to interview management boards or heads of exporting departments of the 314 enterprises. Each interview lasted for 30 minutes including the courtesy time to make businessmen to feel free to exchange information.

All data collected wascomputerized by the software company, Cspro and analyzed by SPSS software version 19[4].The data analysis product is in the form of numerical data and

[4] SPSS stands for Statistical Package for the Social Sciences, later modified to read Statistical Product and Service Solutions) was released in its first version in 1968 after being developed by Norman H.Nie, Dale H. Bent and D. Hadlai Hull. It is among the most widely used programs for statistical analysis in social science. It is a statistical

diagrams.To achieve a comprehensive view of the data analysis results, beyond our own assessment, we also approached third party experts in academic fields as well as local authorities[5] after survey.

We discovered that the three markets which interviewees face the greatest trade measures relating to SPS and TBT are Japan, US and EU. The survey also shows agricultural and plastics products suffer the most. Based on the advice from the World Trade Institute expert, Prof. Häberli[6], we decide to examine experiences from Malaysia for plastic products and Thailand for agricultural products.

4. Findings

4.1. Vietnamese exporters' difficulties relating to SPS and TBT

252 of the 314 enterprises interviewed are facing export measures. The others do not export directly or export without facing any measures. The survey form did not include a question to identify how many enterprises fall on such groups.

Different types of enterprises shall have different reactions and adaptations towards technical measures due to their structures and company culture.

Figure 2 points out the top three markets where exporting enterprises interviewed face the most difficulties relating to SPS and TBT. They are EU, US and Japan. Table 2 shows that agricultural products are always on the top of products facing those measures in every market in the survey. Among 14 enterprises exporting plastic products, EU TBT and SPS regulations obstruct 46.2% of enterprises, US regulations obstruct 56.2% and Japanese regulations obstruct 38.5%. According to companies surveyed, after Vietnam joined WTO, the frequency with which interviewees faced trade measures increased dramatically (see Figure 3). Apparently, when tariffs cannot be officially used to protect

analysis software package that is available on both Windows and Macintosh platform. It is now officially named "IBM SPSS Statistics"

[5] Due to the requirement from experts and officials working in authorities, we cannot public their names. The comments are from their own points of views, not represent authorities' points of views.

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domestic markets, nations have to resort to non-tariff measures such as SPS and TBT measures.

As for the preparation from micro-level towards TBT and SPS measures, the evidence that most enterprises can show is the ISO 9000 (60%); the number of other certificates like IEC, FSC, JSA are so modest. Figure 4 shows most of them try to get ISO 9000 as the trend in Vietnam (60%); 22 out of 33 enterprises in forestry area have FSC; the certificate on sustainable forestry development; 6 out 10 enterprises in telecommunication have ITU and 13 out of 23 enterprises in electrical appliance have IEC; the number of enterprises having JSA (4 enterprises) and CEN (10 enterprises) is so modest meanwhile Japan and EU are big market for Vietnam..

It is good to realize that enterprises in Vietnam actively seek information relating to TBT and SPS. They can research the regulations by themselves and/or rely on support from associations (e.g.associations contribute 22% to the source of information for enterprises – see Figure 5). In order to deal with the measures effectively, many enterprises set up separate departments to deal with the issues or at least assign staff (e.g. 21.67% enterprises interviewed having separate departments on TBT and SPS, 26.67% assign staff- see Figure 6). However, the majority report that they don't have specialized staff or departments. It is understandable as 98% of Vietnamese enterprises are small and medium and lack sufficient resources to set up a separate department to settle TBT and SPS issues.Their solutions are just short term only.

Regardless of trade measures, Vietnam's exporters are resilient.83.9% businessmen decided to continue exporting when facing with TBT and SPS measures, which is a good sign. Only 2.6% decided to move from exporting to selling domestically. 17 enterprises have informed the authorities of the trade measures they have faced which enables authorities to educate other enterprises. Such reporting practices are helpful to others in like industries and should be encouraged (see Figure 7).

Four solutions are used simultaneously to overcome the measures. They are technologcal renovation (21%), quality assurance (25%), education of relevant staff (25%) and strict compliance with importing countries' requirements (see Figure 8).

To overcome the measures, enterprises face different kinds of difficulties. The greatest being in establishing proper administrative procedures (22%). The increased cost of compliance is the next highest obstacle (19%). Additional capital is required to renovate technologies, train staff, for research and beyond to comply with strict requirements from importing countries. Inadequate technology[7] is the most common reason for lack of information on SPS and TBT. WTO members are required to publicly post all trade measures on website 60 days before the effective date. However, language and technology measures prevent Vietnamese firms from accessing such information (see Figure 9).

4.2. Experiences from Malaysia

Plastic industry isn't an industry that has a long history of development in Malaysia but Malaysia has becomeone of leading exporters of plastics in the world. Malaysia has been faced with various technical measures when exporting plastics, especially to EU and Japan. Malaysia has successfully implemented a number of measures at different levels, governmental and industry association, Malaysia Plastic Manufacturers Association (MPMA), and by its plastics companies to overcome such measures. Vietnamese plastic industry is advised to look at such measures as an model for overcoming technical obstacles.

4.2.1. Common features sharing between Vietnam and Malaysia

We find three important features of the Malaysian plastic industry which are similar to Vietnamese plastic industry:

[7] From the report of the Ministry of Science and Technology dated 4th Dec 2009, technologies applied inVietnam now is said to be 2 or 3 generations behind in comparison within Asia – Further details can be found in http://www.most.gov.vn/Desktop.aspx/Bai-viet-Hoat-Dong-KHCN/Chien-luoc-quy-hoach-ke-hoach/THUC_TRANG_KHOA_HOC_VA_CONG_NGHE_VIET_NAM/

First, most of companies in Malaysian plastic industry are SMEs. In 2010, of the 1550 plastic manufacturers, about 930 or 60% are SMEs[8]. The SMEs in this industry generally lack economies of scale, capital, technical and marketing expertise to become major producers and exporters in the global market[9]. These obstacles can influence its capacity to comply with the technical regulations applied in export markets.

Second, the Malaysian plastic industry is mostly locally-owned. The census conducted in 1973 showed that 279 of the 299 enterprises in the plastic industry were owned by local Malaysians. Together, they were also responsible for much of the production within the industry. The amount of value added by Malaysians in this year was about RM36 million or 80 per cent of the total production of this industry[10]. As of 2010, about 53 per cent of 1.550 plastic manufacturers were hold by the local people[11].

Third, the growth in the production activities of the Malaysian plastics industry is dependent on that of other industries, mainly the electrical and electronic industries (E&E). The development and growth of other industries using plastic products triggers growth in the plastics industry to meet those new demands. Malaysian plastic producers are successful in complying with production norms and technical standards and specifications of other industries and meeting their product needs.

4.2.2. Malaysian export

Plastic products are one of the most valuable export products of Malaysia. This section will analyze the export value, product structures and export markets.

Export value

Malaysian plastic exports value increased unevenly year by year from 2006 to 2010 (see the figure 10). It is not difficult to find that in 2006, the Malaysian plastic industry

[8]Istitutonationale per ilCommercio Estero (Italia), *Malaysia: Malaysian plastic processing machinery Market Report (updated December 2010)*, p. 2, available at: http://www.ice.gov.it/paesi/asia/malaysia/upload/173/MALAYSIA%20PLASTIC%20PROCESSING%20MACHINERY%20MARKET%20REPORT%202010.pdf (consulted 15 April 2012)

[9]Malaysian Investment Development Authority, *Performance of the Manufacturing and Services Sectors 2006.*, p.134.

[10]Ken Togo, *ibid.*, p.99.

[11]MIDA, *ibid.*,p.134.

recorded the highest growth ratio of exporting its plastic good: 15.7 per cent compared with the export value achieved in 2005[12]. It continued to increase in years 2007 and 2008, with ratio of 935 per cent (RM 8.3 billion)[13] and 11.92 per cent (RM 9.29 billion)[14] respectively. The 2009 global economic downturn, negatively impacted demand for plastic goods from, notably Singapore, EU and China, resulting in a reduction in export value to RM 823 billion (a decrease of 8.86 per cent compared to 2008)[15]. In 2010, due to the positive signs of global economic recovery and to the measures implemented by the Malaysian government with the intention of stimulating economic development and exportation after the crisis, the export value of the Malaysian plastic goods soared to a record of RM 9,35 billion, an increase of 13,61 per cent compared with those of 2009)[16].

It's important to note that the growth of export value is higher than the growth of production in the Malaysian plastic industry. This shows that on the one hand, over half of plastics products are manufactured for export (in 2006, the export to total turnover ratio was 48.7 per cent, but by 2010 this ratio had increased to 58.1 per cent); and on the other hand, the Malaysia's export-oriented strategy initiated in the 1980s[17] is more successful in particular for its plastic industry. Moreover, this is significant as it positively reflected on the capacity of the Malaysian plastic industry to compete in the global market which has been made increasing competitive by cheap products from

[12]MIDA, *Ibid.*,2006, p. 135.

[13]MIDA, *Malaysia: Performance of the Manufacturing and Services Sectors 2007*, p.132, available at: http://www.mida.gov.my/env3/index.php?page=performance-report (assessed the 5 April 2012)

[14]MIDA, *Malaysia: Performance of the Manufacturing and Services Sectors 2008*, p. 73, available at: http://www.mida.gov.my/env3/index.php?page=performance-report (assessed the 5 April 2012)

[15]MIDA, *Malaysia: Performance of the Manufacturing and Services Sectors 2009*, p. 73, available at: http://www.mida.gov.my/env3/index.php?page=performance-report (assessed the 5 April 2012)

[16]Malaysian-German Chamber of Commerce and Industry, *"Market Watch 2011" The Plastic Sector in Malaysia*, p. 5, available at: http://malaysia.ahk.de/fileadmin/ahk_malaysia/Bilder/Others/Market_Watch_PLASTIC_2011_2.pdf (assessed the 15 April 2012).

[17]Sarosh C. Kuruvilla, " Industrialization Strategy and Industrial Relations Policy in Malaysia" (1995). *Articles and Chapters.* Paper 39, pp.44-47, available at: http://digitalcommons.ilr.cornell.edu/articles/39 (assessed the 21 April 2012); ZainalAznamYusof and Deepak Bhattasali, *Economic Growth and Development in Malaysia: Policy Making and Leadership*, Commission on Growth and Development, Working paper No. 27, 2008, pp.7-23, available at: http://www.neac.gov.my/files/Economic_Growth_and_Development_in_Malaysia-Policy_Making_and_Leadership.pdf (assessed the 21 April 2012).

certain low cost producing countries[18]. Finally, it seems that the trade measures did not inhibit the export success of Malaysian plastic industry.

Structure of Malaysian export plastic products

The export plastic products of Malaysia fall into several different categories. Table 11 shows the principal export plastic products of Malaysia. The bulk of Malaysia's exports of plastic products are plastics in non-primary forms. Major export goods are plates, sheets, films, coils, strips and pipes. Malaysia is also one of the world's leading exporters of plastic bags, films and other flexible packaging materials to EU, Japan and Australia.

With regard to films and sheets, Malaysian produces and exports Linear Low Density Polyethylene (LLDPE) film grades that are ideal as general purpose and heavy duty films. Plastic manufacturers in this country also export High Density Polyethylene (HDPE) film grades for the production of carrier bags and thin film applications such as shrinkable polyethylene films and bags[19]. This category comprised the largest part, 75%of export plastic products with a value of RM 6.2 billion in 2010[20].

A wide range of plastic products such as bottles, disposable tubs, syringes, industrial containers, household wares, and crates are marketed and exported under home-grown brands. As world class exporters of plastics and plastic products, Malaysian plastic manufacturers are also involved in contract manufacturing and supply of plastic parts and components to reputable multinational corporations locating and having production activities in Malaysia, such as Motorola, Intel, Matsushita and Sony. Additionally, its local enterprises also supply plastic parts and packaging materials to other international companies, including ICI, British Paints, Selleys and General Electric[21].

[18]Istituto nationale per il Commercio Estero (Italia), *ibid.*, p.6.
[19]Istituto nationale per il Commercio Estero (Italia), *ibid.*, p.4.
[20]*Malaysian-German Chamber of Commerce and Industry, "Market Watch 2011" The Plastic Sector in Malaysia,pp. 6-7, available at: http://malaysia.ahk.de/fileadmin/ahk_malaysia/Bilder/Others/Market_Watch_PLASTIC_2011_2.pdf (consulted the 15 April 2012).*
[21]Istituto nationale per il Commercio Estero (Italia), *ibid.*, p.4.

Structure of markets importing Malaysian plastic products.

The major export destinations of Malaysian plastic products are Europe, Singapore, Japan, Australia, Thailand, Indonesia and the People's Republic of China. In 2009, the three biggest export markets were Singapore (RM 1.6 billion), Japan (RM 997 million) and the United Kingdom (RM 570 million)[22]. In 2011, Japan continued to be the second biggest importer of Malaysian plastic products, but the exports to this country recorded a decrease of 28,2 per cent compared to 2010[23]. The principal export items consisted of plates, sheets, film, foil and strips of plastic with a share of 61.2 per cent and containers and bottles, plastic bags and sacks, plastic stoppers, lids and cap, 26.4 per cent[24]. In the same year, the EU's market was their third largest destination.

Because the US is not a major export market of Malaysia plastic products and due to lack of information, this study will exclude from the scope of research the measures implemented by Malaysia to overcome the US TBT measures for plastic products.

4.2.3. Measures implemented by Malaysia in order to overcome the technical regulations set by EU and Japan for plastic products originating in Malaysia

To meet and overcome the technical regulations of EU and Japan, Malaysia has implemented a number of measures at different levels, governmental, corporate and through trade associations, the Malaysia Plastic Manufacturers Association (MPMA). Analysis below will focus on all three levels of these measures by clearly indicating the measures generally applied for both markets and particularly applied for each.

a. Measures generally applied for both markets

Measures implemented by Malaysian government and Malaysian Plastics Manufacturing Association

[22]Ministry of International Trade and Industry of Malaysia, *Chemical industry*, available at: http://www.miti.gov.my/cms/content.jsp?id=com.tms.cms.section.Section_44b61991-c0a8156f-628f628f-841b8080&rootid=com.tms.cms.section.Section_8ab4ec2a-7f000010-72f772f7-d6f41129 (assessed 15 April 2012).

[23]Malaysian-German Chamber of Commerce and Industry, "Market Watch 2012" The Plastic Sector in Malaysia, p.8, available at: http://www.malaysia.ahk.de/fileadmin/ahk_malaysia/Market_reports/The_Malaysian_Plastic_Industry.pdf (assessed 5 June 2012).

[24]*Ibid.*,p.8.

Measures implemented by the Malaysian government and Malaysian Plastics Manufacturing Association (MPMA) are included in all categories of measures undertaken to facilitate the success of the plastic industry in the foreign markets, including the EU and Japanese markets.

Measures implemented by the Malaysian government include:

First, successful activities of the Malaysia WTO/TBT Inquiry and Notification Point:

The Malaysian WTO/TBT Inquiry and Notification Point (MWENP) has been managed by appointment of the Malaysian Government since 1993 by SIRIM Berhad[25]. Since January 2002, this function was managed by the Standards Research and Management Center, a department attached to SIRIM Berhad. MWENP provides a number of services, including:

- Assistance in answering foreign enquiries regarding existing or proposed Malaysian Standards, regulations and conformity assessment systems;
- Assistance in answering domestic enquiries regarding existing or proposed standards, regulations and conformity assessment systems affecting trade of other WTO Members;
- Assistance in the preparation and submission of notification of Malaysia's proposed technical regulations to WTO in accordance with TBT agreement obligations;
- Disseminating information on proposed foreign regulations to government agencies, institutions, organizations, associations and other interested parties in Malaysia through the WTO/TBT Newsletter; and
- Managing National TBT Subcommittee (NSC)[26].

[25]SIRIM Perhap is a wholly-owned company of the Malaysian Government under the control of its Ministry of Finance. Considered as the government's mandated machinery for research and technology development and the national champion of quality, SIRIM Berhad has always played a important role in the creative activities and the growth of the private sector in Malaysia. More about the SIRIM's activities, see: http://www.sirim.my/home (assessed 20 April 2012).

[26]Malaysian WTO/TBT Inquiry and Notification Point, see: http://www.sirim.my/web/srmc/overview1 (assessed 10 April 2012).

Of these five services provided, the fourth has been particularly successfully in past years in facilitating export activities of Malaysian manufacturing industries in general, and of the Malaysian plastic industry in particular. Examples of successful services are activities relating to the *WTO/TBT Notification Newsletter*[27] and to *Export Alert!*.

Regarding the WTO/TBT Notification Newsletter, it is published in order to propagate information to Malaysian companies and other interested parties on notifications made by other WTO Member under the article 10 of the TBT Agreement[28]. It consists of a summary about the proposed technical regulations and conformity assessment requirements, including its name, brief description about its fields of application and related rules; final date for comments and proposed date of entry into force[29]. The first issue was published in January 2001, and up to May 2012, 237 issues were released[30]. Two issues are published per month enabling Malaysian companies and other interested parties to have timely capture of information on technical regulations implemented by other WTO Members. This timely captures of information critical for the Malaysian plastic manufacturers to ensure that they have time to find suitable solutions to these changes.

In addition, under the TBT Agreement[31], a Member is entitled to make comments on the proposed technical regulations of the others Members in a reasonable time fixed by them[32], the fore-mentioned permanent publication is so important that Malaysian exporters may review these proposed technical regulations and forward their comments

[27]See the online WTO/TBT Notification Newsletter at: http://www.sirim.my/web/srmc/wto/tbt-notification-newsletter (consulted 10 April 2012).

[28]Article 10.1 of the TBT Agreement provides: "Each Member shall Each Member shall ensure that an enquiry point exists which is able to answer all reasonable enquiries from other Members and interested parties in other Members as well as to provide the relevant documents regarding…"

[29]See, for example, a summary about the proposed regulation relating to *"Apparatus, containers/Packages, Toys and Detergents"* of Japan, *WTO/TBT Notifications Newsletters*, Issue No. 9, May 2005, p. 5.

[30]See http://www.sirim.my/web/srmc/wto/tbt-notification-newsletter (consulted the 10 April 2012).

[31]Article 2.9.4 of the TBT Agreement requires that a Member shall *"allow reasonable time for other Members to make comments in writing, discuss these comments upon request, and take these written comments and the results of these discussions into account"*.

[32]According to the recommendation of the TBT Committee, a minimum sixty-day time-limit should be set for comments on notification and the notifying Member is encouraged to set a time-limit beyond sixty days. See: Committee on Technical Barriers to Trade, *Decisions and Recommendations Adopted by the Committee since 1 January 1995*, Note by the Secretariat, Revision, G/TBT/1/Rev.8, p.17.

for consideration by the concerned governments if it is believed that the technical regulations will have a significant effect on their trade[33].

Export Alert![34], is a unique, automated, and customized e-mail notification service that helps exporters in general, and plastic manufacturers in particular, keep abreast of technically regulatory changes in global markets before they entry into force. For example, when foreign regulators update the requirements that apply to any Malaysian export product, an e-mail is sent by *Export Alert!* To industry subscribers[35].In addition, subscribers are entitled to full access to complete texts of the proposed technical regulations and given an opportunity to directly comment on changes. This free service, the only alert service of its kind in Malaysia, is provided by SIRIM Berhad with the support of the Malaysian Government. However, technical regulations which are written in the members' national languages are not translated by *Export Alert!*. The only translations available are those provided by the source or approved third parties. SMEs which lack the resources to retain translators may experience the lack of a common language a hurdle to taking full advantage of *Export Alert!* services. None-the-less, many of Malaysia's plastics manufacturers subscriber to *Export Alert!* in order to keep abreast of changes in foreign TBT regulations.

Second, creation of integrated plastics park

In 2007 the Malaysian government, as part of the Eastern Coast Economic Region (ECER) development plan, launched the first fully integrated plastics park in Southeast Asia[36], Kerith Plastic Park (KPP). KPP is part of an industrial hub supporting plastics and plastics-related manufacturing activities as well as service providers on a 140-hectar site and promoting further downstream investments in the plastics and plastics-related

[33]About the definition of "significant effect on trade of other Members", see Committee on Technical Barriers to Trade, *ibid.*,p.15.

[34]About Export Alert!, see: https://alert.scc.ca/Malaysia/Index?req=about (consulted 10 April 2012).

[35]Current subscribers to this service include Malaysian small and medium-sized enterprises, government officials, exporters, importers, manufacturers, consumers, and academia.

[36]In the world, we know some parks of this type, including: Dow Olefinverbund GmbH Value Park in Germany, Jain Plastics Park in India and Abu Dhabi Polymer Park in United Arab Emirates.

industries by tapping into the potential synergies from integration with the nearby Kertih Integrated Petrochemical Complex[37].

KPP, which aims to attract foreign and local investment of about RM2 billion and to have developed all of its industrial lots by 2015[38], is expected to be the nucleus for activities relating to technological innovation and development of new technologies harnessing knowledge and skills in the plastics industry. Considered as the realization of a strategic trust under the Third Industrial Master Plan[39] to enhance linkages with the downstream plastic industry and to undertake full integration of petrochemical zones in this country[40], KPP is a substantial move by the Malaysian government to mobilize efforts to intensify technological and scientific density in plastic production, and ease access to the markets of developed countries, such as Japan and EU.

Third, the support activities from Malaysian government institutions

Through its institutions, the Malaysian government established a number of innovative programs to support its plastic manufacturers, who were struggling to comply with technical regulations implemented by export markets.

- The Malaysian External Trade Development Corporation

The government created ***the Malaysian External Trade Development Corporation*** by the Malaysia External Trade Development Corporation Act of 1992 (Act of 490)[41]. It has had a substantial role in promoting, assisting and developing Malaysia external trade with particular emphasis on the export of manufactured and semi-manufactured products,

[37]MIDA, *ibdi.*,2008, p.74.

[38]Malaysian National News Agency, *Kertih Plastic Park Attracts RM145 Million In Investments*, available at: http://www.bernama.com/bernama/v3/news_lite.php?id=375722 (consulted the 10 April 2012).

[39]The Malaysian Third Industrial Master Plan (IMP3) was launched in 2006 and realized up to 2020 with theme "Malaysia – Towards Global Competitiveness". This plan is aimed at achieving long-term global competitiveness through transformation and innovation of the manufacturing and services sectors. More about IMP3, see: Ministry of International Trade and Industry, *Third Industrial Master Plan (IMP3) 2006-2020: Malaysia – Toward Global Competitiveness*, 2006, available at: http://www.miti.gov.my/cms/content.jsp?id=com.tms.cms.article.Article_8e595aba-7f000010-72f772f7-733da6e4 (consulted the 10 April 2012).

[40]MIDA, *ibid., 2008*, p.74.

[41]See The Malaysia External Trade Development Corporation Act of 1992 (incorporating all amendments up to 1 January 2006), available at: http://www.matrade.gov.my/en/about-matrade/corporate-info/matrade-act (consulted 15 April 2012).

including plastics goods[42]. Export support services are provided annually, including a series of training programs (e.g. seminars, briefings and workshops) related to skills enhancement, foreign market entry strategies, formulating export plans and understanding standards and technical regulations for export[43]; and export facilitation (e.g. Malaysia Exporters Registry[44]).

- The Malaysian Plastics Manufacturers Association

The Malaysian Plastics Manufacturers Association (MPMA) which was created in 1967 is a progressive trade association providing leadership and quality services to its members[45] and the plastic industry. By representing its members and the industry in Government interaction, spearheading the plastics industry's growth and providing platforms to assist members to be globally competitive, MPMA played a central role both in promoting export activities and in helping the industry overcome foreign technical requirements. In January 1994, MPMA became the first Standards Writing

[42]The Malaysia External Trade Development Corporation Act of 1992, Section 13. The other functions of MATRADE were the following: to engage in any commercial activity for the purpose of promoting and developing trade and services; to render assistance in any form to Malaysian exporters and importers; to maintain a comprehensive database of information on markets, products, buyers and suppliers; to establish and maintain, with the approval of the Minister and concurrence of the Minister of Finance, trade and exhibition centers in Malaysia and abroad to promote exports; to organize trade promotion activities such as participation in trade fairs and dispatch of trade missions; to require the furnishing of information by Malaysian exporters and importers on matters relating to their businesses other than trade secrets; to publish or to sponsor the publication of periodicals, booklets and other information materials; to produce or to sponsor the production of documentary films and other audio-visual materials; to charge for the use of any facility or service provided by the Corporation; to appoint agents in any country to carry out its functions; to organize courses and award certificates of proficiency; to undertake publicity in any form; to promote cooperation, exchange of information and coordination among institutions concerned with manufacturers, exporters and importers; to conduct other trade promotion and development activities as directed by the Government from time to time; to provide facilities for the training of persons in any way connected with the promotion and development of trade; and to do all such other matters and things as it deems fit to enable it to carry out its functions and powers effectively (see *www.ma**trade**.gov.my/en/.../doc.../250-ma**trade-act***)

[43]In 2010, 39 training programmes of these types had been organized, from which 4817 participants, including a great number of Malaysian plastic producers, benefited. See MATRADE, *Annual Report 2010: From Malaysia to the world*, 2010, p. 172, available at: http://www.matrade.gov.my/en/about-matrade/389-annual-report (assessed 10 April 2012).

[44]Malaysian Exporters Registry (MER) is a database encompassing manufacturers, trading companies, service providers and trade associations. Companies registered in the MER receive information on trade issues (including foreign technical regulations issues), market intelligence, and trade promotion programmes and activities undertaken by MATRADE. Of 16,747 subscribers to this database, about 850 come from Malaysian plastic industry. See MATRADE, *ibid.*, p. 178.

[45]MPMA actually has about 900 members, including ordinary members, which occupy about 60 per cent of plastic manufacturers in this country and account for 80 per cent of Malaysian total production of plastic goods. More about MPMA, see MPMA website at: http://www.mpma.org.my/Pages/default.aspx (assessed 5 April 2012).

Organization[46] of Malaysia accredited by SIRIM Perhad[47]. It aimed to participate in standards development, including standards creation, implementation and usage of standards, and in standards promotion in the plastic industry. MPMA developed the following types of standards: standards concerning material specification[48]; test methods for materials strength, procedures, performance, life-span…[49]; safety measures for materials, procedures, processes related to their impact on human health and the environment[50]; packaging[51] standards; standards for recycled materials and the environment; quality management; and informative researches. The development of a coherent and comprehensive body of internationally approved standards was critical to the advancement of Malaysian plastic manufacturers because it enabled them to raise the levels of quality, safety, reliability, efficiency and interchangeability of their manufacturing processes and products.

With regard to standards creation, the standards drafting work of MPMA is undertaken by the Association Standards Committee, also known as Technical Committee 3, via six different Working Groups (WG)[52]. The majority of the standards originated from the industry itself. In addition, MPMA consulted standards issued by voluntary international standards organizations and those based in other countries, such as the American Society for Testing and Materials (ASTM), the International Standards Organization (ISO), international underwriters' laboratories, etc[53]. As of 2012, of the 121 standards developed by the six WGs of MPMA, 23 are based on ISO standards (with

[46]Actually, there are 16 Standards Writing Organizations appointed by SIRIM Perhad in Malaysia.

[47]Joyce Ting, *MPMA Standards Development*, 2009.

[48]For example: MS 1407:Pt 1 – Specification for plastic containers, part 1; Screw thread Finishes for plastics containers; MS ISO 7056 – Specification for plastics laboratory ware pt. 2 – graduated measuring cylinders (reconfirmed 2008). See: MPMA, Published Standards Developed by Working Groups, available at: http://www.mpma.org.my/Pages/MPMAStandardsDevelopment.aspx (consulted 5 April 2012).

[49]For example: MS 1856 – Method of test for environmental stress crack resistance (ESCR) plastics tight head drums not exceeding 227 I rated capacity. See: MPMA, *ibid.*

[50]For example: MS 1564: Part 6 – Mobile waste containers: Part 6: safety and health requirements (First Revision)… See: MPMA, *ibid*.

[51]For example: MS ISO 8367-2 – Packaging – Dimensional tolerance for general-purpose sacks: sacks made from thermoplastic flexible film. See: MPMA, *ibid.*

[52]There are WG 1 on blow molding, WG 2 on foam products, WG 3 on Polymer Composites, WG 4 on film and lamination, WG 5 on injection molding and WG 6 on woven/non-woven products and geosynthetics.

[53]Joyce Ting, *ibid.*

symbol: MS ISO)[54]. Despite the non-mandatory character of these standards[55], this harmonization of Malaysian standards with international standards enhanced the competitiveness of their products, which easily met international quality requirements, in the international marketplace.

- MPMA Plastics Technology Training Centre

MPMA Plastics Technology Training Centre MPMA-PTTC[56] was set up in 1993 with the objective of upgrading the skills of the workforce in line with the technological progress of the plastics industry. The role and objectives of MPMA-PTTC are to provide facilities for developing and upgrading manpower skills, to act as a "vehicle" for technology transfer from foreign to the local plastics industry and to assist in the establishment of links between the plastics industry and the government, research institutions, local or foreign training agencies[57].

Initially after its establishment training courses provided by MPMA-PTTC were considered too elementary and not relevant to the needs of companies involved in the precision engineering of plastics[58]. Recently, more advanced training courses were organized gaining participation of several plastic producers. For example, in 2012 this center organized a series of advanced courses under the MPMA Talent Development

[54]For example: MS ISO 10319: Geotextiles – Wide Width Tensile Test; MS ISO 294-4: Plastics – Injection molding of test specimens of thermoplastic materials – Part 4: Determination of molding shrinkage. See MPMA, *Published Standards Developed by Working Groups,ibid.*

[55]Section 2 of Standards of Malaysia Act 1996 (Act 549) defines standard as *"a document approved by a recognized body, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods,* ***with which compliance is not mandatory****; and which may also include or deal exclusively with terminology, symbols, packaging, marking or labeling requirements as they apply to a product, process or production method"*. See Standards of Malaysia Act 1996 (incorporating all amendments up to 1 January 2006), available at: http://www.agc.gov.my/Akta/Vol.%2011/Act%20549.pdf (consulted 10 April 2012).

[56]Currently, MPMA-PTTC has three branches, namely MPMA-PTTC Northern Branch/PSDC, MPMA-PTTC Johor and MPMA-PTTC Selangor.

[57]Malaysian-German Chamber of Commerce and Industry, *"Market Watch 2012" The Plastic Sector in Malaysia*, p.14, available at: http://www.malaysia.ahk.de/fileadmin/ahk_malaysia/Market_reports/The_Malaysian_Plastic_Industry.pdf (consulted 5 June 2012).

[58]Socio-economic & Environmental Research Institute, *Economic Briefing to the Penang State Government*, vol.3, issue 5, March 2003, p. 9, available at: http://penanginstitute.org/v3/files/econ_brief/2003/EconBrief2003-03.PDF (consulted 5 June 2012).

Programme[59]. The primary program objective is to upgrade and certify the skills level of advanced and expert scientific injection molding technicians.

With both elementary and advanced training, MPMA-PTTC has contributed to human resource development, including technical and technological transfer in the plastic industry in general, and responded to foreign TBT requirements.

Measures from Malaysia plastic manufacturers

The Technical regulations of EU and Japan, two major markets importing Malaysian plastic goods, impose challenging measures. The following measures were required, in addition to those described above, to overcome trade measures:

- Investments for technological innovation:

Industry Investment was key to the success of Malaysian plastic exporters. It enabled them to implement the technological innovations required to be able to comply with importers' TBT regulations, especially TBT regulations of Japan, EU and the US.

The Malaysian plastic industry attracted a great number of foreign investment projects from Japan, Singapore, EU…[60] These foreign investors brought expertise and new technologies to the Malaysian plastic industry in general and particularly to its small and medium local plastic manufacturers. For example:

- Allied Specialty Compounds Sdn. Bhd. for the production of specialty polymers and composites project: this project approved in 2006 is wholly foreign-owned (Singapore) with an investment of RM124.1 million. The factory is located in the Senawang Industrial Park in Seremban, Negeri Sembilan and supplies high performance polymer compounds for companies in the E&E industry such as Seagate, Maxtor, Xerox, Hitachi, HP and Shimano[61];

- Visko Industries Sdn. Bdh. project: this new joint venture with an investment of RM68.9 million was approved in 2007 for the manufacture of self adhesive tapes. About

[59]MPMA, *MPMA Talent Development Programme,* available at: http://www.mpma.org.my/Pages/default.aspx (consulted 5 June 2012)

[60]Foreign investment in the Malaysian plastic industry started around 1970, with large investment by Japanese electrical and electronic manufacturers, for example: Matsushita Electric in 1965, Hatachi Semiconductor in 1972. See Ken Togo, *ibid.*, p.99.

[61]MIDA, *ibid.*, 2006, p. 137.

90 per cent of its products are high quality exports to Singapore and other strict TBT markets[62].

Of significant importance is the movement from a labor-intensive strategy to more capital-intensive operations, which is clearly evidenced by the increase in capital investment per employee ratio (CIPE ratio) (see table 7). It increased from RM149.266 per employee to RM 351.963 per employee in 2009. In 2011, although this ratio decreased to RM219.558 per employee compared to 2009, it was still higher than in 2006. This trend helped several plastic manufacturers to invest more in technological innovation and manufacturing equipment. In other words, capital investment has been essential to the success of Malaysia's plastic export industry.

- Use of new materials for production of plastic goods

Materials consumed by the Malaysia plastic industry for its production are provided by its petrochemical industry, which furnishes it with the following resins: Low density polyethylene (LDPE); Linear low density polyethylene (LLDPE); High density polyethylene (HDPE); Polypropylene (PP); Polyvinylchloride (PVC); Polystyrene (PS); Expandable polystyrene (EPS); General purpose polystyrene (GPPS); High impact polystyrene (HIPS); Polyvinylchloride (PVC); Acrylonitrile butadiene styrene (ABS); Polyacetyl (PA); Polyester copolymers; Styrene acrylonitrile (SAN); and Polybutylene terephthalate (PBT)[63].

The use of new materials is increasingly visible throughout the industry. The annual reports of MIDA showed that in the packaging subsector, more bio-, photo- or chemical-degradable plastics are being introduced for the production of flexible packaging[64]. E&E plastic products, automotive plastic parts and building wares products, are being primarily manufactured with engineered plastics such as ABS, PA, polyester copolymers and PBT[65].However, there is an increasing trend in the application of polymer blends such as glass reinforced polypropylene and nylon, which are both lighter in weight and

[62]MIDA, *ibid*, 2007, p. 134.
[63]Malaysia Investment Development Authority, *ibid.*, 2007, p.133.
[64]Malaysia Investment Development Authority, *ibid.*, 2006, p. 135; *Ibid.*, 2007, p.132; *Ibid*., 2008, p. 73.
[65]Malaysia Investment Development Authority, *ibid*, 2006, p. 135.

offer better performance[66], making them the preferred choice for the production of these products. The new plastic composite materials produce higher quality plastic products, are more environmentally friendly and are more likely to meet foreign TBT requirements.

b. Particular measures applied for each market

With regard to Japan's market, besides the measures generally applied above, there is a program successfully implemented, known as the ***Green Partnership Program***. The Green Partnership Program (GPP) is coordinated both by Japan External Trade Organization (JETRO) and three organizations in Malaysia in order to discuss and develop three main areas: establishment of Malaysian Life Cycle Assessment system with SIRIM, establishment of Energy Conservation Guideline system in Malaysia with Pusat Tenaga Malaysia (PTM), and Plastic Waste Management and Recycling with MPMA[67]. With regard to the third main area, GPP aims to enhance plastics waste management and recycling activities and initiatives. To obtain this objective, three concrete activities have been realized. They consist of disseminating information concerning Waste Management and Recycling knowledge based on Japanese experience; brainstorming to identify and formulate strategies and action plans; and proposing programs to resolve these problems. Given that this program is primarily based on Japanese knowledge and experience, Malaysian plastic manufacturers can produce plastic goods, which meet Japan's technical requirements.

Regarding EU's market, EU had established a number of rigorous TBT requirements[68] for the purpose of protection of human health, protection of the environment, prevention of deceptive practices or for the assurance of quality of

[66]Malaysia Investment Development Authority, *ibid.*,2008, p.73.

[67]See http://www.jetro.go.jp/malaysia/activities/gpp/ (consulted 10 April 2012).

[68]Malaysian Investment Development Authority, *ibid., 2006,* p.136. It should note that beside facing the EU's TBT regulations, Malaysian plastics manufacturers confronted anti-dumping measures applied by the EU authorities. For example: definitive anti-dumping duty of 16,4 per cent for Hualon Corporation (M) Sdn. Bhd. And of 32,5 per cent for others was imposed in 1997 on imports of polyester textured filament yarn originating in Malaysia. See Council Regulation (EC) No 1001/97 of 2 June 1997, OJEC, L 145/1, 5 June 1997. In 2006, certain plastic sacks and bags originating in Malaysia were subject of an anti-dumping investigation conducted by the EU's Council, however, the investigation had interminated without anti-dumping duty imposed. See: Council Regulation (EC) No 1425/2006 of 25 September 2006, *OJEU*, L 270/4, 29 September 2006.

products[69]. Consequently, Malaysian plastic manufacturers encounter several obstacles when accessing this market. However, following the implementation of the measures analyzed above, these trade measures were readily overcome.

4.3. Experiences from Thailand

4.3.1. Thai agricultural products and SPS measures

Agricultural products are usually subject to health and sanitary standards since they are usuallyproduced for human and animal consumption. Agricultural-importing countries are typically concerned about food safety and require strict compliance with numerous regulations. In such a way, exporting countries in general and Thailand in particular have experienced difficulties in meeting sanitary and phytosanitary (SPS) requirements set by importing countries, due to (i) their inability to assess the implications of SPS requirements on their export markets and (ii) their limited capacity to participate effectively in the dispute settlement procedures to demonstrate that the SPS measures being applied in their countries are equivalent to those set by importing partners.[70] SPS measures, which directly or indirectly affect international trade, have become a major area of concern as they create dissatisfaction in agricultural trade in the form of market access barriers.

Although some countries have more relaxed SPS requirements, others may have more stringent regulations. As noted by Mr. Upali Wickramasinghe, Regional Policy Programme Officer FAORAP, SPS measures do not significantly affect agricultural trade between developed countries but negatively affect exports from developing countries to developed countries and have constituted one of the most crucial non-tariff measures for agricultural exports, especially from developing countries.[71]Figure 12 shows Thai agricultural products, mostly fishery, livestock products, vegetables and fruits, which are subject to SPS and other non-tariff measures.

[69]Peter van den Bossche, *The Law and Policy of the World Trade Organization: Text, Cases and Materials*, second edition, Cambridge University Press, 2008, p.806.
[70]Workshop on WTO Sanitary and Phytosanitary (SPS) Measures; Asian Development Bank Institute (ADBI), Tokyo, Japan (December 2008), Organized by ADBI in Co-operation with FAO; Executive summary, para. 6
[71]Ibid, para. 13

Depending on the type of product and the markets that they are exported to, there are several non-tariff measures aiming at Thai products, including SPS, TBT, anti-dumping, environmental protection, etc. Thai agricultural products have been affected by SPS measures imposed by 30 importing countries, 16 of which are developed countries.[72] There are some products that have suffered from SPS measures several times, such as vegetables and fruits (38 times), canned pineapple (74 times) or frozen seafood and fishery (48 times). A study carried out by Chulalongkorn University in 1999 noted that most developing countries tend to impose SPS measures as a way to sanction those competing with their agricultural products while developed countries usually aim at health concern and risk of plant diseases.[73] This study also indicated that the EU had the largest number of SPS measures against Thai exports (17 per cent), followed by Republic of Korea (14 per cent), ASEAN (13 per cent), Japan (11 per cent) and the United States (8 per cent).[74]

Most of the SPS problems recorded on agricultural products are drug residue, animal or plant diseases, and bacteria. Chicken, fruits and vegetables have shown a very high incidence of detention in the importing countries and in such a way, SPS measures have become barriers for exporting these particular products. As a practice, when an SPS problem has been found, the importing countries tend to detain the whole lot of products and even destroy those that suffer from high insecticide remnants or chemical residue, or delay transport until the products undergo the proper examination and treatment in the importing countries.[75] We view that if the import measures are legitimate, it is good to protect consumers from health risks and port quality of products.

Thailand has also raised a number of specific trade concerns as listed below on SPS measures imposed by trading partners on its agricultural products. The information

[72]Compiled by the author from Chulalongkorn University, 2001; Data by the Ministry of Commerce.FAO Corporate Document Repository, produced by Economic and Social Development Department, *WTO Agreement on Agriculture: The Implementation Experience*, available at: http://www.fao.org/DOCREP/005/Y4632E/y4632e0w.htm, page 10
[73]Ibid, page 11
[74]Ibid.
[75]Ibid, page 12

is collected using the World Trade Organization (WTO) SPS online Information Management System which *allows users to track information on SPS measures that Member governments have reported to the WTO, specific trade concerns raised in the SPS Committee, SPS-related documents circulated at the WTO, Member governments' SPS Enquiry Points and Notification Authorities.*[76]

Thailand usually raised the concern itself in case of measures aimed directly and specifically at its products (see Figure 14); otherwise, the country joined other Members to collectively raise the concern at the meeting of the WTO SPS Committee. Out of 9 concerns, there are 4 concerns which were resolved while the results of the rest have not been reported to the WTO. Specifically, in October 1997, the concern was raised in a case relating to food safety when Korea had ban Thai frozen poultry because of listeria, although Korean experts had been satisfied after visiting facilities of the Thai poultry industry.[77] The two countries then held bilateral consultations while Korea was reviewing its food code as had been requested by Thailand. Finally, the concern was resolved when Korea amended its Food Code and excluded Thai frozen poultry, classified as meat for further processing and cooking, from the requirement and not subject to inspection under the zero tolerance criteria for listeria.[78] Food safety concern was also raised in 4 more cases involving European Union countries. One of those cases dealt with maximum levels for certain contaminants (aflatoxins) in foodstuffs imposed by European Union, one of the biggest markets for Thai agricultural products, where Thailand joined other countries to raise the concern. The main problem was that the EC proposal to set new maximum levels for aflatoxins would impose severe restrictions on trade while not resulting in a significant reduction in health risk to consumers. Not only the proposed sampling procedure was unduly costly, burdensome and unjust, a number of countries argued that the proposal did not seem to be based on a proper risk assessment.[79] Although the measure was eventually resolved, it took much continued efforts for such a long time

[76]SPS Information Management System, World Trade Organization, available at: http://spsims.wto.org/
[77]SPS Information Management System, World Trade Organization, available at: http://spsims.wto.org/web/pages/edition/stc/SpecificTradeConcern.aspx?ID=82632
[78]Ibid.
[79]Ibid, available at: http://spsims.wto.org/web/pages/edition/stc/SpecificTradeConcern.aspx?ID=86340

from 1998 until 2004. Again in 1998, Thailand raised concern because the Czech Republic had stopped shipments of poultry meat from Thailand on the grounds that it contained levels of arsenic acid above the acceptable Czech limits. By means of bilateral consultations, the case was resolved in favour of Thailand and the Czech Republic had lifted the measure as of 1st October 1999.[80]

Another measure that Thai agricultural products have faced was related to genetically modified organisms (GMOs). Egypt has banned imports of Thai tuna canned in oil based on the perception of risk from using soybean oil produced from genetically modified plants. Although Thailand insisted that the tuna was not prepared with genetically modified soybeans, it was not possible to identify the origin of the soybean oil since the final processing stages destroyed genetic material. Egypt took note of Thailand's concerns and agreed to report back to the Committee in due course.[81] However, the case seems to be still pending as there has not been any other announcement or notification.

In November 2000, the Thai government raised concerns on the requirement from Australian authorities that durian fruits exports to Australia would be permitted only under unduly trade restrictive conditions, including excessively sampling requirements. Furthermore, the seasonal limitation on shipments, as well as the requirement that fruit come only from the eastern region of Thailand, did not appear to be justified.[82]Another problem was raised by Thailand, on behalf of ASEAN, in 2001 when Australia had imposed an interim measure on imports of uncooked prawn and prawn products from ASEAN countries, which was based on the fact that the imported prawn might illegally be used as fishing bait. This measure was accused of being more restrictive than necessary and inconsistent with Article 5, SPS Agreement. However, these concerns have remained unsolved. Moreover, in 1997, Thai milled rice was prohibited in Mexico because of the fungus tilletia barclayana (Kernel smut), although Mexican experts visiting Thailand had concluded the fungus would be removed during milling, and

[80]Ibid, available at: http://spsims.wto.org/web/pages/edition/stc/SpecificTradeConcern.aspx?ID=81735
[81]Ibid, available at: http://spsims.wto.org/web/pages/edition/stc/SpecificTradeConcern.aspx?ID=86292
[82]Ibid, available at: http://spsims.wto.org/web/pages/edition/stc/SpecificTradeConcern.aspx?ID=80166

although the fungus existed in Mexico. 4 years later, Mexico reported to the Committee that restrictions on milled rice from Thailand had been lifted as of March 2001.

4.3.2. Measures applied by Thailand to overcome SPS regulations

- Development of food safety systems and conformity assessment

On the one hand, SPS measures have been found to be barriers for agricultural trade, particularly for developing and the least-developed countries, since it is both financially, scientifically and technically challenging for them to comply with related SPS obligations,[83] not even referring to different private standards which have been used in different countries. In this regard, the recognition of equivalence is crucial in facilitating agricultural trade between exporting and importing countries. On the other hand, an SPS measure is considered to be barrier when it is more restrictive than necessary and is imposed at a higher level than the appropriate or legitimate level. SPS measures are problematic themselves but large exporters like Thailand can only maintain their competitiveness by meeting the importers' SPS regulations. On such a basis, Thailand has developed a food safety system and conformity assessment on the ground such that there will be equivalent food safety standards for domestic and foreign consumers in conformity with international standards (see Figure 15).

Moreover, the National Bureau of Agricultural Commodity and Food Standards (ACFS) in Thailand is responsible for "developing standards and processes for production of agricultural commodities and food products; inspect and certify product standards at farm-level production, monitor and evaluate on-going programs and measures on food safety, engage in international negotiations on technical aspects at the bilateral level and with the international organizations to ensure fairness of the use of SPS measures and function as the Central Information Center and Traceability on food standards of agricultural commodities".[84] All these efforts have been made to make sure that Thai agricultural products can meet the SPS requirements in importing countries.

[83]Workshop on WTO Sanitary and Phytosanitary (SPS) Measures; Asian Development Bank Institute (ADBI), Tokyo, Japan (December 2008), Organized by ADBI in Co-operation with FAO; Executive summary, para. 8

[84] Workshop on WTO Sanitary and Phytosanitary (SPS) Measures; Asian Development Bank Institute (ADBI), Tokyo, Japan (December 2008), Organized by ADBI in Co-operation with FAO; Executive summary, para. 69

Furthermore, Thailand has also placed an effective import control system focusing on target chemical residues, plant and animal diseases and pests; encouraged the use of hygienic practices and HACCP in the industry and promoted farm registration and certification.[85] In such a way, exporters need to obtain product certification, export permits from related government departments and have their produce inspected for chemical residues through a rather complicated, expensive and time consuming procedures. Although exporters might be upset as the products have already begun to spoil by the time they have finished all those processes, it is necessary to certify their product quality in order to avoid detention and/or destruction that might happen when products reach destination.

- Develop Good Agriculture Practice- GAP

Thai agricultural products are produced in conformity with GAP: good agricultural practice for on-farm production by modifying concepts of international standards since 2001, resulting in the acceptance from consumers in both domestic and foreign markets. The country strategic plan is to encourage commercial production of fresh produce for export, local consumption and processing. The role of the government in this program is significant. The entire GAP certification process is carried out by the government, from setting the standards and serving as the national regulatory body to providing advisory service, carrying out farm in section and finally, issuing the certification. Keys to success in Thailand are strong support by government policy makers; understandable, practicable and achievable systems for farmers and traders; trader and consumers' awareness for food safety increased[86].

- Develop a formal procedure to resolve SPS- related problems

Despite all of these efforts, Thailand cannot successful respond to such a wide scope of SPS measures and is still have faced with many SPS measures imposed by trading partners. In order to mitigate the loss for farmers, the Thai government has developed a formal procedure in order to resolve the problems when facing with SPS

[85]Ibid, para 74
[86]Salakpetch, Quality Management system: good agricultural practice (GAP) in Thailand, Chanthaburi Horticultural Research Center, p. 96

barriers. As a first response after the sanction has been imposed, Thailand will stop exporting those specific products and start to investigate the measure. Most of the time, the Thai commercial consular in the importing countries will first collect the information and facts and at the same time ask the Thai exporters to examine their own products.[87] In many cases, the ban is based on false information or importing countries' private standards which are more restrictive than necessary. Depending on the responses from trading partners, Thailand usually starts with bilateral negotiations and asks the importing country to send their experts to investigate the production site in Thailand. Thailand also effectively raised concerns at the meeting of the SPS Committee or in meetings concerned with other international organizations. There are several cases which have been resolved thanks to bilateral negotiations and positive efforts from both sides. However, Thailand may engage in dispute settlement if all of those efforts have failed to reach an agreement with the importing partner.

In a specific case, Thailand has temporarily stopped vegetable exports to the European Union from 1st February 2011 due to EU concerns over implementation of food safety controls. While strengthening their own food safety controls, Thai authorities were designing its unilateral action to pre-empt an EU ban on the import of Thai sweet basil, chilli and aubergine.[88] Thai exporters have also called for closer co-operation between private producers and government regulators to promote consistent compliance with GLOBALGAP[89] standards.

[87]Compiled by the author from Chulalongkorn University, 2001; Data by the Ministry of Commerce.FAO Corporate Document Repository, produced by Economic and Social Development Department, *WTO Agreement on Agriculture: The Implementation Experience*, available at: http://www.fao.org/DOCREP/005/Y4632E/y4632e0w.htm, page 12

[88]Agritrade, *Food concerns bring temporary halt to Thai agriculture exports*, available at: http://agritrade.cta.int/en/layout/set/print/Agriculture/Topics/SPS-Food-safety/Food-safety-concerns-bring-temporary-halt-to-Thai-vegetable-exports

[89] Global Good Agricultural Practices: Harmonize their own standards and procedures and develop an **independent certification system** for Good Agricultural Practice (G.A.P.) (further details can be found at http://www.globalgap.org/uk_en/

Thai exporters for agricultural products seem to be quite optimistic about SPS measures, however they still complain about the rising incidence of trade protectionism under the guise of SPS measures and other non-tariff measures.[90]

- Actively participate in the three standard-setting organizations explicitly referenced in the SPS agreement

Codex Alimentarius Commission (Codex), Office International des Epizooties (OIE) and The International Plant Protection Convention (IPPC) are considered the "three sister" organizations referred by the SPS Agreement[91]. Although all members of the SPS Agreement are not forced to participate these organizations, Thailand has become an active member of the three and played an important role as a regional food center and "kitchen of the world" feeding its own population and contributing to the food security of people in and outside Asia[92]. Thailand has increased awareness of the importance of Codex and disseminated of information on the results of meetings, and of progress in the preparation of Codex standards among all relevant stakeholders. Codex standard proposed by Thailand have been adopted, i.e. standards on fish sauce, chili sauce, MRLs for pesticides in tropical fruits and vegetables and method of analysis of fat content in coconut cream[93]. Thailand usually follows Codex standards for food additives[94]. More importantly, Thailand has promoted the consistent application of the risk analysis principle at the national level.

As for animal health, it is responsibility of the Department of Livestock Development (DLB) of Ministry of Agriculture and Cooperatives (MOAC) through the Animal Epidemic Act B.E. 2499 (1956) and the Animal Epidemic Act no 2 B.E 2542

[90]Compiled by the author from Chulalongkorn University, 2001; Data by the Ministry of Commerce. FAO Corporate Document Repository, produced by Economic and Social Development Department, *WTO Agreement on Agriculture: The Implementation Experience*, available at: http://www.fao.org/DOCREP/005/Y4632E/y4632e0w.htm, page 13

[91] SPS Agreement training module: Chapter 7: Work of other relevant Organizations available at http://www.wto.org/english/tratop_e/sps_e/sps_agreement_cbt_e/c7s1p1_e.htm

[92] Thai Affairs Section, Thailand and FAO Achievements and success stories, FAO Regional Office for Asia and the Pacific, March 2011, p.1

[93] Nutrition and Food Safety Unit, Overview of national codex committees in the member states of the WHO South-east Asia Region, Sea-Nut- 183, World Health Organization, p7

[94] USDA Foreign Agricultural Service, Thailand- Food and Agricultural Import Regulations and Standards-Narrative, FAIRS Country Report, Global Agricultural Information Network, Dec 2010, p. 1

(1999). Although Thailand concurred to comply with the OIE guidelines on animal health requirements under the SPS Agreement, Thailand's import requirements in many instances exceed the requirements established under OIE standards.

As for plant health, Thailand follows IPPC guidelines and standards[95]. IPPC provides international standards for phytosanitary measures implemented by governments to protect their plant resources from harmful pests. Thailand bases their measures on such standards. Besides, the public has been kept informed about the pests. Moreover, the Department of Agriculture conducted a survey of mango seed weevil with the purpose of confirming that Thailand is free from this weevil so that the export market for Thai mango can be expanded[96].

5. Conclusion

This paper contributes to the limited literature on the link between the real situation of SPS and TBT implementation in Vietnam and the experiences in Malaysia and Thailand. Our study highlights the institutional, operational and information gap in Vietnam. Using a sample of 314 enterprises across various industries in Hanoi and Ho Chi Minh City, we showed that the top three markets are those where the exporting enterprises are facing the most difficulties overcoming SPS and TBT. We find that enterprises in Vietnam are not capable of coping with such difficulties. However, our study also shows that enterprises in Vietnam choose to remain active in the international marketplace. They have applied different methods in order to overcome the measures. Experiences from other countries shall be helpful for the Vietnamese authorities and Vietnamese enterprises.

From the institutional level, Vietnam should actively participate in the "three sister" organizations referred by the SPS Agreement. Vietnam has already set up Committee of Codex Vietnam with 43 members representing related ministries, enterprises, associations. Vietnam has launched more than 6000 standards including technical standards and sanitary and phytosanitary measures, among which 1700

[95] Ibid., p.2
[96] http://www.ippc.int/file_uploaded/1310181906_25a_Thailand.pdf

standards are said to be meet with international standards like IEC, Codex[97]…Up to March 2011, the United States still complained Vietnam has not yet adopted food safety standards promulgated by international standard-setting organization such as OIE[98]. The paper strongly suggests the Vietnamese authorities to follow international standards like Codex, IPPC, OIE to expand its export markets. Besides, it is highly recommended that Vietnam should develop a formal procedure for exporting enterprises to resolve SPS/TBT related problems as Thailand does. So far, the present lack of such procedure puts Vietnamese exporters in the position of self- solving as mentioned in Figure 8. There are only guidelines for procedures to deal with complaints of importation relating SPS/TBT on websites of SPS Vietnam and TBT Vietnam[99]. The paper suggests that the first thing Vietnamese authorities should do now is to develop food safety systems and conformity assessment. Vietnam does have food safety system but the assessment does not conform. The present lack of mechanisms to ensure Vietnamese market access interests can be improved for the benefit of Vietnamese exporters wherever other WTO Members seem not to act in conformity with their SPS/TBT obligations.

From the operation level, we see the efficiency of the Malaysian Plastic Manufacturers Association in representing members and the industry in government interaction a good example for Vietnamese associations. It is admitted that performance of the most of Vietnamese associations is poor[100]. Therefore, they cannot be platforms to assist their members to be globally competitive. MPMA's activities can be good examples for associations like Vietnam Plastic Association. Moreover, we suggest Vietnam to follow successful activities of SPS/TBT Inquiry and Notifications in Malaysia and Thailand. Such Inquiry and Notifications are available in Vietnam but not

[97] Ho Quoc Thanh, Law on technical standards- in harmonization with international standards, TBT Lam Dong, March 2013 available at http://www.dalat.gov.vn/web/tdc/tabid/568/Add/yes/ItemID/15505/categories/0/Default.aspx

[98] Office of the United States Trade Representative, 2011 Report on Sanitary and Phytosanitary Measures, March 2011, p. 86

[99] http://www.spsvietnam.gov.vn/default.aspx and http://www.tbtvn.org/default.aspx

[100] Speech by dr Le Dang Doanh, former Head of the Central Institute for Economic Management- CIEM) in the Workshop "Current Situation of Performance of Vietnamese Associations for Enterprises" held by the Vietnam Chamber of Commerce and Industry on 25th Jan 2013

work as expected. Enterprises even do not visit their websites frequently[101]. When businessmen do not actively visit the websites to get the information, we can send information to them by Newsletter as in Malaysia.

Among various methods applied in Malaysia and Thailand, our study chooses solutions that we believe could be feasible and applicable in Vietnam.

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LIST OF ACRONYMS

ACFS	Agricultural Commodity and Food Standards
ASEAN	Association of South East Aisan Nations
ASTM	American Society for Testing and Materials
CEN	European Committee for Standardization
Codex	Codex Alimentarius Commission
DLB	Department of Livestock Development
ECER	Eastern Coast Economic Region
EU	European Union
FSC	Forest Stewardship Council
GAP	Good Agriculture Practice

[101] The number of access for TBT Vietnam website is 3660 up to Feb 2013

GPP	Green Partnership Program
GLOBALGAP	Global Good Agricultural Practices
GMOs	Genetically modified organisms
IEC	International Electrotechnical Commission
IPPC	International Plant Protection Convention
ISO	International Standards Organization
JETRO	Japan External Trade Organization
JSA	Japanese Standards Association
KPP	Kerith Plastic Park
MOAC	Ministry of Agriculture and Cooperatives
MPMA	Malaysia Plastic Manufacturers Association
MPMA-PTTC	Plastics Technology Training Centre
MRLs	Maximum reside limits
MWENP	Malaysian WTO/TBT Inquiry and Notification Point
NSC	National TBT Subcommittee
OIE	Office International des Epizooties
SME	Small and Medium Enterprises
SPSS	Statistical Package for the Social Sciences
SPS	Sanitary and Phytosanitary
TBT	Technical barriers to trade
US	The United Staes
WTO	World Trade Organization
WG	Working Groups

REFERENCES

Agritrade, Food concerns bring temporary halt to Thai agriculture exports, available at http://agritrade.cta.int/en/layout/set/print/Agriculture/Topics/SPS-Food-safety/Food-safety-concerns-bring-temporary-halt-to-Thai-vegetable-exports

Coughlin and Wood (1989), An Introduction to Non-tariff barriers to trade, Federal Reserve Bank of St. Louis, p. 32

Christian Häberli (2008), Market Access in Switzerland and in the European Union for Agricultural Products from Least Developed Countries, NCCR Trade regulation, Working paper No 2008/5, p 1

Chulalongkorn University (2001), The Thai economy and its international trade in preparation for the new round of trade negotiation in 2001. Research report prepared by the Department of Business Economics.

Dinh Van Thanh (2012), Assessment of real situation and suggestion of non tariff measures in trade in order to protect the environment, Trade Research Review

Disdier, Fekadu, Murillo and Wong (2008) Trade Effects of SPS and TBT measures on tropical products, international Center for Trade and Sustainable development, Issue Paper No 12

FAO Corporate Document Repository, *WTO Agreement on Agriculture: The Implementation Experience*, Economic and Social Development Department available at: http://www.fao.org/DOCREP/005/Y4632E/y4632e0w.htm

Gascoine D. and Nguyen Tu Cuong (2009), Vượt qua các rào cản SPS để thúc đẩy xuất khẩu sang Liên minh Châu Âu, Mutrap III, p. 12

Gov (2009), Report No 45?BC-CP dated 07/04/2009 Istitutonationale per ilCommercio Estero (Italia), *Malaysia: Malaysian plastic processing machinery Market Report (updated December 2010)*, p. 2, available at: http://www.ice.gov.it/paesi/asia/malaysia/upload/173/MALAYSIA%20PLASTIC%20PROCESSING%20MACHINERY%20MARKET%20REPORT%202010.pdf (assessed on 15 April 2012)

Halloran and Pham (2009), Overcoming TBT to push export to EU, MUTRAP III

Ho Quoc Thanh, Law on technical standards- in harmonization with international standards, TBT Lam Dong, March 2013 available at http://www.dalat.gov.vn/web/tdc/tabid/568/Add/yes/ItemID/15505/categories/0/Default.aspx

Joyce Ting (2009) MPMA Standards Development

Ken Togo, (2006), "The Development of the Malaysian Plastics Industry", *Malaysian Journal of Economic Studies*, vol. XXXXIII, Nos. 1&2, p. 98

MOT (2009), Report No 16/BC-BCT dated 03/03/2009

Naray, Vergano and Kostecki (2006), On the job training for the best practices and management techniques of SPS/TBT notification authorities and enquiry points, Final report of Mutrap EU experts, Mutrap III

Nguyen Tu Cuong (2009), Thủy sản Việt Nam vượt qua các rào cản SPS của thị trường nhập khẩu, Hội thảo Hội nghề cá Việt Nam, Sep- 2009

Nguyen Huu Khai (2007), Quản lý hoạt động nhập khẩu, cơ chế, chính sách và biện pháp, NXB Lao động- Xã hội

Nutrition and Food Safety Unit, Overview of national codex committees in the member states of the WHO South- east Asia Region, Sea-Nut- 183, World Health Organization, p7

Othman, K. and Y. H. Eng, (1986), An Overview of the Plastic Industry in Malaysia, Paper presented in *Special Technical Extension Workshop on Plastic Technology*, 8-24 July, 1986, Malaysia Industry, Development Authority (MIDA), Malaysia, p.3

Office of the United States Trade Representative, 2011 Report on Sanitary and Phytosanitary Measures, March 2011, p. 86

Malaysian Investment Development Authority, *Performance of the Manufacturing and Services Sectors 2006.*, p.134

Malaysian Plastics Manufacturers Association, Talent Development Programme, available at http://www.mpma.org.my/Pages/default.aspx (assessed 5th June 2012)

Malaysian-Gernan Chamber of Commerce and Industry, *"Market Watch 2011" The Plastic Sector in Malaysia*, p. 5, available at: http://malaysia.ahk.de/fileadmin/ahk_malaysia/Bilder/Others/Market_Watch_PLASTIC_2011_2.pdf (assessed 15th April 2012).

Peter van den Bossche, (2008), *The Law and Policy of the World Trade Organization: Text, Cases and Materials*, second edition, Cambridge University Press, p.806

Pham T.H. Yen (2011), An toàn thực phẩm và việc thực thi Hiệp đinh SPS/TBT: Kinh nghiệm quốc tế và giải pháp đối với Việt Nam, NXB Thông Tin và Truyền Thông.

Pham Quang Dieu (2009), Đối mặt với hàng rào vệ sinh dịch tễ SPS: Kinh nghiệm xuất khẩu thực phẩm chế biến của Thái Lan, ICARD

Salakpetch, Quality Management system: good agricultural practice (GAP) in Thailand, Chanthaburi Horticultural Research Center, p. 96

Sarosh C. Kuruvilla, "Industrialization Strategy and Industrial Relations Policy in Malaysia" (1995). *Articles and Chapters.* Paper 39, pp.44-47, available at: http://digitalcommons.ilr.cornell.edu/articles/39 (assessed 21st April 2012)

Socio-economic &Environmental Research Institute, Economic Briefing to the PEhang State Government, Vol 3, Issue 5, March 2003, p9, available at http://penanginstitute.org/v3/files/econ_brief/2003/EconBrief2003-03.PDF (assessed 5th June 2012).

Thai Affairs Section, Thailand and FAO Achievements and success stories, FAO Regional Office for Asia and the Pacific, March 2011, p.1

USDA Foreign Agricultural Service, Thailand- Food and Agricultural Import Regulations and Standards- Narrative, FAIRS Country Report, Global Agricultural Information Network, Dec 2010, p. 1

WTO, SPS information Management System, available at http://spsims.wto.org/

WTO, Agreement on Technical Barriers to Trade, available at: http://www.wto.org/english/tratop_e/tbt_e/tbt_e.htm

WTO, Agreement on Sanitary and Phytosanitary Measures, available at: http://www.wto.org/english/tratop_e/sps_e/spsagr_e.htm

Yue, C., J. C. Beghin,, and H. H. Jensen. 2006. "Tariff Equivalent of Technical Barriers to Trade with Imperfect Substitution and Trade Costs." American Journal of Agricultural Economics 88(4): 947-960.

Yue, C., J. C. Beghin,, and H. H. Jensen. 2006. "Tariff Equivalent of Technical Barriers to Trade with Imperfect Substitution and Trade Costs." American Journal of Agricultural Economics 88(4): 947-960

ZainalAznamYusof and Deepak Bhattasali, *Economic Growth and Development in Malaysia: Policy Making and Leadership*, Commission on Growth and Development, Working paper No. 27, 2008, pp.7-23, available at: http://www.neac.gov.my/files/Economic_Growth_and_Development_in_Malaysia-Policy_Making_and_Leadership.pdf (assessed 21st April 2012).

FIGURE 1: SUMMARY OF ENTERPRISES IN SURVEY

		Frequecy	Percent	Valid Percent	Cumulative Percent
Valid	Joint Stock Companies	102	32.5	33.0	33.0
	Joint ventures with foreigners	10	3.2	3.2	36.2
	100 % foreign-owned enterprises	50	15.9	16.2	52.4
	Limited Liability Companies	107	34.1	34.6	87.1
	State-owned Enterprises	13	4.1	4.2	91.3
	Sole Proprietorships	22	7.0	7.1	98.4
	Others	5	1.6	1.6	100.0
	Total	309	98.4	100.0	
Missing	System	5	1.6		
Total		314	100.0		

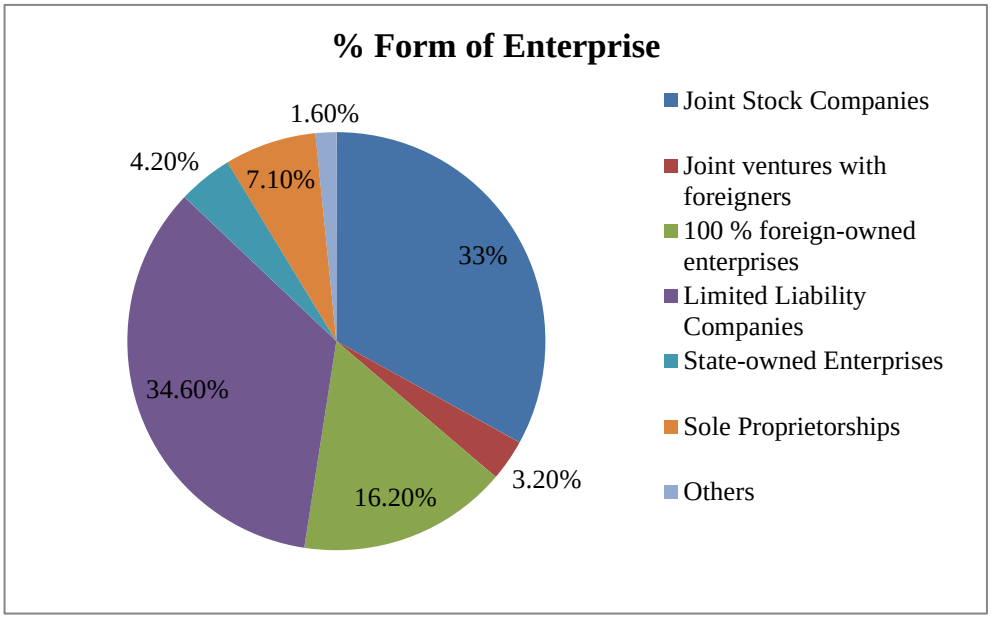


FIGURE 2: MARKETS WITH TBT AND SPS BARRIERS

Markets with TBT and SPS measures relevant for enterprises in survey	Frequency	Percent (%)/Total choices
EU	161	28
United States	153	27
Japan	106	19
China	50	9
ASEAN market	44	8
Others	53	9
Total	567	100.0

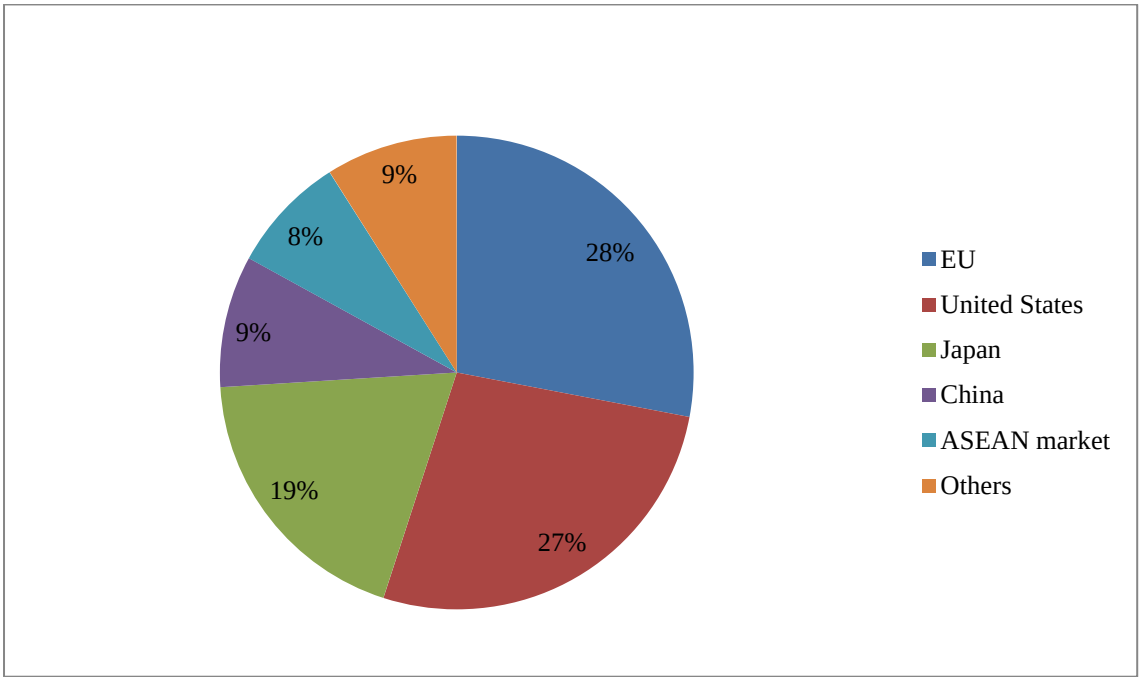


FIGURE 3: COMPARISION OF CHANGES IN PROBLEM RELATING TO TBT AND SPS BEFORE AND AFTER VIETNAM JOINS WTO

8.

When did your enterprise face such technical barriers	Frequency	Percent (%)/Total answer
Prior to Vietnam's accession to the WTO	67	27
After Vietnam's accession to the WTO	185	73
Total	252	100.0

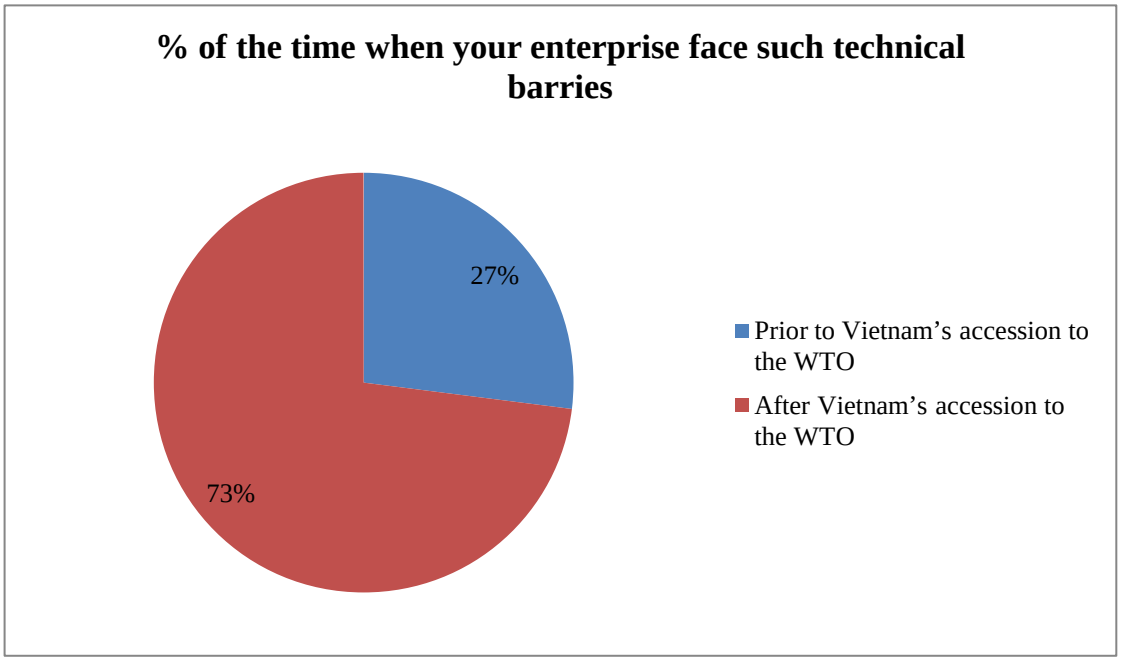
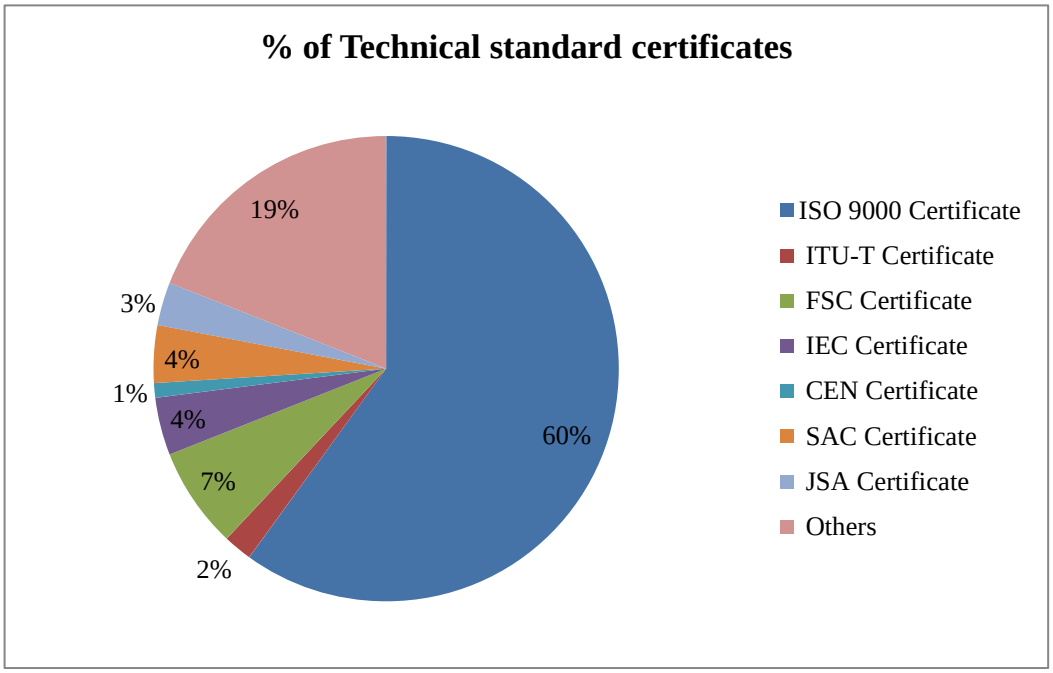


FIGURE 4: SUMMARY OF ENTERPRISES' TECHNICAL STANDARD CERTIFICATES

Technical standard certificates	Frequency	Percent (%)/Total answer
ISO 9000 Certificate[102]	191	60%
ITU-T Certificate[103]	6	2%
FSC Certificate[104]	22	7%
IEC Certificate[105]	13	4%
CEN Certificate[106]	4	1%
SAC Certificate[107]	11	4%
JSA Certificate[108]	10	3%
Others	59	19%
Total	316	100.0



[102] Go http://www.iso.org/iso/home/standards/management-standards/iso_9000.htm for further details
[103] Go http:// *www.**itu**.int/**ITU-T*** for further details
[104] Go http://*www.**fsc**.org* for further details
[105] Go http://www.**iec**.ch for further details
[106] Go http://www.cen.eu for further details
[107] Go http://www.sac.gov.cn/templet/english/ShowArticle.jsp?id=3313 for further details
[108] Go http://www.**jsa**.or.jp/default_english.asp for further details

FIGURE 5:SUMMARY OF INFORMATION SOURCES FOR ENTERPRISES IN SURVEY

From which sources has your enterprise obtained information of technical barriers and sanitary and phytosanitary barriers	Frequency	Percent (%)/Total answer
TBT/SPS Authority of Vietnamese government	75	10
Customs of importing countries	81	11
Business partners	165	22
Industry associations	166	22
Ministries of Vietnamese government	84	11
Research by your enterprise itself	170	22
Others	20	3
Total	761	100.0

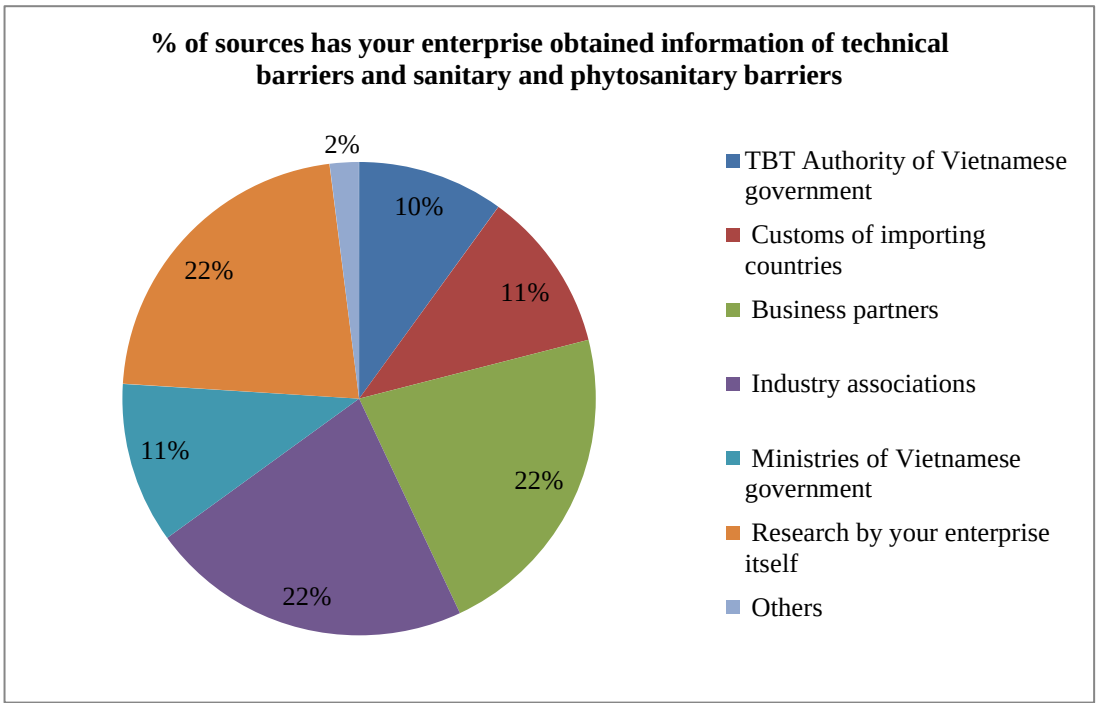

% of sources has your enterprise obtained information of technical barriers and sanitary and phytosanitary barriers
2%
10%
11%
22%
22%
11%
22%
TBT Authority of Vietnamese government
Customs of importing countries
Business partners
Industry associations
Ministries of Vietnamese government
Research by your enterprise itself
Others

FIGURE 6: SUMMARY OF ENTERPRISES' PERSONNEL RELATING TO TBT AND SPS

% of the enterprise have a division specializing in handling issues relating to technical barriers and sanitary and phytosanitary barriers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	65	20.7	21.7	21.7
	Concurrent personnel	80	25.5	26.7	48.3
	Establishment under process	45	14.3	15.0	63.3
	No	110	35.0	36.7	100.0
	Total	300	95.5	100.0	
Missing		14	4.5		
Total		314	100.0		

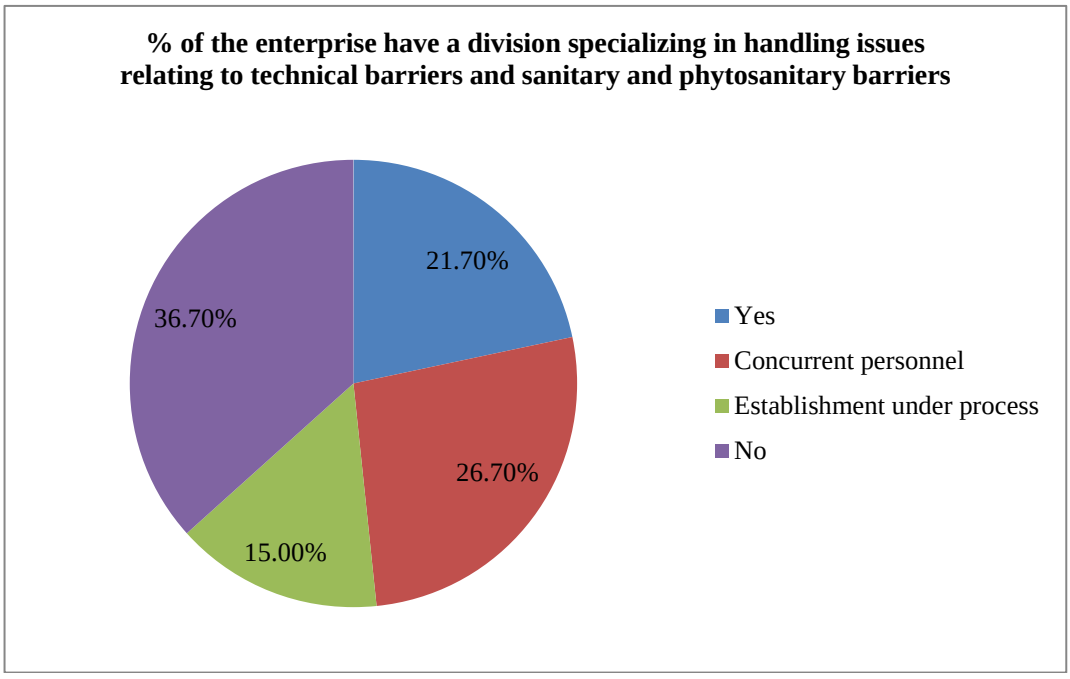


FIGURE 7: SUMMARY OF ENTERPRISES' REACTION TOWARD TBT AND SPS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Continue to export to such market by researching and overcoming the	256	81.5	83.9	83.9
	Get rid of such importing market and shift to other markets with lower barrier or without such barrier	14	4.5	4.6	88.5
	Shift manufacturing from for exporting to for domestic market	8	2.5	2.6	91.1
	Notify competent authorities in Vietnam for assistance before continuing exportation	17	5.4	5.6	96.7
	Others	10	3.2	3.3	100.0
	Total	305	97.1	100.0	
Missing		9	2.9		
Total		314	100.0		

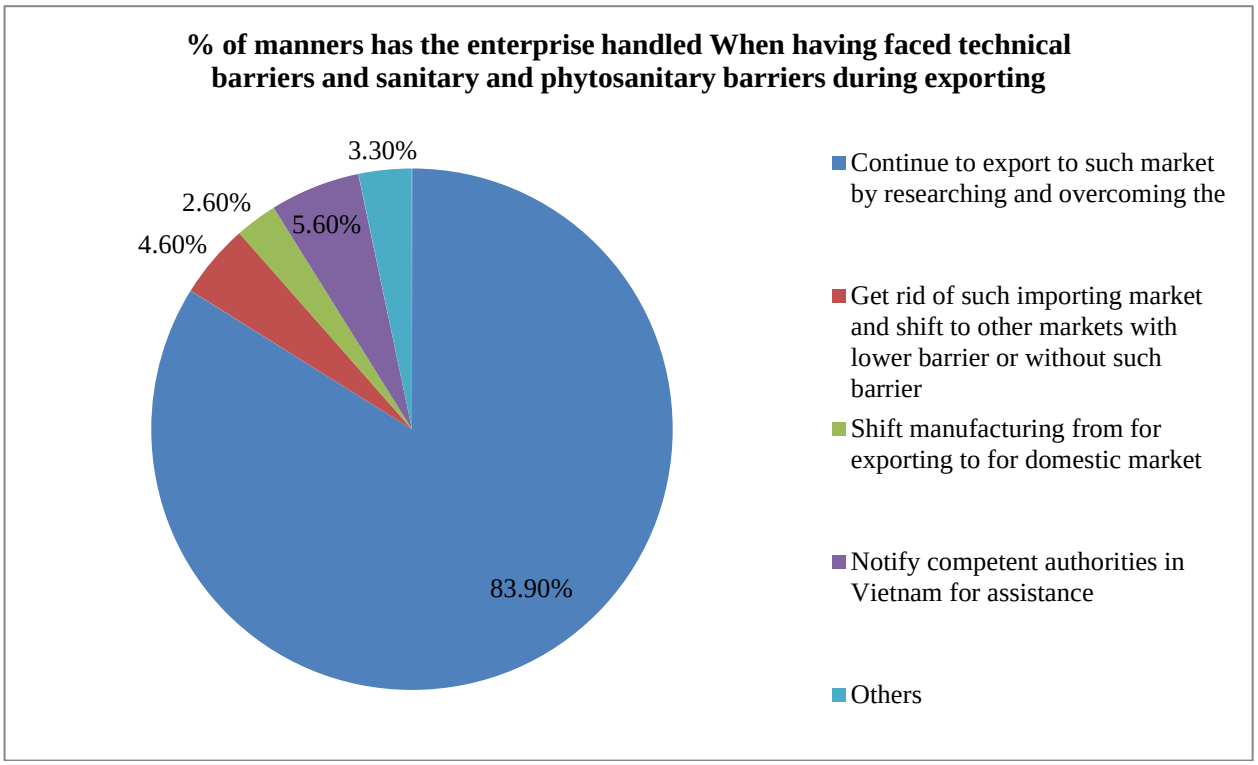

% of manners has the enterprise handled When having faced technical barriers and sanitary and phytosanitary barriers during exporting
3.30%
2.60%
5.60%
4.60%
83.90%
Continue to export to such market by researching and overcoming the
Get rid of such importing market and shift to other markets with lower barrier or without such barrier
Shift manufacturing from for exporting to for domestic market
Notify competent authorities in Vietnam for assistance
Others

FIGURE 8: SUMMARY OF ENTERPRISES' METHODS TO DEAL WITH TBT AND SPS

In case of continuing to export to such market, which of the following specific measures has your enterprise take to overcome the faced barriers	Frequency	Percent (%)/Total answer
Technology advance	174	21
Product quality improvement	205	25
Increase in personnel's understanding of such barriers	207	25
Application and strict compliance with relevant regulations of foreign countries	218	26
Others	21	3
Total	N/A	100.0

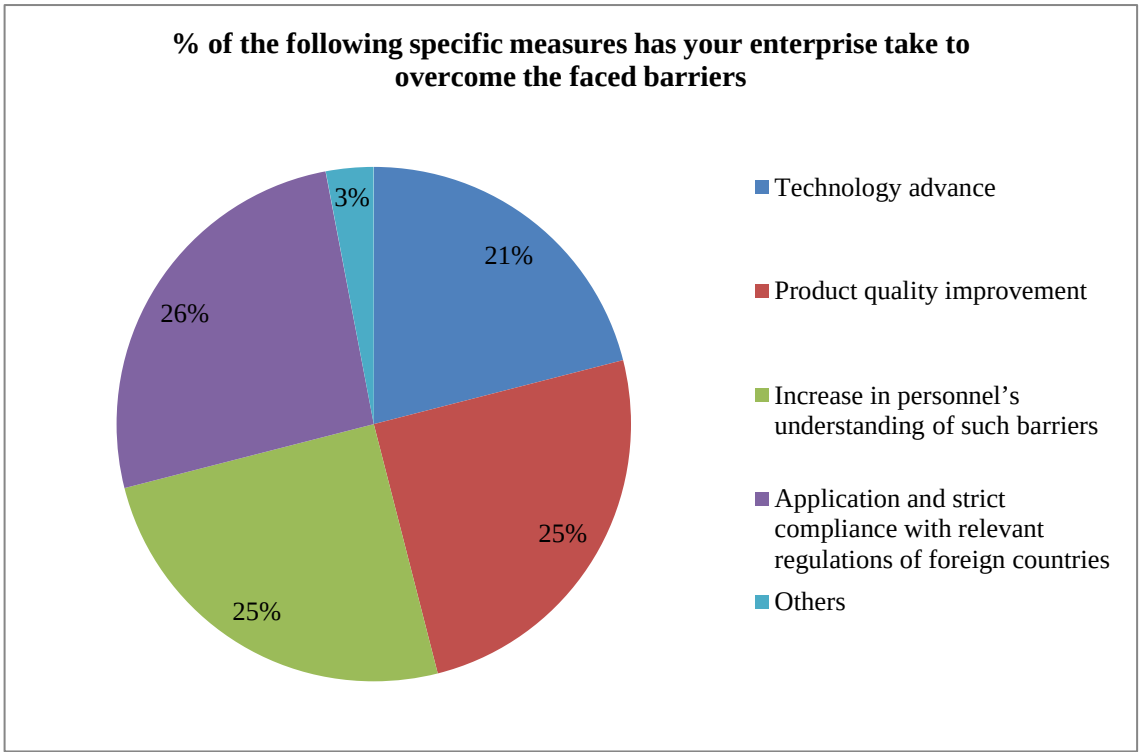


FIGURE 9: SUMMARY OF ENTERPRISES' DIFFICULTIES WHEN DEALING WITH TBT AND SPS

When having taken one or more measures stated in Question 23, which of the following difficulties has your enterprise had	Frequency	Percent (%)/Total answer
Financial difficulty, no access to capital sources	148	19
Low labour quality	110	14
Market information insufficiency	134	17
Limitation on technology in general, information technology and electronic	124	16
Difficulty relating to administrative procedure	171	22
Lack of communication and no assistance from state authorities and associations	81	10
Others	25	3
Total	N/A	100.0

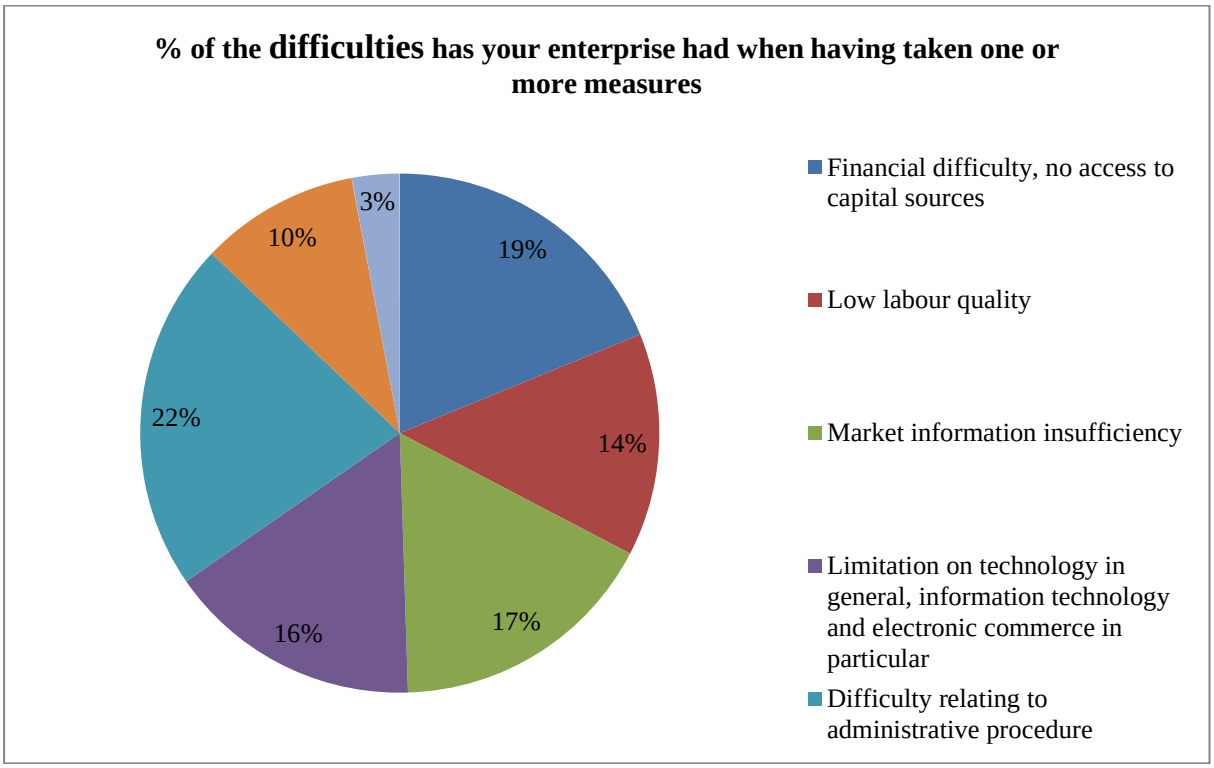


FIGURE 10: Export value of Malaysian plastic products by year

Year	**2006**	**2007**	**2008**	**2009**	**2010**
Export value (RM billion)	7,59	8,30	9,29	8,23	9,35
Growth ratio (%)	15,70	9,35	11,92	-8,86	13,61
% of export against turnover	48,7	51,8	57,3	56,4	58,1

Source: Source: Malaysia Investment Development Autority, Malaysia: Investment Performance, various years, available at: http://www.mida.gov.my/env3/index.php?page=performance-report (consulted the 5 Avril 2012)

FIGURE 11: PRINCIPAL EXPORT PLASTIC PRODUCTS OF MALAYSIA

Unit: RM million

Item	Product Category	2004	2005	2006	2007	2008	2009
1	Sacks and bags, boxes, casings, bottles and containers	2.202,2	2.555,3	2.948,5	3.392,9	3.754,6	2.903,8
2	Plates, sheets, films, foils, strips, tapes, non-cellular and not reinforced, laminated	1.137,9	1.447,2	1.707,7	2.164,8	2.330,4	2.566,5
3	Other plates, sheets, films, foils, strips, tapes.	526,6	627,7	572,2	436,2	413,2	381,5
4	Self-adhesive plates, sheets, films, foils, strips, tapes, etc	247,6	268,6	327,5	354,6	343,5	337,3
5	Tableswares, kitchenwares, other household articles	175,5	204,4	194,2	222,3	303,6	271,9
6	Tubes, pipes, fitting and hoses	85,9	129,2	210,1	156,0	201,6	219,9
7	Window, doors, frames, tanks and other building materials	88,9	97,8	107,7	115,7	171,4	111,1
8	Baths, wash-basins, seats and covers and others	109,1	23,6	32,7	26,3	28,3	31,9
9	Floor, wall and ceiling coverings	37,3	43,2	49,7	56,9	43,6	51,1

10	Others plastics articles	957,9	1.166,6	1.444,3	1.375,1	1.705,4	1/361,6
Total		5.568,8	6.563,4	7.594,7	8.300,9	9.295,5	8.236,6

Source: Malaysian-Gernan Chamber of Commerce and Industry, "Market Watch 2011" The Plastic Sector in Malaysia, pp. 6-7, available at: http://malaysia.ahk.de/fileadmin/ahk_malaysia/Bilder/Others/Market_Watch_PLASTIC_2011_2.pdf (consulted the 15 April 2012).

FIGURE 12: AGRICULTURAL PRODUCTS SUBJECT TO NON-TARIFF MEASURES (NTM) AND COUNTRIES IMPOSING

Products	Type of NTM (number of measures)	Countries imposing NTMs	
		Developing	Developed
Rice	SPS (2), others(6)	8 (6 in Asia, 2 in America)	0
Sugar	SPS (1), ADD (1), others (5)	7	1
Vegetables and fruits	SPS (38), others (1)	5	6
Specific kinds of vegetables and fruits, e.g. mango, longan, durian, papaya, mangtosteen, ginger, pickled cabbage	SPS (12), others (1)	5	7
Cut flowers	SPS (7)	1	6
Canned fruits and vegetables	SPS (2), others (6)	0	2
Canned pineapple	SPS (74), envir (1)	0	5
Dried fruits and vegetables	SPS (5)	1	2
Dried longan	SPS (1), ADD (1), others (5)	0	1
Poultry products	SPS (5), others (1)	0	3
Frozen chicken and cooked chicken	SPS (12), TBT (1), others (4)	4	11
Frozen pork meat	SPS (8), others (1)	2	5
Poultry liver	SPS (1), ADD (1), others (5)	1	0
Rubber	Other (1)	0	1

Frozen and canned seafood, fishery products	SPS (48), TBT (2), envir (3), others (5)	4	13

Source: Compiled by the author from Chulalongkorn University, 2001; Data by the Ministry of Commerce. FAO Corporate Document Repository, produced by Economic and Social Development Department, *WTO Agreement on Agriculture: The Implementation Experience*, available at: http://www.fao.org/DOCREP/005/Y4632E/y4632e0w.htm

FIGURE 13: THAI AGRICULTURAL EXPORTS EXPERIENCING SPS PROBLEMS

Products/SPS problems	Countries imposing SPS measures
Rice: Tilletia Barclayara	Mexico, Peru
Fruits and vegetables	
(1) Insects and plant diseases	Australia, New Zealand, Switzerland, United States, Canada, EU, France, Sweden
(2) Insecticide remnants	Republic of Korea, Japan, Philippines, Brunei, Malaysia, Singapore
Orchids and flower insects (weevil)	EU, France, United States, Japan, Republic of Korea, Mexico
Processed fruits and vegetables	
(1) Bacteria (2) contaminated, foreign objects	United States, Finland, Spain, Sweden, New Zealand
Processed food	
(1) Bacteria	Australia, New Zealand, United States, Canada, EU
(2) Drug residue	Japan, Republic of Korea
Chicken	
(1) Animal diseases and processing temperature requirement	EU, Australia, New Zealand, Japan, Republic of Korea, Taiwan
(2) Drug residue	Philippines, Singapore
Tapioca pellets/chips	
(1) HAACP (2) process tracing back to farmers	EU

Source: Compiled by the author from Chulalongkorn University, 2001; Data by the Ministry of Commerce. FAO Corporate Document Repository, produced by Economic and Social Development Department, *WTO Agreement on Agriculture: The Implementation Experience*, available at: http://www.fao.org/DOCREP/005/Y4632E/y4632e0w.htm

FIGURE 14: THAILAND- SPECIFIC CONCERNS

Number of specific trade concern	Title	Members raising the concern	Members supporting the concern	Members maintaining the measure	First date raised	Subject keywords	Status	Date reported as resolved
35	Import ban on frozen poultry	Thailand		Korea, Republic of	01/10/1997	Food safety	Resolved	01/09/1998
36	Import prohibition of milled rice	Thailand		Mexico	01/10/1997	Plant Health Risk assessment	Resolved	01/06/2002
39	Maximum levels for certain contaminants (aflatoxins) in foodstuffs	Argentina, Australia, Bolivia, Plurinational State of, Brazil, Gambia, India, Indonesia, Malaysia, Philippines, Senegal, Thailand	Canada, Colombia, Mexico, Pakistan, Paraguay, Peru, Philippines, South Africa, Turkey, United States, Uruguay	European Union	01/03/1998	Human Health International Standards / Harmonization Technical Assistance Food safety	Resolved	01/03/2004
50	Quarantine requirements for chicken meat	Thailand	European Union	Australia	01/09/1998	Animal Health	Not reported	
51	Prohibition of poultry meat imports from	Thailand		Czech Republic	01/09/1998	Human Health Food safety	Resolved	01/10/1999

	Thailand							
77	Restrictions on canned tuna	Thailand		Egypt	01/06/2000	Food safety Genetically Modified Organisms Human Health	Not reported	
79	Import restrictions on durian	Thailand	European Union, India, Malaysia, Philippines	Australia	01/11/2000	Plant Health Control, Inspection and Approval Procedures	Not reported	
85	Import restrictions on prawns and prawn products; revised generic IRA for prawns and prawn products	China, Thailand	European Union, Indonesia, Malaysia, Philippines, Sri Lanka, Viet Nam	Australia	01/03/2001	Animal Health Risk assessment Equivalence Sufficiency of scientific evidence	Not reported	
89	Import restrictions on soy sauce	Thailand	Korea, Republic of	European Union	01/03/2001	Human Health International Standards / Harmonization Risk assessme	Not reported	

						nt Food safety		

Source: SPS Information Management System, World Trade Organization, available at: http://spsims.wto.org/web/pages/edition/stc/SpecificTradeConcern.aspx?ID=86340

FIGURE 15: FOOD SAFETY SYSTEM IN THAILAND

Farm	Department of Agriculture Department of Fisheries Department of Livestock Development	GAP Organic COC
Slaughterhouse	Department of Livestock Development	GMP
Packing House	Department of Agriculture	GMP
Processing	Thai Food and Drug Administration Thai Industrial Standards Institute Department of Agriculture Department of Fisheries Department of Livestock Development	GMP HACCP Product Certification
Restaurant	Bangkok Metropolitan Department of Health	
Domestic	Thai Food and Drug Administration	
Export	Ministry and Agriculture and Cooperative	

Source:Workshop on WTO Sanitary and Phytosanitary (SPS) Measures; Asian Development Bank Institute (ADBI), Tokyo, Japan (December 2008), Organized by ADBI in Co-operation with FAO; Executive summary, para. 75