Trading Costs in East Asia's Global Value Chains

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Trading Costs in East Asia's Global Value Chains[1]

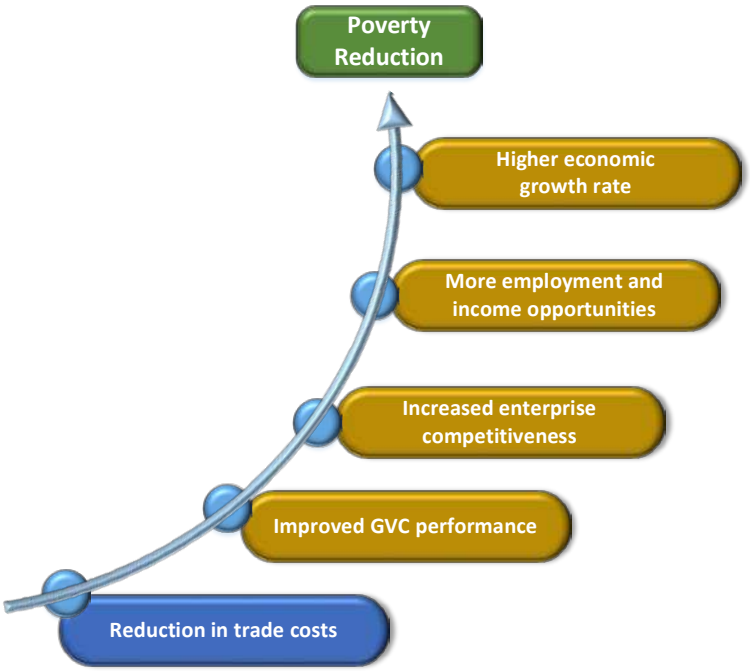
The World Trade Organization's new Agreement on Trade Facilitation has the potential to significantly reduce East Asia's trade costs along the entire supply chain, increasing regional gross domestic product (GDP) by 2.7 percent and employment by 1.2 percent. At present, the region's developing economies suffer from trade costs well above those of the newly industrialized countries and of developed economies, owing to the large number of inefficient border and behind-the-border procedures. Countries have been adding to their stock of nontariff measures, which now account for as much as 90 percent of (non-transportation) trade costs. The ATF defines a new reform agenda for East Asia with potentially far-reaching effects on private sector development, especially for small businesses that need greater transparency and simplification of procedures to enable them to readily access regional and global value chains.

The WTO's New Agreement and What it Means for East Asia

The Agreement on Trade Facilitation (ATF), concluded at the World Trade Organization's (WTO's) 9th Ministerial Conference in Bali, Indonesia, represents a major step toward reducing trade costs. Trade facilitation may be narrowly defined as the simplification and harmonization of the procedures required to move goods across borders and to make the associated payments. Typically, the term also refers to a broader trade agenda, including the modernization of customs administration, the improvement of transport infrastructure, and the removal of other nontariff trade barriers. The ATF is the first major multilateral trade agreement concluded since the WTO was established in 1995. It goes well beyond the old view that trade facilitation should only focus on improving transactions at the border. Instead, the ATF covers the entire range of issues, including behind-the-border issues that affect trade costs along the supply chain. It recognizes that the greater access to markets provided by bilateral, regional, and multilateral trade agreements needs to be complemented by measures that improve the ability of enterprises to compete on a level playing field if they are to effectively participate in international value chains. The ATF therefore has the potential to reduce trade costs significantly, helping East Asia generate increased employment and income and ultimately reduce poverty (Figure 1).

[1] This note was prepared by Montague Lord, Julian Clarke, Fabio Artuso, and Richard Record.

Figure 1. How Trade Facilitation in East Asia's Global Value Chain (GVC) Trade Reduces Poverty



Source: Based on ITC 2013; Rippel 2011; and ITC 2013.

The potential gains from the ATF are striking. Greater trade facilitation, with each country improving its trading environment a quarter of the way toward the levels observed in the region's top performer, could conservatively expand the world economy by 4.5 percent, or US$1 trillion.[2] Analogously, concerted efforts to reduce just two key supply chain barriers (border administration, and transport and communications infrastructure and related services) halfway toward global best practice could increase global GDP by 4.7 percent.[3] The income-generating impact of these trade-cost reductions may have further multiplier effects on output and employment.

Nontariff measures (NTMs) and other nontraditional forms of trade policy are important determinants of trade costs, and now play a stronger role than tariffs in determining economic performance. The above estimates indicate that better trade facilitation and improved logistics would yield greater benefits than eradicating all remaining import tariffs. One important reason is that much progress has already been made in reducing tariffs. As a result, improved logistics reduce trade costs on average 10 times more than equivalent

[2] Hufbauer and Schott 2013; Hufbauer, Vieiro, and Wilson 2012.

[3] World Economic Forum 2013.

proportionate reductions in tariffs.[4] In addition, trade facilitation eliminates resource waste, whereas abolishing tariffs mainly reallocates resources. All this suggests that efforts to reduce NTMs and improve the performance of core services such as logistics should constitute a key policy focus.

The trade facilitation measures having the greatest overall impact on trade volumes are information availability, simplification of documents, automated processes, streamlining border procedures, and good governance.[5] By itself, improved governance and impartiality of border authorities[6] have the potential to reduce total trade costs by nearly 2 percent; the simplification of documents could reduce costs by a further 1.4 percent. For lower-middle-income countries, the harmonization and simplification of documents could lower costs by 1.9 percent, and streamlining procedures by 1.6 percent. In upper-middle-income countries, streamlining procedures could reduce costs by 1.8 percent, and the use of automated processes and risk management by 1.7 percent.

At the sectoral level, agricultural trade costs in developing countries are twice as high as manufacturing trade costs. Trade facilitation measures are especially important for trade in manufactures, since this involves both imports of intermediate and capital inputs, and exports of processed goods.[7] But since agriculture is critically important to poverty reduction and inclusive growth, agricultural trade costs must also be addressed.

For East Asia, trade facilitation improvements under the ATF could boost two-way trade by 20 percent. Conservatively, the region's real GDP would increase by 2.7 percent, and employment by 1.2 percent (Table 1).

Table 1. Potential Impact of Agreement on Trade Facilitation in East Asia

		Value	Percent
Export Gains	Billion US$	$267	9.9
Jobs Supported	Thousand	11,081	1.2
Two-Way Trade Gains	Billion US$	$534	19.8
GDP Increase	Billion US$	$246	2.7

Sources: ESCAP 2013a; Hufbauer and Schott 2013.

The ATF also puts momentum back into the multilateral trading system, and could reverse the increasing fragmentation of international trade created by the intensification of regional trade negotiations. The two proposed mega-regional trade agreements (the Transatlantic Trade and Investment Partnership between the United States and the European Union [EU], and the Trans-Pacific Partnership), combined with the existing "noodle bowl" of Asian trade agreements, could generate considerable trade diversion. Those East Asian

[4] See Arvis et al. (2013) for an analysis of the relationship between trade costs and factors such as tariffs, logistics performance, and maritime connectivity. Logistics performance is measured using the World Bank's Logistics Performance Index.

[5] OECD 2013a.

[6] Governance and impartiality refer to an array of characteristics that include clearly established and transparent structures and functions of border authorities, the existence of a code of conduct and an ethics policy, internal audits, and transparent provisions for financing and for internal sanctions in the customs administration.

[7] OECD 2013a.

developing economies that rely on access to the U.S. and EU markets but are excluded from the Trans-Pacific Partnership could experience negative repercussions on their export performance, especially in global value chains (GVCs) where they have been particularly successful until now.

The cost of implementing the ATF is relatively low. Some developing countries have expressed concerns about the large implementation costs associated with embracing the agreement.[8] Yet the estimated cost of implementing the commitments is relatively low, roughly between US$7 million and US$11 million for each developing country, spread over a number of years.[9]

Why Trade Costs Matter

Trade within East Asia is increasingly shifting from trade in products to trade in tasks, as firms become more closely integrated into GVCs. The share of GVCs in the region's total trade is nearly 40 percentage points greater than two decades ago,[10] and GVCs account for a greater share of trade in East Asia than in any other developing region.[11] This changing dynamic has driven much of the regional clustering of value chains and paved the way for closer regional integration.

Decreasing trade costs are a key factor behind increased participation in GVCs. While geographic distance remains an important factor in determining international transport and logistics costs, the long-term decline in international shipping costs has helped level the playing field and shifted attention to border and behind-the border trade costs.[12]

Nontariff costs now account for as much as 90 percent of remaining (non-transportation) trade costs in East Asia. With rapidly falling shipping costs, what remains are the large trade costs associated with indirect costs at the border and behind the border. These costs largely involve domestic, regional, or international regulations and standards (Figure 2).[13] Tariffs, on average, account for no more than 10 percent of the direct and indirect costs associated with factors other than transportation. NTM costs, which include understanding and complying with a myriad of licenses, permits, and certificates associated with moving goods across border, affect the international competitiveness of businesses in the region. They also affect the ability of enterprises, including in particular small enterprises, to participate in regional and global

[8] ITC 2013.

[9] World Bank 2013.

[10] OECD (2013b, 2013c). A country's integration in GVCs is measured as the share of imported intermediate inputs embodied in its exports following their incorporation in the production of goods and services. See also the OECD-WTO Trade in Value Added (TiVA) Database, http://stats.oecd.org/Index.aspx?DataSetCode=TIVA_OECD_WTO; and "Measuring Trade in Value Added: An OECD-WTO Joint Initiative," www.oecd.org/sti/ind/measuringtradeinvalue-addedanoecd-wtojointinitiative.htm.

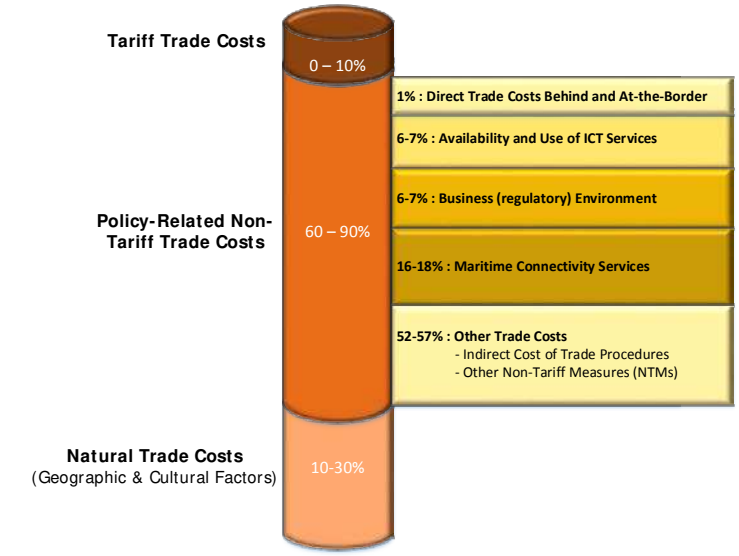
[11] Based on data reported in UNCTAD (2013) from the UNCTAD-Eora GVC database.

[12] Global trade-weighted average transport costs have declined from 6 percent to 4 percent over 30 years (Hummels 2007). See WTO (2008) for a detailed breakdown of the evolution of transportation costs by mode of transportation.

[13] See http://data.worldbank.org/data-catalog/trade-costs-dataset.

value chains; trade in intermediate goods for production networks is especially sensitive to trade costs.[14]

Figure 2. Nontariff Measures Account for as Much as 90 Percent of Non-transportation Trade Costs



Source: ESCAP (2012), based on data from Duval and Utoktham (2011b).

Development of the private sector, especially trading enterprises, is at the heart of the ATF. Yet, existing survival rates of exporters in developing countries are extremely low, typically averaging two to three years.[15] In the Lao People's Democratic Republic, for example, the chance of an export-oriented firm surviving more than one year is less than 50 percent.[16]

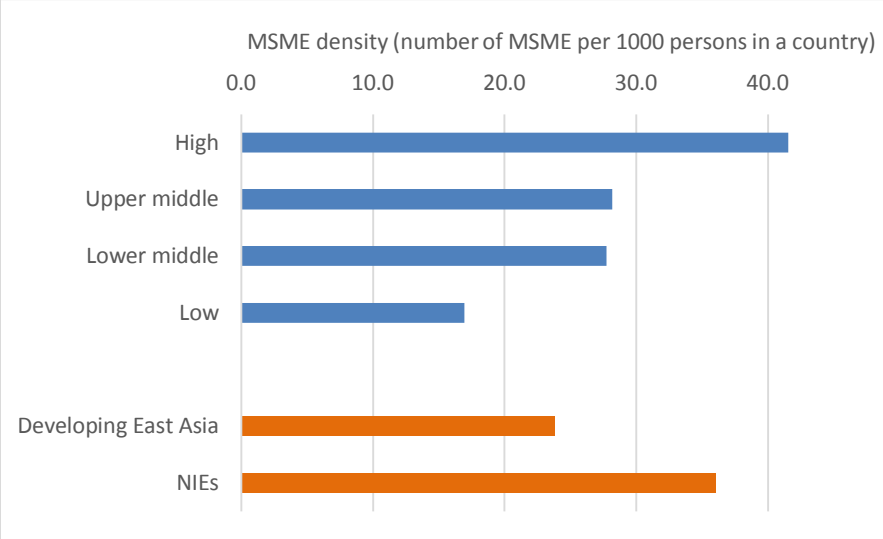
The integration of small firms into high-value-added activities is essential to private sector development in East Asia, particularly in lagging regions. The density of micro, small, and medium-size enterprises (MSMEs) in overall business activity, defined as the number of MSMEs per 1,000 persons, generally reflects a country's level of economic development. In developing East Asia, as expected, MSME density is low compared with both the more developed countries in the region, and the United States and EU (Figure 3). But the East Asian less developed countries (Cambodia, Lao PDR, and Myanmar) have especially low MSME densities even among low- and lower-middle-income countries, as do China and the Philippines. In contrast, Indonesia, Malaysia, Thailand, and Vietnam are in line with the upper-middle- and high-income countries of the world.

[14] Saslavsky and Shepherd 2012.

[15] World Bank 2014.

[16] Stirbat, Record, and Nghardsaysone 2011, 2013.

Figure 3. Micro, Small, and Medium-Size Enterprise (MSME) Density is Closely Related to Level of Development



Sources: International Finance Corporation, World Bank Group, MSME database online; www.ifc.org/wps/wcm/connect/Industry_EXT_Content/IFC_External_Corporate_Site/Industries/Financial+Markets/msme+finance/sme+banking/msme-countryindicators.
Note: MSME density refers to the number of MSMEs per 1,000 persons in a country.

Small enterprises in particular face what are often insurmountable obstacles when trying to export. They usually lack the capacity to comply with complex customs and border procedures and to track down the information needed to trade with overseas markets. Trade costs therefore affect small businesses disproportionately, making them uncompetitive as suppliers and hampering their integration into regional and global value chains. Even in Indonesia, with one of the highest MSME densities in the region, businesses face major difficulties dealing with customs procedures and obtaining information on how to access overseas markets and participate in supply chains and distribution networks.[17] Yet recent evidence in East Asia suggests that small and medium size enterprises can make significant contributions to global value chains and, in so doing, help to boost their value-added activities in international trade.[18]

Trade Costs in East Asia

In Southeast Asia, total trade costs (including transport, border-related, and local distribution costs) remain high relative to other regions.[19] They have recently escalated in

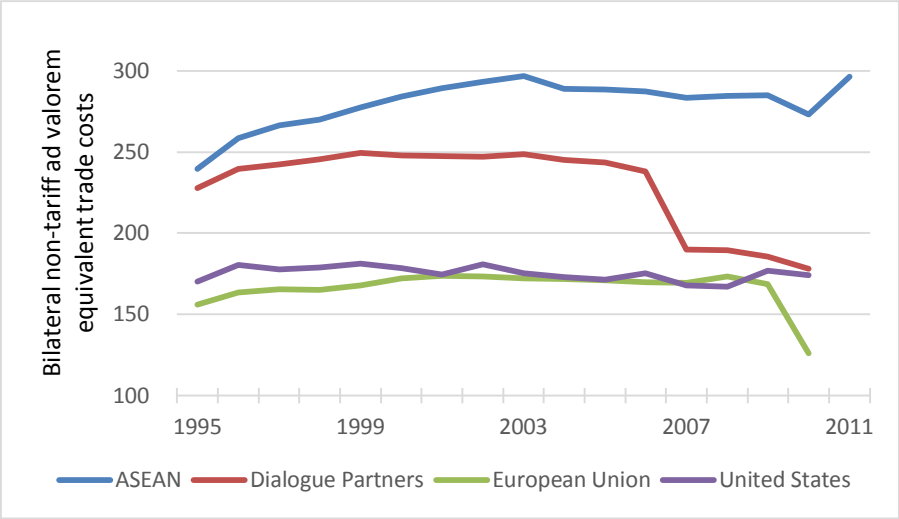
[17] Sipahutar 2013.

[18] ESCAP (2011b).

[19] Data on trade costs are drawn from the ESCAP-World Bank *Trade Cost Database* and ESCAP (2013c). This dataset captures bilateral trade costs between countries, including international transportation costs, tariffs, and other direct and indirect trade costs such as import and export procedures. For details on methodology, see Anderson and van Wincoop (2004), and the detailed explanatory note on database coverage in Arvis et al. (2013) and ESCAP and World Bank (2013). National and regional total trade costs represent unweighted averages of bilateral trade costs in each country; weighted averages might prove misleading, owing to missing bilateral trade

many countries, widening the gap even further.[20] This new trend represents a reversal of the gradual decline during the last decade (Figure 4); box 1 illustrates the evolution of trade costs in Thailand and their impact on manufacturing. Although some countries had, until recently, made significant progress in reducing costs, nearly half the reductions were attributable to tariff cuts.[21] Further gains will need to come from addressing NTMs.

Figure 4. Total Trade Costs Have Recently Escalated in Nearly All Southeast Asian Countries (Ad Valorem Tariff Equivalent, Percent)



Source: ESCAP-World Bank *Trade Cost Database*, www.unescap.org/tid/artnet/db/usernote-2013.pdf.
Note: The Dialogue Partners consist of Australia, China, India, Japan, New Zealand, and Republic of Korea.
ASEAN = Association of Southeast Asian Nations.

costs in various years. The aggregation approach follows Duval and Utoktham (2011a, 2011b, 2012) and Sourdin and Pomfret (2009).

[20] From slightly over 150 percent to 166 percent of the value in the region's Dialogue Partners, and from 186 percent to more than double the EU-U.S. average. For an analysis of the recent growth of protectionism, see ESCAP (2013b).

[21] ESCAP 2011a.

Box 1. Trade Costs and Trade Facilitation in Thailand

Thailand offers a useful example of how trade facilitation can impact trade, for three reasons. First, the country is representative of the larger developing countries in the region. Second, it has invested heavily in manufacturing activities for regional and global value chains. Third, a recent study[a] analyzes the cost of nontariff measures (NTMs) and the impact of remedies offered by the ATF. The study, which this box draws upon, exploits the new OECD-WTO Database on Trade in Value-Added (TiVA),[b] and information on the detailed components of trade costs.

Thailand's cost of trade in manufactures is high. For instance, the ad-valorem equivalent total trade cost with Australia is 110 percent, and with the EU 148 percent. Trade costs are nonetheless low for trade with China, Japan, and the Association of Southeast Asian Nation (ASEAN) countries. However, NTMs with ASEAN countries other than Singapore are more complex than those with Japan. As a result, the time needed to get exports to Indonesia (17 days), Malaysia (13 days), and the Philippines (15 days) is considerably greater than to Japan (10 days). In addition, the logistical performance and quality of port infrastructure in ASEAN countries other than Singapore lags far behind that of Japan. As a result, ease of exporting and importing weigh relatively heavily on Thailand's trade with other ASEAN countries.

Trade facilitation measures could have a large impact on Thailand's trade, and especially on its competitive strength in integrated regional and global markets. In particular, relatively small reforms that address the number of documents and the time involved in exporting and importing could yield large gains. Currently, exports of auto parts from Thailand to India require 29 documents covering more than 800 data inputs, and imports of electronic devices from China require 24 documents covering 700 data inputs.[c] Related to this, exporting auto parts to India can take as much as 51 days compared with an average of 9 days for other manufactures.[d] If the documentation required to process imports and exports were halved, manufacturing trade could expand by 10 percent. Similarly, if the time taken to process exports and imports were reduced by one-quarter, manufacturing trade could increase by 11 percent.

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Sources: a. Wongpit 2013.

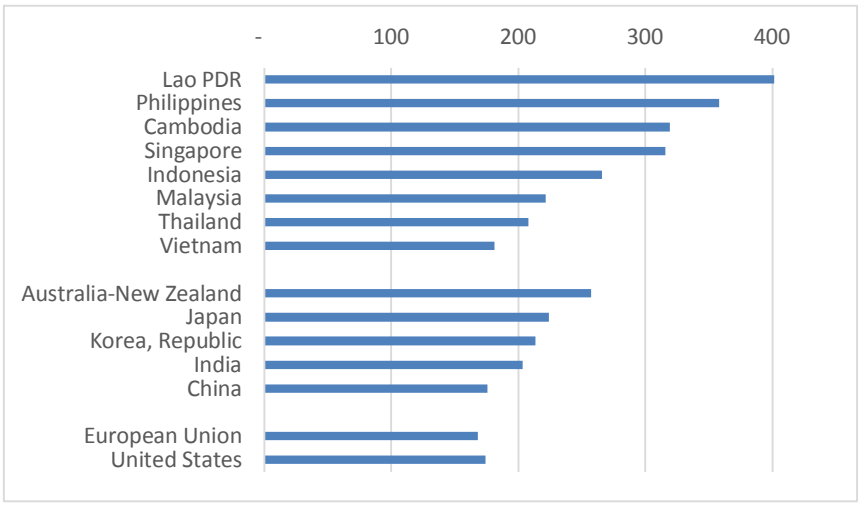
b. http://stats.oecd.org/Index.aspx?DataSetCode=TIVA_OECD_WTO.

c. Keretho and Naklada 2011.

d. Cheewatrakoolpong and Ariyasajjakorn (2012), based on a survey of 500 firms in Thailand.

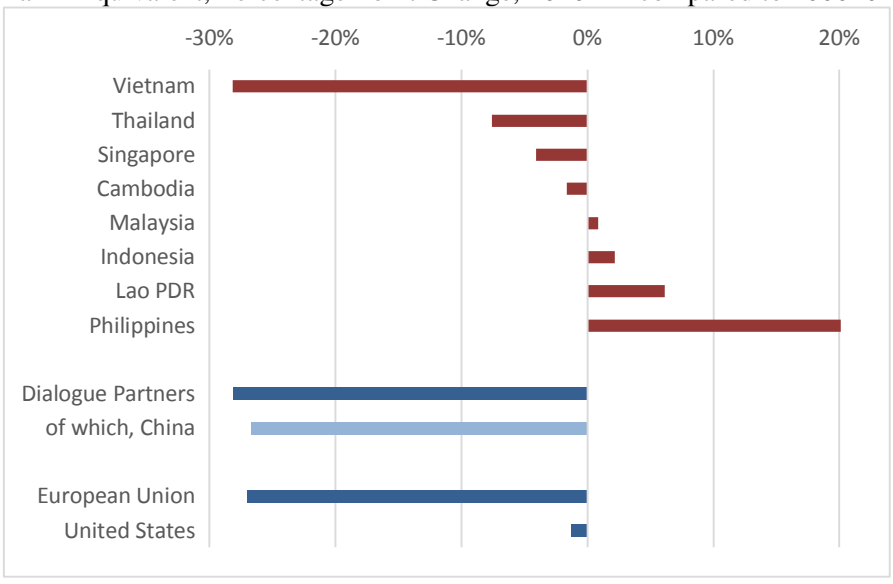
Within the region there are large differences in both the magnitude and evolution of trade costs. The highest-cost countries are Lao PDR, the Philippines, and Cambodia; in contrast, Vietnam, Thailand, and Malaysia enjoy the lowest costs (Figure 5). Among the ASEAN Dialogue Partners, China has the lowest costs. While Vietnam, China, Thailand, and Singapore have led the way in lowering costs, the Philippines and, to a lesser extent, Lao PDR and Indonesia, have experienced a growing use of NTMs (Figure 6).

Figure 5. Over Half of Southeast Asian Countries Have Relatively High Total Trade Costs (Ad-Valorem Tariff Equivalent, Percent)



Source: ESCAP-World Bank *Trade Cost Database*, www.unescap.org/tid/artnet/db/usernote-2013.pdf.
Notes: Total trade costs include transport, border-related, and local distribution costs (see also footnote 19).

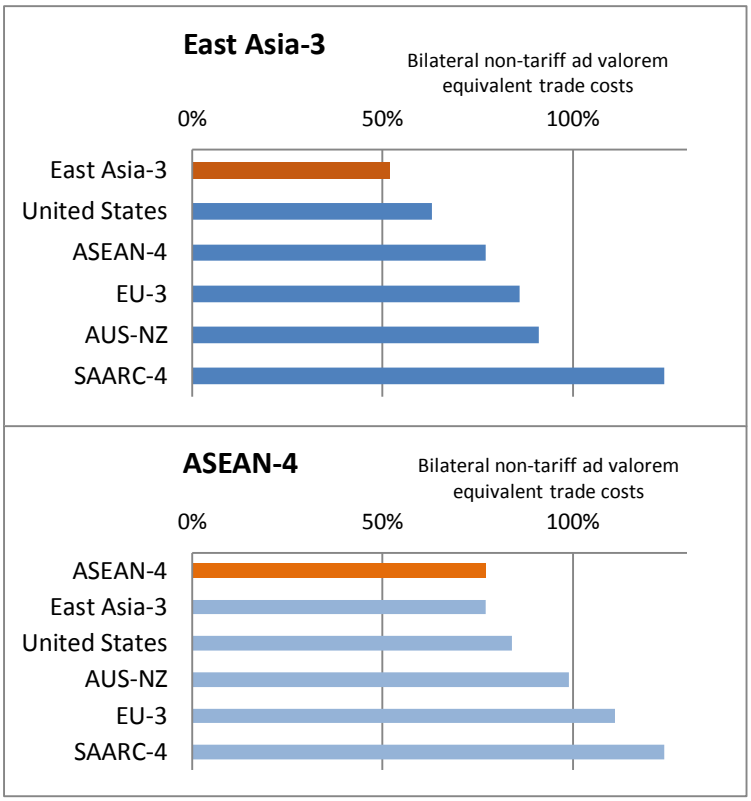
Figure 6. The Evolution of Trade Costs Differs Markedly across Countries
(Ad-Valorem Tariff Equivalent, Percentage Point Change, 2010–11 compared to 2000–01)



Source: ESCAP-World Bank *Trade Cost Database*, www.unescap.org/tid/artnet/db/usernote-2013.pdf.
Note: "Dialogue Partners" consist of Australia-New Zealand, China, India, Japan, and the Republic of Korea. Total trade costs include transport, border-related, and local distribution costs (see also footnote 19).

Costs are relatively low for East Asian intraregional trade. In some of the larger East Asian countries,[22] NTM costs are relatively low (averaging 70 percent), and are especially low for intraregional trade (Figure 7). In the larger ASEAN countries (Indonesia, Malaysia, the Philippines, and Thailand) the average NTM cost for intraregional trade is nonetheless 10 percent higher than a decade ago.

Figure 7. East Asia's Intraregional NTM Trade Costs are Much Lower than its Extraregional Costs (Ad Valorem Tariff Equivalent, Percent)



Source: ESCAP-World Bank *Trade Cost Database*, www.unescap.org/tid/artnet/db/usernote-2013.pdf.
Note: ASEAN-4 refers to Indonesia, Malaysia, the Philippines, and Thailand; East Asia-3 to China, Japan, and the Republic of Korea; AUS-NZ to Australia and New Zealand; EU-3 to Germany, France, and the United Kingdom; SAARC-4 to Bangladesh, India, Pakistan, and Sri Lanka.

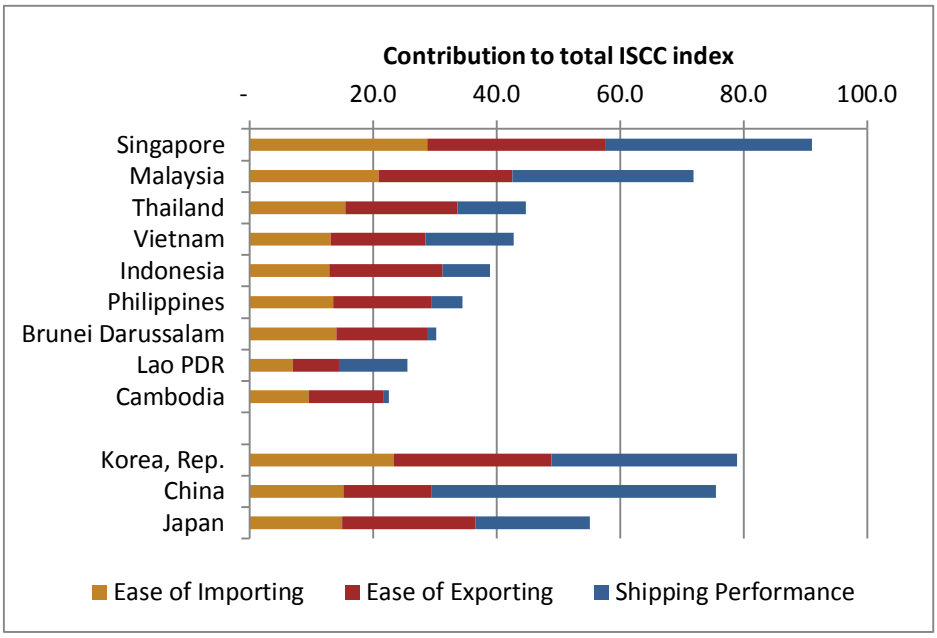
Extraregional trade costs are remarkably high, particularly for trade with other Asian and Pacific areas. High extraregional trade costs are encouraging the larger East Asian countries to favor intraregional trade. For these countries, NTM costs with North and Central Asia are 3.5 times greater than with the EU and the United States. Similarly, NTM costs with

[22] Throughout this section, "the larger East Asian countries" denotes China, Indonesia, Japan, Malaysia, the Philippines, the Republic of Korea, and Thailand.

the Pacific Island Developing Countries are more than three times as high as with the EU and the United States.

East Asia scores well in measures of international logistics and supply chain connectivity.[23] The world's most connected economies are in East Asia: Singapore, Korea, China, and Malaysia, along with Hong Kong SAR, China (Figure 8). Nevertheless, there are wide variations in country performance. Cambodia and Lao PDR, in particular, rank 117th and 138th, respectively, out of 179 countries in supply chain performance.

Figure 8. Different Factors Explain East Asia's Connectivity Performance (International Supply Chain Connectivity Index)



Source: ESCAP, *International Supply Chain Connectivity* index, www.unescap.org/tid/artnet/iscci.asp.
Note: This index measures connectivity performance based on the average of trading-across-borders indicators for exports and imports in the World Bank's *Doing Business* Report, and on UNCTAD's *Linear Shipping Connectivity* Index.

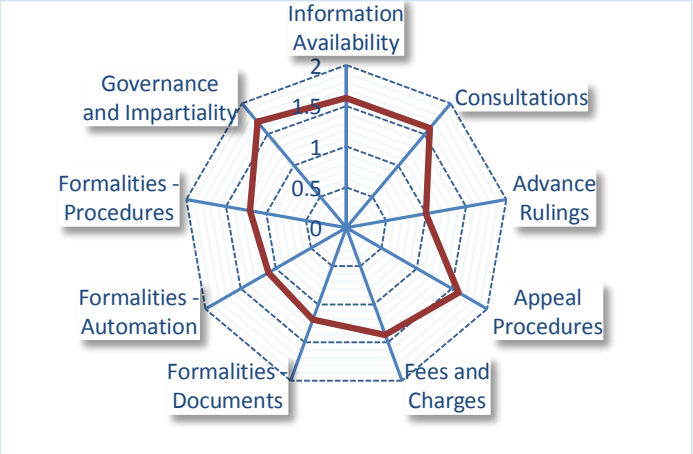
Key Trade Facilitation Measures for East Asia

The trade facilitation measures that matter most for East Asia are information availability, and fees and charges (see Figure 9 for a broader list of trade facilitation challenges). These measures correspond to the main policy areas covered by the ATF. For instance, the agreement improves information availability through increased publication of information, issuance of notifications, and the establishment of inquiry points. The ATF also promotes disciplines (that is, rules and constraints) on fees and charges imposed on imports

[23] Connectivity refers to the ease of importing and exporting and to shipping performance, which can be facilitated by international logistics in supply chain planning, implementation, and control.

and exports. It further covers the use of "single windows,"[24] disciplines on preshipment inspection and customs brokers, and the temporary admission of goods.

Figure 9. Asia's Potential Reduction in Trade Costs from Trade Facilitation Measures is Large in Most Areas (Percent)



Source: OECD 2013a.

It is important that a holistic approach to trade facilitation be adopted. While each of the trade facilitation measures are in varying degrees important to countries in the region, inefficiency in one link of the value chain negatively impacts other links. For this reason, when trade facilitation measures are combined, their total effect is greater than the sum of the parts.[25] The Lao PDR Trade Portal provides an instructive example of how to integrate different trade facilitation measures (box 2).

Box 2. ASEAN Efforts to Increase Transparency and Predictability of Trade Rules and Procedures

As part of their effort to build the ASEAN Economic Community, ASEAN Member States are working toward improving the transparency and predictability of trade rules and procedures. For instance, the Lao PDR Trade Portal (www.laotradeportal.gov.la) was launched in 2012 as Lao PDR's National Trade Repository. It provides traders with access to trade laws, regulations, measures, restrictions, licensing requirements, and tariff rates. Traders can also access detailed process maps of business procedures and downloadable forms. Other countries, such as Indonesia (http://eservice.insw.go.id/), have launched similar initiatives with the objective of completing the ASEAN Trade Repository by 2015.

ASEAN countries are also committed to establishing a National Single Window that will enable traders to fulfill online all regulatory requirements of customs and noncustoms agencies. Eventually, each National Single Window will be integrated into a region-wide ASEAN Single Window, which will function as a platform for electronic data exchange and communication among participating countries. This process is expected to improve the overall efficiency of the current systems, providing time and cost savings for traders.

[24] A single window is a facility that allows parties involved in trade and transport to lodge standardized information and documents with a single entry point to fulfill all import, export, and transit-related regulatory requirements.

[25] **Moïsé et al 2013.**.

In logistics, as well as in border and behind-the-border reforms, the wide variation in country performance suggests a number of country-specific areas amenable to improvement. For instance, shipping performance could be substantially strengthened in Cambodia, Indonesia, the Philippines, and Thailand. In China, there is considerable room to enhance the ease of trading across borders. In Lao PDR, improving the effectiveness of border administration could help offset the disadvantages of being landlocked.

Trade facilitation in East Asia is being supported by several subregional arrangements, most notably efforts to establish an ASEAN Economic Community by 2015. At a broader level, the ASEAN free trade agreements with Dialogue Partners[26] include trade facilitation provisions that can help redress nontariff measures. To that end, the ASEAN Trade in Goods Agreement and its Trade Facilitation Work Program provide specific ways to ensure that progress is made in implementing the region's trade facilitation measures.

Foreign direct investment (FDI) can help small businesses enter international trade and enhance private sector development. In Vietnam, for instance, strong parent-subsidiary relationships in the context of regional and global value chains are important drivers of the increasing share of exports by small firms; such parent-subsidiary relationships are much less important in the Philippines.[27] These differences help account for the high MSME density in Vietnam and the low density in the Philippines. Similar patterns exist elsewhere in the region, and point to the importance of removing existing barriers to FDI (see accompanying note on "FDI and Foreign Ownership Restrictions in ASEAN").

Policy Conclusions: Beyond Stroke-of-Pen Reforms

Given the rising trade flows of intermediate goods crossing borders multiple times, efficient access to imports matters as much to East Asia's trade network as does access to markets. Since over half of East Asia's trade forms part of regional and global value chains, exports embody significant import content.[28] Trade costs therefore matter greatly to the entire production process. Of these trade costs, nontariff barriers account for as much as 90 percent of all direct and indirect trade costs other than transportation. Policy must therefore focus on the trade regulatory environment.

The Agreement on Trade Facilitation covers the entire range of NTM issues affecting trade costs. If East Asia were to implement fairly conservative trade facilitation measures, exports could expand by 10 percent, real GDP by 2.7 percent, and employment by 1.2 percent.

The 12 types of trade facilitation measures covered by the ATF are comprehensive but not exhaustive. Other issues will need to be addressed to further lower trade costs, including topics such as rules of origin in regional trade agreements, intermodal transport, and cross-border logistics services. Within the ATF, the trade facilitation measures with the most impact on developing East Asia are increased information availability on trading rules and regulations,

[26] The Dialogue Partners comprise Australia, China, India, Japan, New Zealand, and the Republic of Korea.

[27] Troilo 2012.

[28] In China, Malaysia, the Philippines, and Thailand the foreign value content of exports ranges from 33 percent to 38 percent, compared with a global average of 24 percent (Banga 2013; WTO 2013). Moreover, the share of foreign value added in exports is rising in almost all developing East Asian countries, especially Vietnam.

improved fee structures, appeal procedures and consultations, and improved governance and impartiality of border authorities covering transparent structures and functions of border authorities, codes of conduct, and internal audits and sanctions in the customs administrations. While some of these measures involve stroke-of-pen reforms that would eliminate trade impediments within a short time, many NTMs require deeper reforms. For instance, dissemination of information that helps businesses initiate and sustain trade-related activities needs a great deal of investment in the full range of areas that meet the specific requirement of different businesses (Box 1).

Success in redressing the region's rising trade costs requires a holistic approach to trade facilitation. Bottlenecks along supply chains will undermine piecemeal reforms. The ATF offers an opportunity to implement much-needed cost-cutting measures across a wide range of areas. If successfully adopted, these measures will allow developing East Asia to more fully participate in regional and global value chains and substantially improve the economic well-being of its peoples.

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