A Composite Index of Market Access for the export of rice from Thailand

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Table of Contents

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Abbreviations and Acronyms

AFTA – ASEAN Free Trade Agreement
ASEAN – Association of South East Asian Nations
BMA – Barriers to market access

CIF – Cost, insurance and freight
CIMA – Composite Index Market Access
EU – European Union
FOB – Free on board
GI – Geographical Identification
GMP – Good Manufacturing Practice
HACCP – Hazard Analysis Critical Control Point .
HS – Harmonised System Classification
ISO – International Organisation for Standardisation
MFN – Most Favoured Nation
OECD – Organisation for Economic and Co-operation and Development
OAE – Office of Agricultural Economics
SPS – Sanitary and phytosanitary
TBT – Technical barriers to trade
TRQs – Tariff rate quotas
US – United States
WTO – World Trade Organization

List of tables

List of Diagram

Executive Summary

This study of the Composite Index of Market Access (CIMA) of the rice industry of Thailand is part of the International Centre for Trade and

Sustainable Development (ICTSD) pilot project on market access for three selected countries (Uruguay, the United States and Thailand). The objective of this project is to build an indicator of market access of main rice importing countries that would include not only tariffs but also other barriers affecting market access for agricultural product such as sanitary and phytosanitary (SPS) measures, technical barriers to trade (TBT), private standards, excise taxes in importing countries and other non-tariff barriers. This tool should be of assistance in trade negotiation and giving a clear indication of whether any particular negotiated outcome result in a real liberalization.

In Thailand's case the three import markets which are the US, the Philippines and South Africa have been selected. These countries are major markets for three major types of rice that Thailand exports to the International market, Thai Jasmine rice, white rice 25% and parboiled rice respectively.

All data used in this study are from official, private and international sources. Mainly, official data are secondary data compiled by Office of Agricultural Economics (OAE) under Ministry of Agriculture and Cooperatives and Customs Department under Ministry of Finance. Private data are collected by interviewing the rice business entrepreneurs both processors and exporters in Thailand. And international data are from the WTO secretariat and www.trademap.org.

This study comprised of 8 chapters as follows:

Chapter 1 describes the introduction of this study, including the data sources used, the selected period and the unit of measurement.

Chapter 2 illustrates how Thai rice industry is important to Thailand due to 16 million Thai people holding farmland only 2.4 – 3.2 hectares per household depending on this sector. Thailand has produces 29.61 – 32.09 million tonnes of long grain rice (Indica type) annually with 9.18 – 9.24 million hectares of cultivation areas.

Rice processing and exporting in Thailand are operated by private sector. Regarding rice processing, there are more than 40,000 mill houses in Thailand. A major type of rice exporting commodity of Thailand is white rice. Around 45 percent of total rice productions are export worldwide.
Thailand has potential to export all rice qualities whether or not premium quality like Jasmine rice, medium to low quality like white rice and parboiled rice.

Barriers to trade for rice export perceived by Thailand are high level of applied tariff rate, monopolised state – trading enterprises and domestic supports for rice commodities by developed countries.
Chapter 3 describes price level of rice within market chain such as farmers' selling price, Free on board (FOB) and Cost, insurance and freight (CIF).price.

Chapter 4 gives an overview of cost stemming from export procedure including cost of production, cost of processing, cost of domestic transportation, cost of international transportation and other costs.

Chapter 5 highlights tax rate domestically applied to rice commodities, domestic support. This chapter indicates that Thailand has no tax rate or domestic support applied to rice commodities. In addition, it also describes how major importing markets imposed import tariff and other fees and duties to these commodities.

Chapter 6 and 7 illustrate the construction of the price ladders and the calculation of CIMA in three selected markets. It reveals that the average Barriers to Market Access (BMA) are 7.95, 25.8 and 0.13 percent for the US, the Philippines and South Africa respectively. This also corresponds to the average CIMA of the three markets of 92.05, 74.2, 99.87 percent accordingly.

Chapter 8 gives details about the summary of this study. It also shares the constraints found by researchers such as the problem in estimation of cost of export in each level. Moreover, it also indicates that the calculated CIMA lacks of power to explain the trade barriers from tariff rate quotas (TRQs) policy, import commodities specification and import licensing auction by some importing countries.

1. Introduction

This study of the Composite Index of Market Access (CIMA) of the rice industry of Thailand is part of the International Centre for Trade and Sustainable Development (ICTSD) pilot project on market access for three selected countries (Uruguay, the US and Thailand). The objective of the

project is to build an indicator of market access of the main rice importing countries that would include not just tariffs but other barriers that affect market access for agricultural product as sanitary and phytosanitary (SPS) measures, technical barriers to trade (TBT), private standards, excise taxes in importing countries and other, non-tariff barriers. This tool should be of assistance in trade negotiation, giving a clear indication of whether any particular negotiated outcome result in a real liberalization.

In the case of Thailand, the three import market selected, the US, the Philippines and South Africa. These countries are the major markets for the three major types of rice that Thailand exports to the International market, Thai Jasmine rice, white rice 25%, parboiled rice, respectively.

1.1 Measurement Unit Used

Rice volume on this study are mainly expressed in milled rice equivalent, using the conversion rate provided by Office of Agricultural Economics (OAE), Thailand, which is 1 ton of paddy rice equivalent to 0.66 ton of milled rice.

1.2 Selected Period

Calendar of the year 2006, 2007 and 2008 have been selected for this study.

1.3 Data Sources

All data used in this study are from official, private and international sources. Mainly, official data are secondary data compiled by OAE under Ministry of Agriculture and Cooperatives and Customs Department under Ministry of Finance. Private data are collected by interviewing rice business entrepreneurs both processors and exporters in Thailand. And international data are from the WTO secretariat and www.trademap.org.

2. Thailand Rice sector

2.1 Structure of the industry

Rice is the most important staple crop for Thailand because farmers around 3.72 million households (16 million people) or 65 percent of total agricultural households (5.76 million households) are in this industry. Most of Them are small-scaled with only farmland around 2.4 – 3.2 hectares (15 – 20 rai*) per household.

Thai farmers cultivate rice twice a year: in rainy season, which is known as major rice, and in summer, which is known as second rice. Total farmland for major rice cultivation in 2006 – 2009 is around 10.82 – 11.23 million hectares in average. The major rice is accounted for 9.18 – 9.24 million hectares or 84 percent of total cultivation areas. The rest is for the second rice which is around 1.58 – 2.059 million hectares or 16 percent of total cultivation areas. (See Table 1)

Thailand has produces 29.61 – 32.09 million tonnes of rice every year. Total paddy production will be kept as seeds for next crop around 4 – 5 percent. The rest will be sent directly to mill houses 40 percent, middlemen 30 percent, agricultural institutes 8 percent and government mortgage scheme 17 percent. The rest of paddy production apart from seeds will be destined to mill houses to process into milled rice. Private mill houses, co-operatives and villages' small – scaled mill houses will sell their product about 50 percent via wholesalers to export. And 50 percent remaining which will be used for domestic consumption and stock keeping will be selling via wholesalers and retailers. (See Diagram 1)

According to the world export of rice over the last 30 years, Thailand remains at the number one rank of rice exporting countries of the world. In the average of the last three years (2006 – 2008), Thailand exports rice around 40 – 45 percent of total rice production. Thai rice export tends to increase from 7.494 to 10.216 million tonnes – milled equivalent or 36.32 percent increase from the previous year. Rice in form of Thai Jasmine rice (Also known as Hom Mali rice), white rice, parboiled rice and glutinous rice are annually exported in average 2.7 4.0 2.0 and 0.3 million tonnes – milled equivalent respectively (See Table 2). Most of rice exports from Thailand are in white milled form.

In 2006 – 2008 the Government of Thailand had launched the rice pledging scheme aiming to resolve selling price deterioration facing by farmers during harvesting period. Farmers was requested to bring their product to mortgage with the concerned government agency with mortgage price that determined mainly by average annual price in previous year. Farmers were able to redeem their product when the market price was higher than the mortgage price. It is found that both prices are not quite different. As a result, it may be concluded that the rice pledging scheme are not categorised as a domestic support scheme. (See Table 3)

*Rai is unit of land in Thailand: 1 hectare = 6.25 rai

2.2 Nature of the commodity traded

Rice cultivated in Thailand is mainly Indica type (long grain). It is categorised into:

- Non – glutinous rice: Thai Jasmine rice, in particular which is the highest quality grade of Thai rice. It is soft and good taste. Its yield is quite low. Thai Jasmine rice is possible to cultivate only in north – eastern part of Thailand with only major rice cultivation.
- Glutinous rice: It has white or black colour. Mostly are for domestic consumption with few exports. It also has a Geographical Identification (GI) product for niche market such as Doi Saket rice and Keaw Ngoo sticky rice.

Thai rice is a high quality grade and possible to process into non – glutinous rice compliance to high international standards for all grades of products from highest grade (100 percent of no broken rice), 5, 10 and 15 – 25 percent broken rice and broken rice grade. It is due to the fact that Thailand has lots of mill houses which are highly efficient in processing in accordance with Good Manufacturing Practice (GMP), International Organisation for Standardisation (ISO) and Hazard Analysis Critical Control Point (HACCP).

2.3 The process of exporting

Basic steps in the process of exporting Thai rice are:

Cultivation

Rice cultivation in Thailand is classified as follows:

- **Major rice cultivation** is defined for rice cultivated from May 1st to October 31st except in the southern part of Thailand where rice is cultivated from June 16th to February 28th. Farmer's cultivation relies mainly on rainfall up to 75 percent of total cultivated area. Only 25 percent of total cultivated areas are under the irrigation system. Major rice could be planted in all provinces of Thailand. In the past 3 years (2006 – 2008), the rice planted areas are declined from 9.24 to 9.18 million hectares in 2006 or declining at the rate of 0.34 percent because rice cultivation was replaced by substitute energy plant cultivation, for example oil palm and para rubber. The paddy production reduced from 23.53 million tonnes in 2006 to 23.30 million tonnes in 2008 or reduced at the rate of 0.49 percent due to the rice cultivation area reduction and the lower yield caused by drought in the cultivation period and flood in the harvesting period. Yield dropped from 2.54 to 2.53 tonnes per hectare or 0.15 percent reduction rate. In 2009 the rice cultivation area is 9.18 million hectares increased 1 million hectares or accounted for 0.06 percent from 2008. However rice production and yield tend to decline from 2008 around 0.31 and 0.38 percent accordingly.

- **Second rice cultivation** is defined for rice cultivated from November 1st to April 30th except in the southern part of Thailand where rice is cultivated from March 15th to June 15th. This kind of cultivation is in irrigable area and depends mainly on water from irrigation system and

swelling water canal. This helps farmers to cultivate 2 – 3 times a year with considerately less risk from drought comparing to the major rice cultivation. In the past 3 years (2006 – 2008), the rice planted areas, rice product and yield tend to increase due to the increase in planted areas from 1.58 to 2.04 million hectares, rice product increasing from 6.75 to 8.79 million tonnes and yield increasing from 4.26 to 4.29 tonnes per hectare or increasing 13.69, 14.09 and 0.35 percent respectively. In 2009 the estimated rice cultivation areas, production and yield are 1.98 million hectares, 8.41 million tonnes and 4.24 tonnes per hectare respectively. They all decline from 2008 around 3.12, 4.28 and 1.2 percent accordingly due to brown plant hopper outbreak (See Also Table 1).

Harvesting

Starting from the rice flowering period, farmers will check water level, insects and other pests in the paddy field so as to plan for harvesting around 28 – 30 days after that. Once water is being drained out completely from the paddy field, harvesting will be carried out in combination of labour around 40 percent and machines, which are capable to harvest and thresh simultaneously, around 60 percent. Harvesting periods are as follows:

- For major rice crop is through July to May of next year. About 95 percent of its production will be harvested between November and December.
- For second rice crop is through February to November. About 60 percent of its production will be harvested from March to July.

Milling

There are more than 40,000 mill houses located in all areas of Thailand. Most of non – glutinous rice mill houses are located in the north – eastern part of Thailand. Their capacities are range from 3 – 5 tonnes per day to more than 1,000 tonnes per day. All mill houses in Thailand have total potential capacities to mill total rice product only in 1 month since their capacities are more than the amount of paddy rice which farmers can potentially produce in one period. After being harvested, paddy rice will be transported to mill houses. Then, milled rice will be distributed to sell domestically around 33 percent, export around 50 percent, process around 7 percent and keep as stock around 10 percent.

Trade

Thai rice export in 2006 – 2008 is around 7.5 – 10.2 million tonnes or 50 percent of total rice production. Major Thai rice export markets classified by its quality are:

- High quality rice export markets for Jasmine rice and white rice, are the US, China, Malaysia and Singapore. (See Table 3)

- High quality rice export markets for white rice are Iraq, Ivory Coast, Mozambique and Japan. (See Table 3)
- Medium quality rice export markets are Malaysia, Indonesia, Australia and Republic of Korea. (See Table 4)
- Low quality rice export markets are the Philippines, Senegal, Ivory Coast and the Netherlands. (See Table 4)
- Parboiled rice export markets are Benin, South Africa, Russia and Belgium. (See Table 5)
- Glutinous rice export markets are Indonesia, Malaysia, the US and Taiwan. (See Table 5)

Domestic consumption

Rice products around 15 – 16 million tonnes paddy (9.9 – 11.0 million tonnes equivalent milled) or 40 – 50 percent of total rice product are for domestic utilisation in terms of consumption, seeds for next crop, raw material for animal feed industry and processing products. The rest is for export and keeping as stock for domestic food security.

2.4 The main barriers as seen by the industry

The main barriers as seen by Thailand are prioritised as follows:

- **Tariff barriers**
  Rice is one of the most protected commodities besides sugar. Import tariff rates implemented by trading countries, in particular developed countries which consumers are affordable to buy high price food, are set quite high. This becomes one of the most powerful barriers to rice export by Thailand (See Table 6).
- **Monopoly importers**
  One of trade barriers to rice imports is state trading enterprises which are the government agencies monopolized rice import. Thailand's trading countries use this mechanism are Japan, Taiwan, China, South Korea, Philippines, Indonesia and Malaysia. Measures which monopoly importers use are categorised into 3 types:
  (1) **Quota restriction:** Rice is a TRQs commodity in countries using monopolised importers system. Mostly, rice import quantities are restricted solely by monopoly importers. Out of quota imports are hardly occurred due to high out of quota tariff rates.
  (2) **Rice import specification restriction:** It is not allowed to import rice according to real demand. Specified types of rice for import mainly are not major rice types for domestic consumption, for instance, Japan, Taiwan and South Korea limit rice imports only used by food industry, not allow high quality rice import for household consumption**,** meanwhile Philippines allows to import only low quality rice 25 percent. This becomes a major constraint for Thailand to export high quality rice to Philippines.
  (3) **Rice import auction:** Rice imports require import license from rice importers. It can be acquired by auction. Consequently, rice importers will bear a higher cost from paying for the import license.

This cost brings rice import price and domestic rice price nearly at the same level.

- **Domestic Subsidies by Developed Countries**
  Rice is one of agricultural commodities which are domestically subsidised by developed countries. According to the study of Organization for Economic and Cooperation and Development (OECD), it is found that in 2002 – 2004 OECD member countries have applied domestic subsidy to rice commodities up to 75 percent of total agricultural income earned by these countries. The high level of domestic subsidy to rice commodities by developed countries have distorted international rice markets by encouraging rice producers in developed countries to produce more than their potential capacity. Additionally, this has affected rice prices in the world market to become lower than normal situation.

3. Price levels

3.1 Price to farmers (Farm gate price)

Farm gate prices of paddy 5 percent and Jasmine paddy in 2006 – 2007 tend to increase as follows:

- Farm gate price of paddy 5% increases from 6,533 baht per tonne (173 USD per tonne) to 9,848 baht (298 USD per tonne) in 2009 or 31.25 percent increase.
- Farm gate price of Jasmine paddy increases from 8,032 baht per tonne to 12,536 baht/tonne (379 USD per tonne) in 2009 or 24.93 percent increase.
  (See Table 7)

3.2 Price at the processor level in this research will use wholesale price in Bangkok market for milled rice due to the fact that this price is normally set by exporters on behalf of rice brokers who are a match – maker in trade between millers and wholesalers in Bangkok and/or exporters. In addition, rice brokers and millers have the same business owner. Rice brokers have the information about buying prices of exporters and selling prices of millers. So, they can facilitate them to make a deal between millers and exporters or millers and Bangkok wholesalers. Also, they will estimate sale and service cost, transportation cost and profit in order to set mill house price.

3.3 Export price is the price quoted by exporters. Normally, this price will be posted in terms of FOB price at ports in Thailand. It will be determined by demand and supply inside or outside Thailand, competition situation in the world market and exchange rate, for instance, FOB price for milled rice 5% increased from 11,583 baht per tonne (307 USD per tonne) in 2006 to 11,210 baht per tonne (327 USD per tonne) in 2007. Value in USD term was high but low in baht term due to the baht appreciation. (See Table 8 – 10)

3.4 Price in importer markets

- CIF prices are used in this research. The average unit value is calculated from volume and value of import statistics from trademap website.
- Excise taxes, value added taxes, other fees and duties are compiled from "Country Trade Policy Review" by the US, the Philippines and South Africa from WTO website.
- Profit margin is estimated around 30 percent according to normal business profit which is composed of importer's profit and other expenses, for instance, custom fee and transportation cost to distributors.
- Price premium for meeting private standard is not available according to the interview with Thai rice exporters.

3.5 Exchange rates used in this research are annual reference rate from the Bank of Thailand database. For the analyzed period, the USD – Baht exchange rate used was 37.7296, 34.2813 and 33.0915 baht for 2006, 2007 and 2008 accordingly.

4. Costs

4.1 Cost of production will be categorised into 3 groups according to cultivation methods:

- First method is labour intensive with highest cost compared to the rest because farmers have to cultivate rice seedlings in advance and transplant them into paddy field. It also requires water sources proximity to cultivation areas so as to facilitate farmers to control water level appropriately in their areas. Production yield by this method is quite high.
- Second method is quite similar to the first one but requires germinated seeds instead of rice seedlings. In order to prepare those seeds, farmers have to soak them into water in covered storage to make it ready to sow them in prepared cultivation areas. This method also requires sufficient water. Most of farmers using this method are in irrigation areas.
- Last method requires only rain as a source of water. Most of them are used in high plateau or plain areas with limited water sources. Farmers around 70 percent of total farmers in Thailand are using this method. Farmers using this method exposed to risk from drought or flood, seeds with low possibility to grow and pests. This method has a high cost of production because of the lowest yield compared to other methods. Although Thailand is the number one rice exporting country in the world, they got lower average yield compared to other countries due to cultivated areas prone to risk from inappropriate available water quantity.

According to production factors such as organic fertilizers, pesticides, herbicides, plant diseases and fuels used in water pumping machines, they are varied depending on farmers' budget. Moreover, household's labours are

often unavailable in harvesting period. As a result, farmers rely heavily on harvesting machines with higher cost in substitution of labours. If paddy is ready for harvest and harvesting machines are unavailable in that time, rice production will be low quality. And farmers will gain low prices due to high percentage of broken rice.

It is obvious to acknowledge that Thailand has various costs of production. In this research will use farm gate prices or farmers' selling prices compiled by Office of Agricultural Economic of Thailand as criteria in calculation of cost of production for milled rice in terms of Jasmine rice, white rice 25% and parboiled rice as follows (See Table 11):

- **Cost of production of Jasmine rice** in 2006, 2007 and 2008**,** which are farmers' selling prices of milled rice, equal to 323, 392 and 574 USD per tonne respectively**.**
- **Cost of production of white rice 25% and parboiled rice** in 2006, 2007 and 2008 equal to 262, 291 and 542 USD per tonne respectively.

4.2 Cost of transportation

When millers sell products to exporters or importers, transportation cost which depends on distance to wholesalers' and exporters' warehouses will be in average 500 baht per tonne (15.11 USD per tonne).

4.3 Cost of processing

Due to unavailable confidential commercial information of private processors, the estimation of processor cost which incurred processor selling price will be as follows:

- When millers have received offer prices from exporters, they will set their buying prices of paddy from farmers by excluding milling cost according to rice conditions and their milling cost which varies depending on their milling technology. Once paddy is milled, its main products will be head rice and by – products such as husk ꞑ grist and bran.

  When paddy passes milling process, the main product will be head rice, for instance, rice 100% and 5%. In this system, there will be a colour sorter to make rice clean and white so as to get premium grade rice. When buying paddy, millers will take into account considerately the head rice and paddy humidity which is not more than 15 percent. The higher the paddy humidity, the lower buying price farmers receive.

  Moreover, there will be sales and services cost including required profit and profit from by – products such as husk. When milling cost, selling expenses, management cost and profit are summed up, it will be processing price.

Milling costs will be different between parboiled rice and white rice due to the complicated process of the first type. Before milling, parboiled rice will be passed a steaming process. Then it has to be exposed to sunlight and steaming again to reduce humidity. When paddy passing all process is milled, rice will not be broken. But there will be less grist. Also, millers will take care of sales and services expenses since they request middlemen to be responsible for sending products directly to exporters. Parboiled rice is for export only since Thai consumers do not consume this kind of rice.

4.4 Cost of overseas shipping

This cost is estimated from margin between CIF and FOB prices. The freight cost to transporting ship is approximately 385 – 400 bath per tonne (11 – 12 USD per tonne).

4.5 Cost of compliance

This cost is a burdensome of exporters. It is separated into 2 parts which are:

- Cost to process according to importers' specification. DNA inspection cost in case of Jasmine rice will be included and charged 1,400 baht per 21.5 tonnes of first shipment and 18 bath per tonne (0.54 USD per tonne) for the rest.
- SPS cost such as fuming cost which will be charged 30 baht per tonne (1.00 USD per tonne).

5. Subsidies and taxes

5.1 Taxes and subsidies in exporting country

Thailand has no domestic tax and no domestic subsidies for rice.

5.2 Taxes in importing country

In this research, 3 major rice export markets with one major rice commodity each are the US – the number one export market for a premium quality rice, Jasmine rice, the Philippines – the number one export market for low quality rice, rice 25 percent broken and South Africa – the number two export market for parboiled rice. Benin as the number one export market for parboiled rice is not selected because Benin re – exports to Nigeria and data is unavailable for research period.

- **US**

The US apply import tariff rate for Thai rice under HS 1006.30 – white rice with 11.2 percent MFN rate. They do not impose excise tax for rice commodities. Some states collect sale taxes with exemption for food commodities.

- **Philippines**

Although Thailand and Philippines are ASEAN member countries, Philippines still categorises rice commodities under highly sensitive list which is not accordance with market access under AFTA. They apply import tariff rate for Thai rice under 1006.30 – white rice with 50 percent MFN rate. Moreover, they classify rice commodities under the minimum

market access under Annex 5 of Agreement of Agreement on Agriculture of Uruguay Round result. So, Philippines imports rice solely under quota system. They do not impose excise tax for rice commodities.

- **South Africa**

South Africa applies import tariff rate of rice 0 percent. They impose a value added tax at 14 percent goods and services.

6. Price ladders of Thai rice

(See Table 12 – 14)

7. Calculation of the CIMA

The Barriers to Market Access (BMA) identified by Thailand to export rice for the three market analysis are:

BMA = EDT + MTD + (PLC - PLP) + SPC
Where
EDT: Excise tax importing countries;
MTD: Import duties and other charge;
PLC: Cost of meeting private standard for export;
PLP: Price premium for meeting private standard;
SPC: Cost of meeting health and safety standards;

The BMA as a percentage is calculated as:
BMAP = BMA/PRX * 100
Where
PRX: Final selling price for the exporter.

This allows the CIMA to be calculated as the degree of market access.
CIMA = 1 – BMAP

7.1 The CIMA of Thai Jasmine rice exports to the US are:
(See Table 15)

7.2 The CIMA of Thai white rice 25% exports to the Philippines are:
(See Table 16)

7.3 The CIMA of Thai parboiled rice exports to South Africa are:
(See Table 17)

The summary of the BMAP and CIMA are:
(See Table 18)

8. Conclusions

This research aims to demonstrate the CIMA calculation for three major types of Thai rice which are Jasmine rice, white rice 25% and parboiled rice, exporting to three major markets which are the US, the Philippines and South Africa respectively.

It is not so surprising that the estimated CIMA is quite high in free trade market like South Africa (CIMA = 99.87 percent) following by the US which is moderate degree of market access (CIMA = 92 percent). And the lowest degree of market access is the Philippines with closed market policy (CIMA = 74 percent).

It is obvious to notice two constraints found in this research:
First is the estimation of processor and export cost. Due to the fact that Thai rice exports are operated by private sector, they often give the estimated data according to their opinions when interviewed. It is not possible to find reference document for research.

Second is the estimation of cost of meeting standard for export and cost of meeting health and safety standards. According to practical trade, most of standards requirement are relevant to the international trade standards which are acknowledged for years. So, Thai entrepreneurs are not recognised this as cost burdensome. This cost might be easy to identify for some perishable and easy to contaminate agricultural commodities such as meat, fresh vegetable and fruits.

There are other constraints, for instance, prices and costs in importing countries. All constraints might be occurred due to time constraint for this research. So, it would be better to further research on this matter in the future.

However, it is found that CIMA is not relevant to explain the international trade barriers to rice exports facing by Thailand in 2 cases:

First is CIMA is not relevant to explain trade barriers stemming from limited quota policy and import product specification policy administered by State – Trading Enterprises which are monopolised imports by importing countries. The example in this case is the Philippines. They manage rice import system under the Minimum Market Access (MMA). As a result, rice importers have to import under limited quota and rice specification by the government of the Philippines only. This constraint cannot be explained according to CIMA.

Second is the rice import licensing auction system utilised by importing countries operating under monopoly state – enterprises. This auction cost will be a burdensome to importers. However, they transmit this cost to Thai rice exporters by request for low price. Consequently, Thailand as a rice producing and exporting country gains lower price than normal. Once calculating CIMA from price in importing market, it is irrelevant to explain this constraint facing by exporters.

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