

**IMPROVEMENT TO RULES OF ORIGIN UNDER FTA ARRANGEMENT
FOR THE THAI SEAFOOD INDUSTRY**

SUBMITTED TO

AUSAID

BY

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Executive Summary

Seafood products are an important source of income for the economy of Thailand, as well as for those of many developing and LDC countries. This study focuses on seven products namely, frozen fish fillets, frozen fish meat, processed fish (Suremi), frozen shrimps, processed shrimps, canned tuna, and cuttlefish and squids because these products represent 85% of Thai seafood export. For these seven, Thailand seafood exports in 2006 amounted to US\$ 5,093 million. There were 496 fishery factories registered with Department of Industrial Works in 2003, with a registered capital of Bath 22,000 million. Employment in fishery production is as high as 158,590 workers in the same year. Over the past few years, the Thai seafood industry has confronted many challenges ranging from increasing labor costs, exhaustion of natural resources, especially fisheries and increasing competition in world market due to further trade liberalization resulting from free trade agreements. Thailand now is a member of several free trade agreements with other ASEAN members (AFTA), Australia (TAFTA), New Zealand (TNZCEP), Japan (JTEPA) and China (ACFTA), while still in negotiations with India, South Korea and Peru. Through these PTAs, Thailand and her partners' tariff rates towards each other have been reduced over the years.

To benefit from preferential tariff rates from partner countries, exported products must be of Thailand origin. Rules of Origin or ROO are usually negotiated amongst the PTA parties in order to establish criteria to determine product nationality. On one hand, ROO can help in the prevention of circumvention problems -- an unfair trade practice, such as a transshipment of products from outside the PTA in order to gain tariff preferences from countries within the PTA. On the other hand, ROOs if they are not appropriate or too restrictive, difficult or impracticable to implement can be used as a trade barrier to protect domestic markets and industries from other parties to the FTA. Restrictive ROOs, though ostensibly promoting intra-regional trade, may force manufacturers to use raw materials from inefficient sources and, as a result, product costs are increased which reduces producer competitiveness and, at the same time, diminishes consumer welfare.

The aim of this study is to identify appropriate ROO for the selected fisheries products, so that market access can be increased by adoption of less restrictive and removal of protective ROO. This study found that in all Thailand's PTA, there are still a number of protective ROO provisions. That is a rule that not in line with the real production process, making it's difficult or impossible to comply with.

ROOs should be used to promote trade and should not be employed as non-tariff barriers, when tariff rates are reduced or eliminated. While promoting free trade, ROOs should, at the same time, prevent circumvention

Therefore this research studied both real production processes in term of tariff classification change between the raw material and final product as well as local value added in production. The finding is that tariff classification changes differ between products, ranging from a two-digits change (CC) to 6 digits change (CTHS) while there is no tariff classification change in one product, frozen shrimp. In terms of value added 3 products, frozen fish meat, frozen fish fillets and processed shrimp use 100% of domestic raw material, while three product processed fish, frozen shrimp and cuttlefish/squid are more dependent on imported input but the local value added is still comparatively high at more than 40%. Canned tuna depends heavily on imported tuna, resulting in low local value added (less than 40%).

Impact of the existing ROO on each seafood product differs from product to product according to the level of local value added. For the products that have 100% local content, namely frozen fish fillets, frozen fish meat and processed shrimps, there will be no origin conferring problem because they will automatically gain origin through the wholly obtained criterion. However, if the domestic raw materials are exhausted or insufficient in the future, the impact of ROO on these products will become greater.

The next group of products is processed fish, cuttlefish/squid and frozen shrimp. This group of products is partly dependent on imported input. If the ROO is restrictive, only manufactures that use domestic raw material can benefit from the preferential tariff rate, while the products

that use imported raw material, while still able to be exported, will have to pay the MFN tariff rate. This group of products will also become more negatively affected if Thailand becomes more dependent on imported raw material.

The last group is the one that heavily depends on imported input, canned tuna. This canned tuna group will be the one that has the highest impact if the ROO is not in line with the real production process because of its low local content. This will be the product most affected by inappropriate ROO.

Liberal ROOs can help manufacturers become more competitive by helping to reduce the COE acquisition cost and by not being biased in favor of using inefficient raw material sources. Thus, PTAs should not impose too stringent ROOs or use ROOs as a barrier to trade, so that every participating member country can enjoy the benefits of real trade liberalization. On this basis the Change in Tariff classification method is recommended for all products. CTC is easier for the manufacturer to follow and can reduce the accounting costs for certificates of origin (COE). It is not necessary for the exporter to have a complicated and costly system to monitor the sources of fish in order to calculate the accurate value added of product in each shipment. Moreover, RVC is sometimes used to encourage intra-regional sourcing of raw material. This may cause a bias toward using inefficient/uncompetitive raw material. As a result, a producer may be less competitive in other markets and at the same time consumer welfare may be lost due to the higher price of the product.

ROO should be in accordance with actual production processes. If the ROO is inconsistent with the actual production process, manufacturers are unable to comply, with the result that the most stringent rule, WO, will typically be the criterion for origin. The following are suggested ROO position for Thailand. In case of frozen shrimp, however, CTC rule cannot be applied since the raw material is in the same HS code with the final product. Thus an RVC rule of less than 40% is recommended. The suggested percentage of less than 40% is in line with the real production process and thus would not unduly restrict trade.

■ Frozen fish fillets	CTH
■ Frozen fish meat	CTH
■ Processed fish	CC
■ Frozen shrimps	RVC (of 40% or less)
■ Processed shrimps	CC
■ Canned tuna	CC
■ Cuttlefish and squids	CTSH

The Thai government should plan to revise the ROO that are too protective in each PTA. In order to do so, the reviewing period regarding ROO should be identified and the above position should be proposed to other PTA parties.

Ministry of Industry is one of the agencies that has a duty to provide suggestions regarding ROO negotiation positions in the manufacturing sector to negotiators (Department of Trade Negotiation and The Customs Department). The Ministry needs to send the above recommendation and supply negotiator with supporting evidence, and at the same time it needs to advise manufacturers to adjust their production to meet origin criteria so that they can enjoy the preferential tariff rate.

In the next reviewing process of PTAs that Thailand are member, Thailand should propose a this change in order to increase market access for this product for all party members. In the mean time, manufacturers need adjust their production especially their source of inputs to meet origin criteria so that they can enjoy the preferential tariff rate.

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Chapter One: Rules of Origin

Trade liberalization has been an important means to achieve national economic development over the last few decades. Most countries have liberalized their markets either multilaterally, bilaterally or unilaterally. With the unfortunate stagnation of the WTO Doha Round trade negotiations, free trade areas or FTAs have been increasing in importance in world markets, as may be seen from the proliferating number of new FTAs established during the past few years. Under FTAs, members gain market access to other members' markets for goods, services and investment, according to the terms of the relevant FTA agreement. As regards trade in goods, both exporters and importers benefit from preferential tariff rates. However, in order to avoid trade deflection problems, resulting from transshipment of goods from a third country to gain the benefits of an FTA agreement, there must be an instrument to measure the country origin of traded products. This instrument is "rules of origin" or ROOs. On one hand, ROOs may help protect trading partners from unfair trade practices by setting agreed criteria to measure the origin of goods. In other words, a sufficient proportion of the production process must occur in the partner country in order to qualify for the preferential tariff rate. On the other hand, ROOs can be used as a trade barrier to prevent imports from entering markets of other trading partners by applying too difficult or unrealistic ROO in the agreement. It is, therefore, important to understand what ROOs are, their importance for importers, and how ROOs can impact on the business operations of Thai manufacturers and exporters.

Nature and Importance of ROOs

Rules of Origin (ROOs) establish criteria to determine the origin or nationality of products. There are two types of ROOs, namely, non-preferential rules of origin and preferential rules of origin. Non-preferential ROOs are international standards set by the WTO to identify the nationality of the product for purposes of applying trade policy measures, such as most favored nation treatment (MFN), anti-dumping and countervailing duties (AD&CVD), and safeguard measures. Moreover, they can be used to measure import quantities for countries under tariff quotas and for trade statistics purposes.

Preferential ROOs also set criteria to determine the nationality of the product. This type of ROO, however, aims at determining eligibility for preferential treatment in the form of import duty reduction under various multilateral, regional and bilateral free trade agreements, such as the Generalized System of Preferences (GSP) for WTO Members, Global System of Trade Preferences (GSTP) for developing countries, ASEAN Integrated System of Preferences (AISP) for ASEAN countries, and TAFTA (Thailand-Australia Free Trade Area).

Agreement on preferential ROOs normally is derived from the FTA member negotiation process. ROOs are, thus, not necessarily a fair measurement or determination of product nationality, but a set of conditions that the parties agree upon, according to members' interests or requirements, such as the protection of sensitive or uncompetitive products. For instance, ROO requirements pertaining to sensitive products may be set so high that it is difficult or impossible for FTA partners to comply with, in order to limit market access for such products. However, ROO requirements for the same product may be lower for FTA partners who are relatively uncompetitive. ROOs of one country may therefore vary from one FTA to another. In other words, preferential ROOs may amount to a non-tariff barrier and limit benefits otherwise available from trade liberalization under an FTA agreement. Since inappropriate preferential ROO can be a trade barrier and can reduce benefit of FTA agreement, this study will, therefore, focus only to Preferential ROOs.

Criteria for Rules of Origin

There are two major criteria to determine country of origin. In order to determine origin, product has to be either wholly obtained (WO) or substantially transformed in the countries.

"1. Wholly Obtained Goods (WO) are exported goods totally composed of domestic raw materials, which applies to the following;

- 1.1 Material obtained in a natural state such as pearl, crude oil, diamonds, gems, minerals,
- 1.2 Live animals born and raised domestically, including both livestock and fish catches
- 1.3 Plants grown and harvested domestically
- 1.4 Mineral resources mined domestically
- 1.5 Products made from raw materials mentioned in 1.1-1.4 without any foreign raw materials mixed or assembled
- 1.6 Waste and scrap generated domestically from industrial processes and general consumption" (Leelarasamee, 2007)
- 1.7 Used products in the country that can be reused for raw materials
- 1.8 Products in the country which are made from those mentioned in 1.1-1.7

"2. *Substantial Transformation (ST)* requires an export product be made from imported raw materials to fundamentally change its form in order to be considered as an originating product. In this regard, primary change of imported materials must be defined based upon the following classifications.

2.1 Change of Tariff Classification (CTC) – The material used to produce a good should have been classified under a different tariff heading" (Leelarasamee, 2007) With the Harmonized System, there are three main level of CTC that can be applied as follows.

- Change of Chapter (CC) 2 digit level – Change to this chapter from any other chapter
- Change of Heading (CTH) 4 digit level – Change to this heading from any other heading
- Change of Sub-Heading (CTSH) 6 digit level – Change to this subheading from other subheading or from any other heading

2.2 Specific Manufacturing Process – Production processes to transform imported materials into a different product can also confer origin. This classification approach may be necessary when the change in tariff classification rules is not sufficient to determine the origin of finished products. This criterion is generally applied to specific products. Examples of the specific manufacturing process rule are as follows.

Examples from Chemical Chapters:

Chemical reaction rule

Mixture rule

Purification rule

Reduction in particle size rule

Other sectors:

Assembly rule in machinery chapters

Yarn forwarding, fiber forwarding, printing or dyeing in textiles

Coating of ferrous metals

Mixing and blending

" 2.3 Percentage of Value Added: Regional Value Content (RVC) - Under this approach, the maximum percentage of import content and/or minimum percentage of local content, including costs of the total production cycle, are prescribed to determine the fundamental change of a product." (Leelarasamee, 2007) Value Added is calculated by formulae such as the following example taken from the ASEAN Free Trade Agreement (AFTA);

The formula and rules for ASEAN Value Content or Regional Value Content (RVC) can be expressed as follows:

a) Direct Method

$$\text{RVC} = \frac{\text{ASEAN Material Cost} + \text{Direct Labour Cost} + \text{Direct Overhead Cost} + \text{Other Cost} + \text{Profit}}{\text{FOB Price}} \times 100\%$$

Rule: $\text{RVC} \geq 40\%$

b) Indirect Method

$$\text{RVC} = \frac{\text{Total FOB Price} - \text{Value of Non-ASEAN Materials}}{\text{FOB Price}} \times 100\%$$

Rule: Value of Non-ASEAN Materials $\leq 60\%$

Where,

“The value of imported non-ASEAN materials, parts or produce means (i) CIF value at the time of importation of the products or importation can be proven; or (ii) The earliest ascertained price paid for the products of undetermined origin in the territory of the Member State where the working or processing takes place.

Labour cost shall include wages, remuneration and other employee benefits associated with the manufacturing process.

Overhead cost shall include, but not limited to real property items associated with the production process (insurance, factory rent and leasing, depreciation on buildings, repair and maintenance, taxes, interests on mortgage); factory security; utilities; research; royalties or licenses, inspection and testing of material and the goods, etc.

FOB price means the free-on-board value of the goods, inclusive of the cost of transport to the port or site of final shipment abroad. FOB price shall be determined by adding the value of materials, production cost, profit and other costs.

Other costs shall refer to the costs incurred in placing the goods in the ship for export, including but not limited to, domestic transport costs, storage and warehousing, port handling, brokerage fees, service charges, etc.” (Rules of Origin for the CEPT scheme for AFTA, 2006)

With respect to the Value Added principle, a “Cumulation Rule” may also be applied. This allows a good originating in the territory of an FTA member, which is used in the territory of another member as material for finished goods eligible for preferential tariff treatment, to be considered as originating in the territory of the latter member where the working or processing of the finished good has taken place.

“2.4 Combined Criteria (or Product Specific Criteria) – Specific combinations of above-mentioned criteria can be developed under mutual agreement of trading partners, for application to agreed products. In general, these criteria are usually applied to textiles, garments, and electrical, automotive and auto part products, in which CTC and value added are combined or value added criteria and specific manufacturing process are combined.”(Leelarasamee, 2007) For example, the Thailand-India FTA has agreed to use ROO criteria for footwear products as a combination of CTH and local content of 40%. Normally, the more criteria, the more difficult for trade partner to comply. Thus, FTA partners usually request a combined criterion for ROO in order to restrict trade in such product or to protect domestic market.

Special features of fisheries ROOs

Fisheries are one of the sectors in which special rules are applied. Fishery products can come either from farming or catches from rivers and the sea. In the case of farming within the country, the fishery product will gain the country origin according the wholly obtained (WO) principle. However, in the case of fishing, the origin of fish or fishery products may be determined according to the following criteria.

1. **Territory where fish are caught.** FTAs usually apply relevant international law (i.e. the United Nations Convention on the Law of the Sea: UNCLOS) to fish and fishery products for purposes of establishing country of origin and application of ROOs. UNCLOS defines the territorial sea as extending up to 12 miles from the coast. (Naumann, 2005). Fish that were caught within this 12 miles area will be given an origin of the territory owner country. However, when fishing is done outside this 12 miles territory or on the high the origin of fishery products is determined by other criteria as described below.
2. **Ownership and flag of vessel.** The nationality or country where the ship is registered or sails under a national flag can be used to determine the origin of the fish caught. In case the ownership of the vessel extends to more than one country, a minimum percentage of ownership requirement for determining origin and eligibility for tariff preferential treatment may negotiated by the FTA parties.
3. **Nationality of captain, master, and crew of the ship.** Some FTAs set a percentage of majority nationality of the captain and officers for purposes of origin determination.
4. **Other specific requirements.** Other specific requirements can also be established in order to gain preferential treatment. Examples can be seen in the FTA between Japan and Thailand (Japan-Thailand Economic Partnership Agreement: JTEPA). Under this agreement, for all tuna products (HS 160414), “non-originating material taken by authorized fishing vessels on Indian Ocean Tuna Commission (IOTC) Record shall be transported to a party where the non-originating material is used”. In other words, fish that are captured anywhere by a vessel registered to IOTC are allowed to be calculated as being of Thai or Japanese origin for eligibility of preferential treatment under JTEPA.

The four above-mentioned special features of fisheries ROO may be applied at the same time. Examples can be seen from following fishery rules of origin in the EU-ACP Cotonou Agreement which provides that any fish caught outside of a country's territorial waters, but still within its 200 mile exclusive economic zone (EEZ), is subject to stringent fishing vessel, crew, registration (flag) and ownership nationality requirements. Essentially, all fish must be caught by a country's own vessels, or those owned by EU stakeholders. To be considered a domestic fishing vessel, the ship must be registered in and sail under the flag of an ACP (African, Caribbean and Pacific) state or the EU, be at least half-owned by nationals of the ACP (subject to further conditions pertaining to head office, the Board of Directors and capital), and must use the services of a crew that are at least half nationals of the ACP. While these conditions are consistent across most EU preference regimes, the Cotonou Agreement further provides certain minor concessions: under certain conditions, leased or chartered vessels may be used, although even this concession is subject to prior approval by a so-called “ACP-EC Customs Cooperation Committee”. But the concessions continue to require that at least 50% of crew is ACP nationals, which in itself is a slight concession from the usual 75% crew requirement.” (Naumann, 2005).

Importance of ROOs

Rules of origin are necessary in preferential trading arrangements. On one hand, ROOs are used as proof of the origin of products, which goods are eligible for reduced/zero import tariff under a free trade agreement (FTA) or under various trade preference schemes. On the other hand, ROOs may be used as a barrier to trade or to protect some products or sectors from competition. Negotiation of ROO, therefore, can be aimed at either facilitating or restricting trade.

With the reduction of MFN tariff rates, there is an increasing use of ROO as a trade protection instrument. Estevadeordal and Suominen (2005) mentioned that ROO can increase both administrative costs and increase production costs to party applying them and as a result reduce the benefit of Preferential Trade Agreement (PTA).

For the administrative side, a complicated and expensive ROO certification system can impose more cost to exporter. "Some types (as in case of EU two-step system) require heavier involvement by exporting country government and increase the burden of exporter. On the other hand, there is the increasing adoption of "self-certification" model (certified by a public or private umbrella entity approved by the government) which entails lower administrative costs to exporter." (Lazaro and Medalla, 2006). Moreover, when certification is too complicated or expensive, exporters may not use the preferential tariff, especially when the preferential margin is small.

On the production cost side, Estevadeordal and Suominen (2005) argued that ROO can be used to "encourage intra-PTA input at the expense of extra-PTA input even if the later were cheaper". Examples can be seen in PTA that allows intra-regional content to count as a local value added like AFTA and FTA between Thai and Australia. In this circumstance, if members of this PTA need a preferential treatment, they may forced to use raw material from the member country in production in order to pass ROO requirements, even though such raw materials are more expensive. This inefficient use of raw material will cause a higher cost product of production and as a result customers have to pay more for the product. The more restrictive the ROO, the more possibility of inefficient use of inputs.

Furthermore, the ROO itself can be used as a trade restriction instrument. With the reduction of tariff within a PTA, a party may raise the ROO requirement, such as high local content (as well as combined ROO), in order to increase the difficulty of compliance for the other party, and thus restrict that party's exports of a particular product. For market access, exporter still need to comply with this trade restrictive ROO. Regardless of inefficiency and higher production cost, adjustment to their production is needed. The adjustment can ranged from change of production technology to change in source of input.

Manufacturers or exporters therefore need to be concerned about ROOs because if they cannot meet the conditions and requirements on rules of origin, although some degree of manufacturing has taken place in Thailand, their products may not be eligible for lower tariff treatment under FTAs to which Thailand is a party. This is especially true for non-agricultural products where it is difficult or sometimes not possible to use only domestic raw materials in the production process.

In order to benefit from preferential tariff arrangements, Thai manufacturers need to comply with ROOs requirements of Thailand's FTA partners. Thus, exporters are advised as follows.

- Study FTA agreements carefully, especially rules of origin provisions
- Ascertain that the HS codes of their products are eligible for tariff reduction or elimination under the relevant FTA. For example, check if the current production process changes the raw materials used into a finished product resulting in a different HS code classification according to the terms of the FTA, and in the case of value added criteria, check if the local value added in the product is in line with the requirement.
- Create and manage a sound accounting system to maintain product data, especially on price, cost and sources of raw material used in production. In order to be eligible for preferential tariffs, a certificate of origin (C/O) must be presented as proof to the customs authority of importing countries. The C/O may be issued by either government or private agencies, such as a chamber of commerce, depending on the procedures of each FTA member country. In some cases, for example under the New Zealand-Thailand Free Trade Agreement, a C/O can be issued by exporters

themselves. In the case of Thailand, most C/Os are issued by the Department of Foreign Trade (DFT).

- Procedures of the Thailand Department of Foreign Trade (DFT).
 - First, exporters are required to provide information regarding their production to the DFT by filling out a C/O request or application form. This data includes raw material used, source and cost of inputs, production procedures and domestic value added.
 - After reviewing the data provided, if the product, on the basis of its origin, is eligible for preferential treatment according to the relevant FTA, the DFT will issue C/O for those exporters.
 - Exporters subsequently send the C/O to the importer to submit to the customs of the importer's country in order to prove the origin of the goods. After examination of the C/O, customs of the importer's country will return a duplicate copy to the DFT for the record.

In order to apply for a C/O, it is reiterated that a sound and accurate accounting system is necessary in order to provide the above data to the DFT and also for purposes of product inspection, either by the DFT or importer country authority.

- If the product can not satisfy the relevant origin criteria and thus is ineligible for preferential tariff treatment in the relevant FTA partner market, manufacturers should undertake adjustments by:
 - improving the technology of the manufacturing process in order to comply with applicable ROOs criteria, for example, by substituting the type of raw materials if such materials do not comply with the Change of Tariff Classification rule;
 - increasing domestic value added, in case the relevant ROOs require a high percentage of domestic value added by using more domestic inputs or inform trade partners so that the applicable ROO cumulation rule can be applied.
 - Relocate to/invest in other FTA member or target countries in order to qualify for preferential ROOs treatment or more changes on competitiveness with using cheaper raw material in those countries.

Chapter Two: Trade in Thai Seafood Products covered under existing FTA arrangements

Thailand is one of the world top exporters of seafood products (combination of products in HS Chapters 03 and 16), with exports of seafood throughout the world totaling US\$ 5,093 million in 2006. Within the seafood sector, Thailand's seafood trade is dominated by export of shrimp, tuna, squid, octopus and cuttlefish. The seven top exported seafood products by HS classification are frozen fish fillets (HS030420), frozen fish meat (HS 030490), frozen shrimps (HS 030613) cuttlefish and squids (HS 030749), canned tuna (HS 160414), processed fish (Suremi) (HS 160420) and processed shrimps (HS 160520). Exports of these seven products accounted for more than 85% of the value of Thai seafood export. These 7 product can be classified into 4 groups namely, canned and processed fish, frozen fish, shrimp products, and squid/cuttlefish products.

1. Canned and Processed Fish (HS 160414 and HS 160420)

This group of product consists of canned tuna and processed fish (Suremi).

1.1 Canned Tuna (HS 160414)

Table 2.1 World Trade in exports of Tuna Product

Country	2005 (US\$)	2006 (US\$)
Thailand	1,127,675,850	1,298,000,550
Spain	296,228,659	327,912,204
Ecuador	289,378,529	272,061,187
Indonesia	128,635,721	129,790,247
Italy	96,496,881	98,944,815
Philippines	65,449,461	88,986,526
Germany	86,443,674	87,265,212
Netherlands	80,867,615	61,604,046
France	62,913,869	61,492,591
China	19,745,338	41,214,903
Guatemala	21,220,507	24,777,061
Portugal	22,604,695	22,212,852

Source: Global Trade Atlas

Table 2.2 Thailand Export Markets for Tuna product

Partner Country	Export 2006 (US\$)	Share %	2006/2005 % Change
World	1,298,000,550	100.00	15.10
United States	285,005,828	21.96	-2.66
Australia	99,183,384	7.64	4.88
Japan	94,904,037	7.31	-6.49
Canada	90,083,188	6.94	12.25
Egypt	63,879,317	4.92	41.10
Libya	60,059,665	4.63	18.46
Saudi Arabia	50,585,287	3.90	35.16
United Kingdom	48,917,811	3.77	17.77
Germany	40,553,585	3.12	14.78
France	30,395,823	2.34	62.52

Source: Global Trade Atlas

Canned tuna is the most important seafood export. With an export value of US\$ 1,298 million in 2006, Thailand is the world's number one canned tuna exporter. Thailand supplied 46% of canned tuna exports to the world in 2005. Other major exporters of canned tuna are Spain, Ecuador, Italy, Germany, Netherlands, France, Guatemala, China and ASEAN countries such as Indonesia and Philippines (see table 2.1)

Thailand's biggest market for canned Tuna is the United States. Thailand exported US\$ 285 million or 22% of its total tuna exports to the U.S. in 2006. Other important markets for Thailand are Australia, Japan, Canada, Egypt, Libya, Saudi Arabia and EU (United Kingdom, Germany and France). Export to Egypt and Saudi Arabia increased as high as 41% and 25% from year 2005 respectively. (see table 2.2)

1.2 Processed fish (Suremi) (HS 160420)

For prepared and preserved fish, Thailand was the world's third largest exporter in 2006 with an export value of US\$ 176 million. China and Ecuador are the two biggest exporters for this product. Other competitors for Thailand are France, Spain, Japan, Germany, United States, India and Singapore (see table 2.1).

Japan was the biggest market for Thai processed fish with a share of more than 28%. In 2006, Thailand exported US\$ 50 million of processed fish to Japan. However, export value to Japan has reduced by almost 23% from year 2005 to 2006, while export to Australia increased by 12.4%. New markets for this product are Russia with export of US\$ 7.3 million, increased by 169% from year 2005 to 2006. Other important markets for Thailand's processed fish are the U.S., EU (United Kingdom, Spain and Italy) Singapore and Malaysia. (see table 2.4)

Table 2.3 World Trade in exports of fish product

Country	2005 (US\$)	2006 (US\$)
China	208,838,692	251,768,867
Ecuador	158,219,573	213,944,006
Thailand	176,168,502	177,078,187
France	78,793,955	91,727,778
Spain	62,112,452	87,146,215
Lithuania	68,758,689	80,406,964
Morocco	61,571,046	64,283,623
Japan	63,995,538	63,938,880
Germany	60,982,879	62,302,423
United States	48,887,692	54,932,408
India	30,079,270	
Singapore	29,250,996	34,600,966

Source: Global Trade Atlas

Table 2.4 Thailand Export Markets for Fish product (2006)

Partner Country	US\$	Share %	2006/2005 % Change
World	177,078,187	100.00	0.52
Japan	50,451,134	28.49	-22.97
Australia	14,925,478	8.43	12.42
United States	14,303,624	8.08	5.70
United Kingdom	11,412,973	6.45	-10.51
Hong Kong	11,401,358	6.44	-4.24
Spain	8,393,819	4.74	8.89
Singapore	8,364,390	4.72	1.13
Russia	7,291,181	4.12	168.65
Malaysia	7,286,227	4.11	8.95
Italy	5,742,302	3.24	69.67

Source: Global Trade Atlas

2. Frozen Fish (HS 030420 and HS 030490)

This group of seafood product consists of two products by HS classification.

2.1 Fish fillets (HS 030420)

Table 2.5 World Trade in Exports of Frozen Fish Fillets

Country	2005 (US\$)	2006 (US\$)
China	1,850,380,412	2,193,617,018
Chile	482,427,117	621,500,535
Iceland	466,249,412	481,617,809
Norway	395,760,475	449,841,558
Netherlands	538,721,792	393,291,575
United States	272,551,573	347,291,223
Argentina	277,556,240	337,555,159
Germany	298,369,357	323,665,629
Denmark	294,067,428	308,220,353
Spain	161,653,848	195,142,266
Poland	134,072,132	161,257,104
Thailand	147,254,093	142,287,180

Source: Global Trade Atlas

Table 2.6 Thailand Export Markets for Frozen Fish Fillets (2006)

Partner Country	US\$	Share %	2006/2005 % Change
World	1,146,964,740	100.00	38.21
United States	714,077,183	62.26	50.61
Japan	214,678,712	18.72	5.48
Canada	53,062,876	4.63	25.42
Australia	31,169,141	2.72	9.26
United Kingdom	29,973,955	2.61	158.12
Germany	24,548,028	2.14	51.42
Korea South	19,705,922	1.72	33.53
Belgium	13,979,871	1.22	283.99
France	6,950,199	0.61	72.73
Taiwan	6,917,317	0.60	5.07

Source: Global Trade Atlas

Thailand was only the 12th biggest exporter of frozen fillets in 2006 with export value of US\$ 147 million. China with as high as US\$ 1,850 million export was the world number one exporter for this product. Other suppliers of fish fillets are Chile, Iceland, Norway, Netherlands, the U.S., Argentina, and Germany.

Thailand depends heavily on U.S. market for fish fillets. With export value of US\$ 1,146 million, increased by 50.6% from 2005, U.S. share of Thai fish fillet exports was as high as 62% in 2006. Next biggest market for Thailand was Japan with share of almost 19%. Thailand's other important markets for frozen fish fillets are Canada, Australia, South Korea and the EU (United Kingdom, Germany and Belgium).

2.2 Other frozen Fish Meats (HS 030490)

The United States was the biggest exporter for frozen fish meat, while Thailand was the third largest exporter with export value of US\$ 165 million in 2006. Other main suppliers for this product are Chile, Norway, China, Iceland, Denmark, Spain, Argentina and New Zealand. (see table 2.7 below)

Thailand's export of this product has decreased by 6.3% from 2005 to 2006. Export to Japan, Thailand's largest market for other frozen fish with a share of more than half of Thai exports, has reduced 16.3% from 2005 to 2006. For other important markets, export also decreased, 5.9% for Korea, 18.6 for Singapore and 21.4% for Taiwan. However, export to the U.S., the third largest market for this product, increased by 71% from 2005 to 2006.

Table 2.7 World Trade in Exports of Frozen Fish Meat

Country	2005 (US\$)	2006 (US\$)
United States	469,861,665	427,711,591
Chile	264,545,075	350,158,333
Thailand	176,947,027	165,870,388
Norway	102,575,264	101,070,433
China	65,305,482	82,304,752
Iceland	80,648,576	68,181,626
Denmark	45,361,972	66,494,818
Spain	81,521,419	61,647,612
Argentina	34,393,726	42,581,913
New Zealand	31,460,640	40,690,724
Portugal	19,960,441	28,046,335
Netherlands	22,099,115	23,365,650

Source: World Trade Atlas

3. Shrimps (HS 030613 and HS 160520)**3.1 Frozen Shrimps (HS 030613)**

Table 2.9 World Trade in Export of Frozen Shrimps

Country	2005 (US\$)	2006 (US\$)
Thailand	898,706,989	1,059,550,743
Indonesia	804,022,736	939,711,381
India	866,151,647	n.a.
Ecuador	457,453,010	581,848,917
Argentina	85,323,201	369,264,299
Mexico	341,085,972	361,480,894
Belgium	226,207,679	297,505,767
Canada	274,532,676	271,315,546
Denmark	256,486,599	263,229,128
Malaysia	274,893,785	231,533,408
China	326,501,679	187,331,895
Netherlands	183,382,115	180,051,374

Source: World Trade Atlas

Thailand was the largest frozen shrimp exporter with export value of more than one billion dollars in 2006. The other important exporters of frozen shrimps are Indonesia, India and Ecuador. In term of market, Thailand exported more than half its shrimps to the US. in 2006. Next important markets are Japan, Canada, Korea, Australia, Hong Kong and China, respectively.

3.2 Processed Shrimps (HS 160520)

Thailand is also the number one exporters of processed shrimps. Thailand exported US\$ 829 million in year 2006. China, the second largest exporter, exported US\$ 727 million. Other important exporters are Denmark, Netherlands, Indonesia, India, Canada and Iceland. (see table 2.11 below)

Table 2.8 Thailand Export Markets for Frozen Fish Meat

Partner Country	US\$	Share %	2006/2005 % Change
World	165,870,388	100.00	-6.26
Japan	96,535,031	58.20	-16.28
Korea South	12,772,923	7.70	-5.90
United States	10,890,447	6.57	71.05
Singapore	9,806,127	5.91	-18.64
Germany	9,067,847	5.47	24.08
Taiwan	7,748,780	4.67	-21.36
Sweden	7,506,818	4.53	1831.25
Malaysia	3,319,704	2.00	5.90
France	2,043,381	1.23	303.95
United Kingdom	1,250,293	0.75	7796.08

Source: World Trade Atlas

Table 2.10 Thailand Export Markets for Frozen Shrimp

Partner Country	US\$	Share %	2006/2005 %Change
World	1,059,550,743	100.00	17.90
United States	605,220,343	57.12	22.20
Japan	172,882,182	16.32	-4.17
Canada	60,123,395	5.67	20.30
Korea South	51,547,546	4.87	41.43
Australia	28,771,352	2.72	-4.61
Hong Kong	23,166,472	2.19	27.28
China	14,071,729	1.33	0.88
United Kingdom	11,411,325	1.08	140.02
France	9,447,281	0.89	42.84
Germany	9,318,483	0.88	143.47

Source: World Trade Atlas

The U.S. is also the biggest market for Thailand with the share of 57%. Japan is the next most important export market for Thailand with the share of 16%. Other markets for Thailand are Canada, Korea, Australia and Hong Kong. Export to the U.S., Canada and Korea increased by as much as 22.2%, 20.3% and 41.4% respectively from 2005 to 2006. (see table 2.12 below)

Table 2.11 World Trade Exports in Export for Processed Shrimps

Country	2005 (US\$)	2006 (US\$)
Thailand	829,848,607	1,146,964,740
China	727,094,180	1,114,938,760
Denmark	245,496,830	269,946,768
Netherlands	189,319,376	210,124,108
Indonesia	112,614,171	142,721,431
India	112,071,030	
Canada	125,282,915	139,465,741
Iceland	120,502,562	98,312,370
Belgium	65,693,317	82,671,035
Norway	89,838,480	72,181,950
United States	42,731,103	47,668,097
Malaysia	29,755,994	31,909,842

Source: World Trade Atlas

Table 2.12 Thailand Export Markets for Processed Shrimps

Partner Country	US\$	Share %	2006/2005 %Change
World	1,146,964,740	100.00	38.21
United States	714,077,183	62.26	50.61
Japan	214,678,712	18.72	5.48
Canada	53,062,876	4.63	25.42
Australia	31,169,141	2.72	9.26
United Kingdom	29,973,955	2.61	158.12
Germany	24,548,028	2.14	51.42
Korea South	19,705,922	1.72	33.53
Belgium	13,979,871	1.22	283.99
France	6,950,199	0.61	72.73
Taiwan	6,917,317	0.60	5.07

Source: World Trade Atlas

4. Cuttlefish/Squid (HS 030749)

Cuttlefish/Squids (Frozen, Dried, Salted or In Brine) (HS 030749)

With the export of US\$ 347 million in 2006, Thailand was the largest squid/cuttlefish exporter in 2006. China was the second largest exporter, while other major exporters are Spain, Peru, India, Morocco, New Zealand and Malaysia.

In 2006, US\$ 167 million or almost half of Thailand's squid exports were supplied to Japan. Italy, the US., Taiwan and Canada were the next most important export markets for Thailand in this product. While export to Japan decreased by 3.5%, export to Italy, the U.S., Taiwan, Canada, China and Australia increased.

Table 2.13 World Trade in Exports of Cuttlefish/Squids products

Country	2005 (US\$)	2006 (US\$)
Thailand	332,563,649	347,855,703
China	221,846,098	231,044,510
Spain	168,946,782	163,303,354
Peru	94,644,417	91,589,709
India	64,155,636	n/a
Morocco	80,183,097	76,514,705
New Zealand	119,764,496	75,625,062
Malaysia	59,666,701	75,550,529
United States	57,738,311	66,865,652
Taiwan	41,657,276	60,876,515
South Africa	59,734,865	57,955,958
South Korea	101,280,885	44,820,379

Source: World Trade Atlas

Table 2.14 Thailand Export Squids

Partner Country	US\$	Share %	2006/2005 %Change
World	347,855,703	100.00	4.60
Japan	167,003,399	48.01	-3.50
Italy	72,213,697	20.76	6.10
United States	31,680,176	9.11	28.10
Taiwan	13,449,066	3.87	4.42
Canada	10,818,921	3.11	31.71
China	8,865,256	2.55	16.76
Australia	7,209,781	2.07	31.54
Hong Kong	6,257,676	1.80	25.32
Korea South	5,591,296	1.61	28.99
Germany	4,241,035	1.22	3.24

Source: World Trade Atlas

In conclusion, Thailand is a world major supplier for seafood products. It was the largest exporter of canned tuna, frozen shrimps and shrimps/cuttlefish in 2006. For frozen fish meat and processed fish, Thailand was ranked the 3rd largest exporter of both products. ASEAN are also important world exporters in seafood business. Indonesia, for example, was second largest exporter of frozen shrimp products and was number three exporter of canned tuna. Other important exporters of seafood products are Ecuador for canned tuna, processed fish and frozen shrimps. China also played an important role in this industry by being the largest exporter for frozen fish fillets and second largest exporter for both prepared/preserved shrimps and cuttlefish product. As well, India is a major exporter for shrimp and squid products, being the third largest exporter for frozen shrimps and the 5th largest exporter for both prepared/preserved shrimps and squids products in 2005.

Major markets for Thai seafood product are the US, Japan, EU and Australia. Being the biggest market for Thailand, the US imported 21% of Thai canned tuna exports and more than half of Thai frozen fish fillets (62%), frozen shrimps (57%) and processed shrimps (62%) exports. Thailand's second largest market, Japan is the biggest market for Thai processed fish and other frozen fish and cuttlefish product. Thailand exported 28% of her processed fish, 58% of other frozen fish and 48% cuttle fish to Japan in 2006. Japan is also an important market for canned tuna (the 3rd largest market), frozen fish fillets (the 2nd largest market), frozen shrimps (the 2nd largest market), prepared/preserved shrimps (the 2nd largest market).

Other important export markets for Thai seafood products are Australia, Canada and Taiwan. Other major trade partners for Thailand in seafood industry are EU members such as United Kingdom, France, Spain and Germany.

Trade relation with FTA partners in Seafood industry

ASEAN (AFTA)

As above mentioned, ASEAN is world major seafood suppliers. Indonesia is a world major exporter of canned tuna, frozen shrimps and processed shrimps. Malaysia is also an important exporter of shrimps and squid products. Philippines is also an important canned tuna exporter. Other ASEAN members, like Singapore, also exports some of seafood products. ASEAN is, therefore, not a market for Thailand for these products. Thailand exported only a small value of fish products to Singapore and Malaysia. For example Thailand exported US\$ 6.1 million canned tuna to Malaysia in 2006. In the same year, Singapore imported only US\$ 5.2 million of canned tuna, US\$ 2.9 million of processed Shrimps, and US\$ 1.6 million of frozen shrimps from Thailand. Other ASEAN nations like Vietnam, Myanmar, Laos and Cambodia, imported very small values of seafood products from Thailand.

JAPAN (Japan-Thailand Economic Partnership Agreement: JTEPA)

Japan is Thailand's second largest seafood market next to the U.S. Thailand exported a large quantity of these seven seafood items to Japan in 2006. Japan is the biggest market for Thai processed fish, other frozen fish and cuttlefish products. Japan is also an important exporter of processed fish by exporting US\$ 64 million in 2006, making Japan a top ten exporter in this product in 2006.

AUSTRALIA (Thailand-Australia Free Trade Agreement: TAFTA)

Australia is the 3rd largest market for Thai seafood products. Australia is the second largest market for Thai canned tuna, prepared/preserved fish. Moreover, Australia is also an important market for both frozen fish fillets, prepared/preserved shrimps.

NEW ZEALAND (Thailand - New Zealand Closer Economic Partnership: TNZCEP)

As New Zealand is relatively a small country, trade with Thailand is very limited. Thailand exported only US\$ 9.6 million of canned tuna, US\$ 4.4 million of processed fish, US\$ 5.3 million of frozen fish fillets and 3.3 of frozen shrimps, while the rest of seafood product export value is less than one million dollars. However, New Zealand was ranked the 7th in the world as an exporter of squids/cuttle fish, with the export value of US\$ 75 million in 2006.

INDIA (India-Thailand Free Trade Area: ITFTA)

India is one of the most important producers of shrimps and squids products. In 2006 India was ranked world number 3 as an exporter of frozen shrimps and ranked number 5 for both processed shrimps and squid products. Moreover, Thailand exports almost no seafood to India.

CHINA (ASEAN - China Free Trade Agreement)

China is a major exporter and competitor for Thailand in seafood business, rather than ASEAN and Ecuador. China was world number one exporter of processed fish, frozen fish and world number two exporter (next to Thailand) in processed shrimps and squids product. By importing US\$ 14 million (1.33%) of frozen shrimps and US\$ 8.8 million of squid products, China is now a small market for Thai seafood products.

Rather than the abovementioned Trade Preferential agreements (PTAs), Thailand now in negotiation process with Peru and Korea (under ASEAN-Korea FTA). FTA between Thai and US, the most important market for Thai seafood product, is suspended due to political problem and expected to soon resume after election process at the end of this year, while, FTA between Thai and EU (under ASEAN-EU FTA), another important market for Thai seafood, is in an early stage of framework setting. The US, EU and Korea are important markets for Thai seafood product. Thus, liberal and appropriate ROO can help Thai manufacture gain access to these markets.

In conclusion, for seafood product Thailand has a free trade agreement with two important export markets, Japan and Australia, while, New Zealand is a small market for Thai seafood products. Other free trade partners, ASEAN, China and India are major producers and exporters for the same products. As a result, Thailand exports only a small volume of seafood products to these three partners. However, Thailand is now on negotiation process with other three important seafood markets, the US, EU and Korea. ROO negotiation position is therefore important for Thai government in the negotiation process in order for Thai manufacturers to can gain access to these markets.

Chapter 3: Structure of Thai Seafood Industry

A main objective of this chapter is to study the production structure for the selected seafood products. Since the main propose of this study is to appraise the appropriate ROO for the Thai seafood product, the main focus is on identifying major inputs used in production, sources of input, tariff classification changes in production and local value added of these products.

Since production of these seven products is relatively similar, this chapter will group them into four groups, 1) fish products, 2) shrimp products, 3) canned tuna and 4) squid/cuttlefish products.

1. Frozen fish fillets (HS030420)

Frozen fish meat (HS 030490)

Processed fish (Suremi) (HS 160420)

Raw material and source of raw material

The most important raw material for these products is fresh fish from codes HS 0302 and 0303. Most of the fish used in production are Teadfin beam fish, Red/white Snapper and bigeye. They are caught or farmed domestically. However, small quantities of imported fish such as tuna, salmon and mackerel are also used in production.

Table 3.1 below shows sources of imported fish by Thailand in HS 0302 from year 2004 to 2006. The most important sources of fish for Thailand are Myanmar, Norway, Singapore and Japan. Next important sources are Australia, India, Chile, and Cambodia. These countries are mostly Thailand's partners in Free trade Agreements.

Table 3.1 Thailand fish import (HS 0302)

Partner Country	United States Dollars			% Share			% Change 2006/2005
	2004	2005	2006	2004	2005	2006	
World	55,778,967	55,147,797	55,557,973	100.00	100.00	100.00	0.74
Myanmar	40,149,627	40,070,821	37,386,056	71.98	72.66	67.29	-6.70
Other Countries NES	8,946,893	9,066,528	7,662,833	16.04	16.44	13.79	-15.48
Norway	1,954,122	2,937,425	3,765,269	3.50	5.33	6.78	28.18
Singapore	3,168	3,217	1,612,617	0.01	0.01	2.90	∞
Japan	121,423	370,950	1,499,689	0.22	0.67	2.70	304.28
Australia	163,654	74,778	795,734	0.29	0.14	1.43	964.13
India	3,156	10,716	609,637	0.01	0.02	1.10	5588.86
Chile	202,813	774,592	569,448	0.36	1.40	1.02	-26.48
Cambodia	588,392	493,909	468,429	1.05	0.90	0.84	-5.16
Malaysia	2,379,890	1,016,519	240,337	4.27	1.84	0.43	-76.36
France	80,039	81,989	235,276	0.14	0.15	0.42	186.96
New Zealand	206	14,944	226,363	0.00	0.03	0.41	1414.76

Source: World Trade Atlas

For fish from HS 0303, important sources for Thailand are Taiwan, Indonesia, Vanuatu and Japan. Thailand also imported some fish from FTA partners like China, Philippines and India (see table 3.2 below). However, data from table 3.2 may be misleading because, as mentioned earlier, fish used in production are mostly from domestic sources and part of these imports are for domestic consumption. Moreover, products in HS 0303 also include tuna (HS 0303.41-0303.49), which is not a main raw material for these three products but rather for canned tuna (HS 160414).

Table 3.2 Thailand fish import (HS 0303)

Partner Country	United States Dollars			% Share			% Change 2006/2005
	2004	2005	2006	2004	2005	2006	
World	876,941,637	1,078,866,822	1,198,841,010	100.00	100.00	100.00	11.12
Taiwan	132,945,785	154,253,158	187,967,405	15.16	14.30	15.68	21.86
Indonesia	183,397,646	213,310,853	164,586,417	20.91	19.77	13.73	-22.84
Vanuatu	105,546,885	119,306,245	158,833,244	12.04	11.06	13.25	33.13
Japan	67,620,367	134,546,284	117,738,368	7.71	12.47	9.82	-12.49
Korea South	36,292,196	58,461,638	71,172,458	4.14	5.42	5.94	21.74
Maldives	32,290,122	45,357,184	60,814,854	3.68	4.20	5.07	34.08
Chile	28,276,734	42,167,640	44,525,948	3.22	3.91	3.71	5.59
China	24,410,981	25,102,156	40,965,361	2.78	2.33	3.42	63.19
United States	19,243,745	33,626,614	40,841,457	2.19	3.12	3.41	21.46
Papua New Guinea	20,468,408	15,391,628	26,182,281	2.33	1.43	2.18	70.11
Philippines	13,334,703	7,158,444	24,880,925	1.52	0.66	2.08	247.57
Micronesia	43,508,428	43,003,638	24,681,378	4.96	3.99	2.06	-42.61

Source: World Trade Atlas

Production and Cost

The production process for these three products begins from cleaning and grading the raw material. The next step is cutting the fish into desired shapes or grinding it. For frozen products (HS 0304.20 and HS 0304.90), this semi-finished product will go to a quick freezing process at temperature of -40 C°. For processed fish (HS 160420) the fish meat will go through processes of seasoning or cooking, then freezing. Packing and labeling are the last production process. (See Figure 3.1)

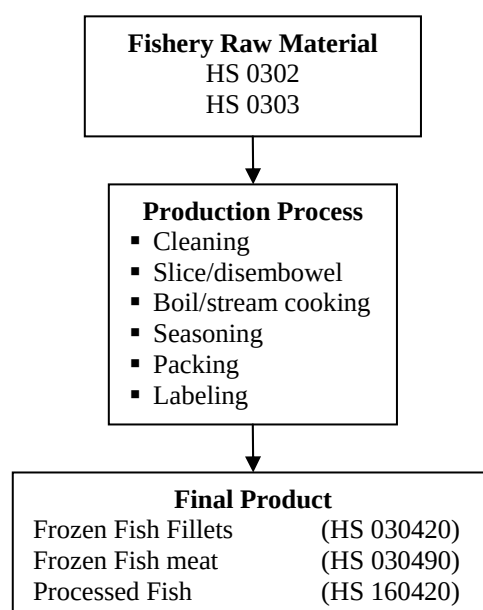


Figure 3.1: Production Process of Frozen and Processed Fish

Through the above production process, raw material in HS codes 0302 or 0303 are transformed into final products in HS code 0304. It is a one step production process, in term

of tariff classification change. Therefore, products are substantially transformed and acquire originating status if a “Change of Tariff Heading (CTH- 4 digit level) rule is applied. Note that if manufacturers can comply with a CTH rule, they will have no problem complying with less stringent rules based on changes at the 6 Digits level (Change of Sub-Heading: CTSH).

In terms of cost, the largest production costs are fishery raw material, while the next largest is labor cost. Tivakul (1993) estimated that, for fish products, 70-85% of total costs are raw material, while labor cost consist of around 7-15%, and energy, utility and packaging costs combined are around 8-15% of total production cost.

Local Value Added

For local value added aspects, there are three sources of data used in this study, namely, industrial survey by Office of Industrial Economics (OIE) in year 2005 (Ror-Ngor 9 form)¹, questionnaire survey by the researchers of this study and survey by Federation of Thai Industry (FTI). Data from the surveys are shown in table A, B and C in appendix I at the end of this chapter.

- Frozen fish fillet (HS 0304.20)
OIE survey indicates that the surveyed firms use only domestic inputs in production, i.e. they have 100% of local value added. However, data for this product are not available from the questionnaire survey and FTI survey .
- Frozen fish meat (HS 0304.90)
From OIE industrial survey, a firm in the survey indicated using no imported input in production. The FTI survey also suggests that local content for this product is 100%. The questionnaire survey finds one firm using 100% of domestic input but there are, however, two firms reporting that local value added in their product is less than 50%.
- Processed fish (HS 1604.20)
FTI survey suggests that local content of this product is 100%. OIE survey shows that, while there are firms that using only domestic raw material in production (100% of local content), there are also factories that use imported fish in production. Import content in total cost, therefore, ranged from 0% to 21%. Variation can also be seen in the questionnaire survey; there are both firms that have 100% local value added and one that has less than 50%. Average foreign content for firm that use imported input is as high as 37.7%.

In conclusion, for these three products, the main source of input is domestic and as a result, local value added can be as high as 100%. However, there are some firms that use imported raw material (such as salmon and tuna) in production and in this case the local value added can be less than 50%.

2. Frozen shrimps (HS 030613) **Processed shrimps (HS 160520)**

Raw Material and sources of raw material

Most of the shrimp supply in Thailand is from shrimp farming. Shrimp farms in Thailand are mostly producing/cultivating “Giant tiger prawn”. Important shrimp farming areas in Thailand are Nakorn Srithammarat and Surathani provinces in the south and Chonburi province in the East.

¹ The numbers in this survey however are only for cost of product including raw material, labor, utility, interest and depreciation but not including transportation and profit. Thus, the real local value added is slightly higher than the numbers indicated in this survey.

Table 3.3 (1): Thailand Frozen Shrimp Import (HS 030613)

Partner Country	United States Dollars			% Share			% Change 2006/2005
	2004	2005	2006	2004	2005	2006	
World	82,766,389	72,501,697	74,424,534	100.00	100.00	100.00	2.65
India	7,557,421	4,752,902	12,513,865	9.13	6.56	16.81	163.29
Greenland	14,225,775	15,853,651	10,462,843	17.19	21.87	14.06	-34.00
Canada	4,770,327	5,407,196	7,349,426	5.76	7.46	9.88	35.92
Argentina	10,174,681	1,222,612	6,491,177	12.29	1.69	8.72	430.93
Myanmar	5,595,848	4,365,403	5,289,733	6.76	6.02	7.11	21.17
Saudi Arabia	2,689,259	4,163,081	4,677,567	3.25	5.74	6.28	12.36
Russia	5,114,115	9,045,612	4,216,035	6.18	12.48	5.66	-53.39
Malaysia	2,047,414	1,466,835	3,286,102	2.47	2.02	4.42	124.03
Vietnam	3,838,866	5,726,428	3,250,908	4.64	7.90	4.37	-43.23
Indonesia	8,105,260	3,376,077	2,947,827	9.79	4.66	3.96	-12.68
Mozambique	1,258,158	2,254,264	2,925,509	1.52	3.11	3.93	29.78

Source: World Trade Atlas

Table 3.3 (2): Thailand Shrimp Import (HS 030623)

Partner Country	United States Dollars			% Share			% Change 2006/2005
	2004	2005	2006	2004	2005	2006	
World	4,870,231	3,862,766	2,750,816	100.00	100.00	100.00	-28.79
United States	742,899	1,491,574	1,033,767	15.25	38.61	37.58	-30.69
Malaysia	3,627,129	1,717,159	962,179	74.48	44.45	34.98	-43.97
Saudi Arabia	0	86,249	360,880	0.00	2.23	13.12	318.42
Philippines	75,405	120,671	135,022	1.55	3.12	4.91	11.89
Japan	6,739	23,882	67,652	0.14	0.62	2.46	183.28
Myanmar	252,379	130,712	54,231	5.18	3.38	1.97	-58.51
Cambodia	74,779	67,785	53,081	1.54	1.75	1.93	-21.69
Mozambique	6,371	0	34,677	0.13	0.00	1.26	0.00
Tanzania	11,221	62,358	24,652	0.23	1.61	0.90	-60.47
New Zealand	0	656	14,435	0.00	0.02	0.52	2100.40

Source: World Trade Atlas

For frozen/processed shrimp production in Thailand, around 90% of the shrimp supply is from domestic sources, either from farming or catching from sea, while the rest (around 8-9%) is imported. There are two HS codes for shrimp, HS 030613 (frozen Shrimp) and HS 0306.23 (not frozen). Thailand sometimes imports frozen shrimp from India, Greenland, Canada, Argentina, Myanmar, Saudi Arabia, Russia, Malaysia and Vietnam. The import value is, however, very small at US\$ 74 million in year 2006 (see table 3.3 (1)), compared to the values of frozen shrimp and processed shrimp export, which are US\$ 1,050 million and 1,147, respectively in the same year. This will confirm that Thailand is mainly using local material in production of shrimp products. Thailand imports some of this shrimp for both domestic consumption and partly in manufacturing when the import price is very competitive. Non frozen shrimp is not an important input for industry. Thailand imported very small amount of this shrimp, only US\$ 2.7 million in year 2006. (see table 3.3 (2))

Production and Cost

Thailand is the world's largest shrimp exporter. Thailand exports a variety of shrimp products worldwide. For frozen shrimp, there is a range of types that Thailand manufactures such as

“Head-on Shell on”, “Headless Shell on”, “Peeled Deveined/Underdeveined Tail”. This frozen shrimp production harmonization code is 030613. This HS 030613 code also includes shrimps that are already cooked.

In addition to this simple frozen product, Thailand also produces higher value added products like Sushi-Ebi (Butterfly-open for Sushi), breaded Torpedo & butterfly, battered shrimp, Shrimp Roll, Shrimp BBQ and Shrimp cake. These latter products are classified in HS code 160520.

The production process for shrimp products is shown in Figure 2 below. For the lower value added product, the frozen shrimp, Thailand manufactures both fresh and boiled frozen shrimp. The process starts from cleaning, quality checking, and sorting shrimp size. Next the cleaned shrimp will be beheaded, de-skinned or de-shelled and cut in the desired form. In case of fresh frozen shrimp, this prepared shrimp will go directly into the freezer at temperatures of - 20 to -40 C° in the IQF (Individual Quick Frozen) system. In the case of cooked shrimps, the prepared raw material will be boiled at temperature 80-100 C° and frozen afterwards.

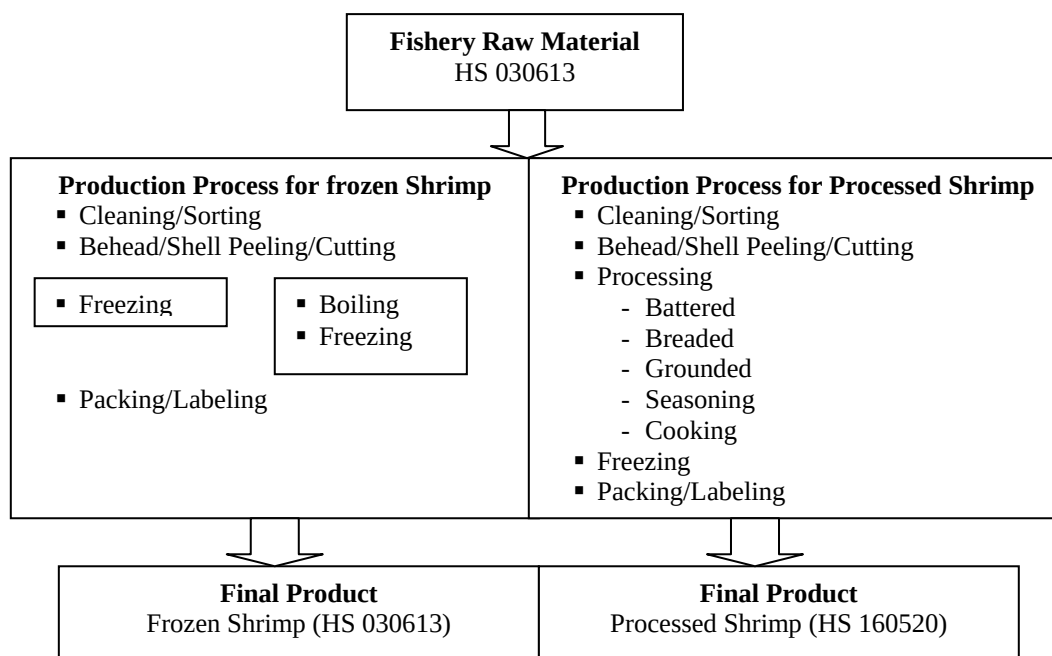


Figure 3.2: Production Process of Shrimp Product

For processed shrimps, there are additional processes before the frozen shrimp stage. After the shrimp is cleaned, it will go through a cooking process which differs from product to product. The shrimp may be grounded, battered, seasoned, breaded, boiled or fried. After this cooking stage, the finished product will also be frozen and packed like the regular frozen shrimp product.

In term of tariff classification change, manufacturing the frozen shrimp and processed shrimp products is one step production. In the case of frozen shrimp, the raw material is in HS 030613 and following the manufacturing process, the output, frozen shrimps also shares the same HS code, 030613. In this case, the Change of Tariff Classification rule cannot be used to determine if the product is substantially transformed because the raw material and final product are in the same HS code. Thus, in this case, the local value added seems to be more suitable. Nevertheless, all frozen shrimp products will gain originating status on the basis of the wholly obtained (WO) rule. Thus, since Thailand mostly uses domestic shrimp in production it normally has no ROO problem for this product in all FTA agreements.

For processed shrimp, the raw material in HS 030613 is transformed into a final product in HS 160520. Thus, the most stringent Change of Tariff Classification rule at the 2 digit level (CC) can be accepted as the basis for origin determination.

Local Value Added

- Frozen Shrimp (HS 030613)
Three firms in the OIE survey reported that only domestic input is used in production. The questionnaire survey also shows a similar result (one firm uses no imported input and the other uses less than 4%). The FDI survey reported that local content of this product is more than 40%.
- Processed Shrimp (HS 160520)
For HS 160520, the OIE survey shows that there are both firm that use and firms that do not use imported inputs. For firms that use imported inputs, average foreign cost is 21%. However, one firm in the questionnaire survey reported that its foreign input is more than 50% of FOB price. The FTI survey suggests that local content of this product is 100%.

From the above data, it can be concluded that raw material of shrimp products is mostly of domestic source. Thus local value added will not be a problem in gaining Thai origin. (However, some care is needed because in some cases, especially for products in HS 160520, foreign input is used.)

3. Canned tuna (HS 160414)

Raw Material and source of raw material

At first the canned tuna industry was using local tuna fish in production. However, when the industry grew, the local tuna fish supply became insufficient and nowadays most of the tuna used in production is imported. Thailand imported up to 82% of its tuna requirements, while the remainder of around 18% is caught by Thai vessels. There are three types of tuna that are mainly used in canned tuna production, namely Skipjack, Yellow-fin and Albacore.

For Albacore tuna (HS 0303.41), Thailand's imports were US\$ 88.6 million in 2006, an increase of 31% from year 2005. The most important sources of Albacore are Japan and Taiwan respectively. Thailand imported more than half of its Albacore from these two economies. Other important sources of Albacore for Thailand are South Africa, Singapore and South Korea. Thailand also imports a small amount from other countries. (See table 3.4)

Table 3.4: Thailand import Statistic of Albacore Tuna (HS 0303.41)

Partner Country	United States Dollars			% Share			% Change 2006/2005
	2004	2005	2006	2004	2005	2006	
World	70,684,273	67,613,285	88,626,472	100.00	100.00	100.00	31.08
Japan	33,128,936	22,086,580	30,687,092	46.87	32.67	34.63	38.94
Taiwan	16,602,504	17,782,139	24,980,779	23.49	26.30	28.19	40.48
South Africa	3,108,597	1,521,155	9,749,550	4.40	2.25	11.00	540.93
Singapore	1,180,290	1,328,623	5,591,818	1.67	1.97	6.31	320.87
Korea South	2,608,507	6,765,488	4,426,243	3.69	10.01	4.99	-34.58
Russia	0	0	1,789,954	0.00	0.00	2.02	0.00
Mauritius	1,195,603	1,800,820	1,486,896	1.69	2.66	1.68	-17.43
Papua New Guinea	842,808	4,080,020	1,252,559	1.19	6.03	1.41	-69.30
Vanuatu	2,487,983	2,794,528	1,229,184	3.52	4.13	1.39	-56.01
Namibia	0	0	1,017,670	0.00	0.00	1.15	0.00

Source: World Trade Atlas

Among the import sources of Albacore, Thailand has a free trade agreement with only Japan (JTEPA) and Singapore (AFTA), while the free trade agreement between Thai and Korea (ASEAN-Korea Free Trade Agreement: AKFTA) is now under negotiation. Thailand has no free trade agreement with Taiwan and South Africa. Thus, if cumulation is applied under the ROO, it will help Thailand export only to Japan (since ASEAN is not a market for Thai canned tuna).

For Yellowfin tuna, Thailand imported almost US\$ 130 million in 2006. Important sources of this tuna are Taiwan, Vanuatu and the Philippines, from which Thailand imported US\$ 32 million, US\$ 27 million and US\$ 12 million in 2006 respectively. Thailand also imports this tuna from South Korea, Papua New Guinea, North Korea, Maldives, China and Japan but in an amount of less than US\$ 7 million a year. Among the sources of yellow fin tuna, Thailand has a free trade agreement with only the Philippines (AFTA), China (ASEAN-China FTA) and Japan (JTEPA). (See table 3.5)

Table 3.5 Thailand import Statistic of Yellow fin Tuna (HS 0303.42)

Partner Country	United States Dollars			% Share			% Change 2006/2005
	2004	2005	2006	2004	2005	2006	
World	83,095,726	133,518,155	129,568,114	100.00	100.00	100.00	-2.96
Taiwan	15,592,113	28,285,322	31,871,518	18.76	21.18	24.60	12.68
Vanuatu	11,592,033	24,253,607	27,116,931	13.95	18.17	20.93	11.81
Philippines	1,500,181	5,712,824	11,798,620	1.81	4.28	9.11	106.53
Korea South	2,462,174	10,569,013	7,966,153	2.96	7.92	6.15	-24.63
Papua New Guinea	3,178,178	3,754,998	7,918,032	3.82	2.81	6.11	110.87
Korea North	236,637	202,055	6,481,893	0.28	0.15	5.00	3107.98
Maldives	5,879,075	5,636,166	6,154,447	7.08	4.22	4.75	9.20
China	2,499,151	3,576,260	4,943,803	3.01	2.68	3.82	38.24
Japan	6,759,273	9,256,960	4,228,328	8.13	6.93	3.26	-54.32
Micronesia	4,298,220	5,386,249	3,062,635	5.17	4.03	2.36	-43.14

Source: World Trade Atlas

Table 3.6 Thailand import Statistic of Skipjack Tuna (HS 030343)

Partner Country	United States Dollars			% Share			% Change 2006/2005
	2004	2005	2006	2004	2005	2006	
World	400,104,097	513,883,967	588,911,394	100.00	100.00	100.00	14.60
Vanuatu	91,466,870	92,252,619	130,487,128	22.86	17.95	22.16	41.45
Taiwan	100,048,527	106,293,328	129,014,815	25.01	20.68	21.91	21.38
Korea South	25,827,622	38,318,614	56,643,082	6.46	7.46	9.62	47.82
Maldives	26,192,945	39,110,812	54,488,062	6.55	7.61	9.25	39.32
Japan	15,771,746	87,431,269	45,498,368	3.94	17.01	7.73	-47.96
China	16,390,214	13,171,802	24,574,994	4.10	2.56	4.17	86.57
Micronesia	36,442,789	37,000,921	21,618,743	9.11	7.20	3.67	-41.57
Papua New Guinea	16,447,422	7,554,528	17,001,018	4.11	1.47	2.89	125.04
Korea North	685,917	562,868	14,068,252	0.17	0.11	2.39	2399.39
United States	1,185,812	4,038,719	12,887,894	0.30	0.79	2.19	219.11

Source: World Trade Atlas

Skipjack is the most important tuna in Thai production. In 2006, Thailand imported more than US\$ 580 million of Skipjack. From this number, Thailand imported around US\$ 130 million each from Vanuatu and Taiwan. Other important sources of Skipjack are South Korea, Maldives, Japan and China, from which Thailand imported US\$ 57 million, US\$ 54 million, US\$ 45 million and US\$ 25 respectively in 2006. Importing more from Japan and China, with whom Thailand has free trade agreements, may help in gaining origin and thus entitlement to preferential tariff treatment in these countries. (See table 3.6)

Production and Cost

In producing canned tuna, firstly the frozen tuna needed to be cleaned. Secondly, the tuna will be steam boiled and then gutted with the bone and skin removed. Thirdly, tuna will be cut into small pieces and put into the can and again steam boiled at temperature of 102 C° for 15-20 minutes. Next is the seasoning process, involving addition of vegetable oil, brine or tomato sauce. After this the can will be sealed and again sterilized at a temperature of 177-200 C° for around 55 minutes. After the cooling process, canned tuna will be labeled and is then ready for shipping. The production process for canned tuna is shown in Figure 3.3 below.

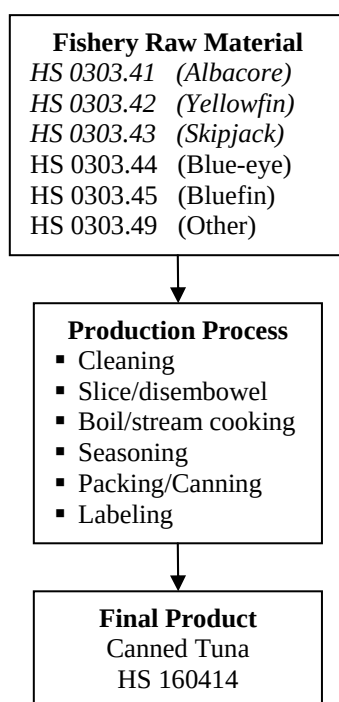


Figure 3.3: Production Process of Canned Tuna

Canned tuna is also one step production in terms of HS code change. Raw materials of canned tuna are frozen tuna from HS 0303.41 to HS 0303.49. The final product is in harmonization code of HS 1604.14. Therefore, the most stringent Change of Tariff Classification rule based on two-digit change (CC) can be accepted for the determination of origin.

In terms of cost, the raw material, tuna is the most important cost in production. The tuna is mostly imported. The remaining raw materials, vegetable (soybean) oil, can and other packing, are mostly from domestic sources.

The Department of Export Promotion studied the cost structure of canned tuna production and found that raw materials are 54.5% of total cost. The next most important costs are operational (15.8-18.6%) and labor costs (5.6-6.6%). This study also suggested that 85% of

raw material is imported. Chatchertchaijul has estimated that raw material is around 60% of total cost, while labor, utility and other cost (seasoning, ingredient and packaging) are around 10%, 10% and 20% respectively. Somporn (1997) studied the Thai seafood export industry and estimated the cost structure of Thai canned tuna as 87.1% raw material cost (tuna, oil and seasoning), 4.8% packaging cost and 3.1 labor cost. The remaining 2.9% are other costs such as utility cost, interest and depreciation cost.

Local Value Added

The OIE survey shows high use of foreign input in canned tuna production. For firms that use imported raw material, the average foreign content is 45.6%. One factory reported that foreign raw material content is 52%. The questionnaire survey shows a similar result, with a factory using more than 50% of foreign raw material in term of cost. FTI surveys suggest that local content of canned tuna is less than 40%. Thus, canned tuna may not be eligible for preferential tariff rates if the local content requirement is too high. It is suggested that the local value added requirement should be less than 40% for canned tuna.

4. Cuttlefish and squids (HS 030749)

Raw Material and source of raw material

The raw material for squid and cuttlefish products is fresh or frozen squid/cuttlefish from HS 0307.41. Manufacturers of this product mostly use local squid/cuttlefish in production and import only small amounts when price is attractive. Table 3.7 shows Thailand's import value and import source of squid/cuttlefish. Thailand imported only US\$ 3.9 million of squid/cuttlefish in year 2006. Most of the imported squid/cuttlefish came from Myanmar. Comparing this import value of only US\$ 3.9 million to the export, of finish squid/cuttlefish product of US\$ 348 million in the same year, the gap between import and export shows that Thailand mostly uses local squid/cuttlefish for production.

Table 3.7: Thailand Import of Cuttlefish and Squids (HS 030741)

Partner Country	United States Dollars			% Share			% Change 2006/2005
	2004	2005	2006	2004	2005	2006	
World	3,992,379	3,994,159	3,859,850	100.00	100.00	100.00	-3.36
Myanmar	3,594,922	3,668,083	3,156,006	90.04	91.84	81.77	-13.96
United States	0	0	264,071	0.00	0.00	6.84	0.00
Taiwan	0	46,257	109,913	0.00	1.16	2.85	137.61
Canada	0	0	87,242	0.00	0.00	2.26	0.00
Japan	25,160	43,388	83,606	0.63	1.09	2.17	92.69
Korea South	329	0	79,896	0.01	0.00	2.07	0.00
Indonesia	0	4,194	40,103	0.00	0.10	1.04	856.27
India	59	0	25,802	0.00	0.00	0.67	0.00
Malaysia	540	83	6,855	0.01	0.00	0.18	8138.80
Iceland	0	0	4,626	0.00	0.00	0.12	0.00

Source: World Trade Atlas

Production and Cost

There are two important products in this HS 0307.49 category, frozen and dried squid. Production process for these two products is relatively simple and similar to that of frozen fish and frozen shrimp. Firstly squid/cuttlefish will be cleaned, sorted and then cut into desired size and shape. The frozen product will go through process of quick freezing, while the dried one will go through process of either sun or machine dehydrating/drying. Then, the product will be packed and readied for shipping. The production process of squid/cuttlefish product is shown in Figure 3.4 below.

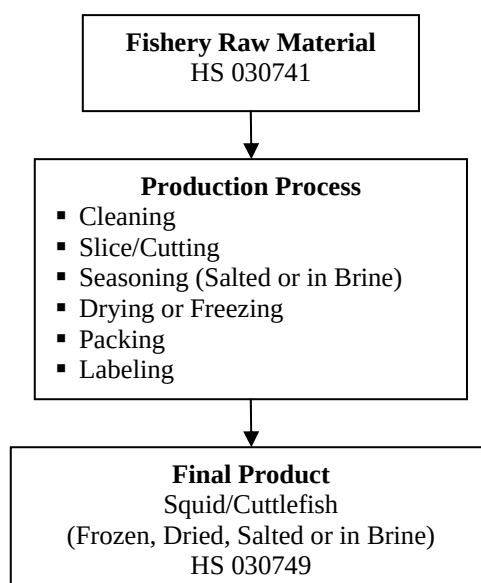


Figure 3.4: Production process of Squid/Cuttlefish product

In term of tariff classification change in production, the raw material of squid/cuttlefish in HS 0304.41 is transformed to a final product in HS 0307.49. The manufacturing process of this product is one step like the previous products. However, this time both raw material and final product has the same first 4 digits of 0307. Thus, a change at 6-digit level or “CTSH” is necessary for the product to gain origin.

Local Value Added

For frozen squids/cuttlefish, domestic raw materials are mainly used in production. The OIE survey shows that two firms in the survey use 100% of local content in production. Similarly, one firm in the questionnaire survey uses no imported raw material. Similarly, the FTI survey suggests that local content of this product is 100%. Thus, the value added requirement is not a problem for gaining origin for Thailand.

Appendix I

Table A: Data from Office of Industrial Economics Survey (Year 2005)

Product	Number of Firm	import content (%)			
		Min	Max	Average	Average (Import Firm Only)
HS 030420	1	0.00	0.00	0.00	-
HS 030490	1	0.00	0.00	0.00	-
HS 030613	3	0.00	0.00	0.00	-
HS 030749	2	0.00	0.00	0.00	-
HS 160414	8	0.00	52.00	22.80	45.60
HS 160420	9	0.00	65.56	12.57	37.72
HS 160520	4	0.00	21.03	5.27	21.03

Table B: Data from Questionnaire Survey (Year 2007)

Product	Firm number	Imported Input (%)
HS 030490	1	0
HS 030490	2	>50
HS 030613	6	1-4
HS 030613	10	0
HS 030749	1	0
HS 030749	6	1-4
HS 160414	3	>50
HS 160414	9	>50
HS 160420	1	0
HS 160420	5	>50
HS 160420	7	6-10
HS 160420	13	0
HS 160520	5	>50

Table C: Local Content (Federation of Thai Industry Survey)

Product	% of Local Content
HS 030420	n/a
HS 030490	100%
HS 030613	>40%
HS 030749	>40%
HS 160414	<40%
HS 160420	100%
HS 160520	100%

Chapter 4: Rules of Origin for the Thai Seafood Industry in existing FTAs

Thailand has concluded several Free Trade Agreements (FTAs) over the past few years. These FTAs are channels to enhance trade opportunities and market access in member countries or parties. In order to obtain preferential tariff treatment, as agreed in any FTA entrepreneurs/manufacturers need to follow the conditions set forth in the agreement. One of those conditions is satisfying Rules of Origin (ROO) which are used to determine the origin or nationality of products. ROO criteria were fully discussed in Chapter 1 of this paper. The objective of this chapter is two-fold. First, to examine the ROO in Thailand's existing free trade agreements and under particular GSP schemes. Second, to assess ROO provisions in these FTAs and GSP systems as applied to the Thai seafood industry.

All FTA agreements set forth a general rule that applies to all products. This general rule can be either Wholly Obtained (WO) or Substantial Transformation. Due to differences in each product/production nature, this general rule may not be appropriate to determine the origin of some products. Therefore, FTAs usually prescribe a special rule for particular products. This special rule is called the "product specific rule" or "PSR". PSR can have different local content or different level of tariff classification change requirements from the general rule. Moreover, some products require different treatment to confer origin such as the chemical reaction requirement for chemical products. These PSRs were fully discussed in Chapter 1 of this paper. In many cases, FTAs also provide an alternative rule. This alternative rule means manufacturers can choose the origin criteria to be applied. For instance, for HS Code 030420 (Fish Fillets), AFTA stipulates that the ROO criteria to be used may be either RVC 40% or CTH. Manufacturers can choose between RVC 40% and CTH as an origin criterion for their production.

It should be noted that the Generalized System of Preferences (GSP) is different for Preferential Tariff Agreements (PTA). GSP is the scheme that developed countries grant products imported from developing countries or least developing countries (LDCs) with tariff preferential treatment in order to increase trade with developing countries/LDCs, to promote their industrialization, and encourage the diversification of their economies. On the other hand, in FTAs, preferential tariff treatment is negotiated between members. Thus, in GSP, ROO are decided by the donor country, while in PTAs, ROO are set by all members through the negotiation process.

Rules of Origin for Seafood Products in Free Trade Agreements and GSP Schemes

Thailand now has six Preferential Tariff Agreements with its trading partners as follows:

1. ASEAN Free Trade Area (AFTA)
2. Thailand-New Zealand Closer Economic Partnership Agreement (TNZCEP)
3. Thailand-Australia Free Trade Agreement (TAFTA)
4. Japan-Thailand Economic Partnership Agreement (JTEPA)
5. ASEAN-China Free Trade Agreement (ACFTA)
6. India-Thailand Free Trade Area (ITFTA)

For GSP, there are two GSP systems that important to Thailand. These are the GSP for the US (GSP-US) and the EU (GSP-EU). In these six agreements and two GSP systems, ROO provisions are different from each other. As mentioned earlier, there are different types of ROO, the general rule and the production specific rule. It is necessary to examine both in order to understand which rule should be applied to seafood products.

General Rules

In the above preferential tariff agreements, the general rules are as follows.

- AFTA agreed to use WO, RVC 40%, or CTH for almost all HS codes with the remainder determining origin by reference to a specific rule line by line (for each HS code).
- TNZCEP, TAFTA, JTEPA do not establish a general rule, but there are product specific rules (PSR) which are rules that specify that the materials have undergone a

change in tariff classification or a specific manufacturing or processing operation, or satisfy an ad valorem criterion or a combination of any of these criteria. The member countries agreed to set PSR for each HS code product. Therefore, the characteristics of those products would be significant factors to stipulate origin criteria.

- ACFTA agreed to use WO or RVC 40% as the general rule and the remainder of products would have origin determined by a specific rule (depending on negotiations) for each HS code.
- ITFTA agreed to use CTSH and RVC 35% (currently under negotiation, not yet concluded) as the general rule and the remainder of products would have origin determined by a specific rule (depending on negotiations) for each HS code.
- GSP-US uses WO or RVC 35% for each tariff line.
- GSP-EU uses WO, ST (i.e. CTC, VA, production process) for each tariff line.

Product Specific Rule (PSR) and ROO for Seafood Product

ROO for seafood products in Thailand's existing FTAs and under GSP systems are shown in Table 4.1 below.

Frozen fish fillets (HS030420)

Frozen fish meat (HS 030490)

In AFTA and ACFTA, the general rule is applied to these two products. AFTA stipulates ROO criteria for this tariff line product using the general rule of RVC 40% or CTH, while ACFTA set origin criteria for this tariff line with RVC 40%. In TNZCEP and TAFTA, CTH has been agreed as conferring origin, while JTEPA has accepted CC as a criterion. At present, ITFTA is still under negotiation as to what CTC and LC percentages will be used.

For GSP-US, WO or LC of at least 35% (of the ex-factory price or appraised value of such goods in the USA) or Cumulative Origin RVC 35% (of ex-factory price or appraised value) by aggregation among Cambodia, Indonesia, and Philippines is applied. For GSP-EU, WO is used as the ROO criterion for this tariff line product.

Processed fish (Suremi) (HS 160420)

For this product, rather than the general rule of RVC 40%, CC can be used as an alternative for AFTA. However, only the general rule of RVC 40% is used in case of ACFTA. For TNZCEP, and TAFTA, the CC rule is applied. Although JTEPA also uses the CC rule to determine origin of goods, it applies a more stringent rule requiring that non-originating materials from Harmonization Chapter 03 (Fish and crustaceans, molluscs and other aquatic invertebrates) to be either obtained/caught by fishing in ASEAN member countries, taken by vessels which are registered in and sail under the flag of ASEAN countries, from the sea outside the territorial sea of that non-Party. ACFTA set RVC 40%, a general rule, as the origin criteria for this product. At present, ITFTA is still under negotiation as to what CTC and LC percentages will be used.

An origin criterion for GSP-US is WO or LC of at least 35% (of ex-factory price or appraised value of those goods in the USA) or Cumulative Origin RVC 35% (of ex-factory price or appraised value) by aggregation among Cambodia, Indonesia, and Philippines, while GSP-EU requires CC for gaining origin of the product.

Frozen shrimps (HS 030613)

As shown in Table 4.1 below, as in the case of the previous products, AFTA uses the general rule for this product of RVC 40% or CTH. WO is set forth in the TNZCEP agreement. For TAFTA and JTEPA, the CC rule is applied. ACFTA provides origin criteria for this tariff line of RVC 40%. At present, ITFTA is still under negotiation as to what CTC and LC percentages will be used.

For GSP-US, WO or LC of at least 35% (of the ex-factory price or appraised value of such goods in the USA) or Cumulative Origin RVC 35% (of ex-factory price or appraised value) by

aggregation among Cambodia, Indonesia, and Philippines is applied. For GSP-EU, WO is used as the ROO criterion for this tariff line product.

Processed shrimps (HS 160520)

The AFTA rule of origin for this product is either RVC 40% or CC, while the TNZCEP and TAFTA rule of origin is CC. ACFTA set RVC 40%, a general rule, as origin criteria for this product. The JTEPA agreement also applies the CC rule. However, there is a requirement similar to that of processed fish (HS 160420) above, that non-originating material in Harmonization Chapter 03 must be either obtained/ caught by fishing in ASEAN member countries, taken by vessels which are registered in and sail under the flag of ASEAN countries, from the sea outside the territorial sea of that non-Party. At present, ITFTA is still under negotiation as to what CTC and LC percentages will be used.

An origin criterion for GSP-US is WO or LC of at least 35% (of ex-factory price or appraised value of those goods in the USA) or Cumulative Origin RVC 35% (of ex-factory price or appraised value) by aggregation among Cambodia, Indonesia, and Philippines, while GSP-EU requires CC for gaining origin of the product.

Canned tuna (HS 160414)

Origin conferring criteria for canned tuna in ASEAN are different from other seafood products. ASEAN requires CC or a two-digit change for origin determination. TNZCEP and TAFTA also apply the same CC rule.

Again, the JTEPA agreement has more stringent rules. Although the same CC rule applies, JTEPA requires that all non-originating materials of the product in Harmonization Chapter 3 (i.e. tuna fish) must be taken by authorized fishing vessels listed in the Indian Ocean Tuna Commission (IOTC) Record. The Indian Ocean Tuna Commission (IOTC) is an intergovernmental organization mandated to manage tuna and tuna-like species in the Indian Ocean and adjacent seas.

ACFTA sets the same RVC 40% as origin criteria for canned tuna. Similarly, GSP-US and GSP-EU apply the same criteria as previous products. At present, ITFTA is still under negotiation as to what CTC and LC percentages will be used.

Cuttlefish and squids (HS 030749)

ROO criteria for this cuttlefish and squid products in all of Thailand existing PTAs are almost similar to those for frozen fish above. They are RVC 40% or CTH for AFTA, WO for TNZCEP, CC for TAFTA and JTEPA, RVC 40% for ACFTA. At present, ITFTA is still under negotiation as to what CTC and LC percentages will be used. WO or LC 35% for GSP-US and WO for GSP-EU.

Table 4.1 : Origin Criteria for the Thai Seafood Industry in existing FTAs

HS Code and Description	AFTA	TNZCEP	TAFTA	JTEPA	ACFTA	ITFTA	GSP-US	GSP-EU
030420 <i>Fish Fillet Frozen</i>	RVC 40% or CTH	CTH	CTH	CC	RVC 40%	CTC + LC (at the present could not agreed on the percentage of LC)	WO or LC at least 35% (of Ex-factory Price or Appraised Value of that goods in U.S.A.) or Cumulative Origin RVC 35% (of Ex-factory Price or Appraised Value) by aggregation among Cambodia, Indonesia, and Philippines	WO
030490 <i>Fish Meat, Minced or not, Frozen</i>	RVC 40% or CTH	CTH	CTH	CC	RVC 40%	CTC + LC (at the present could not agreed on the percentage of LC)	WO or LC at least 35% (of Ex-factory Price or Appraised Value of that goods in U.S.A.) or Cumulative Origin RVC 35% (of Ex-factory Price or Appraised Value) by aggregation among Cambodia, Indonesia, and Philippines	WO
030613 <i>Shrimps and Prawns, Frozen in shell or not, including boil in shell</i>	RVC 40% or CTH	WO	CC	CC	RVC 40%	CTC + LC (at the present could not agreed on the percentage of LC)	WO or LC at least 35% (of Ex-factory Price or Appraised Value of that goods in U.S.A.) or Cumulative Origin RVC 35% (of Ex-factory Price or Appraised Value) by aggregation among Cambodia, Indonesia, and Philippines	WO
030749 <i>Cuttlefish and Squid shell or not, Frozen, Dried, Salted or in Brine</i>	RVC 40% or CTH	WO	CC	CC	RVC 40%	CTC + LC (at the present could not agreed on the percentage of LC)	WO or LC at least 35% (of Ex-factory Price or Appraised Value of that goods in U.S.A.) or Cumulative Origin RVC 35% (of Ex-factory Price or Appraised Value) by aggregation among Cambodia, Indonesia, and Philippines	WO

HS Code and Description	AFTA	TNZCEP	TAFTA	JTEPA	ACFTA	ITFTA	GSP-US	GSP-EU
160414 <i>Tuna, Skipjack and Bonito, prepared or preserved, whole or in pcs. Excl. Minced</i>	CC	CC	CC	CC that provided, where non-originating materials of chapter 3 are used, each of the non-originating materials is taken by the authorized fishing vessels on the IOTC Record.	RVC 40%	CTC + LC (at the present could not agreed on the percentage of LC)	WO or LC at least 35% (of Ex-factory Price or Appraised Value of that goods in U.S.A.) or Cumulative Origin RVC 35% (of Ex-factory Price or Appraised Value) by aggregation among Cambodia, Indonesia, and Philippines	CC
160420 <i>Fish prepared or preserved, except whole or in pieces</i>	RVC 40% or CC	CC	CC	CC that provided, where non-originating materials of chapter 3 are used, each of the non-originating materials is obtained by fishing in a non-Party which is a member country of the ASEAN or taken by vessels, which are registered in and sail under the flag of a non-Party which is a member country of the ASEAN, from the sea outside the territorial sea of that non-Party	RVC 40%	CTC + LC (at the present could not agreed on the percentage of LC)	WO or LC at least 35% (of Ex-factory Price or Appraised Value of that goods in U.S.A.) or Cumulative Origin RVC 35% (of Ex-factory Price or Appraised Value) by aggregation among Cambodia, Indonesia, and Philippines	CC
160520 <i>Shrimps and Prawns, prepared or preserved</i>	RVC 40% or CC	CC	CC	CC that provided, where non-originating materials of chapter 3 are used, each of the non-originating materials is obtained by fishing in a non-Party which is a member country of the ASEAN or taken by vessels, which are registered in and sail under the flag of a non-Party which is a member country of the ASEAN, from the sea outside the territorial sea of the non-Party	RVC 40%	CTC + LC (at the present could not agreed on the percentage of LC)	WO or LC at least 35% (of Ex-factory Price or Appraised Value of that goods in U.S.A.) or Cumulative Origin RVC 35% (of Ex-factory Price or Appraised Value) by aggregation among Cambodia, Indonesia, and Philippines	CC

Note	:	AFTA	= ASEAN Free Trade Area
		TAFTA	= Thailand-Australia Free Trade Agreement
		TNZCEP	= Thailand-New Zealand Closer Economic Partnership Agreement
		JTEPA	= Japan-Thailand Economic Partnership Agreement
		ACFTA	= ASEAN-China Free Trade Agreement
		ITFTA	= India-Thailand Free Trade Area
		GSP	= Generalized System of Preferences for WTO members
		CTC	= Change of Tariff Classification
		CC	= Change of Chapter (2 digit level) – Change to this chapter from any other chapter
		CTH	= Change of Heading (4 digit level) – Change to this heading from any other heading
		CTSH	= Change of Sub-Heading (6 digit level) – Change to this subheading from other subheading or from any other Heading
		RVC	= Regional Value Content of the FOB value of the good
		LC	= Local Content of the FOB value of the good

Thai Seafood Industry and existing ROOs

Frozen Fish fillet/meat (HS 030420 and HS 030490)

These two products use raw material from harmonization code 0302 and 0303 and involve a one-step production process. When the change in tariff classification ROO is applied, there needs to be at least a 4-digit change or CTH in order to qualify as substantial transformation. (See Table 4.2) Thus, Thailand has no origin conferring problem in AFTA and free trade agreements with New Zealand and Australia which employ the CTH rule. However, the JTEPA agreement requires CC which is impossible given actual production processes so it is not possible to meet the origin criteria.

ACFTA requires regional value content of 40%, while GSP-US requires either WO or 35% of local content and GSP-EU allow only wholly obtained (WO) product to get preferential treatment.

Most fish raw materials in producing frozen fish are from local sources. Only a small amount of imported fish, such as salmon, is used in production. In other words, the majority of Thai frozen fish products are wholly obtained. Thus, in terms of local value added requirement, most of Thailand frozen fish products have no problem in gaining the preferential tariff rate; this is true even for exports to Japan since WO product automatically satisfy origin criteria. However, some firms that use high percentages of imported inputs may be unable to gain access to preferential tariff rates. In order to help these firms, CTH rule, which corresponds with actual production process, would be more appropriate for this product.

Table 4.2 Tariff Classification Change and Local Content of Thai Seafood Industry

Product	Raw Material	Final Product	CTC	Local Content
Frozen fish fillets	HS 0302/HS 0303	HS 030420	CTH	100%
Frozen fish meat	HS 0302/HS 0303	HS 030490	CTH	100%
Processed fish	HS 0303/HS 0303	HS 160420	CC	>40%
Frozen shrimps	HS 030613	HS 030613	no change	>40%*
Processed shrimps	HS 030613	HS 160520	CC	100%
Canned tuna	HS 0303.41-49	HS 160414	CC	<40%
Cuttlefish and squids	HS 030741	HS 030749	CTSH	>40%*

* Local content may be as high as 100%

Processed fish (Suremi) (HS 160420)

Harmonization of processed fish is 160420 in chapter 16, while the raw material is from different chapter 03, thus, the change in tariff classification in production for this product is in 2 digit level or CC. (see Table 4.2)

Most of Thailand's preferential trade agreements, AFTA, TAFTA and TNZCEP require CC, which fits the actual production processes for these products.

In the agreement with Japan (JTEPA), however, a more stringent rule is applied. It requires that all non-originating material from chapter 03, the raw material of this product, to be acquired in ASEAN or taken by vessels which are registered in and sail under the flag of ASEAN countries.

The ASEAN-China Free Trade Agreement, on the other hand, uses local content criteria, requiring 40% of regional value added. From a previous chapter of this study, a raw material for processed fish production is sourced from within the country, thus, can satisfy WO criteria. However, there are some firms that use foreign inputs in production. It is therefore recommended that when there is an RVC requirement, the percentage of RVC should not be over 40%. Since the local content in production is more than 40%, Thailand can meet RVC requirements in both the ACFTA agreement and GSP-US which require WO or LC of 35%.

Because GSP-EU requires only CC in this product; Thai seafood production will have no problem obtaining origin status.

For trade liberalization purposes, it is suggested that the ROO in Thailand's FTAs should be in accordance with actual production processes. Thus, CC (or the less stringent rule of CTH) is advised.

Frozen shrimps (HS 030613)

Table 4.2 above shows that raw material of frozen shrimp came from HS 030613, the same HS as for finished frozen shrimp products. Thus, the change in tariff classification is inappropriate as an origin conferring method. Another option for substantial transformation measurement is therefore a local content requirement.

Table 4.1 shows that both TAFTA and JTEPA set CC as an origin criterion. Since the actual production process cannot change the HS code at any digit level, even at 6 digits level – a less stringent rule -- Thailand frozen shrimp need to be wholly obtained in order to gain preferential tariff treatment. New Zealand requires 100% local content. AFTA and ACFTA are more liberal by allowing RVC of 40%. For GSP ROO, WO/LC 35% is used for the US and WO for the EU.

For frozen shrimp products, as mentioned in Chapter 03, a majority of shrimp are from local sources. Thus, most of Thailand's frozen shrimp can meet WO conditions. However, some Thai firms have reported that imported inputs are used and the surveys suggest that Thai local content of this product is more than 40%. Thus, RVC 40% is suitable for Thailand.

Processed shrimps (HS 160520)

Different from frozen shrimps, processed shrimp's raw materials come from products in a different harmonization chapter 03, from HS 030613, while the final product harmonization code is HS 160520. Therefore, the actual production process for processed shrimps involves a Change in Chapter or CC. (See Table 4.2)

Tariff classification change requirement of AFTA, TAFTA and TNZCEP and GSP-EU is CC, which is in line with the actual production process. Japan, again, applies a more stringent rule, similar to that for processed fish, while ACFTA still uses RVC 40% as usual.

Since most shrimp in Thai production are either farmed or caught domestically, thus, local content of shrimp products are almost 100% meeting a ROO requirement for AFTA, ACFTA and GSP-US. Moreover, most of Thai processed shrimp can meet wholly obtained conditions. However, there are some firms which have reported that they use up to 20% of foreign inputs. In such cases, these firms can still gain preferential tariff treatment from China but not Japan.

In case countries (or Thailand in the future) are unable to find local shrimp raw materials, they will not obtain this tariff privilege, when the high RVC rule is imposed. It is therefore recommended that the more liberal rule of CC should be applied to this product.

Canned tuna (HS 160414)

For canned tuna, AFTA, TAFTA, TNZCEP and GSP-EU require the CC rule as conferring origin, which fits the actual production process. The JTEPA agreement, although allowing for the use of CC, further demands that all non-originating raw materials (from chapter 03 of the harmonization classification) must be caught in ASEAN country territories or taken by vessels of IOTC member countries. Looking at tuna sources, Thailand's major suppliers of fresh tuna are Vanuatu, Japan, Taiwan, South Korea, Maldives, South Africa and some from ASEAN members such as the Philippines. (See Table 3.4-3.6) All of these countries are registered with IOTC, except Taiwan and Maldives. Thus, if manufacturers need a preferential tariff rate from the JTEPA agreement, they must avoid using tuna fish from non IOTC countries like Taiwan

and Maldives. The Thai Food Processors' Association provides information that there is an increasing amount of tuna being imported from IOTC countries. Thailand normally import 600,000-700,000 tons of tuna fish worldwide, with almost half of total tuna imports in 2005 (47.4%) coming from IOTC members. Even though Thailand can manage using tuna from IOTC countries, this rule is biased against using tuna from some other countries and therefore may cause inefficiency in production, leading to higher production costs.

In terms of domestic value added, since this product depends heavily on imported tuna, the local value added of this product may be lower than 40%. Thus, Thailand canned tuna manufacturers may not receive benefits from the ACFTA which requires as high as 40% of RVC. In such cases, Thai manufacturers may need to consider using tuna from ASEAN countries in order to have more accumulative regional value added.

Since many canned tuna producers depend on imported tuna thus the CC rule may be a more liberal rule for this product.

Cuttlefish and squids (HS 030749)

For the last product in this study, cuttlefish and squids, the production process is one step - transforming raw material in HS 030741 to final product in HS 030749. A change in production process is thus in the 6 digit level or CTHS (change of tariff sub-heading).

For change in tariff classification rule, AFTA requires CTH, while TAFTA and JTEPA require CC. All of these are inconsistent with the actual production process, making these ROOs a barrier to trade because only wholly obtained product may satisfy origin criteria.

On the value added aspect, AFTA, ACFTA require 40% of regional value added to obtain origin status. A more stringent rule may be seen in case of TNZCEP and GSP-EU which require the product to be 100% local in origin (WO).

For Thailand, Thailand mostly uses domestic cuttlefish/squid in production. Imported input, however, is also used when the price is attractive. Local content of this product is therefore more than 40% (and most firms' products are 100% LC products). Although the majority of Thai producers can meet the WO requirement, firms that use imported input will have a problem, especial in case of WO of TNZCEP and GSP-EU and CC of TAFTA and JTEPA which make it impossible for all producers to comply (and thus equates to a WO requirement). ROOs for this product are relatively difficult for Thai producers.

In conclusion, when comparing ROO provision in all Thai PTA, one will see that there are both one that in line with and one not in line with the real process. Problem, however, depends on level of dependency on imported fishery in put.

Products that mostly use domestic raw material that are frozen fish fillets, frozen fish meat and processed shrimps will have less origin conferring problem. Since these product will automatically gain an origin through wholly obtained criterion.

Next group of products are processed fish, cuttlefish/squid and frozen shrimp. This group of product is partly dependent on imported input. Local content in these products is more than 40%. Looking at the current ROO provision, we can see that there are still a lot of inconsistency between tariff classification change and the ROO requirement. For example, the real tariff classification change for cuttlefish/squid product is CTHS, while the ROO requirement is CC for JTEPA and TAFTA. While change of tariff classification can not be used in case of frozen shrimp due to the nature that raw material and final product is share the same HS code, JTEPA and TAFTA still require a CC for origin conferring. In this case, only product that use domestic raw material can be benefited for preferential tariff rate, while the one that use imported raw material, although can export, will have to pay MFN rate tariff.

The last group is the one that heavily depend on imported input, a canned tuna. This canned tuna group will be the one that has the highest impact if the ROO is not in line with the real production process because of its low local content. Thus, Thailand was very careful about this product and, as a result, most of the ROO is correspond with the real production in term of both CTC and local content requirements. However, a 40% local content requirement of ASEAN-China FTA is a problem for Thailand since local value added of this product is less than 40% (and may less than 20%).

Although, Thai seafood products depend more on domestic supply of fisheries, some product especially canned tuna still need imported input. Thus, a more liberal rule may be preferable for Thailand.

As mentioned in Chapter 3 of this study, more liberal rules will lower manufactures costs and make products more competitive through the efficient sourcing of raw materials. Using simple ROO can also help reducing Certification of Origin (CEO) acquiring cost for manufactures. Thus a Tariff Classification Change (CTC) criterion is recommended. The applied ROO needs to be inconsistent with the production process so that it's not be used as a trade barrier. Some of the ROOs for seafood products in Thailand's existing FTAs are currently impractical, while some are too stringent in order to protect some members market. This will distorting the market, causing inefficient in term or raw material sourcing and most importantly making the goal of free trade area cannot be achieved. Thus, the Thai government needs to pay attention to the existing rules and, if possible, re-negotiate more appropriate and more liberal rules, the Change of Tariff Classification (CTC), in all PTA for all possible product, namely frozen fish fillets/meat, processed fish, frozen shrimp, processed shrimp, canned tuna, cuttlefish/squid products according the real production process shown in table 4.2. In case of frozen shrimp which CTC cannot be applied, appropriate local content of 40% is recommended. In the mean time, manufacturers may need to undertake adjustments in production, especially in terms of raw material sourcing, in order to increase regional value added in their products to meet the RVC requirement in each PTAs.

Chapter 5: Policy Recommendations and Conclusions

Seafood products are an important source of income for the economy of Thailand, as well as for those of many developing and LDC countries. For the seven products in this study, Thailand seafood exports in 2006 amounted to US\$ 5,093 million. There were 496 fishery factories registered with Department of Industrial Works in 2003, with a registered capital of Bath 22,000 million. Employments in fishery production are as high as 158,590 workers in the same year. Over the past few years, the Thai seafood industry has confronted many challenges ranging from increasing labor costs, exhaustion of natural resources, especially fisheries and increasing competition in world market due to further trade liberalization. Countries all around the world, including Thailand, have been reducing their tariffs as a result of either the conclusion of free trade agreements or unilateral tariff reductions.

Using trade liberalization as a development strategy, Thailand and other countries have increasingly sought to participate in preferential tariff agreements (PTAs). Thailand now has a several free trade agreements with other ASEAN members (AFTA), Australia (TAFTA), New Zealand (TNZCEP), Japan (JTEPA) and China (ACFTA), while still in negotiations with India, South Korea and Peru. Being a member of PTAs, Thailand and her partners' tariff rates have been reduced over the years. To benefit from preferential tariff rates from partner countries, exported products must be of Thailand origin.

Rules of Origin or ROO are usually negotiated amongst the PTA parties in order to establish criteria to determine product nationality. On one hand, ROO can help in the prevention of circumvention problems, such as a transshipment of products from outside the PTA in order to gain tariff preferences from countries within the PTA. On the other hand, ROOs if they are not appropriate or too restrictive, difficult or impracticable to implement can be used as a trade barrier to protect domestic markets and industries from other parties to the FTA. Restrictive ROOs, though ostensibly promoting intra-regional trade, may force manufacturers to use raw materials from inefficient sources and, as a result, product costs are increased which reduces producer competitiveness and, at the same time, diminishes consumer welfare.

This study is aimed to study the appropriate ROO in order to increase market access by adoption of less restrictive and removal of protective ROO. This study found that in all Thailand's PTA, there are still a number of protective ROO provisions. That is a rule that not in line with the real production process, making it's difficult or impossible to comply with. Table 5.1 below is the real production process in term of tariff classification change and value added of each product. Table 5.2 shows PTA that ROO provision that inconsistent with the real production process.

Table: 5.1 Tariff Classification Change and Local Value Added in production

Product	Raw Material	Final Product	CTC	Local Content
Frozen fish fillets	HS 0302/HS 0303	HS 030420	CTH	100%
Frozen fish meat	HS 0302/HS 0303	HS 030490	CTH	100%
Processed fish	HS 0303/HS 0303	HS 160420	CC	>40%
Frozen shrimps	HS 030613	HS 030613	no change	>40%*
Processed shrimps	HS 030613	HS 160520	CC	100%
Canned tuna	HS 0303.41-49	HS 160414	CC	<40%
Cuttlefish and squids	HS 030741	HS 030749	CTSH	>40%*

Impacts of this protective ROO to each seafood product differ from product to product according to level local value added. For the product that has 100% local content which are of frozen fish fillets, frozen fish meat and processed shrimps, there will be no origin conferring problem because they will automatically gain an origin through wholly obtained criterion. However, if the domestic raw materials are exhausted or insufficient in the future, these products will have a grate trade impact.

Next group of products are processed fish, cuttlefish/squid and frozen shrimp. This group of product is partly dependent on imported input. If the ROO is protective, only manufactures that use domestic raw material can be benefited for preferential tariff rate, while the one that use imported raw material, although can export, will have to pay MFN rate tariff. This group of product also will have a negative affect if Thailand depend more on imported raw material.

Table 5.2: Thailand's PTA that ROO provision inconsistent with real production process

Seafood Product	AFTA	TNZCEP	TAFTA	JTEPA	ACFTA	ITFTA	GSP-US	GSP-EU
Frozen fish fillets				X				X
Frozen fish meat								
Processed fish								
Frozen shrimps		X	X					X
Processed shrimps								
Canned tuna					X	X		
Cuttlefish and squids		X	X	X				X

X = PTA that is in consistent

The last group is the one that heavily depend on imported input, a canned tuna. This canned tuna group will be the one that has the highest impact if the ROO is not in line with the real production process because of it low local content.

Recommendations

ROOs should be used to promote trade and should not be employed as non-tariff barriers, when tariff rates are reduced or eliminated. While promoting free trade, ROOs should, at the same time, prevent circumvention -- an unfair trade practice.

Therefore, the Thai government, in the course of devising and discussing ROOs during trade negotiations, should try to re-negotiate identified problematic ROOs with PTA parties as part of periodic FTA review procedures so that ROOs will be liberalized. For the negotiating PTA and the future PTA, Thai government should propose the liberal ROO so that both parties in the agreement can truly benefited from the free trade agreement. The liberal ROO for seafood product will be discussed in the following section.

As for the private sector, Thai manufacturers may need to adjust their production, especially as regards raw material sourcing, in order to meet ROOs requirements (especially for regional value added requirements).

Specific recommendations are as follows:

1. Rules of origin should be liberal and, at same time, should effectively prevent circumvention, therefore CTC is recommended. Comparing to RVC ROO, using CTC is easier for the manufacturer to follow and can reduce the accounting costs for certificates of origin (COE). Because there It is not necessary for exporter to have a complicate system to monitor the sources of fish in order to calculate the accurate value added of product in each shipment. This complication will be much higher if manufactures imported fish from different sources and use production lot. The incorrect calculation may result in false COE and exporter may have to pay a fine. Moreover, RVC is sometimes used to encourage intra-regional sourcing of raw material. This may cause a bias toward using inefficient/uncompetitive raw material. As a result, a producer may less competitive in other markets and the same time consumer welfare may be lost due to the higher price of product.

2. ROO should be in accordance with actual production processes. If the ROO is inconsistent with the actual production process, manufacturers are unable to comply, as a result, the most stringent rule, WO, will typically be the criterion for origin. For the seven seafood products in this study, the following are the actual production processes in terms of tariff classification change. Details of real tariff classification change production process of each process show in table 5.1 above. In case of frozen shrimp, however, CTC rule cannot be applied since the raw material is in the same harmonization code with final product. Thus a RVC rule of less than 40% is recommended. The suggested percentage of less than 40% is in line with real production and not too and would amount to a barrier to trade.
3. Followings are specific ROO position for Thailand in all PTA negotiations.

- Frozen fish fillets	CTH
- Frozen fish meat	CTH
- Processed fish	CC
- Frozen shrimps	RVC <40%
- Processed shrimps	CC
- Canned tuna	CC
- Cuttlefish and squids	CTSH
4. Next, Thai government should plan to revise the ROO that are too protective in each PTA. In order to do so, the reviewing period regarding ROO should be identified. The PTA that has protective ROO shows in table 5.2 above. However, as suggested in recommendation 1 above, Thai government should try to negotiate the use of CTC as ROO criteria for this sector. PTA that Thailand needs to negotiate with as follows.

4.1 ACFTA	For all products
4.2 AFTA	Frozen shrimp, Cuttlefish/Squids
5. Ministry of Industry as one of the agency that has duty to provide suggestion regarding ROO negotiation position in manufacturing sector to negotiator (Department of Trade Negotiation and Customs Department) need to send the above recommendation and supply negotiator with supporting evident.
6. For the private sector, Ministry of industry need to advise manufacturers to adjust there production to meet origin criteria so that they can enjoy the preferential tariff rate. Following are specific recommendations regarding the value added for each product.
 - Frozen fish fillets/Frozen fish meat
These products have minimal of ROO problem because raw materials are mostly from domestic sources. However, there are some firms that use imported fish in production. In this latter case, manufacturers are unable to obtain preferential tariff rates from Japan (JTEPA), China (ACFTA) and the EU which required CC, RVC 40% and WO, respectively. Thai exporters may consider using fish from China and ASEAN in order to increase regional value content. However, for Japan, CC is not in line with actual production processes, thus it is impossible for any firm to comply, accordingly, this rule should be re-negotiated. For the EU, since GSP is unilaterally determined and is intended to provide special and differential treatment generally to DCs or LDCs, it is not practically feasible to attempt re-negotiation, at least on a bilateral basis..
 - Processed fish
For processed fish there are two PTAs that pose problems for Thailand. First is the RVC 40% requirement of China. In this case, raw material from China or ASEAN should be considered. Second is JTEPA which requires that fish from harmonization Chapter 03 must come from ASEAN. This is very difficult to comply with since most Thai imported fish, salmon, for example, cannot be sourced from ASEAN.
 - Frozen shrimps
For this product, AFTA and China require RVC of 40%, while Japan and Australia specify CC (which is not consistent with actual production processes which tariff classification of raw material and finish product are in the same HS code) and New Zealand and EU mandate WO. Thus, Thai frozen shrimp producers must use only local shrimps in order to qualify for Thai origin.

- Processed shrimps

Most of the agreements require CC (a change in chapter level between input and output) which is in line with actual production processes which raw material is in Chapter 03 while final product is in Chapter 16. Only China requires RVC 40%, while Japan imposes a requirement of using only ASEAN fishery raw materials. Since supply of shrimp is local, there is no origin problem for this product and thus no adjustment needed.

- Canned tuna

Unlike other seafood products, Thailand imports a majority of tuna for production purposes. Major export markets for Thailand are the US, Australia and Japan. In most existing PTAs of which Thailand is a member, CC is used as an origin criterion. Since the actual production process is also CC, Thailand has no origin problem for this product. There are two PTAs pursuant to which Thailand may face difficulties, ACFTA and JTEPA. Firstly, ACFTA requires relatively high RVC of 40% which Thailand may sometimes be unable to comply with. Tuna fish from ASEAN may be needed to increase regional content for preferential tariffs from China. However, China is not an important export market for this product. Secondly, Japan requires the additional condition that tuna needs to be caught by a vessel of a country registered with the IOTC. In this case, Thai producers may need to change the sourcing of tuna to buy more from IOTC members like Vanuatu, South Africa, India and Indonesia.

- Cuttlefish and squids

Similar to most fish products, sources of cuttlefish and squids are local in origin. However, Thailand imports some of inputs from abroad. The actual production process for this product is CTSH (change in sub-heading or four digits change requirement from raw material in HS 030741 to finished product in HS 030749). Comparing this ROO requirement, it can be seen that ROO for this product is not practical. New Zealand and EU require WO, while Japan and Australia require CC. However, since CC is unrealistic, product must be wholly obtained in order to satisfy origin requirements. For AFTA and China, RVC 40% is the currently accepted ROO. In this case, raw material for this product, if imported, should be from the ASEAN region to meet the RVC requirement.

Conclusions

Liberal ROOs can help manufacturers become more competitive by helping to reduce the COE acquisition cost and are not biased in favour of using inefficient raw material sources. Thus, PTAs should not impose too stringent ROOs or use ROOs as a barrier to trade in order for every participating country member to enjoy the benefits of real trade liberalization. Thai government should use CTC as a ROO criterion in seafood sector. This CTC rule need to be in line with real production process, otherwise ROO will be a trade barrier. In case that product inapplicable for CTC rules such as frozen shrimp, the RVC should not be too high. In the next reviewing process of PTAs that Thailand are member, Thailand should propose a this change in order to increase market access for this product for all party members. In the mean time, manufacturers need adjust their production especially their source of inputs to meet origin criteria so that they can enjoy the preferential tariff rate.

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APPENDIXES

**แบบสอบถาม การศึกษาเรื่องกฎแหล่งกำเนิดสินค้าที่เหมาะสมของไทย
ในอุตสาหกรรมอาหารทะเล**

1. ข้อมูลสินค้าที่ผลิต (หากผลิตสินค้าหลายชนิด กรุณาแยกตอบในแบบสอบถามเดียวกันแยกอีกชุดหนึ่ง)

1.1 สินค้าที่ผลิต

1.2 ประเภทสินค้าที่ผลิตแยกตามพิกัดศุลกากร

- | | |
|--|--|
| ☐ เนื้อปลาแช่แข็งแบบฟิเล (HS 030420) | ☐ กุ้งปรุงแต่ง/แปรรูป (HS 160520) |
| ☐ เนื้อปลาแช่แข็งแบบอื่นๆ (HS 030490) | ☐ กุ้งแช่แข็ง (HS 030613) |
| ☐ ปลาทุบกระป๋อง (HS 160414) | ☐ ปลาหมึกแช่แข็ง (HS 030749) |
| ☐ ปลาปรุงแต่ง/แปรรูป (ซูริมิ) (HS 160420) | |
| ☐ อื่นๆ โปรดระบุ | (HS |

1.3 มูลค่าของวัตถุดิบจากต่างประเทศคิดเป็น**ประมาณกี่เปอร์เซ็นต์**ต่อราคาสินค้า (FOB Price)

ในการผลิต สินค้าข้างต้นใกล้เคียงกับตัวเลขใดที่สุด

- | | | | | |
|------------------------------------|--------------------------------------|----------------------------------|----------------------------------|----------------------------------|
| ☐ ไม่ใช้เลย | ☐ 1-4% | ☐ 6-10 % | ☐ 11-15 % | ☐ 16-20 % |
| ☐ 21-25 % | ☐ 26-30 % | ☐ 31-35 % | ☐ 36-40 % | ☐ 40-45 % |
| ☐ 46-50 % | ☐ มากกว่า 50% | | | |

1.3 ชนิดของสัตว์น้ำที่ใช้เป็นวัตถุดิบในการผลิต (กรณาระบุเลขพิกัดศุลกากรของปลา/สัตว์น้ำ หากทราบ)

- | | |
|--------|-----------|
| 1..... | (HS |
| 2..... | (HS.....) |
| 3..... | (HS.....) |
| 4..... | (HS.....) |

1.4 แหล่งที่มาของสัตว์น้ำที่ใช้เป็นวัตถุดิบในการผลิต

- | | | |
|--|---------------------------------------|-------------------|
| ☐ จากในประเทศ | คิดเป็นร้อยละของสัตว์น้ำที่ใช้ทั้งหมด | % โดยประมาณ |
| ☐ จากต่างประเทศ | คิดเป็นร้อยละของสัตว์น้ำที่ใช้ทั้งหมด | % โดยประมาณ |

หากมีการนำเข้า จงระบุประเทศที่มีการนำสัตว์น้ำ 5 อันดับแรก

- | | |
|---------|---------|
| 1. | 4. |
| 2. | 5. |
| 3. | |

2. ตลาดของสินค้า

2.1 บริษัทของท่านส่งออกสินค้าคิดเป็นจำนวนมูลค่าร้อยละเท่าใดของมูลค่าสินค้าทั้งหมดที่ผลิต
.....%

2.2 ตลาดส่งออกที่สำคัญ 5 อันดับแรก

ประเทศ	ร้อยละโดยประมาณของการส่งออกเทียบกับการส่งออกทั้งหมด
1.	%
2.	%
3.	%
4.	%
5.	%

3. การใช้สิทธิพิเศษทางภาษีอากรและกฎแหล่งกำเนิดสินค้า

3.1 ท่านมีความเข้าใจเกี่ยวกับเรื่องแหล่งกำเนิดสินค้าภายใต้เขตการค้าเสรีในระดับใด

☐ เล็กน้อย ☐ ปานกลาง ☐ มาก ☐ มากที่สุด

3.2 บริษัทของท่านส่งออกสินค้าไปยังประเทศใดบ้างที่มีข้อตกลงให้สิทธิพิเศษทางด้านภาษีแก่ไทย

(สามารถเลือกตอบได้มากกว่า 1 ข้อ)

- | | |
|--|--|
| ☐ เขตการค้าเสรีอาเซียน | ☐ เขตการค้าเสรีไทย-ญี่ปุ่น |
| ☐ เขตการค้าเสรีอาเซียน-จีน | ☐ เขตการค้าเสรีไทย-อินเดีย |
| ☐ เขตการค้าเสรีไทย-ออสเตรเลีย | ☐ เขตการค้าเสรีไทย-นิวซีแลนด์ |
| ☐ สิทธิพิเศษภายใต้ GSP (จากประเทศ.....โปรตุเกส) | |
| ☐ อื่น ๆ (โปรดระบุ)..... | |

3.3 หากบริษัทของท่านมีการส่งออกไปยังประเทศ/ข้อตกลงตามข้อ 3.2 ท่านได้ใช้สิทธิประโยชน์ด้านภาษีอากรหรือไม่

☐ ไม่ได้ใช้ ☐ ใช้น้อย ☐ ปานกลาง ☐ มาก

3.4 หากในข้อ 3.3 ท่านเลือกตอบข้อ ไม่ได้ใช้ ใช้น้อย หรือใช้ปานกลาง จงอธิบายว่าเนื่องจากสาเหตุใด ?

(สามารถเลือกตอบได้มากกว่า 1 ข้อ)

- ☐ ไม่ทราบว่าสินค้าที่ส่งออกได้รับการลดภาษี
- ☐ ไม่สามารถผลิตได้แหล่งกำเนิดตามที่ข้อตกลงหรือประเทศที่ให้สิทธิพิเศษกำหนด
- ☐ มีความไม่สะดวกในการขอใบรับรองแหล่งกำเนิดสินค้า
- ☐ มีค่าใช้จ่ายเพิ่มขึ้นในการจัดทำ/ขอใบรับรองแหล่งกำเนิดสินค้า
- ☐ อื่นๆ โปรดระบุ

หมายเหตุ: หากมีข้อสงสัยเกี่ยวกับแบบสอบถามฉบับนี้ กรุณาติดต่อ นายอนุวัตร จุลินทร หรือ นางสาวสุทธิรัตน์ ชาลาธราวัฒน์ ที่หมายเลขโทรศัพท์ 02 202 4321 และ 02 202 4307 โทรสาร 02 202 4308

Questionnaire (rough Translation)

1. Product Deatails

1.1 Name of Product

1.2 Type of product according to HS classification

- | | |
|--|--|
| ☐ Frozen Fish Fillets (HS 030420) | ☐ Processed Shrimps (HS 160520) |
| ☐ Other Frozen Fish Meat (HS 030490) | ☐ Frozen Shrimps (HS 030613) |
| ☐ Canned Tuna (HS 160414) | ☐ Squids/Cuttlefish (HS 030749) |
| ☐ Processed Fish (Suremi) (HS 160420) | |
| ☐ Other, Please specify | (HS) |

1.3 What is the closes estimation of the of imported raw material value in your product FOB price

- | | | | | |
|----------------------------------|--|----------------------------------|----------------------------------|----------------------------------|
| ☐ 0% | ☐ 1-4% | ☐ 6-10 % | ☐ 11-15 % | ☐ 16-20 % |
| ☐ 21-25 % | ☐ 26-30 % | ☐ 31-35 % | ☐ 36-40 % | ☐ 40-45 % |
| ☐ 46-50 % | ☐ more than 50% | | | |

1.3 Type of aquatic animal use in production

- | | |
|--------|------------|
| 1..... | (HS) |
| 2..... | (HS.....) |
| 3..... | (HS.....) |
| 4..... | (HS.....) |

1.4 Please identify sources you aquatic animal

- ☐ Domestic %
☐ imported %

if your are import, please list top five source (country) that you import most

- | | |
|---------|---------|
| 1. | 4. |
| 2. | 5. |
| 3. | |

2. Market

2.1 Percentage of your export to total production%

2.2 Please list top five of your export market

- | Country | Share |
|---------|--------|
| 1. |% |
| 2. |% |
| 3. |% |
| 4. |% |
| 5. |% |

3. Utilization of Preferential tariff and Rules of Origin

3.1 Your understanding level of ROOs

- ☐ little ☐ moderate ☐ high ☐ highest

3.2 Which of the following tariff preferential agreement that your company export to?

- | | |
|---|---|
| ☐ AFTA | ☐ JAPAN-Thailand FTA |
| ☐ ASEAN-China FTA | ☐ India-Thailand FTA |
| ☐ Australia-Thailand FTA | ☐ New Zealand Thailand FTA |
| ☐ GSP (Please specify country) | |
| ☐ Others (Please specify)..... | |

3.3 If you company export to the agreement listed in 3.2, how your company can utilize the preferential tariff rate?

- ☐ none ☐ low ☐ moderate ☐ high

3.4 If your answer in 3.3 is "none" or "low", what is the reasons

- ☐ have no knowledge of preferential tariff
☐ Cannot product according the agreed ROOs
☐ Cost of Certificate of Origin (CO) is too high
☐ CO application and procedure is too complicate
☐ Others, Please specify