

REDUCING NON-TARIFF BARRIERS ON MAIZE TO ADVANCE INTRA-ASEAN TRADE*

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INTRODUCTION

The Association of Southeast Asian Nations (ASEAN) is a regional intergovernmental organization comprising 10 member states, namely Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam. Founded in 1967 with five original members, ASEAN is aimed at widening and deepening cooperation among the 10 member states in areas of political, economic, and social development for their mutual benefit. The establishment of the ASEAN Economic Community (AEC) at the end of 2015 is a major milestone in the ASEAN regional economic integration agenda. Under the AEC Blueprint 2015, the 10 ASEAN member states set a concrete target to launch a single market and production base through the free flow of goods, services, investment, skilled labor, and freer flow of capital. The purpose of this AEC target is a more liberalized market, where all tariff and non-tariff barriers to trade would be removed, providing greater opportunities for intraregional trade with reduced trading costs. To achieve this target, the Common Effective Preferential Tariff (CEPT) scheme, under the ASEAN Free Trade Agreement (AFTA), was signed in 1992; it was superseded by the ASEAN Trade in Goods Agreement (ATIGA) in 2010. Tracking of the implementation and key achievements of the AEC Blueprint 2015 measures revealed that significant progress had been made by 2015 in tariff elimination among the ASEAN member states, with flexibility for Cambodia, Lao PDR, Myanmar, and Vietnam, the so-called CLMV countries. A challenge remains in achieving the target of a region-wide single market and production base with a growing list of ASEAN non-tariff measures (NTMs) that have implications for trade barriers.¹

¹ Thailand Development Research Institute, 2014, *Increasing the Competitiveness of Thai Manufacturing Industries under the New International Economic Environment (Phase V)*, Office of Industrial Economics Ministry of Industry (in Thai).

To illustrate the challenges and opportunities facing the ASEAN member states in fulfilling their commitments under ATIGA and the AEC Blueprint, a pilot study was conducted on the trade in maize (or corn) among three states, namely Cambodia, Lao PDR and Thailand. Maize has emerged as one of the major agricultural commodities in the ASEAN region, which has been subject to alternative domestic and trade policies as well as various NTMs over the last decade. Cambodia and Lao PDR are major sources of maize for import into Thailand, while Thailand exports maize seed and animal feed, mostly to ASEAN countries. There are also backward linkage sectors, such as seeds, fertilizer and agricultural machinery, and forward linkage sectors, such as animal feed and livestock, that would significantly benefit from the expansion of Thailand's imports of maize from Cambodia and Lao PDR. Moreover, there are substantial benefits to be gained from the multiplier effect on border trade in terms of durable and non-durable goods. The stakeholders affected are mostly poor farmers and small and medium-sized enterprises (SMEs), and traders in the northern, northeastern and eastern rural areas of Thailand and border areas of Cambodia and Lao PDR. Increased opportunities in maize trade among these three ASEAN member states through elimination or reduction of non-tariff barriers (NTBs) would further advance intra-ASEAN trade, as well as enhance AEC integration and regional development.

ASEAN NON-TARIFF MEASURES

NTMs are policy instruments other than ordinary customs tariffs that countries apply to imported and exported goods, which have effects on trade between nations. These trade measures include a very diverse array of policies and regulations that may restrict or facilitate international trade.²

² UNCTAD, 2013, *Non-Tariff Measures to Trade: Economic and Policy Issues for Developing Countries*, UNCTAD/DITC/TAB/2012/1



NTMs are of particular concern to exporters and importers in developing countries, such as most of the ASEAN member states, as major determinants in restricting market access. Most traded products are likely subject to one or more types of NTMs. Any product might be subject to several types of NTMs applicable to various stages of production, from input sourcing for production to the final stage of consumption, including waste treatment. The implementation of a given NTM might be transparent and serve certain social or economic objectives or otherwise be non-transparent and detrimental to social welfare. It is therefore necessary to review critically the relevant NTMs on each product in order to identify the trade barrier elements and design appropriate ways for reducing or eliminating the trade barrier effects of such NTMs on the product of interest.

A study by the Thailand Development Research Institute (TDRI) in 2008 revealed that there were 1,925 NTMs in use in ASEAN member states in 2004.³ Based on the categories of ASEAN NTMs identified by the AFTA Council, using the red/

³ Thailand Development Research Institute (TDRI), 2008, *Reaping Benefits from Free Trade Agreements (Phase II)*, Office of Industrial Economics Ministry of Industry (in Thai).

amber/green box system,⁴ 996 measures (51.7% of the total) were classified as transparent and non-discriminatory (green box), 502 measures (26.1%) were non-transparent and discriminatory (red box), and the remaining 427 measures (22.2%) were unclear (amber/yellow box). Most of those in the red box (67.1%) were quantity control measures, and most of those remaining (28.9%) were technical measures. NTMs to trade continue to maintain a strong presence in the ASEAN region. According to the database of ASEAN NTMs,⁵ there are 5,881 NTMs currently being enforced, of which 2,528 measures are classified as “technical barriers to trade.”

The ASEAN member states implement several types of NTMs, including those in categories A, B, C, D, E, G, and H under the Classification of Non-Tariff Measures of the United Nations Conference on Trade and Development (UNCTAD), on imports among the members. Quantity control measures are most commonly used in the member states, all of which impose import prohibitions and all, except Vietnam, implement non-automatic licensing. Indonesia, Malaysia and Vietnam also impose import quotas. Lao PDR is the only country among the ASEAN member states that does not implement technical barriers. Several of these states, excluding Brunei Darussalam, Philippines,

and Singapore, employ measures affecting competition, such as state-trading enterprises or other selective import channels. Indonesia, Malaysia, Philippines, Singapore and Thailand implement contingent trade-protective measures, particularly anti-dumping and safeguards (Table 1).

Agricultural products and food were among the top groups of products affected by NTMs in ASEAN member countries. As shown in Figure 1, 52 percent of agricultural products and 46 percent of food products were subject to one or more NTM in ASEAN member states. From 2004 to 2009, Malaysia and Thailand did not reduce any NTM, while Indonesia lifted the importer restriction on milk, vegetables, fruit, machine tools, iron and steel. New NTMs were imposed by Indonesia, Malaysia, and Thailand, including restrictions on financial service providers, on a number of agricultural products, food, minerals, and rubber by Indonesia, prohibition of used automobiles by Malaysia, and state-trading enterprises on certain agricultural products and non-automatic licensing on marble and granite by Thailand.

THE CASE OF THAILAND'S MAIZE TRADE

Thailand has been a strong advocate for ASEAN regional economic integration. In 2014, Thailand's Ministry of Commerce declared its strategic plan to upgrade Thailand to become a “trading nation,” with the aim of utilizing the strength of the country's geographical location, which connects ASEAN member states with abundant resources, such as Cambodia, Lao PDR, Myanmar, and Vietnam, to trade with a large number of consumers and strong purchasing powers, including China, Malaysia, and Singapore.⁶ The plan would support the realization of Thailand's vision of becoming

⁴ Measures that are non-transparent, discriminatory in application, without scientific basis, and for which a less restrictive measure is available should be eliminated immediately (red box). Measures that are transparent but discriminatory in application and that nullify or impair some benefits or obligations of the country, that affect highly traded products in the region, or that are in nine priority sectors that cannot be clearly justified or identified as a barrier, will be subject to negotiation (amber box). Measures that are transparent, applied without discrimination, have no alternative, have a scientific basis, are imposed for reasons of public health and safety, religion, and national security, and are World Trade Organization-consistent and reasonable (e.g., sanitary and phytosanitary measures and environmental regulations) may be maintained (green box).

⁵ I-TIP official NTMs: Integrated analysis and retrieval of collected non-tariff measures based on official regulations, a joint project implemented by the Economic Research Institute for ASEAN and East Asia (ERIA) and UNCTAD, <http://asean.i-tip.org/>.

⁶ Boonwara Sumano, Thailand must “break out” and become a trading nation, Thailand Development Research Institute, January 19, 2016, <http://tdri.or.th/en/tdri-insight/thailand-must-break-out-and-become-a-trading-nation/>.

Table 1: Types of non-tariff measures implemented in ASEAN member countries

ASEAN Classification	NTMs	THA	INA	MYS	SGP	PHI	BRU	VIE	CAM	LAO	MYM
Technical (A,B,C)	Standards (A2), Testing (A82, B82), Labeling (A31, B 31)	*	*	*	*	*	*	*	*		*
	Pre-shipment inspection (C1)		*								
Quantity-control (E)	Non-automatic licensing (E1)	*	*	*	*	*	*		*	*	*
	Import quota (E2)		*	*				*			
	Import prohibition (E3)	*	*	*	*	*	*	*	*	*	*
Monopolistic (H1)	Monopoly or state-trading enterprise (H11)	*/ ¹	*	*				*	*	*	*
Financial (G)	Terms of payment (G4)										*
Price-control (Contingent Trade Protective Measures)/ ² (D)	Anti-dumping duties (D12)	*	*	*	*	*					
	Countervailing duties (D22)										
	Safeguards (D3)	*	*			*					

Abbreviations: THA = Thailand, INA = Indonesia, MYS = Malaysia, SGP = Singapore, PHI = Philippines, BRU = Brunei Darussalam, VIE = Vietnam, CAM = Cambodia, LAO = Lao PDR, and MYM = Myanmar.

Notes: * indicates that the NTM of interest is implemented in that country.

Information in parentheses is NTM classification by UNCTAD.

¹ Information has been updated by the authors on December 11, 2015.

² UNCTAD classification 2012.

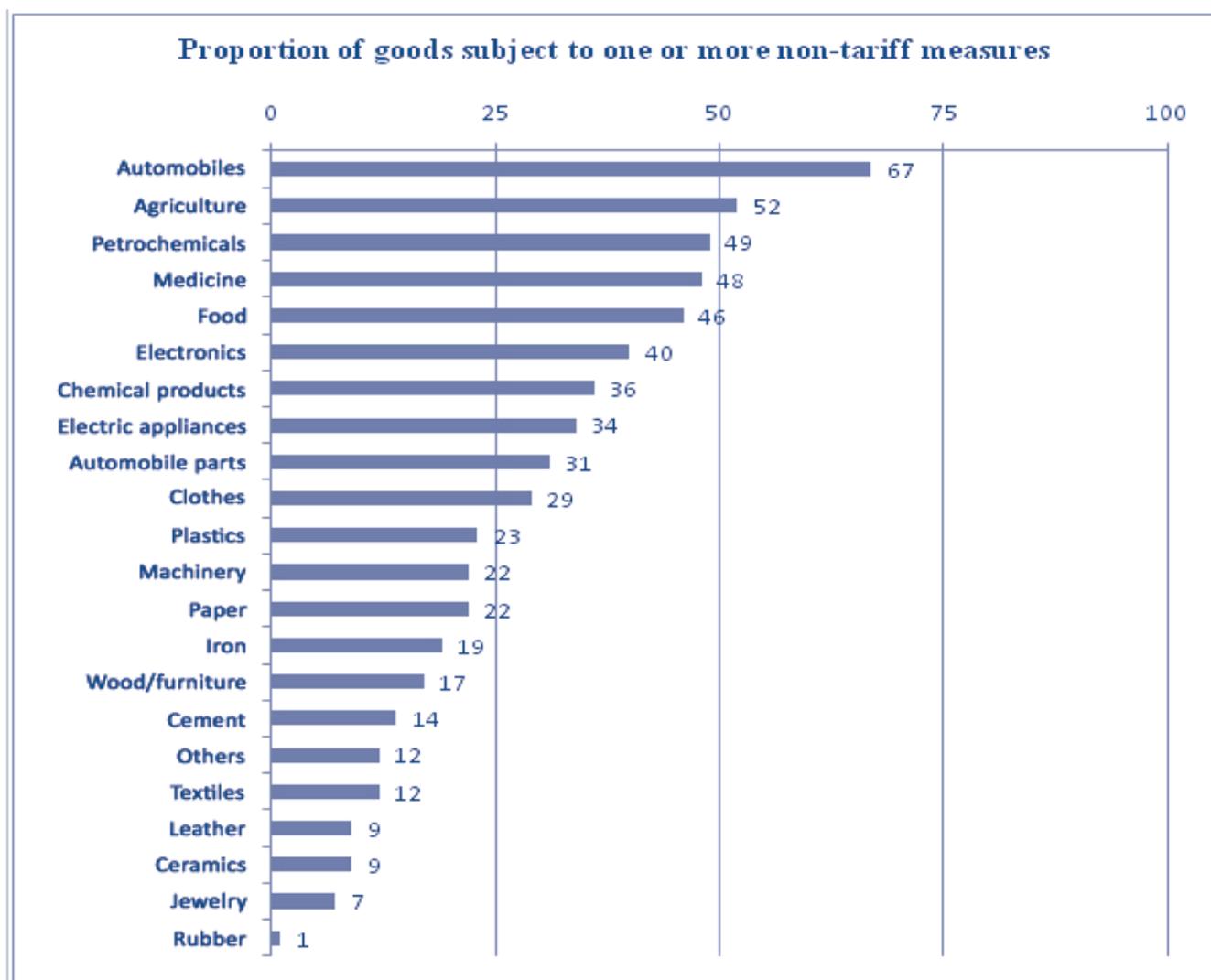
Source: Adapted from Thailand Development Research Institute, 2013, *Increasing the Competitiveness of Thai Manufacturing Industries under New International Economic Environment (Phase IV)*, Office of Industrial Economics Ministry of Industry (in Thai).

a trading hub for the ASEAN region as well as contribute to the country's implementation of the ASEAN Economic Community's target to create a regional single market and production base. Having made good progress on tariff liberalization to realize national and ASEAN trade goals, focus and emphasis should now be given to addressing NTMs that may have trade effects.

According to a recent TDRI study,⁷ reduction of NTBs in Thailand and its regional trading partners could potentially increase all parties' trade, GDP, and social welfare enormously. A reduction in NTBs is also necessary for Thailand to facilitate

⁷ Thailand Development Research Institute, 2015, *Thailand Country Study: ASEAN Economic Community Blueprint Mid-term Review Project*, ERIA Discussion Paper Series.

Figure 1: ASEAN non-tariff measure coverage by product groups



Source: Thailand Development Research Institute's calculation using data from the ASEAN Secretariat (2013).

and enhance its “Thailand Plus One” strategy⁸ for investment and trade between Thailand and other ASEAN member states as well as neighboring ASEAN members, which would also be vital to realizing the benefits from AEC. In calling for the removal of

NTBs among the ASEAN member states in order to realize AEC Blueprint objectives, the TDRI study was focused on maize trade among Cambodia, Lao PDR and Thailand to determine where and how intra-ASEAN trade with regard to maize production would be advanced. It is anticipated that the findings and recommendations on possible solutions for reducing trade barriers for advancing trade and regional integration in ASEAN may be more or less common or applicable to other products subject to the same or similar NTMs affecting AEC.

Maize is one of five major crops grown in

⁸ “Thailand-Plus-One” strategy refers to a business model introduced to develop and secure supply chain competitiveness and markets in Thailand and developing countries along its border, particularly CLM (Cambodia, Lao PDR, Myanmar) through the inclusion of border cities in the CLM countries into supply chains centering on production clusters in Thailand.

the uplands of Thailand, along with rice, cassava, sugarcane, and rubber trees. Thailand's largest maize planting area is in the northern upland region, accounting for approximately 68 percent of the total area devoted to maize cultivation in 2014, followed by the northeastern and the central regions. Nearly 480,000 households are involved in maize production. The maize-growing households in the northern region account for approximately 75 percent of the total number of maize-growing households, followed by those in the northeastern and the central regions. Increases in the planting area and number of maize-growing households in the past few years took place mainly in the northern and northeastern regions, with declining trends in the central and southern regions. These different maize production areas apply varying management practices that in turn result in varying maize production conditions and results. Efforts to improve maize productivity and resultant farmer welfare in marginal and poverty areas of rural Thailand must begin with a study of the potential, constraints, needs, and decision-making patterns of farmer groups across the maize-producing regions of Thailand.

Maize farming and production in Thailand has faced a series of problems that need to be urgently and effectively addressed to achieve efficient and sustainable development not only specifically for maize farmers but also for the entire value chain of maize and the Thai economy. Some of the major challenges include inappropriate farming area, lack of knowledge and good agricultural practices, low-quality seed varieties, vulnerability to diseases, increasing cost of chemical fertilizer and farm labor, lack of land entitlement, farm financing problems, and adverse market effects of domestic policy interventions. In addition, expansion of maize planting in the northern upland region has had severe impacts on environmental deterioration. Maize cultivation on sloping land could cause serious environmental impacts, including deforestation, flash floods, drought, soil erosion, and landslides. Excessive and inappropriate use of chemical fertilizer and pesticides resulted in soil deterioration

and water contamination. Slash-and-burn practices, which have also been associated with the expansion of maize farming, annually cause severe smog and air pollution.

Thailand was a major exporter of maize grain in the 1980s. Maize exports from Thailand declined substantially in the 1990s due to increased domestic demand for the grain along with the growth of the domestic livestock industry and related exportable products. In recent years, Thailand's domestic maize production has decreased as a result of various factors, including climatic and rainfall conditions, with occasional droughts substantially reducing maize output, and competition between maize and other crops, such as sugarcane, cassava, and sunflower, when maize grain prices are low. Since the 1990s, Thailand has both exported and imported maize depending on the gap between domestic production and consumption.

The ASEAN countries comprise Thailand's major maize trading partner, with the Philippines currently ranked as the top export destination, accounting for 60 percent of Thailand's total maize exports in 2014, followed by Vietnam, Malaysia, China and Indonesia in that order. The major sources of maize imports for Thailand are Lao PDR, Cambodia, United States, South Africa and Argentina. Thailand also exports maize seed and animal feed, mostly to ASEAN countries. The export value of seed and animal feed has increased over the last decade. Vietnam is the top destination for maize seed exports from Thailand, with a share of more than 50 percent of total seed exports in 2014. Cambodia, Vietnam and Lao PDR are among the top destinations for animal feed exports from Thailand, together accounting for more than 50 percent of total animal feed exports.

Multiple trade policy measures on maize have been implemented by Thailand during the past decade. Since 2000, Thailand has imposed price intervention policies on many agricultural products, including maize. Thailand reduced the tariffs on maize to 6.67, 2.22, 5.5, and 0 percent for in-quota imports under the Thailand-Australia Free Trade

Agreement (TAFTA), the ASEAN-Korea Free Trade Agreement (AKFTA), ASEAN-Japan Comprehensive Economic Partnership (AJCEP), and the Japan-Thailand Economic Partnership Agreement (JTEPA), respectively, in 2015. The out-of-quota tariff was reduced to 65.7 percent under TAFTA but remained at 73 percent under AKFTA, AJCEP and JTEPA. Under the Thailand-New Zealand Closer Economic Partnership (TNZCEP), however, Thailand reduced the tariff on maize to 0 percent and removed the quota. It should be noted that the quota for the in-quota tariff was set at 8,081.68 tons under TAFTA but imports under AKFTA, AJCEP, and JTEPA all together shared in the Most Favoured Nation (MFN) quota of 54,700 tons. All the in-quota imports under the World Trade Organization (WTO), TAFTA, AKFTA, AJCEP, and JTEPA, which would enjoy tariff preference benefits, were granted to the Public Warehouse Organization (PWO), a state enterprise under the Ministry of Commerce, as the sole importer.

Thailand has recently allowed unlimited volumes of maize to be imported from neighboring ASEAN member states under AFTA. Imports from those states under ATIGA and from New Zealand under TNZCEP enjoyed both duty-free and import-quota-free preferences. However, while the importers were subject to import licensing and some other import regulations under ATIGA, they were exempted from all these restrictions under TNZCEP. The parties to Thailand's other FTAs, including China under the ASEAN-China Free Trade Agreement (ACFTA) and India under the ASEAN-India Free Trade Agreement (AIFTA), can gain access to Thailand's maize market on an MFN basis, as maize is excluded from these FTAs.

NON-TARIFF MEASURES ON MAIZE IMPORTS FROM CAMBODIA AND THE LAO PDR TO THAILAND

The ASEAN member countries, especially Cambodia, Lao PDR and Myanmar, enjoy the best market access in Thailand. In 2003, the Thai gov-

ernment initiated a policy to promote agricultural development in those three neighboring countries through cross-border contract farming under the Ayeyawady-Chao Phraya-Mekong Economic Cooperation Strategy (ACMECS) framework. Eight agricultural products were selected in the pilot program, including maize. The cross-border contract farming was aimed at generating employment and income in neighboring countries, thus to help narrow the development gap in the region. This arrangement also served as an additional source of supply for the rapidly expanding animal feed industry in Thailand. To support the cross-border contract farming development program, under the ASEAN Integration System of Preference (AISP), since 2005 Thailand has set a zero percent tariff for the promoted products, including maize, imported from Cambodia, Lao PDR and Myanmar. Imports from other ASEAN countries under the Common Effective Preferential Tariffs-ASEAN Free Trade Area (CEPT-AFTA) still faced a 5 percent ad valorem duty, or 2.75 Baht/kg specific duty, whichever was higher. Thailand recently reduced the tariff on maize to zero percent for all ASEAN member states under ATIGA-AEC.

On the other hand, since 2010 Thailand's Department of Foreign Trade has imposed seasonal import restrictions on maize imports from Cambodia, Lao PDR and Myanmar. Following the drop in the domestic price of maize from the peak price of more than 9 Baht per kg in 2008 to less than 6 Baht per kg in 2009, the import of maize from Cambodia, Lao PDR and Myanmar was prohibited after the harvest season of 2010 and allowed only for four months from March to June 2011 when the domestic stock of maize was depleted. A few years later, the seasonal import restriction was relaxed, allowing the importation of maize from Cambodia, Lao PDR and Myanmar for five months from March to July 2012 and for six months from March to August 2013. However, in 2014 the seasonal import restriction was tightened, allowing the importation of maize from Cambodia, Lao PDR and Myanmar only in August. Currently, the seasonal import re-



striction has been relaxed to allow importation of maize from those three countries for seven months from February to August in the three years between 2015 and 2017.

Maize imports are also subject to additional NTMs, particularly the “permit to import prohibited articles for commercial purpose,” under the Plant Quarantine Act, and sanitary and phytosanitary measures (SPS). The import procedure applicable to maize requires (a) a certificate of entitlement to tax obligation under WTO, which in turn requires copies of invoice, bill of lading, and certificate of origin; (b) certificate of origin; (c) phytosanitary certificate; and (d) a permit to import prohibited articles for commercial purposes. In addition, the recipient of the certificate of entitlement to tax obligation under WTO must report such imports to the Department of Foreign Trade within one month of each importation. It has been observed that the

certificate of origin is repeatedly required in order to go through the customs procedure – once in order to obtain the certificate of entitlement to tax obligation under WTO and another copy together with other documents, including the certificate of entitlement to tax obligation under WTO, which already included a copy of the certificate of origin. It is also worth noting that whether importers should be burdened (a) with obtaining the certificate of entitlement to tax obligation under WTO to enjoy such a benefit, and (b) with reporting to the Department of Foreign Trade after each importation.

Thailand’s Department of Foreign Trade also imposes restrictive rules and regulations related to preferential imports from Cambodia, Lao PDR and Myanmar. To obtain preferential tariff benefits, importers are required to register with the Department of Foreign Trade and provide information on where the importer’s warehouse is located. The registration needs to be renewed annually. In addition, since 2012 the Department of Foreign Trade also requires importers to apply for an animal feed import permit from the Division of Animal Feed and Veterinary Products Control, Department of Livestock Development, Ministry of Agriculture. The permit has to be renewed annually. Other than those required documents and reports under MFN and FTAs on the origin of imports, reports to the Department of Foreign Trade are required on preferential imports from Cambodia, Lao PDR and Myanmar with regard to correspondent stocking, movement, usage, and balance within one month of each transaction/activity.

In summary, whereas maize farmers/exporters in Cambodia, Lao PDR and Myanmar have been relieved of tariff burdens under Thailand’s policy initiative on cooperation and assistance for the development of Cambodia, Lao PDR and Myanmar, together with Thailand’s ATIGA-AEC commitment, they are subject to new/additional rules, regulations, and requirements related to the utilization of such tariff preferences. These new/additional measures inevitably add transaction costs to, and thus might have become NTBs against, the import of maize

from Cambodia, Lao PDR and Myanmar. Some of these policy measures, if not properly reconsidered, could be detrimental to the economic development and welfare of both Thailand and its three neighbors: Cambodia, Lao PDR and Myanmar.

Major trade-obstructing measures on the importation of maize into Thailand include: (a) seasonal prohibition; (b) state-trading enterprises; (c) the permit to import prohibited articles for commercial purposes, and the animal feed import permit; (d) the certificate of entitlement to tax obligation under WTO, and the certificate of tax exemption under AFTA; (e) the report of import, and the report of stock, movement, usage, and balance; and (f) importer registration.

Seasonal prohibition refers to a measure aimed at restricting maize imports into Thailand from Cambodia, Lao PDR and Myanmar during periods of abundant domestic maize supply following the annual harvest when the domestic price tends to be low. The measure was implemented the year after the government raised the guaranteed price or reference price for maize above the competitive market price in order to prevent maize from Cambodia, Lao PDR and Myanmar from suppressing domestic prices and/or enjoying the benefits of the maize price guarantee scheme, which is intended to be a subsidy for Thai maize farmers. In effect, Thailand's import of maize from Cambodia and Lao PDR dropped sharply in value, from nearly \$50 million in 2010 to about \$25 million in 2013, during the 4-6-month period when imports from Cambodia, Lao PDR and Myanmar were allowed (March-August); the value dropped further to less than \$5 million in 2014, when the permitted period for imports from those three countries was limited to the month of August.

The seasonal prohibition measure is a quantity control barrier which has a significant quantitative impact on imports. Such a measure is considered as contradicting Thailand's policy of cooperating and promoting trade and development with the three ASEAN countries in order to narrow the development gap under ACMECS and AEC, un-

der which Thailand promotes cross-border contract farming in Cambodia and Lao PDR and has reduced tariff on maize imports from those countries to zero. As a result, this measure would undermine the objectives of committed contract farming and the tariff preference scheme, confuse Thai maize traders and the maize farmers and traders from Cambodia, Lao PDR and Myanmar concerning the consistency of Thailand's policy direction, thus ruining Thailand's policy credibility and damaging investor confidence.

As a consequence, contract farming practices between Thai maize traders and Cambodian and Laotian farmers would cease to exist. Thai traders would incur bad debts because Cambodian and Laotian maize farmers could not earn enough from exporting maize to Thailand to repay the credits that they had received for purchasing maize seed and various agricultural inputs and farm machinery. Local businesses in the relevant border provinces, which had enjoyed booming sales of durable and non-durable consumer goods during previous years when the maize trade was expanding, would become stagnant, as Cambodian and Laotian farmers' earnings from maize exports declined. In struggling to survive, Cambodian and Laotian farmers would divert their maize exports to China and Vietnam or diversify into the cultivation of other crops, such as cassava. For those awaiting the period when imports from Cambodia, Lao PDR and Myanmar are allowed, the quality of the maize would tend to deteriorate due to the lack of appropriate warehouses to stock the grain for a long time after the harvest and, hence, would receive lower prices. In such a situation, both Thailand as the importer and Cambodia and Lao PDR as the exporters would suffer losses due to the deterioration of the quality of the traded maize products.

A quota has been imposed on the import of maize into Thailand. PWO, a *state-trading enterprise*, has been designated as the sole importer of maize for the MFN in-quota of 54,700 tons, which includes the in-quota under all FTAs relevant to Thailand, and the TAFTA in-quota of 8,081.68 tons.

Since 2012, PWO has been authorized to be the sole importer of maize all year round from Cambodia, Lao PDR and Myanmar, while other traders could import maize from those countries only during the permitted period. This would enable PWO to exercise its monopsony power to suppress the import price and import less than otherwise during the prohibited season. In practice, PWO outsourced an experienced trader to import maize from Cambodia and Lao PDR. The trader is required to re-export the same amount of maize products to international markets. Since the imported maize is likely to be of a lower grade than that produced domestically, the trader would improve its quality by sorting out low-grade maize and replacing it with Thai high-grade maize for re-export.

The experienced trader who acts as a middleman buying maize from Cambodia and Lao PDR would continue the process of improving the quality of the maize, re-exporting it to the global market, and enjoying reasonable benefits from the import of maize from Cambodia and Lao PDR for re-export. Under such an arrangement, the import quota measure might to some extent increase the export of maize from Cambodia and Lao PDR to Thailand, and from Thailand to the global market. Cambodia, Lao PDR, and Thailand could be better off with increased maize trade should Thailand be opened up for competitive imports of maize from Cambodia, Lao PDR, and Myanmar. Competitive exports and re-exports of maize from Thailand to the global market would allow the country to become the regional hub for the maize trade and the maize value chain.

The requirement for a *permit to import prohibited articles for commercial purposes and an animal feed import permit* would be considered unnecessary due to the fact that maize is an ordinary crop widely planted in Thailand and largely traded in the global market, and thus should not be classified as a prohibited article. Sanitary and phytosanitary measures, technical barriers to trade, and good agricultural practice should adequately and appropriately regulate the movement of and trade in

maize both domestically and internationally in order to protect people, animals, plants, and the environment from dangerous diseases, insects, pesticides and any other hazard. Under such circumstances, there should be no reason to require a permit to import prohibited articles for commercial purposes and an animal feed import permit to import maize. Requirements for permits only unnecessarily add costs and time to the importation of maize and could be conducive to bribery/corruption, unless the permits are automatically granted.

A *certificate of entitlement to tax obligation under WTO and certificate of tax exemption under AFTA* are also viewed as unnecessary requirements for customs procedures. An interesting explanation lies in the assumption that customs officers should know very well that maize is entitled to a tax reduction under WTO and a tax exemption under AFTA. Removing these requirements would reduce costs on the importation of maize. Similarly, the required *reports of import and report of stock, movement, usage, and balance* are viewed in the report as being redundant and troublesome, adding unnecessary costs to the process of importation. It is recommended therefore that these requirements be lifted in order to improve efficiency and reduce business costs related to the import of maize for re-export in order to turn Thailand into a regional hub for the maize trade and value chain.

In addition, maize importers in Thailand are required to register with the Department of Foreign Trade; *importer registration* is valid for one year at a time and needs to be renewed once a year. This requirement is also viewed as not only burdensome but would also create uncertainty among importers who have already established their import business. The annual import registration requirement is therefore not conducive to the long-term development of the international trading business. It is further suggested that the recorded information on importers and exporters of maize in the customs database should be sufficient and convenient to retrieve in case there is a need to do so for policy or regulatory purposes.

POLICY CHALLENGES AND SOLUTIONS

TDRI's case study of NTBs on Thailand's maize trade illustrates several policy challenges and possible solutions in terms of the country's readiness to fulfill its obligations and fully enjoy the potential benefits of AEC.

First, Thailand faces the challenge posed by the conflict between the policy to protect domestic maize farmers against low, volatile prices versus the trade liberalization policy under multilateral and regional agreements, especially AEC commitments. The high intervention price set by the government for protecting Thailand's domestic maize farmers would lead to Thai maize as well as all the products in its entire value chain, such as animal feed, livestock products, prepared and processed food, bio-fuel, and other products using maize as input, becoming uncompetitive. The high price of maize would induce expansion of planting into areas with less fertile and sloping land, reserved forests and headwater areas, thus causing even lower productivity and environmental degradation. Consequently, the farmers' marginal and average cost of producing maize would rise. Price intervention measures would also inevitably restrict maize imports from neighboring ASEAN member states, such as Cambodia and Lao PDR. The combined effects of high guaranteed prices and restricted import barriers would likely induce smuggling of maize from neighboring countries, facilitated by the payment of bribes to relevant government officials.

Thailand has to be decisive and ensure its policy integrity. The country has obviously come a long way on trade liberalization and stands to gain much more if it goes all the way in this regard. On the contrary, Thailand would suffer great losses from standing still or backtracking on trade liberalization in the current globalized economic environment.

Secondly, Thailand faces the challenge of choosing the correct policy instruments to achieve its target policy. In the case of maize, the low and volatile income of maize farmers is a key issue. The



correct policy choice would be aimed at increasing and stabilizing maize farmers' income rather than attempting to increase and maintain maize prices at high levels. It is equally important to distinguish low-income issues from volatile income problems. Different policy instruments are required to tackle the problems of low income on one hand and volatile income on the other.

Some solutions to the problems related to the Thai maize farmers' low and volatile income would include appropriate cost reduction and/or productivity improvement through: yield improvement technology, including improvement of seed quality, improvement of agricultural technology and practices, improvement of post-harvest technology, improvement of farming infrastructure, especially irrigation, warehouse facilities, and transportation and logistics facilities; improvement of farm management systems; provision of incentives for inefficient farmers to take up alternative occupations or job opportunities; and steps to encourage the relocation of maize farms from infertile, non-irrigated and sloping land to irrigated flatland, e.g. substituting maize for rice as a second crop on irrigated land in Thailand's central plain.

There might be also an opportunity for domestic maize farmers to enjoy higher margins between the real cost of production and competitive market prices, and hence higher income through: liberalizing as well as promoting modernization and competition in the transport and logistic services sectors in order to reduce the real costs of transportation and logistics; adjusting the planting/harvesting period to different months wherever possible to achieve better quality—due to less humidity—of maize output and higher seasonal prices (due to off-peak supply), for example, planting maize as a second crop in irrigated rice fields in the central plain as previously mentioned; improving farmers' bargaining power through collective bargaining, through maize farmers' cooperatives, in the purchase of agricultural inputs and the sale of maize outputs; and promoting and effectively enforcing competition in the maize market, including institutionalizing a competitive maize market, such as through commodity exchange and forward markets.

The persistent low-income problem could and should be alleviated directly by measures to increase earning capacity without distorting market prices. Low-income maize farmers should be provided with technical and/or financial assistance to improve their productivity, or alternative crop production or other occupation offering higher income-earning opportunities. On the other hand, the problem of income volatility with maize farming requires a different set of policy instruments. The maize income shortfall could originate either from falling demand under conditions of economic recession or from a production shortfall due to natural disasters, such as floods and drought. There might be also cyclical price declines due to a lagged supply response to excess demand or high prices. Seasonal price fluctuations also exist, such as low prices due to peak supplies after an early harvest season and high prices due to the availability of off-peak supplies before the regular harvest season.

To relieve maize farmers of the adverse effects of these price declines and consequent income falls caused by economic downturns, income com-

pensatory finance would be the most efficient and effective measure. Furthermore, a crop insurance scheme would be the most suitable answer to the problem of production shortfalls arising from natural disasters. In addition, commodity exchanges and forward markets would be best to smooth cyclical price fluctuations resulting from lagged supply responses. It should be noted, however, that price intervention would undermine the functioning of commodity exchanges and forward markets. As for seasonal price fluctuations, shifting the planting time to the dry season in irrigated areas wherever possible would help smooth out the seasonal price fluctuations while saving stocking costs as well as improving the quality of maize.

All these suggested measures would directly, efficiently, effectively, and sustainably solve the maize farmers' problems according to their causes. It is strongly recommended that these policy instruments or measures be carefully considered, rigorously prepared, and comprehensively implemented in order to successfully restructure and reform the entire maize value chain in Thailand.

Thirdly, Thailand also faces a challenge in terms of streamlining rules and regulations related to importation and customs procedures. As discussed in this study, there are a number of prerequisite permits, registration forms, certificates, information and identification procedures required—often repeatedly and sequentially—by different government agencies, some of which are just for procedural reasons or a routine practice, while other permits and certificates might be called for according to an officer's whim. These requirements add time and costs to the importation and customs procedures both for importers and the government agencies concerned. An officer's discretion without clear and testable criteria and transparency could lead to corruption and increase business uncertainty and costs. In addition, the requirements about warehouse location, movement, uses, and remaining stock of the maize imported from Cambodia, Lao PDR and Myanmar add costs for importers and users of the maize imported from those countries.

CONCLUSIONS AND POLICY IMPLICATIONS

It has been found empirically that trade facilitation has had a significant impact on bilateral trade between Thailand and its major trading partners in ASEAN, the Regional Comprehensive Economic Partnership, the United States, and the European Union. Costs in Thailand are still higher as are the time consumed by importation and customs procedures relative to several major trading partners, despite the significant cost and time reductions that have been implemented in recent years. These conditions enable the country to improve its trade facilitation efforts through the elimination and streamlining of rules, regulations, and requirements.

To enhance AEC integration, Thailand's transformation into a major trading nation, and the Thailand Plus One Trade and Investment Strategy, a pilot study was conducted on Thailand's NTBs on maize, which is not only a major agricultural product of Thailand but also the major import commodity from Cambodia and Lao PDR. Maize has been subject to alternative domestic and trade policies as well as various NTMs over the last decade. Great potential trade opportunities and mutual benefits exist for Cambodia and Lao PDR (as the exporters) and Thailand (as the importer), if appropriate policies and trade measures could be adopted.

To enhance Thailand's leadership in realizing the goals of AEC, to effectively implement the Thailand Plus One Trade and Investment Strategy, as well as to take steps to realize the potential benefits from the regional maize value chain and Thailand's role as the trading hub for ASEAN in general and the Greater Mekong Sub-region in particular, focusing on the maize trade between Thailand and Cambodia, Lao PDR and Myanmar, specific policy recommendations drawn from the TDRI study and stakeholder consultations include the following:

a) Thailand should remove MFN and FTA in-quota import restriction (tariff quota) measures and the seasonal prohibition against importing maize from Cambodia, Lao PDR and Myanmar, and, in-

stead, allow the importation of maize year round on an MFN basis without any quantitative restrictions;

b) Thailand should lift the restriction that allows the import of maize only by PWO from the ASEAN member states (which is relevant to Cambodia, Lao PDR and Myanmar in particular) any time of year subject to the annual procurement plan, and, instead, allow all importers—private enterprises and PWO—to import maize competitively from any country, especially Cambodia, Lao PDR and Myanmar, all year round without the requirement of having a procurement plan;

c) Thailand should facilitate the import and export of maize regardless of country of origin and market destination through improvement of transport and logistics infrastructure, including roads, railways, waterways, warehouse facilities, and telecommunications, especially in the border provinces of strategic importance to the maize trade between Thailand and Cambodia, Lao PDR and Myanmar;

d) Thailand should give the highest priority to investment promotion of maize value chain activities in the special economic areas that are located at borders connecting to Cambodia, Lao PDR and Myanmar;

e) Thailand should facilitate even greater imports and exports of maize through the streamlining of rules, regulations, and customs procedures by eliminating unnecessary permits, certification and reports, particularly with regard to such measures as the permits to import prohibited articles for commercial purposes, the certificate of entitlement to tax obligation under WTO, certificate of origin, report of imports to the Department of Foreign Trade within one month of each importation, registration with the Department of Foreign Trade for preferential tariff benefits under ATIGA, the animal feed import permit, and report of stocking, movement, usage, and balance of maize imported from Cambodia, Lao PDR and Myanmar.