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Impacts of free trade agreements on business activity in Asia: The case of Japan

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Impacts of Free Trade Agreements on Business Activity in Asia: The Case of Japan

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Sato, and Ikumo Isono

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Abstract

Free trade agreements (FTAs) have proliferated in East Asia in recent years. As of December 2008, eight bilateral FTAs and one plurilateral FTA involving Japan have entered into force; additional negotiations are ongoing with several more countries. The proliferation of FTAs in Japan and other Asian countries is thought to be behind the perceived overlapping rules of origin (ROO) problem, or "spaghetti bowl" effect. Effective implementation of FTAs is becoming an increasingly pressing issue for Japanese firms because Japanese firms have expanded overseas, particularly into the rest of Asia, which has contributed to the formation of production networks in East Asia.

There have been numerous *ex ante* studies on the impacts of FTAs in which they assumed that any firm can maximize profits by utilizing FTA preferential tariffs without any additional costs. In reality, however, FTAs require certificates of origin, which impose additional administrative costs on firms. It is doubtful whether firms really use FTAs because FTAs are not compulsory. With this in mind, this study investigates how East Asian FTAs have affected the behavior of Japanese firms, including their affiliates operating overseas.

Our study concluded that presently FTAs are neither well known nor well utilized by Japanese firms. There are several reasons for low utilization. Firms either do not fully understand or are not knowledgeable about the existing FTAs. There are some trade arrangements from which tariffs are completely exempted, such as the Information Technology Agreement and the special exemption of tariffs under Thailand's Board of Investment laws. Phase-out tariff reduction schedules, in which tariffs are gradually reduced over several years, discourage FTA use. Furthermore, the administration to prepare documents for certificates of origin is cumbersome. As a result, in general, small- and medium-sized enterprises cannot use FTAs, meaning that they are penalized in utilizing FTAs. Only a few FTAs with large economic partners are utilized by Japanese firms. Bilateral FTAs are not more beneficial than plurilateral FTAs, in particular in East Asia where production networks have developed.

JEL Classification: F13, F14 and N75

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1. INTRODUCTION

There have been numerous *ex ante* studies on the impacts of bilateral and plurilateral free trade agreements (FTAs). These studies, based on computed general equilibrium (CGE) models, assume that any firm can maximize profits by utilizing the FTA preferential tariffs without any additional cost. Such studies come to the conclusion that, due to decreases in import prices from lowered tariffs, exports, imports, consumption, or welfare levels significantly increase. In reality, however, FTAs require certificates of origin, which impose additional administrative costs on firms. More importantly, FTAs are not compulsory, and therefore it is uncertain whether firms view using FTAs to be in their best interest. The extent to which firms utilize FTAs depends on the firms' knowledge about the agreements and their capacities to comply with requirements.

Japanese firms have expanded operations overseas, contributing to the formation of production networks in East Asia and accelerating *de facto* economic integration (see Hiratsuka 2006). In addition, in recent years, FTAs have proliferated in East Asia. Japan has been no exception. As of December 2008, Japan agreed to economic partnership agreements (EPAs) with five countries; additional negotiations are ongoing with several more countries. The proliferation of FTAs in Japan and other Asian countries is thought to be behind the perceived overlapping rules of origin (ROO) problem, or the "spaghetti bowl" effect.

With the proliferation of FTAs in East Asia and in Japan, effective implementation of FTAs is becoming an increasingly pressing issue. With this in mind, this study investigates how East Asian FTAs have affected the behavior of Japanese firms including affiliates operating overseas. Specifically, the study aims to understand the impacts, if any, of different tariffs and ROO on Japanese exporters.

The study concludes that Japanese firms have low rates of FTA utilization, using FTAs only for a limited number of products. Reasons for non-use abound: firms do not know enough about FTAs; phaseout tariff reduction schedules, whereby tariffs are gradually reduced over several years, have made FTAs unattractive to firms; there are alternative trade arrangements in which tariffs are completely exempted, such as the Information Technology Agreement (ITA) and the special exemption of tariffs under Thailand's Board of Investment (BOI) laws; administrative and documentation efforts for certificate of origin are cumbersome. Small and medium enterprises (SMEs) in particular face significant barriers in using FTAs. Moreover, the study finds that Japanese firms plan to use only a few FTAs with large economic partners. The study also reveals potential benefits to be reaped: FTAs involving Japan may enhance the business environment by providing opportunities for the business sector to participate in consultations and meetings related to FTA negotiation. The study addresses the expectation that unilateral most-favored nation (MFN) tariff reduction will generate large benefits for exporters.

The next section reviews Japan's FTA strategy and trade performance on products that have been liberalized by the FTAs involving Japan. Section 3 introduces a large sample survey conducted in 2006 by the Japan External Trade Organization (JETRO). Section 4 presents the results of survey interviews conducted during July 2007–May 2008 by the Institute of Developing Economies (IDE-JETRO) to investigate FTA utilization, the costs and benefits of FTAs, ROO problems, the overlapping ROO problem, and policy support. Section 5 summarizes the implications of this study and offers policy recommendations to better utilize FTAs.

2. JAPAN'S FTA STATUS

2.1 Japan's FTA Strategy

Efforts to liberalize global trade through the World Trade Organization (WTO) have made limited progress since the Doha round of negotiations was launched in 2001. The Doha tariff reduction negotiation is deadlocked due to disagreements between developed and developing economies, and between the European Union (EU) and Japan on one side and the United States (US) on the other. Another shortfall of the negotiation has been the exclusion of some significant issues, such as intellectual property rights. Such disappointing consequences have forced the WTO member countries (US and EU in particular) to choose alternative paths such as FTAs to promote trade. The trend toward FTAs has generated a domino effect in which one FTA triggers the creation of others.

Although Japan has been involved in this domino effect, it seems to have a disciplined and progressive FTA strategy. Japan's FTAs aim not only to facilitate trade but also to improve business environments and enhance competitiveness with economic cooperation in the partner countries where many Japanese affiliates have operations. This differs greatly from the approaches of the People's Republic of China (PRC) and Republic of Korea (hereafter Korea), which seek mainly to expand trade by the enforcement of FTAs. Japan's FTAs also target developing countries rather than advanced countries with large markets, and they call their FTAs "EPAs" because they cover various elements beyond tariff elimination, such as customs procedure cooperation; technical regulations, standards, and conformity assessment; investment; trade in services; movement of natural persons; energy and mineral resource development cooperation; intellectual property rights; government procurement; and control of anti-competitive activities. For Japan, enforcement of FTAs, therefore, means strong commitments by the concerned countries to improve their business environments.

As shown in Table 1, as of 1 February 2009, Japan had nine bilateral FTAs in effect with Brunei Darussalam, Chile, Indonesia, Malaysia, Mexico, Philippines, Singapore, Thailand, and Viet Nam. Furthermore, Japan has concluded a bilateral FTA with Viet Nam. In addition to those bilateral FTAs, Japan has entered into a plurilateral FTA with ASEAN. Specifically, the Japan–ASEAN EPA included Singapore, Lao People's Democratic Republic, Viet Nam, and Myanmar in December 2008; Brunei Darussalam was added in January 2009. The plurilateral FTA will enter into force with other economies when national requisites are complied. With the ASEAN–Japan EPA, bilateral and plurilateral FTAs coexist between Japan and Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore, Thailand, and Viet Nam. Therefore, a Japanese exporter has the option to choose one preferential tariff among them.

Table 1: Summary of EPAs and FTAs Involving Japan as of 1 January 2009

Economy	Commencement of Negotiation	Conclusion	Entry into Force
Singapore	January 2001	13 January 2002	30 November 2002
Singapore (amending)	April 2006	19 March 2007	2 September 2007
Mexico	November 2002	17 September 2004	1 April 2005
Malaysia	January 2004	13 December 2005	13 July 2006
Chile	February 2006	27 March 2007	3 September 2007
Thailand	February 2005	3 April 2007	1 November 2007
Indonesia	July 2005	20 August 2007	1 July 2008
Brunei Darussalam	June 2006	18 June 2007	31 July 2008
ASEAN	April 2005	14 April 2008	1 December 2008
Philippines	February 2005	9 September 2006	11 December 2008
Viet Nam	January 2007	25 December 2008	
Korea, Rep. of	December 2003		
India	February 2007		
Australia	April 2007		
Switzerland	May 2007		

ASEAN = Association of Southeast Asian Nations; EPA = economic partnership agreement; FTA = free trade agreement.

Source: Compiled from the Website of Ministry of Foreign Affairs, Japan.

2.2 Liberalization Level of FTAs Involving Japan

The General Agreement on Tariffs and Trade (GATT) Article 24 requires that the parties of FTAs have to “liberalize substantially all imports.” This requirement leaves some important questions unanswered: Which criterion is used to measure liberalization—import value or coverage of tariff line code? And how much liberalization is “substantial”? In notifying FTAs to the WTO, Japan has reported the liberalization figures based on the import value, and thus, the country has not released the liberalization coverage of tariff lines. In order to understand the strategy of FTA, the level of trade liberalization in goods needs to be transparent.

Kimura and Kuno (2007) measured the level of trade liberalization in goods in FTAs involving Japan (those with Singapore, Mexico, and Malaysia) based on both import value and tariff line code. The study found that Japan liberalized goods on more than 94% of imports in terms of import value but less than 90% in terms of tariff line code (Tables 2 and 3). This reflects the existing protections on agricultural products. As shown in Table 3, Japan–Singapore liberalized only 18.8% of agricultural products. The figure of Japan–Mexico rose to 41.7% and the one under Japan–Malaysia rose to 54.0%. Conversely, Japan liberalized almost all mineral and manufactured products: 92.4% for Japan–Singapore, 98.0% for Japan–Mexico, and 98.3% for Japan–Malaysia. Among mineral and manufactured products in the Japan–Malaysia EPA, some products such as fur skin and leather goods, raw silk, ski boots, slippers, and footwear for gymnastics are excluded from the liberalization lists.¹

Table 2: Japan’s FTA Liberalization Levels in Terms of Import Value (%)

Economies	Liberalization Level of Japan Side	Liberalization Level of Partner Side
Japan–Singapore	95	100
Japan–Mexico	96 (two ways), 87 (one way)	98
Japan–Malaysia	94	99

FTA = free trade agreement.

Source: Kimura and Kuno (2007).

Table 3: Japan’s FTA Liberalization Levels in Terms of Tariff Line Codes (%)

Economies	Agricultural Products	Mineral and Manufactured Products	Total
Japan–Singapore	18.8	92.4	76.2
Japan–Mexico	41.7	98.0	85.7
Japan–Malaysia	54.0	98.3	88.7

FTA = free trade agreement.

Source: Kimura and Kuno (2007).

2.3 Impacts of FTAs Involving Japan

Studies on the impacts of FTAs involving Japan based on CGE models include those by Kawasaki (2003); Brown, Kiyota, and Stern (2004); Ando and Urata (2005); Kawai and Wignaraja (2007) and JETRO (2007b). Some interesting observations involving Japan have been obtained from these studies. First, due to trade creation, Japan and FTA partner countries experience gains in areas including welfare, gross domestic product (GDP), and exports. Kawasaki (2003) estimated that Japan’s FTAs with PRC, Thailand, Korea, Malaysia, Indonesia, and Philippines increase Japan’s GDP by 0.45%, 0.24%, 0.12%, 0.08%, 0.06%, and 0.03%, respectively, while each partner country increases its GDP by 3.06%, 20.09%, 2.45%, 5.07%, 3.01%, 3.03%, respectively.

Second, due to trade diversion, those FTAs involving Japan generate large negative impacts on non-member countries. Kawasaki (2003) obtained the results that an ASEAN–Japan FTA would decrease the PRC’s GDP by 0.28%, and a PRC–Japan FTA would decrease the

¹ Fur skin and leather goods are protected for historically marginalized people who have been engaging in production of these goods and have political influence.

GDPs of Singapore by 0.34%, Indonesia by 0.26%, Malaysia by 0.42%, Philippines by 0.27%, Thailand by 1.06%, and Viet Nam by 0.59%. Kawai and Wignaraja (2007) obtained the results that an ASEAN–Japan FTA would increase the GDPs of Japan and ASEAN by 0.21% and 2.43%, respectively, but would decrease the GDPs of Korea and the PRC by 0.23% and 0.14%, respectively. Ando and Urata (2005) obtained similar results that non-member countries experience a decrease in GDP and income.

Third, a larger number of FTA members makes for larger gains from an FTA. Ando and Urata (2005) estimated that ASEAN–Japan FTA would increase Japan's GDP by 0.18% while expanding the agreement to include ASEAN+3 would increase it by 0.19%. Kawai and Wignaraja (2007) obtained the results that Japan is expected to increase GDP by 1.54% with ASEAN+3, and by 1.59% with ASEAN+6. JETRO (2007b) estimated that Japan–ASEAN FTA would increase Japan's GDP by 0.3%, while ASEAN+3 and ASEAN+6 would increase it by 2.0% and 2.6%, respectively. Brown, Kiyota, and Stern (2004) estimated that unilateral free trade liberalization on a non-discretionary MFN basis would increase Japan's welfare by 3.7%, with partner countries also reaping large gains. These effects are greater than the effects of combined bilateral FTAs. Finally, global free trade liberalization was estimated to increase Japan's GDP by 7.4%.

Fourth, plurilateral FTAs such as an ASEAN–Japan EPA have been predicted to bring larger benefits than the combination of bilateral FTAs, such as Japan–Singapore, Japan–Malaysia, Japan–Thailand, and Japan–Indonesia. Fouquin (2008) compared the simulation results of the combination of ASEAN+4 bilateral FTAs (ASEAN–PRC, ASEAN–Korea, ASEAN–Japan, and ASEAN–India) and a plurilateral ASEAN+4 FTA. The plurilateral FTA or full FTA in which PRC, India, Japan, and Korea not only remove their tariffs on imports from ASEAN-10 members but also remove their bilateral tariffs (e.g. PRC–Japan) generates larger gains than the combination of ASEAN+4 bilateral FTAs (Table 4).

Table 4: Impacts of Bilateral and Plurilateral FTAs (%)

	GDP					
	ASEAN+4 bilateral FTAs			ASEAN+4 plurilateral FTAs		
	2010	2020	2025	2010	2020	2025
ASEAN-10	3.27	4.20	4.43	2.62	3.33	3.50
Japan	0.52	0.72	0.75	1.99	2.40	2.46
Korea, Rep. of	0.47	0.52	0.47	4.22	3.65	3.47
China, People's Rep. of	0.70	0.86	0.84	2.13	2.07	1.94
India	2.25	2.25	2.19	3.87	4.07	4.04
Hong Kong, China; Taipei, China; Rest of East Asia	-0.26	-0.42	-0.41	-0.58	-0.84	-0.83
EU-25	-0.08	-0.08	-0.08	-0.10	0.00	-0.11
United States	-0.10	-0.07	-0.07	-0.08	-0.06	-0.06

ASEAN = Association of Southeast Asian Nations; FTA = free trade agreement; GDP = gross domestic product; EU = European Union.

Source: Fouquin (2008).

Ando (2007) conducted ex-post FTA impacts of a Japan–Singapore EPA and a Japan–Mexico EPA using gravity model estimations. The Japan–Singapore EPA was found to have almost no direct impact on trade because actual reduction of tariffs was quite limited. However, the Japan–Singapore EPA had a positive impact on trade, particularly on exports.

3. LARGE SAMPLE SURVEY

JETRO conducts an annual survey on Japanese firms' international activities, such as trade and foreign direct investment. This survey covers broad topics, including utilization of FTAs, and provides convenient snapshots of Japanese perspectives on FTAs. This section discusses a general outline on utilization of FTAs and concerns over multiple ROO based on the JETRO surveys (2007a, 2008).

In the 2006 survey (JETRO 2007a), a questionnaire was sent to 2,537 JETRO member firms engaged in manufacturing, trading (export and import), and wholesale and retailing. The number of respondents is 729 (response rate 28.7%). Similarly, in the 2007 survey, a questionnaire was sent to 2,626 firms, of which 733 responded (response rate 27.9%). Respondents are highly international: more than 70% of them have overseas bases in both surveys. Both surveys asked about present and prospective use of FTAs. Only the 2006 survey addressed different ROO under FTAs in the Asia-Pacific region.

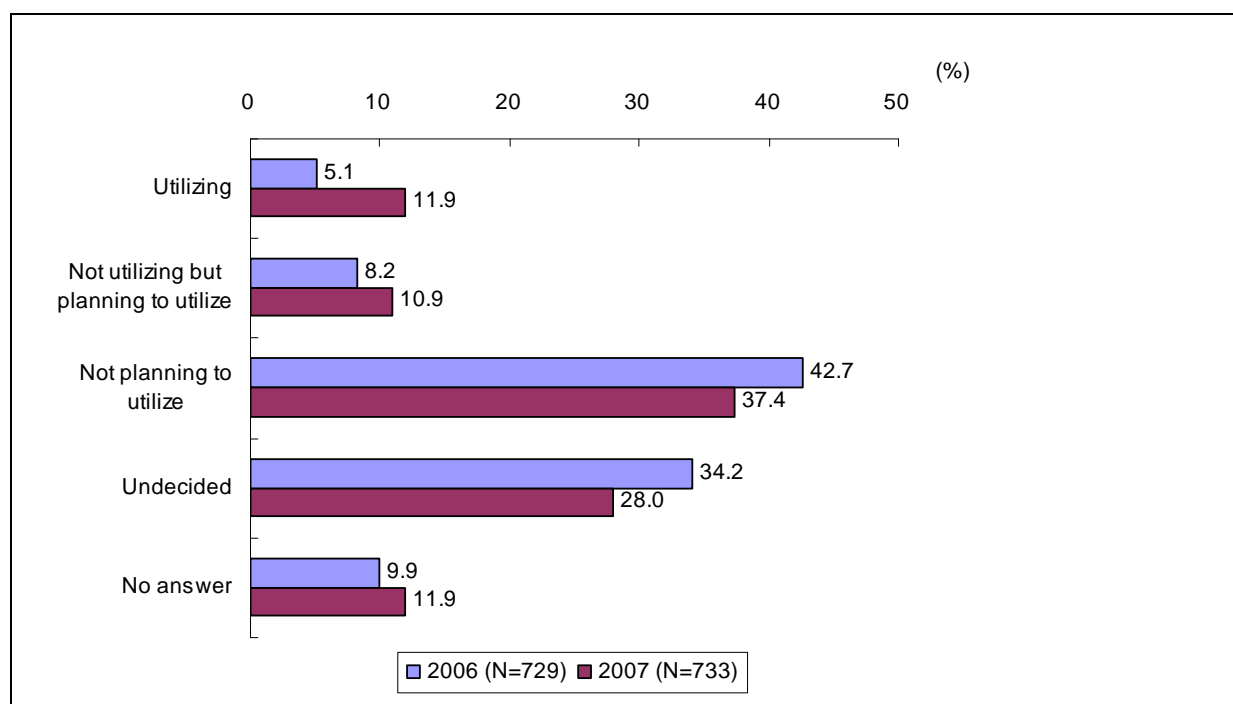
3.1 Utilization of FTAs by Japanese Firms

Figure 1 reports the utilization rates of FTAs.² Two things are noteworthy. First, FTAs are not widely used by Japanese firms. In 2006, only 5.1% (37 firms) utilized preferential tariff schemes and 8.2% (49 firms) planned to utilize them. The largest group of firms (42.7%) did not plan to utilize such schemes and more than a third (34.2%) were undecided. Although the number of firms that utilized FTAs increased to 87 firms in 2007, still more than 65% of firms were not willing to use FTAs or were still undecided. Nevertheless, Japanese firms are expressing interest in FTAs. The percentage of firms that utilized FTAs doubled in 2007. The percentage planning to utilize FTAs also increased to 10.9%. Both ratios of firms not planning to utilize FTAs and undecided on use of FTAs declined. These changes are largely attributed to an increase in Japan-related FTAs. As is shown in Figure 2, the Japan–Thailand EPA (enacted in November 2007) obtained 31 user firms and the Japan–Chile EPA obtained 11 user firms. Also, the user firms for the Japan–Malaysia EPA doubled.³

² The 2006 survey asked about the following 14 FTAs: Japan–Singapore, Japan–Malaysia, ASEAN Free Trade Area (AFTA), PRC–ASEAN; PRC–Hong Kong, China; PRC–Macau; Singapore–Korea; Singapore–India; Singapore–New Zealand; Singapore–Australia; Thailand–India; Thailand–Australia; Thailand–New Zealand; and Australia–New Zealand. Three FTAs were added to the 2007 survey: Japan–Thailand, Japan–Mexico, Japan–Chile.

³ Although the Japan–Mexico EPA was enacted in May 2005, it was not included in the 2006 survey. Thus, it is not known whether the user firms increased in 2007.

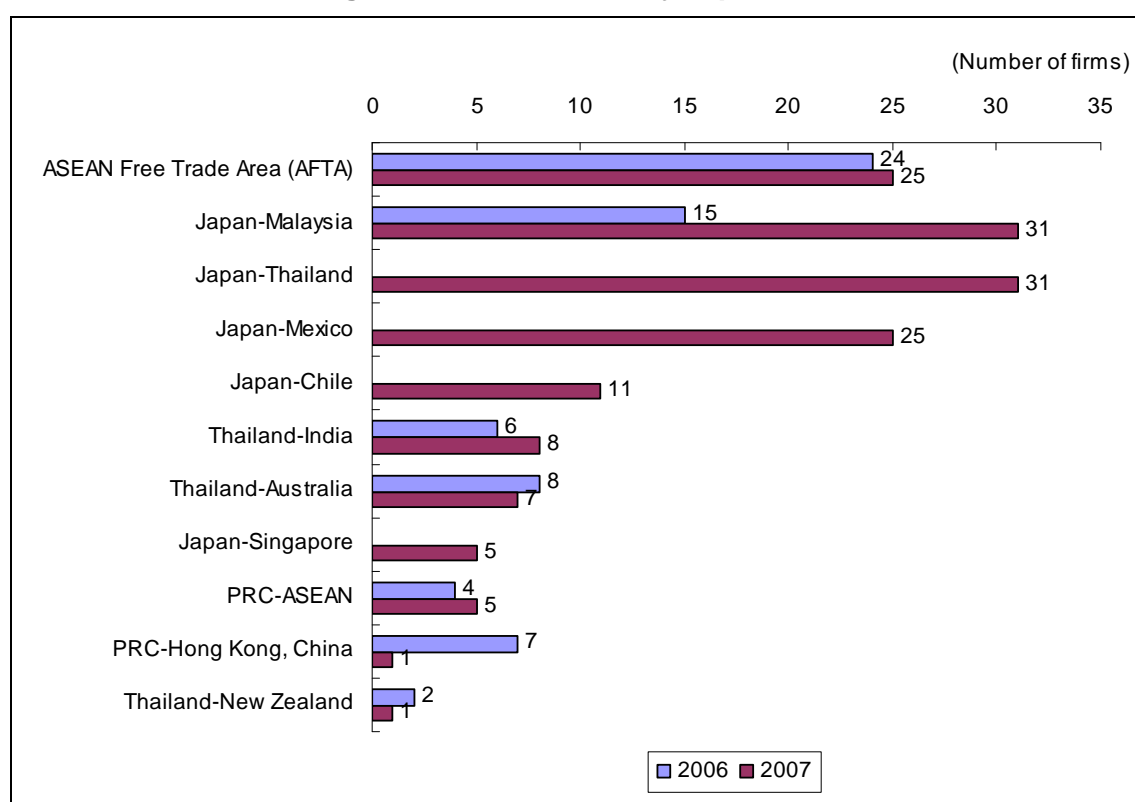
Figure 1: Percentage of Japanese Firms Utilizing and Planning to Utilize FTAs (2006, 2007)



FTA = free trade agreement.

Source: Japan External Trade Organization Large Sample Surveys (2007a, 2008).

Figure 2: FTAs Utilized by Japanese Firms



ASEAN = Association of Southeast Asian Nations; FTA = free trade agreement.

Note: The Japan–Mexico EPA enforced in April 2005 is not included in the 2006 survey.

Source: Japan External Trade Organization Large Sample Surveys (2007a, 2008).

JETRO (2008) provides a disaggregated table of the number of Japanese firms utilizing and planning to utilize FTAs (Table 5). As is expected, many more large firms than small and medium firms utilize or plan to utilize FTAs. Similarly, among manufacturing firms, multinationals are more eager than firms without foreign subsidiaries to utilize FTAs.

Table 5: Number of Japanese Firms Utilizing and Planning to Utilize FTAs (2007)

(%)

	Number of Firms	Utilizing/ Planning to Utilize	Utilizing	Not Utilizing but Planning to Utilize	Not Planning to Utilize	Undecided	No Answer
Total	733	22.8	11.9	10.9	37.4	28.0	11.9
Large	296	29.4	17.2	12.2	36.1	25.3	9.1
Small/Medium	437	18.3	8.2	10.1	38.2	29.7	13.7
Manufacturing	546	25.3	13.7	11.5	36.1	26.6	12.1
MNC	340	30.9	17.6	13.2	35.6	25.3	8.2
Domestic	203	16.3	7.4	8.9	36.9	28.6	18.2
Non-manufacturing	187	15.5	6.4	9.1	41.2	32.1	11.2

MNC = multinational corporation.

Source: Japan External Trade Organization Large Sample Survey (2008).

Figure 2 demonstrates another characteristic of Japanese firms' utilization of FTAs: in general, Japan-related FTAs are much more popular than those between third-party countries. One exception is the ASEAN Free Trade Agreement (AFTA), which was used by 25 firms in 2007. The popularity of Japan-related FTAs could be attributed to the fact that Japanese firms have well-established production and procurements networks in the ASEAN region.⁴ In fact, as shown in Table 6, during the period from 1965 to 2004, 8.5% of total FDI from Japan went to ASEAN.⁵ The two most popular bilateral FTAs are the Japan–Malaysia EPA and the Japan–Thailand EPA. This is not surprising considering that Japan's trade volumes with these two countries are greater than those with the other countries with which Japan has FTAs. Thailand is the sixth largest export market in 2008 for Japan (3.8% of Japan's total exports), and Malaysia is in thirteenth place (2.1% of Japan's total exports). These export shares are greater than those of Mexico (1.3%) and Chile (0.4%).⁶ However, it should be noted that Japan has not yet had FTAs with significant regional trade partners such as the PRC and Korea. This is a stark contrast with the US and the EU countries.

Table 6: Japan's outward FDI (1965–2004)

	1965–1985	1986–1996	1997–2004	1965–2004	1965–1985	1986–1996	1997–2004	1965–2004
North America	26,769	221,965	100,322	349,056	32.3%	46.3%	28.5%	38.2%
Latin America	15,417	47,838	50,957	114,212	18.6%	10.0%	14.5%	12.5%
Asia	19,311	80,727	60,318	160,356	23.3%	16.8%	17.1%	17.5%
ASEAN-10	6,461	41,609	29,819	77,889	7.8%	8.7%	8.5%	8.5%
Middle and Near East	2,788	2,156	828	5,772	3.4%	0.4%	0.2%	0.6%
Europe	10,981	94,823	127,432	233,235	13.3%	19.8%	36.1%	25.5%
Africa	3,359	5,140	1,996	10,495	4.1%	1.1%	0.6%	1.1%
Oceania	4,238	26,720	10,684	41,642	5.1%	5.6%	3.0%	4.6%
TOTAL	82,858	479,370	352,536	914,764	100.0%	100.0%	100.0%	100.0%

ASEAN = Association of Southeast Asian Nations; FDI = foreign direct investment.

Note: Figures based on reports and notifications are available from 1965 to 2004. The Ministry of Finance of Japan has released figures based on the balance of payments instead of reports and notifications. Figures based on the balance of payments are available from 1995 by country.

Source: Prepared by the Japan External Trade Organization from Ministry of Finance (MOF) statistics for Japan's inward and outward FDI, MOF Policy Research Institute Monthly Finance Review, and Bank of Japan foreign exchange rates.

⁴ Another exception is the Japan–Singapore EPA, which only five firms used in 2007.

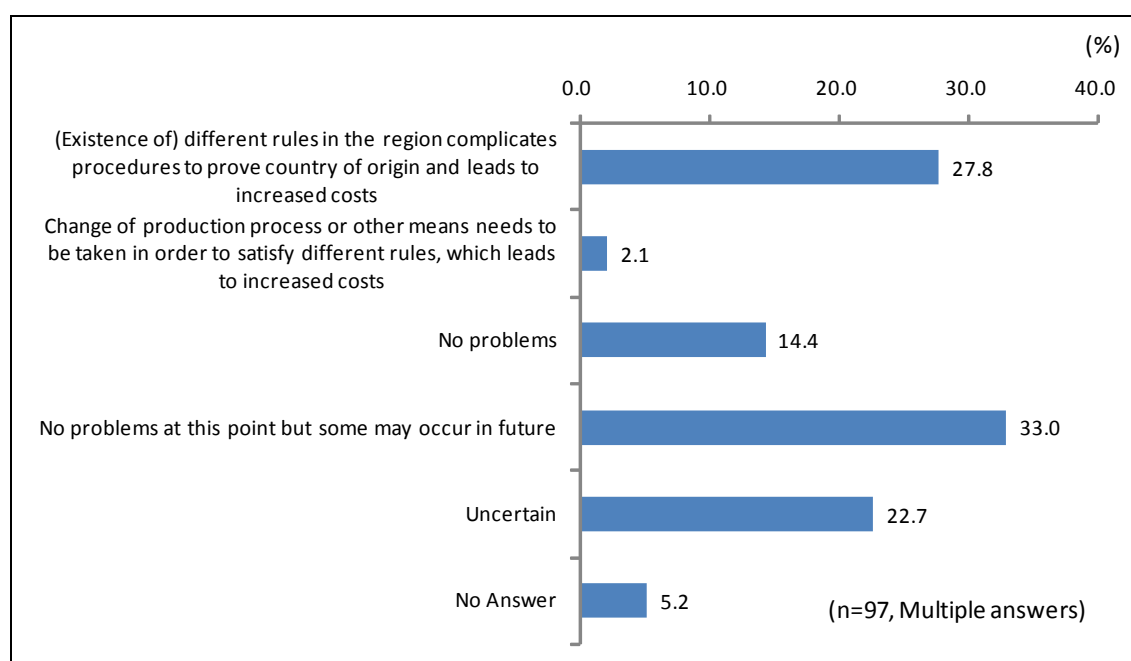
⁵ The Ministry of Finance of Japan has released figures based on the balance of payments instead of reports and notifications. The balance of payments-based figures are available from 1995 by country.

⁶ Figures were obtained from the *World Trade Atlas* database (accessed 26 June 2009).

3.2 Concerns Over Multiple ROO

The 2006 survey asked Japanese firms for their views about the increase in different ROO. Among the 97 firms utilizing or planning to utilize FTAs, 32 firms (33%) replied that although there had not been any problems so far, some problems may occur in the future (Figure 3a). Twenty-seven firms (28%) indicated that a view that the existence of different ROO complicates procedures to prove the country of origin and leads to increased costs. It should be noted that while 14 firms (14%) did not see any problems in the existence of multiple ROO, 22 firms responded that they did not know if the existence of multiple ROO would be problematic. Thus, in total, it seems that even Japanese firms that utilize or plan to utilize FTAs have difficulty evaluating the extent to which different ROO would adversely affect their businesses.

Figure 3a: Problems Caused by the Multiple ROO, as Identified by Japanese Firms Currently Utilizing FTAs (2006)



FTA = free trade agreement; ROO = rules of origin.

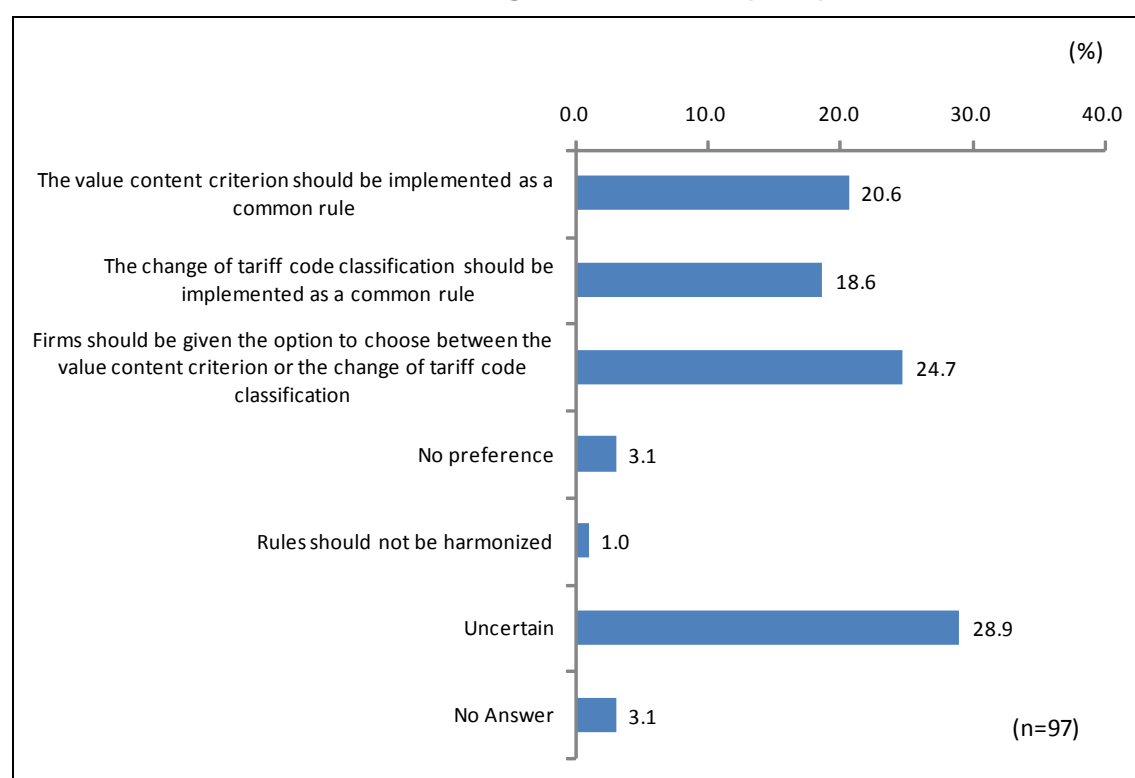
Note: Percentages were calculated using only those firms utilizing or planning to utilize preferential tariff schemes.

Source: Japan External Trade Organization Large Sample Survey (2007a).

The 97 firms were also asked about the needs for ROO harmonization (Figure 3b). Although the majority (64% of respondents) appreciated a harmonized ROO, the type of harmonization preferred varied. Twenty-four firms (25%) preferred that under a harmonized ROO, firms be able to choose either the value content criterion (VC) or the change of tariff code classification (CTC). Also, 20 firms (21%) preferred the value content criterion while 18 firms (19%) preferred the change of tariff code classification. These results indicate that many respondents may be familiar with the VC through experiences with FTAs in the Asia-Pacific region, where the VC is applied to many agreements.⁷

⁷ For example, AFTA applied ROO based on the VC until 2008. The Japan–Malaysia EPA is flexible and allows users to choose either the VC or the CTC.

Figure 3b: Necessity of Harmonization of ROO, as Identified by Japanese Firms Planning to Utilize FTAs (2006)



FTA = free trade agreement; ROO = rules of origin.

Note: Percentages were calculated using only those firms utilizing or planning to utilize preferential tariff schemes.

Source: Japan External Trade Organization Large Sample Survey (2007a).

4. SMALL SAMPLE SURVEY OF SELECTED INDUSTRIES⁸

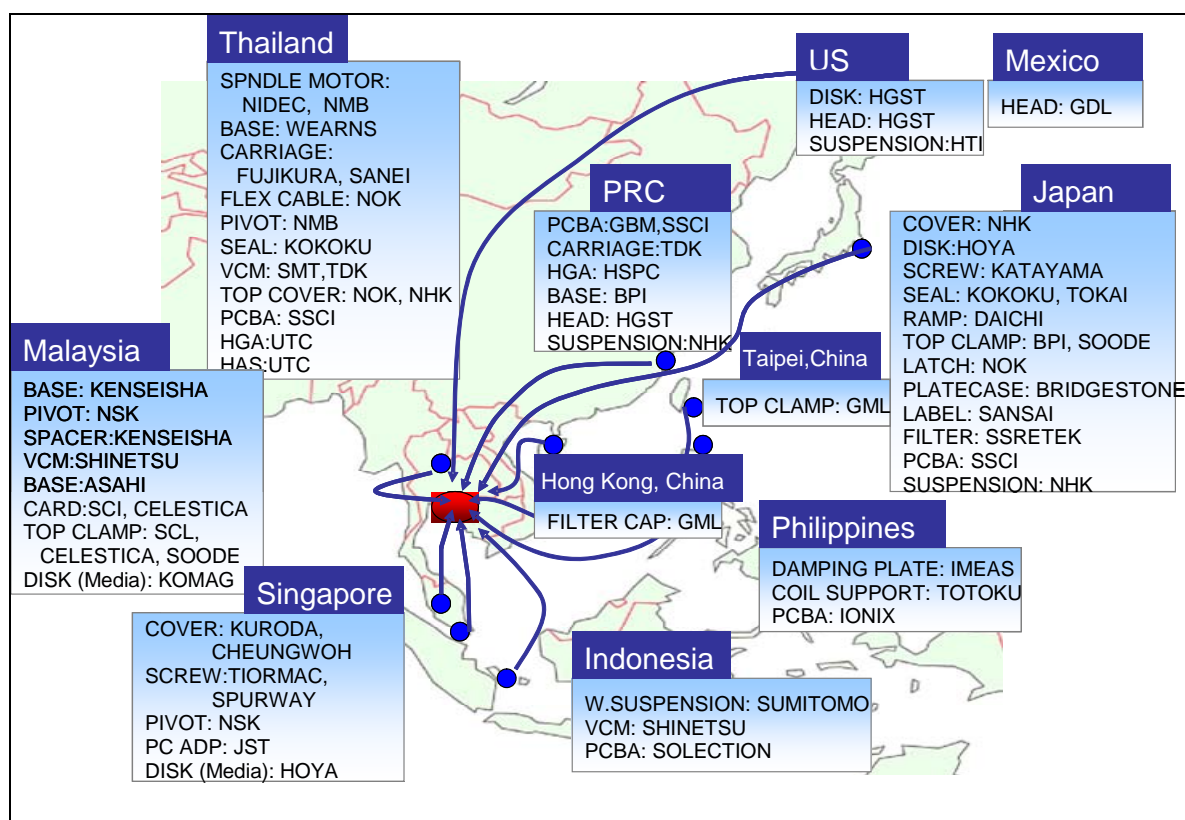
4.1 Overview

The JETRO survey (2007a, 2008) provides information on how many Japanese firms including affiliates operating overseas are currently utilizing and plan to utilize the enforced FTAs in East Asia. It did not, however, cover plans to use FTAs that were under negotiation at the time the survey was held, such as the Japan–ASEAN EPA and Japan–Thailand EPA. More importantly, the survey did not investigate several significant research questions related to the evaluation of FTAs: Why are Japanese enterprises interested in FTAs between Asian countries? What are the impediments to utilization of FTAs? Why are ROO costly to firms? Which ROO is best practice and why? This section tries to address these questions. For this purpose, we interviewed 38 Japanese firms during the period between July 2007–May 2008, focusing on the selected industries of electronics and electrical appliances, automobile, and garment industries.

Each of these industries has different features. Electronics is an industry in which fragmented production blocks are located across countries. Highly capital-intensive processes remain in Japan but most of the production processes have been moved to Asia because they are labor-intensive. Electronics components are exempted from import tariffs under the ITA, and in addition, the metal and plastic precision parts are also exempted from the tariffs under the BOI schemes. Therefore, the vertical division of labor in production process or production fragmentation has formed region-wide production networks (Figure 4).

⁸ This survey was conducted for the Asian Development Bank.

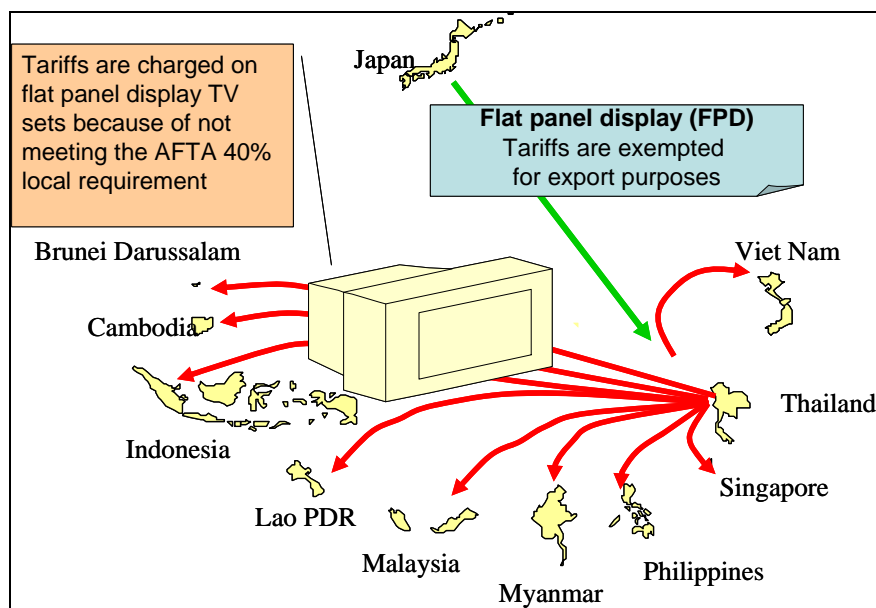
Figure 4: Production Network in Electronics Industry: Parts Procurement of a Hard Disk Drive Assembler Located in Thailand



PRC = People's Republic of China; US = United States.

Source: Hiratsuka (2006).

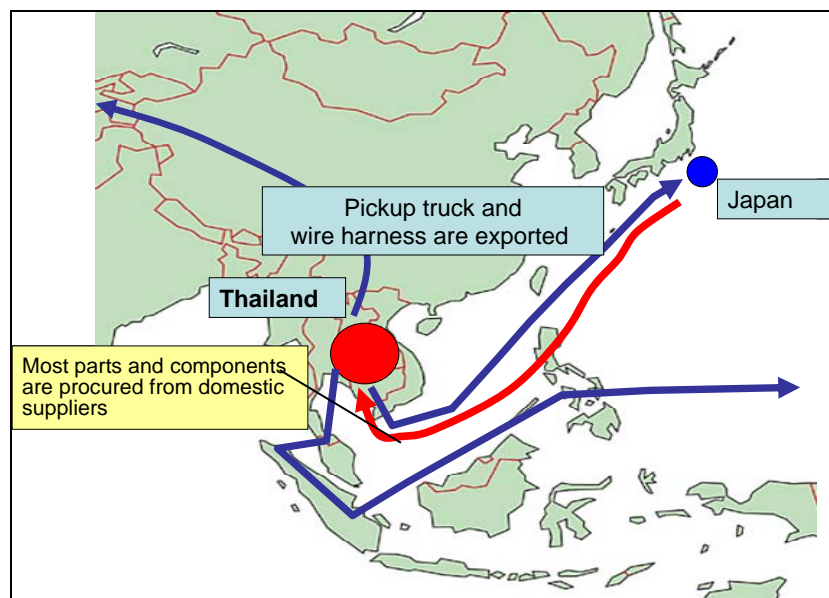
In the electrical appliances industry, the horizontal division of labor has progressed. Low and medium value goods are assembled in Asia while high value goods are still manufactured in Japan. A few key components are produced in Japan and exported to another Asian country. The key components are built into final products in the country and the final products are sold in the domestic market and exported to regional and world markets, including Japan (Figure 5). The key components exported from Japan are exempted from tariffs if the final assembled goods are to be exported. The final consumption and capital goods, however, are subject to tariffs.

Figure 5: Production and Distribution of Electrical Appliances: Flat Panel TVs

AFTA = ASEAN Free Trade Agreement; Lao PDR = Lao People's Democratic Republic.

Source: Authors' depiction.

Japanese automobile assemblers have huge production facilities in the countries where demand is large, such as PRC, Indonesia, Malaysia, Philippines, Thailand, and, very recently, India. It is a characteristic of the automobile industry that each assembling base has formed a huge agglomeration of supporting industries. The majority of parts are procured from those assembling bases, but some key parts that require high precision technology and economies of scale, including engines, are exported from Japan. Low value parts are also exported from those assembling bases to other production bases in the rest of the world, including Japan (Figure 6).

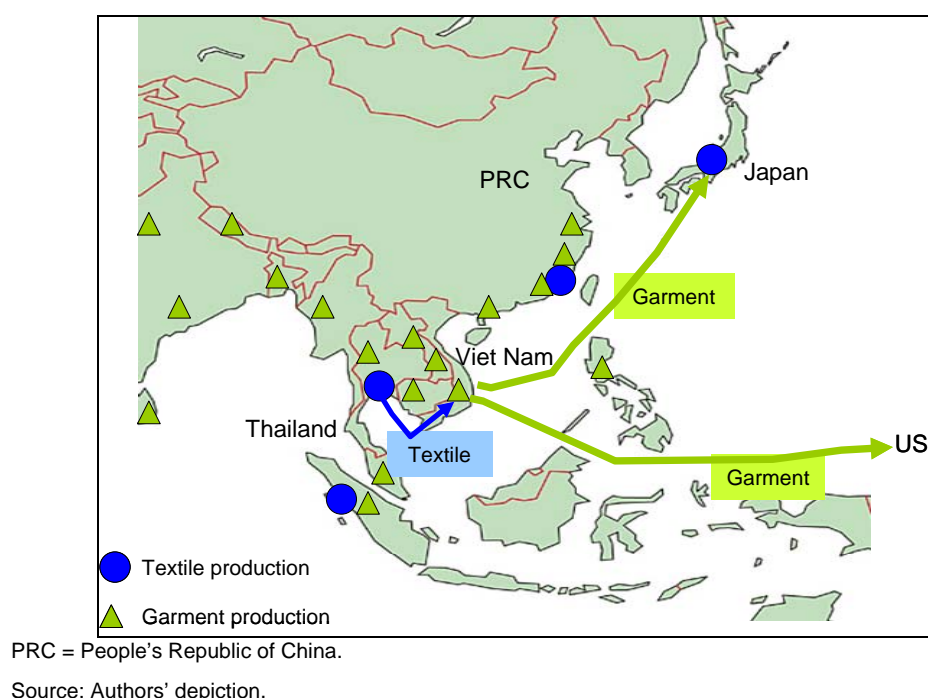
Figure 6: Bilateral Automobile Industry Trade between Japan and Thailand

Source: Authors' depiction.

In the textile and garment industry, some upstream textile plants, which are more capital-intensive, remain in Japan while others have moved to Asia, where a downstream garment industry has developed. Much of the Japanese garment industry operates in Japan. The upstream textile industry is located in a few additional countries such as PRC, Indonesia,

and Thailand, while the downstream garment industry is scattered across countries in Asia including Bangladesh, Cambodia, PRC, India, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Sri Lanka, Thailand, and Viet Nam (Figure 7).

Figure 7: Two-Stage Sequential Production in Textile and Garment Industry



4.1.1 Current Utilization of FTAs by Japanese Firms

We interviewed 38 firms in three industries: electronics and electrical appliances (16 firms), automobile (13 firms), and garment and textile (nine firms). Results are summarized in Table 7. Among the 38 firms, 11 are currently utilizing FTAs: two for electronics and electrical appliances, four for automobiles, and five for garments and textiles.

Table 7: Number of Japanese Firms Utilizing FTAs and EPAs

	All	Now Utilizing	Planning to Utilize
By Industry			
Electronics and electrical appliances	16	2	1
Automobile	13	4	3
Textiles and garments	9	5	3
By Size			
Large *	28	9	7
Small and medium	10	2	0
Total	38	11	7

*more than 200 employees.

EPA = economic partnership agreement; FTA = free trade agreement.

Source: Asian Development Bank Small Sample Survey conducted by authors.

Among the 38 firms, seven are not currently utilizing FTAs but plan to do so. One of these firms will utilize FTAs for electronics and electrical appliances, and three firms each will utilize FTAs for automobile and garment and textile (Table 7). However, the firms that were currently utilizing FTAs guessed that their affiliates located in ASEAN were utilizing FTAs. Also, all seven respondents that planned to utilize FTAs involving Japan said that they were not likely to use the agreements soon. Their knowledge of these agreements appears

inadequate to effectively utilize preferences. Among all the interviewees, only one knew actual procedures of FTAs involving Japan.

Table 8 reports which FTAs are utilized by respondent firms in Japan. Most of the utilization is of FTAs in which Japan is not involved. AFTA is being utilized the most (eight firms). Four firms utilize the Thailand–India FTA and two utilize the ASEAN–PRC FTA.⁹ Only eight firms are utilizing FTAs involving Japan: five for Japan–Mexico, two for Japan–Thailand, and one for Japan–Malaysia. These results suggest that it takes time for firms to become familiar with the FTA procedure. The Japan–Mexico EPA went into force in April 2005 and the Japan–Malaysia EPA went into force in July 2006. Meanwhile, no firm is utilizing the Japan–Singapore EPA, which reflects the fact that most of Singapore’s MFN tariff rates are zero percent, excluding alcohol. In fact, utilization of the Japan–Singapore FTA is limited to a few alcohol-related industries, including beer and ale. In general, most of the trade by respondent firms under FTAs is intra-firm trade rather than inter-firm trade. This intra-firm trade is between overseas plants supervised by head offices in Japan. Respondents use FTAs between foreign countries or plan to do so, such as AFTA, ASEAN–PRC, Thailand–Australia, and Thailand–India.

We found that more large firms than small and medium firms utilize FTAs. As for SMEs, which have fewer than 200 employees, two out of 10 firms are now utilizing FTAs while nine out of 28 large firms are now utilizing FTAs. The two SMEs that do use FTAs are utilizing the Japan–Thailand EPA (Table 7). These two firms are not exporters; they import garments from their affiliate companies in Thailand. This corresponds to Takahashi and Urata (2008) which used probit analysis to show that larger firms are more likely than small firms to use FTAs.

Table 8: Utilization of Specific FTAs and EPAs by Japanese Firms

Utilizing FTAs	All	Automobile	Electronics and Electrical Appliances	Textiles and Garments
Japan–Singapore	0	0	0	0
Japan–Mexico	5	3	2	0
Japan–Malaysia	1	1	0	0
Japan–Thailand	2	0	0	2
AFTA	8	3	2	3
ASEAN–PRC	2	0	0	2
Singapore–Korea, Rep. of	0	0	0	0
Singapore–Australia	0	0	0	0
Singapore–New Zealand	0	0	0	0
Singapore–US	0	0	0	0
Thailand–Australia	1	1	0	0
Thailand–New Zealand	0	0	0	0
Thailand–India	4	2	2	0

AFTA = ASEAN Free Trade Area; ASEAN = Association of Southeast Asian Nations; EPA = economic partnership agreement; FTA = free trade agreement; PRC = People’s Republic of China; US = United States.

Note: Firms were allowed to provide multiple answers.

Source: Asian Development Bank Small Sample Survey conducted by authors.

Which FTAs do firms plan to use? This question is very important because several FTAs involving Japan have almost been concluded and will enter into force in a couple of years. As shown in Table 9, the largest number of firms plans to use the Japan–ASEAN EPA (13 firms): five firms in the automobile industry, three in electronics and electrical appliances, and five in textiles and garments. This FTA is the most popular because, as a plurilateral FTA between ten ASEAN countries and Japan, it offers more business opportunities than a bilateral FTA.

⁹ Firms were allowed multiple answers.

Table 9: Planned Utilization of Specific FTAs and EPAs by Japanese Firms

Planning to Utilize FTAs	All	Now Utilizing Other FTAs	Automobile	Electronics and Electrical Appliances	Textiles and Garments
Japan–Singapore	0	0	0	0	0
Japan–Mexico	1	0	1	0	0
Japan–Malaysia	1	0	0	1	0
AFTA	2	0	1	0	1
ASEAN–PRC	4	2	2	0	2
Singapore–Korea, Rep. of	0	0	0	0	0
Singapore–Australia	0	0	0	0	0
Singapore–New Zealand	0	0	0	0	0
Singapore–US	0	0	0	0	0
Thailand–Australia	0	0	0	0	0
Thailand–New Zealand	0	0	0	0	0
Thailand–India	2		1		1
Japan–Philippines	2	2	1	1	0
Japan–Chile	2	2	0	2	0
Japan–Thailand	11	7	4	2	5
Japan–Indonesia	6	4	5		1
Japan–Brunei Darussalam	0	0	0	0	0
Japan–ASEAN	13	9	5	3	5
Japan–India	5	2	5	0	0
Japan–Australia	0	0	0	0	0
Japan–Korea, Rep. of	6	3	3	1	2

AFTA = ASEAN Free Trade Area; ASEAN = Association of Southeast Asian Nations; EPA = economic partnership agreement; FTA = free trade agreement; PRC = People's Republic of China; US = United States.

Note: Firms were allowed to provide multiple answers.

Source: Asian Development Bank Small Sample Survey conducted by authors.

Many Japanese firms have used Singapore as an international procurement center where goods are transported to Singapore first and then distributed to other ASEAN countries on an intra-firm basis. The electronics and electrical appliance industry is a typical case.

Initially, the electronics and electrical appliance industry viewed the Japan–ASEAN EPA to be utilized only for flat panel TVs. Flat panel displays (FPDs) are excluded from the non-tariff lists under the ITA. Tariffs on FPDs, however, are exempted for export production purposes. A problematic situation arises when FPD TV sets assembled in Malaysia and Thailand using FPDs made in Japan are subject to import tariffs when exported to other ASEAN countries, because the FPD occupies more than 60% of the value of an FPD TV set and the product fails to meet the AFTA Common Effective Preferential Tariff (CEPT) requirement. In contrast, under the Korea–ASEAN FTA, Korea can export FPDs with the FTA's preferential tariff, and then the FPD TV sets assembled in Malaysia and Thailand using FPDs made in Korea can be exported under the preferential tariff. Consequently the FPD business in Japan cannot compete with that in Korea in the ASEAN market.

In addition, electronics and electrical appliance firms are awaiting the enforcement of the Japan–ASEAN EPA because after the enforcement of the Japan–Malaysia EPA, they felt that the bilateral FTA was not as useful as initially expected. Under the current logistics system, goods are transported via Singapore. The Japan–Malaysia EPA, however, does not allow transporting of goods from Japan to Malaysia via Singapore due to the “direct shipment” requirement. The Japan–ASEAN EPA would enable Japanese firms to transport goods via Singapore to other ASEAN countries.

The automobile industry is also more likely to utilize the ASEAN–Japan EPA. That agreement enables member countries to export high value parts from Japan to Thailand and, after assembling, to export the components or automobiles to other ASEAN countries.

The Japan–ASEAN EPA will also be useful for the textile and garment industry. There are many upstream textile factories in Thailand but there are none in Viet Nam. The Japan–ASEAN EPA will make it possible to export textiles from Thailand to Viet Nam, where many garment factories are located, and then export garments from Viet Nam to Japan.

Among the bilateral FTAs, 11 firms plan to use the Japan–Thailand EPA, followed by the Japan–Indonesia EPA (6 firms), the Japan–Korea EPA (6 firms), and the Japan–India EPA (5 firms). Japanese firms are more interested in the Japan–Thailand EPA than in other FTAs because Thailand is becoming a major production base of machinery in industries such as automobile, electronics, and electrical appliances.

4.1.2 Benefits and Costs of FTAs

What benefits are Japanese firms expecting from FTAs? As shown in Table 10, the interviewed firms see FTAs as beneficial because they bring an “increase in exports” (13 firms) and make goods “easier to import” (13 firms). These figures indicate that Japanese firms expect mostly positive trade effects of FTAs. In addition, “concentration of production” is a benefit cited by five firms (three from the automobile industry and two from the textile and garment industry). These five firms think FTAs provide incentives to alter the location of production. Because the automobile industry is a typical industry in which economies of scale work, FTAs promote concentration of the industry in specific countries. On the other hand, since the characteristics of the textile and garment industry vary according to the manufacturing processes, FTAs promote optimum location according to manufacturing processes. However, no electronics and electrical appliances firms cited “concentration of production” as a benefit. Under various investment promotion programs and the ITA, Japanese affiliates operating in Asia are engaged in specific production process, and parts and components are traded without any tariff. To put it differently, de facto economic integration has advanced in the form of production networks, in particular in the electronics and electrical appliances industry, prior to de jure (formal or FTA) integration. Hence, firms in the electronics and electrical appliances industry do not need to change locations even if FTAs are enforced.

Table 10: Japanese Firms’ Perceived Benefits from FTAs and EPAs

Perceived Benefit	All	Now Utilizing FTAs	Automobile	Electronics and Electrical Appliances	Textiles and Garments
Increase in exports	13	9	5	3	5
Easier to import intermediate goods and raw materials	13	6	7	1	5
Concentration of production	5	1	3		2
New business opportunities	1	1	0	0	1
Others	0	0	0	0	0

EPA = economic partnership agreement; FTA = free trade agreement.

Note: Firms were allowed to provide multiple answers.

Source: Asian Development Bank Small Sample Survey conducted by authors.

Several firms perceived costs to using FTAs (Table 11). Among them, six firms cited administrative and documentation costs. Six firms claimed that their businesses had been affected by “disadvantage due to precedent FTAs,” and one firm saw the FTAs as bringing “increased competition in Japan.” Japanese firms are worried about competitive disadvantages, in particular those against Korea, which has concluded FTAs with ASEAN and the US and is negotiating with the EU. The Japanese firms claim that under such a situation, they cannot stand on equal footing with competitors and that Japan will be at a disadvantage in those markets compared to Korea.

Table 11: Japanese Firms' Perceived Costs of FTAs and EPAs

Perceived Cost	All	Now Utilizing FTAs	Automobile	Electronics and Electrical Appliances	Textiles and Garments
Increased competition in Japan	1	1	1	0	0
Administrative and documentation requirements	6	3	4	2	0
Disadvantage due to precedent FTAs	6	3	3	1	2
Relocation of production	2	1	2	0	0
Others	0	0	0	0	0

EPA = economic partnership agreement; FTA = free trade agreement.

Note: Firms were allowed to provide multiple answers.

Source: Asian Development Bank Small Sample Survey conducted by authors.

4.1.3 Impediments to Implementation

Several factors impede the utilization of FTAs by Japanese firms. First, “administrative costs are high,” as cited by eight firms (Table 12). The application and certificate fee is just 3,000–4,000 yen (US\$30–40).¹⁰ More importantly, an exporter has to prepare documentation to obtain the certificate of origin, while the benefits go to the importer. The incentive to utilize FTAs is low for exporters given these costs. Preparation of a document that satisfies the value content (VC) rule is especially costly. It is easier to prepare documentation to satisfy the change of tariff code (CTC) rule because if tariff codes are added on the Bill of Materials—a flow chart of production processes with materials, which firms normally have—the document meets the CTC rule. Nevertheless, firms complained that lack of human resources prevents them from using FTAs even for intra-firm trade, so they are forced to be selective and choose a few FTAs that bring the largest benefit. In particular, the documentation procedures for the ROO are very costly for SMEs.¹¹

Table 12: Japanese Firms' Perception of Impediments to the Implementation of EPAs

Perceived Impediments	All	Now Utilizing FTAs	Automobile	Electronics and Electrical Appliances	Textiles and Garments
MFN tariff rates are low	5	4	0	2	3
Administration costs are high	8	5	2	3	3
Applications ask for confidential information	4	2	2	2	0
No idea on how to use	5	1	2	2	1
Others	1	0	0	1	0

EPA = economic partnership agreement; FTA = free trade agreement.

Note: Firms were allowed to provide multiple answers.

Source: Asian Development Bank Small Sample Survey conducted by authors.

Second, four firms cited “applications ask for confidential information” as an impediment. To satisfy the ROO, the components of products have to be reported to certificate of origin issuing agencies such as the Japan Chamber of Commerce and Industry (JCCI). However, information on the components of products or their procurement source is highly confidential for some products. If the component contains patented material, the manufacturer will not use the FTA at all. The original equipment manufacturers (OEM) do not want to use FTAs because doing so requires disclosure of procurement sources.

¹⁰ In the US, there is no charge for the certificate.

¹¹ SMEs that had been asked by their clients to submit data for the ROO complained that the ROO was very costly.

Third, as five firms pointed out, “MFN tariff rates are low.” Tariffs on electronics and electrical appliances were eliminated in January 2000, with a few limited exceptions including flat panel displays, under the ITA. More importantly, phaseout tariff schedules discourage utilization of FTAs. Thailand offers concession tariffs, e.g., for moulding boxes (Harmonized System [HS] 8480) to be 4.17% in the first year, 3.33% in the second year, 2.50% in the third year, 1.67% in the fourth year, 0.83% in the fifth year, and 0.00% in the sixth year against the MFN tariff, 5% (Table 13). Because of the spread between the preferential tariff and the MFN one in the initial years, the motivation to use FTAs is quite low, resulting in failure to disseminate the Japan–Thailand EPA even after the implementation.

Table 13: Phaseout Tariff Schedule by Thailand in the Japan–Thailand EPA

Tariff Item Number	Description of Goods	MFN Tariff (%)	Rate of Customs Duty (%)					
			1st Year	2nd Year	3rd Year	4th Year	5th Year	From 6th Year
8480	Moulding boxes							
8480.10	- Molding boxes for metal foundry	5.00	4.17	3.33	2.50	1.67	0.83	0
8480.20	- Mould bases	5.00	4.17	3.33	2.50	1.67	0.83	0
8480.30	- Molding patterns	5.00	4.17	3.33	2.50	1.67	0.83	0
	- Moulds for metal or metal carbides :	5.00						
8480.41	- - Injection or compression types	5.00	4.17	3.33	2.50	1.67	0.83	0
8480.49	- - Other	5.00	4.17	3.33	2.50	1.67	0.83	0
8480.50	- Moulds for glass	5.00	4.17	3.33	2.50	1.67	0.83	0
8480.60	- Moulds for mineral materials	5.00	4.17	3.33	2.50	1.67	0.83	0
	- Moulds for rubber or plastics :	5.00						
8480.71	- - Injection or compression types	5.00	4.17	3.33	2.50	1.67	0.83	0
8480.79	- - Other	5.00	3.75	2.50	1.25	0	0	0

EPA = economic partnership agreement; MFN = most-favored nation.

Source: Compiled by authors from Ministry of Foreign Affairs (Japan) data.

Aside from these factors, Japan’s products exhibit very low price elasticity because of highly differentiated or highly customized products, and this has also discouraged the use of FTAs.

4.1.4 Measures to Encourage the Utilization of FTAs

What measures can be undertaken to encourage utilization of FTAs? “Less demanding administration,” including a self-certificate system, was cited by most exporters (nine firms) (Table 14). An exporter has to submit the application documents with invoices to JCCI so that the value added can be calculated and the origin of the product confirmed. The applicants complain that the JCCI enforces strict documentation requirements without offering clear information on implementation. Demanding administrative costs to secure a certificate of ROO conflicts with the “just in time” production process. In this regard, firms in Thailand have favored the self-certificate General System of Preferences arranged by the US. The self-certificate system complements the “just in time” production process.

Table 14: Japanese Firms' Preferred Measures to Encourage Utilization of FTAs

Measure	All	Now Utilizing FTAs	Automobile	Electronics and Electrical Appliances	Textiles and Garments
Less demanding administration (e.g., Self-certificate)	9	5	3	2	4
Less restrictive ROO	0	0	0	0	0
Wider range of products subject to preferential tariffs	3	2	0	2	1
No idea	16	1	6	7	3
Others	1	0	0	1	0

FTA = free trade agreement; ROO = rules of origin.

Note: Firms were allowed to provide multiple answers.

Source: Asian Development Bank Small Sample Survey conducted by authors.

Other complaints make reference to certificates of origin by part and component. It is difficult to get certificates of origin for some parts. In particular, a large number of parts is used for automobiles. The exemption of certificates of origin for the parts attached to the main units may encourage the utilization of FTAs.

Equally, the “direct shipment” requirement, in which goods are shipped directly from an exporter to an importer, was cited as a problem by some firms. Most current bilateral FTAs, however, do not allow goods to be shipped via a third country. Respondents suggested loosening direct shipment requirements and allowing “re-invoice” and/or “back-to-back invoice” operation instead.

4.1.5 Spaghetti Bowl Problem

FTAs involving Japan have proliferated; agreements between Japan and Chile, Malaysia, Mexico, Singapore and Thailand have already been implemented. Therefore, Japanese exporters are faced with a plethora of different phaseout tariff schedules and multiple ROO including format by destination. How have firms in Japan viewed the “spaghetti bowl” problem? Has it been a burden and has it discouraged the use of FTAs? Asked about the problem stemming from overlapping FTAs in Japan, eight firms thought that different ROO increase costs. Six firms saw no problem at this point, but acknowledged that some may occur in the future (Table 15). To utilize even one FTA is not an easy thing for a firm, and thus, to juggle several FTAs at the same time may be quite difficult. Different application forms for certificates of origin by FTA are just one example of the administrative costs.

Table 15: Japanese Firms' Perceptions on Overlapping Rules of Origin

Perception	All	Now Utilizing FTAs	Automobile	Electronics and Electrical Appliances	Textiles and Garments
Different rules lead to increased costs	8	5	1	3	4
Change of production process	5	2	4	1	0
No problem	3	2	0	0	3
Problem in future	6	2	5	1	0
No idea	12	1	4	7	1

FTA = free trade agreement.

Note: Firms were allowed to provide multiple answers.

Source: Asian Development Bank Small Sample Survey conducted by authors.

Asked about the necessity of harmonization of ROO, 10 firms preferred having the option to choose the VC rule or the CTC rule (Table 16). Eight firms preferred the CTC rule, while no firm preferred the VC rule because it takes time to prepare documents to calculate the value

content ratio of products. This result is opposite to the large sample survey results by JETRO (2007a). In particular, firms in the machinery parts industry complained about the VC rule because of the difficulty in calculating the value added (or local content) of a single part given that sources of suppliers as well as prices of materials change frequently. Several firms hoped that the ROO in the plurilateral FTA (Japan–ASEAN EPA) could be applied to the bilateral FTAs, such as the Japan–Malaysia and Japan–Thailand EPAs.

Table 16: Japanese Firms' Preferences for Harmonization of Rules of Origin Criteria

Preferable Harmonization	All	Now Utilizing FTAs	Automobile	Electronics and Electrical Appliances	Textiles and Garments
Value added (VA) criterion	0	0	0	0	0
Change of tariff code (CTC) classification	8	4	1	1	6
Option to choose between VA and CTC	10	4	6	3	1
No need to harmonize	1	1	0	0	1
Do not know	15	2	6	8	1

FTA = free trade agreement.

Note: Firms were allowed to provide multiple answers.

Source: Asian Development Bank Small Sample Survey conducted by authors.

Which organizations and authorities are Japanese firms looking to for guidance on FTAs? As summarized in Table 17, among the responding firms, the concerned ministries of the Ministry of Economy, Trade, and Industry (METI) and the Ministry of Foreign Affairs (MOFA) were cited most (13 firms), followed by business associations (10 firms). These replies show that FTAs provide opportunities for the business sector to voice their opinions on these agreements.

Table 17: Japanese Firms' Utilization of Institutional Support for FTA Problems

Institutions Contacted	All	Now Utilizing FTAs	Automobile	Electronics and Electrical Appliances	Textiles and Garments
METI/MOFA	13	8	6	3	4
Business associations	10	5	4	2	4
Chamber of commerce	7	3	4	1	2
JETRO	11	5	5	1	5
Counterpart	3	1	2	1	0
Lawyer/Consultant	5	1	3	1	1
None	0	0	0	0	0

JETRO = Japan External Trade Organization; METI = Ministry of Economy, Trade, and Industry; MOFA = Ministry of Foreign Affairs.

Note: Firms were allowed to provide multiple answers.

Source: Asian Development Bank Small Sample Survey conducted by authors.

What support do firms seek or need? Most of the FTAs adopt the phase out tariff schedule in which tariffs are gradually reduced over ten years. Thus, tariff rates change every year. Transparency and clarity of information on these changes would help promote the utilization of FTAs.

4.2 Automobile Sector

4.2.1 Industry Profile

The automobile industry is one of Japan's key industries. Japan became the world's largest production base of automobiles in 2006, surpassing the US. Japanese auto assemblers and

auto parts makers make their products not only in Japan, but also in foreign countries. They have been pursuing local production in foreign countries and international specialization of products.

The automobile industry has large agglomeration forces because it requires many components and cooperative product and management development. Agglomeration forces bring auto assemblers and auto parts makers closer. Many auto parts factories are located near the final assemblers' factories. Auto parts plants in Japan usually serve final assemblers' plants in Japan while auto parts plants in foreign countries usually serve final assemblers' plants in those countries.

As for international specialization, scale economies play an important role. Toyota Motor Thailand assembles pickup trucks, Toyota Motor Manufacturing Indonesia assembles minivans, and they export reciprocally and to the world. Thailand and Indonesia took first and second place in the ranking of Toyota's car production and sales in Asia excluding Japan in 2005. This suggests that scale economies play an important role in ASEAN countries.

The barriers for international specialization in the auto industry are falling as the ASEAN Industrial Cooperation (AICO) scheme and the Common Effective Preferential Tariff (CEPT) scheme have come into broad use. Exports of passenger vehicles from Thailand to Indonesia expanded from US\$4.2 million in 2000 to US\$416.2 million in 2005, those from Thailand to the Philippines increased from US\$0.7 million in 2000 to US\$243.7 million in 2005, and those from Thailand to Malaysia increased from US\$0.2 million in 2000 to US\$56.2 million in 2005. These exports are mainly done by Japanese auto assemblers.

4.2.2 Utilization of FTAs

Despite the expectation that the auto industry is likely to benefit from FTAs because MFN tariff rates in automobiles are still high, we found little utilization rate increase. Two striking reasons explain why FTAs have not been utilized so far.

First, many companies did not know how to use FTAs or did not know whether their products were eligible for FTAs. For example, auto parts maker A has not utilized FTAs. It has affiliate factories in Thailand and Malaysia. There are no transactions of auto parts between Thailand and Malaysia. They sell the auto parts to assemblers' affiliates within the country. Goods shipped from Japan to Thailand or Japan to Malaysia are mainly materials like iron and steel. Auto parts maker A does not know whether iron and steel are eligible for FTAs. This is partly because the firm's trade volumes are very low and it has not had sufficient incentive to investigate FTAs. In general, if an auto parts maker handles a part with large trade volume, it will consider relocating the production site closer to the assembler's factories. The interviewee also said the firm handles many products and has little time and resources to look into the FTA options.

Second, auto companies said that they did not need to utilize FTAs because they already enjoyed tax exemptions and other benefits. For example, auto parts maker B pointed out other tax benefits it has received. The firm has seventeen or eighteen affiliate factories in ASEAN countries. Components are shipped from Japan, US, and ASEAN to Thailand and the Philippines. In Thailand, because of the BOI scheme, the company will be exempt from tariffs or value-added taxes on materials when the whole products are produced in Thailand and exported to foreign countries. In Viet Nam, the products sold from export processing zones to the domestic market will be eligible for preferential tariffs similar to CEPT. As a result, the company feels no need to utilize FTAs.

Some auto parts companies said they used or tried to use FTAs despite difficulties. In contrast, some large assembler companies asserted that they had enough resources to utilize FTAs. Auto parts maker C utilizes AFTA. It operates as a wholly owned subsidiary of a Japanese auto assembler and it sells mainly to the assembler. The company does not plan

to use the Japan–Malaysia EPA although it exports to Malaysia. This is because the trading company in Malaysia is not a solely owned subsidiary of auto parts maker C. From the viewpoint of the trading company as an importer, the tariff reduction is surely beneficial. Auto parts maker C thinks that if the importer were a wholly owned subsidiary, utilizing the Japan–Malaysia EPA would generate profits.

Auto parts maker D exports 2,000 items from Japan to Malaysia. It has started utilizing the Japan–Malaysia EPA. In July 2007, it applied to the FTA for four items as a trial, and it expanded to 10 items in October. The firm plans to expand its FTA utilization to 100 items that account for 80% or 90% of its export value from Japan to Malaysia. Auto parts maker D does not plan to utilize the FTA for the other 1,900 items because it does not believe the benefits will be worth the cost for preparing the needed documentation.

Auto assembler makers E and F have already developed a complementary production network in East Asia under the Brand-to-Brand Complementation scheme and the AICO scheme. Thus, for these two companies, the AFTA scheme is merely an extension of these two schemes.

4.2.3 Impact of FTAs

We expected that utilization of FTAs would induce relocation of factories and concentration of product bases, but found little evidence of this. Auto parts maker C used to have production lines in eighteen countries including Thailand, Malaysia, Australia, and Indonesia. Because the parent company plans to concentrate its production lines in Thailand, auto parts maker C also plans to concentrate its production lines in Thailand and Malaysia and close the factories in Australia and Indonesia. The interviewee cited AFTA as one of the reasons for concentration of products even though the main reason is the assembler's relocation.

It was expected that the impact of the Japan–Mexico EPA would be smaller than normal in the automobile industry. This is partly because the Mexican government unilaterally reduced the MFN rate to 5% before the conclusion of the Japan–Mexico EPA. Also, the fact that Japanese firms have already set up local plants in Mexico that have procurement networks with home intermediate-good suppliers may weaken the impact of the Japan–Mexico EPA. For local suppliers in Mexico, the FTA has led to greater competition with import products.

4.2.4 Rules of Origin

Although most companies are not facing problems related to overlapping rules of origin, some exporters think that preparing different documents for different ROO will be very costly for auto parts suppliers, particularly for small suppliers. Auto parts maker D, which utilizes only one FTA at present, thinks the firm will see an increase in problems when it utilizes several FTAs.

Some auto parts suppliers who are not direct exporters are requested by final assemblers to submit ROO-related documents because the final assemblers need such documents to obtain certificates of origin. It is difficult for such auto parts suppliers to ask the final assemblers for higher delivery prices to compensate for the costs incurred in the preparation of the documents. The fact that each assembler requests ROO-related documents in different formats is another reason costs are high for auto parts firms.

4.2.5 Policy Issues

Japan's FTAs may have arrived too late for small auto parts suppliers. Big suppliers have already set up local plants in the PRC and ASEAN. If the ASEAN–PRC FTA were to include the tariff reduction of automobile parts, Japan's affiliates operating in the PRC would start to export the auto parts to ASEAN. Such late FTAs do not necessarily benefit small and weak auto parts suppliers and large and powerful suppliers have already set up overseas plants.

On FTAs, the Japanese government has not been as supportive of Japanese firms and has demonstrated some indifference in the implementation of FTAs relative to other countries' governments. It seems that foreign governments are more active in protecting the interests of their countries' firms in the implementation of FTAs, taking actions such as seeking improvements in customs procedures in partner countries.

It is critical for many auto companies to stand on equal footing with competitors. For example, the Korea–US FTA has been concluded and the Korea–EU FTA negotiation has just started. The potential consequences of these agreements greatly vary because the MNF tariff rate of the US is 2.5% and that of the EU is 10%. Japanese auto companies hope that the Japanese government catches up with the world trend of FTAs to avoid being in a disadvantaged position relative to other countries.

4.3 Electronics

4.3.1 Industry Profile

The electronics industry has well-developed global production networks. The production in Japan is largely concentrated in high-value-added final products for the home market and key parts and components that are supplied to production bases in the PRC and ASEAN countries. This global production structure limits the opportunities for Japanese electronics manufacturers to exploit tariff reduction from Japan-related FTAs.

The ITA further reduces the opportunities for Japanese electronics manufacturers to use Japan-related FTAs. It removes tariffs on a broad range of information-technology-related products, such as computers, integrated circuits, and digital cameras.¹² Hence, products that would benefit from the preferential tariffs of FTAs are limited to audio visual products and some other products such as TV sets and camcorders.

Among audio visual products, TV sets with FPDs are products in which the Japanese electronics industry has competitiveness. Although the assembling of FPD TV sets in ASEAN countries has started, FPDs themselves are produced in Japan. Hence, the Japanese electronics industry expresses a concern about tariff rates of FPDs.

Bearing in mind the fact that the products that would benefit from the tariff reduction offered by FTAs, we met with managers and executives from sixteen electronics firms including one concentrating on electronics parts and devices. We conducted these interviews between July 2007 and May 2008. In each case, we asked to meet with someone directly responsible for dealing with FTA issues.

4.3.2 Utilization of FTAs

Although Japan had five bilateral FTAs in effect as of the survey period, we were unable to ask about two of them because they had just come into effect very recently. Thus, ex-post evaluation of FTAs is feasible for the Japan–Mexico EPA (signed in September of 2004 and implemented in April of 2006) and the Japan–Malaysia EPA (signed in December of 2005 and implemented in July of 2006).¹³

Asked which FTAs their companies currently used, two interviewees pointed to the Japan–Mexico EPA. Although there were no firms that had already started to use the Japan–Malaysia EPA, an interviewee noted that they were considering using it. Reflecting the

¹² According to the WTO, 70 members and states were participating in the ITA as of November 2007 and it covers about 97% of world trade in information technology products.

¹³ The FTA with Singapore (the Japan–Singapore EPA) came into effect in 2002. However, as stated previously, the FTA with Singapore had virtually no impact because its tariff reduction from MFN rates is very limited: Singapore reduced tariffs for four commodities only while Japan did not reduce any tariffs.

industry characteristics discussed above, the Japanese electronics industry does not intensively use Japan-related FTAs. However, several interviewees noted that if the FTA between Japan and ASEAN were to include FPDs, they would consider using the FTA along with the Japan–Malaysia EPA.¹⁴

As of the survey period, Japan had several FTAs under negotiation. Among them, the FTAs between Japan and ASEAN, Philippines, Chile, and Thailand were chosen by interviewed firms as those that they were planning to use.

With worldwide production networks, the Japanese electronics industry uses foreign FTAs. When asked about the utilization of FTAs in Asia, the interviewed firms listed AFTA and the Thailand–India FTA as the agreements they were using. In addition, interviewees noted that they were interested in the PRC's and Korea's FTAs with ASEAN. The reason was twofold: Manufacturers that produce FPDs were concerned about competition with FPDs made in the PRC or Korea. Some other manufacturers found that exporting their products from ASEAN to Korea would be beneficial because Korea has relatively high tariffs for audio visual products.

In total, because the impact of FTAs on the electronics industry is limited to audio visual products, interviewed firms that produce audio visual products generally showed deep concerns about FTAs, particularly the competitive disadvantage they may face from other countries' FTAs.¹⁵ In contrast, firms focusing on information technology products and devices do not use FTAs and their concerns on FTAs were low, as expected.

4.3.3 Impact of FTAs

Excepting firms with products covered by the ITA, interviewees emphasized that FTAs were in general beneficial. However, it is important to note that products for which Japanese firms would benefit from FTAs tend to be limited to those not covered by the ITA, such as TV sets and camcorders.

For trade with countries that do not participate in the ITA, FTAs would be more valuable. Indeed, one interviewee appreciated the Japan–Chile EPA, which reduces Chile's tariff on digital cameras to zero.¹⁶ However, even if countries do not join in the ITA, they may have zero tariffs for products covered by the ITA. For example, Mexico, which is not a participant in the ITA, sets zero tariffs for a broad range of electronics products through the Sectoral Promotional Program, a Mexican tariff reduction scheme.

More concretely, the following examples were cited as merits of FTAs. Interviewees from different firms agreed that a primary benefit of the Japan–ASEAN EPA would be that firms would be allowed to export FPD panels for TV sets from Japan to ASEAN countries.¹⁷ One manufacturer currently chooses to purchase inexpensive Korean TFT panels for TV sets assembled in Malaysia even though this manufacturer produces its own TFT panels in Japan. This is due to the ASEAN CEPT's local content criterion (more than 40% for TV sets). Another manufacturer noted that it chose domestic assembly of FPD TV sets. The Japan–ASEAN EPA may affect such firms' behavior and facilitate exports of FPDs from Japan to ASEAN countries.

Citing a benefit of the Japan–Mexico EPA, one respondent said his firm gained competitiveness in the US market for video projectors. Therefore, although the impact is not measurable, we can observe anecdotal evidence that FTAs bring about benefits for

¹⁴ Recently, the Japanese government and ASEAN agreed that the Japan–ASEAN EPA would include FPDs as a subject of tariff removal. Thus, it is expected that Japanese electronics manufacturers will benefit from the Japan–ASEAN EPA by exporting FPDs to ASEAN countries.

¹⁵ Such an example is the Korea–Chile FTA.

¹⁶ The Japan–Chile EPA went into effect on 3 September 2007. The tariff on digital cameras was 6%.

¹⁷ One interviewee even asserted that this would be the only merit of the Japan–ASEAN EPA.

Japanese manufacturers in terms of (i) increased market access and (ii) importing intermediate goods and raw materials.

In addition to the benefits of tariff removal with FTAs, these agreements may improve business environments. Indeed, most of Japan's free trade agreements articulate bilateral cooperation for improving business environments and set up special committees for this purpose. One interviewee noted that the committee for improving business environments in the Japan–Mexico EPA had been successful. In particular, since such committees allow private sector participation, Japanese private entities, such as Nippon Keidanren and the Japanese Maquiladora Association, can potentially establish direct channels through which to convey their concerns to the Mexican government.

Whereas many interviewees pointed out the benefits of FTAs as discussed above, they also pointed out several negative impacts of FTAs:

- **Increased documentation costs.** In order to enjoy preferential tariffs by FTAs, exporters have to prepare documents in compliance with the requirements of ROO.¹⁸ Even if firms do not use FTAs themselves, they may be asked by client firms to prepare the necessary documents.
- **Competitive disadvantages due to precedent FTAs.** Firms are concerned about threats to their current competitive positions in foreign markets as a consequence of FTAs in which Japan is not involved. For example, an interviewee raised concerns about negotiations for an FTA between the EU and Korea.¹⁹
- **Small tariff reduction by FTAs.** Firms raised two reasons for this complaint. The first reason is that the range of products for which FTAs remove tariffs is not very wide for the electronics industry. As mentioned above, the ITA realizes zero tariffs for information technology-related products, including integrated circuits. Also, developing countries already have zero tariff schemes for attracting FDI. Thus, FTAs are redundant. The other reason is gradual tariff reduction schemes: even under FTAs, some products have 10-year gradual tariff reduction schemes. This is problematic for the implementation of FTAs when, after the conclusion of an FTA, a party government cuts MFN tariffs much deeper than the FTA tariffs. As a result, no firms use the FTA. Indeed, in the Japan–Mexico EPA, there are several products for which MFN tariffs are lower than the preferential tariffs.
- **Dissemination of confidential information.** This point relates to the method of ROO certification rather than the FTA itself. Calculations of local content require information about costs and procurement sources (countries). One interviewee raised concerns that the company had to submit ROO applications including such sensitive information to the certificate issuing body.

¹⁸ This is because the Japan-related FTAs require certification by a private entity approved as a certifying agency by the government. On the Japanese side, the Chamber of Commerce issues certificates as the approved agency.

¹⁹ The EU Commission and Korea launched trade negotiations for a bilateral FTA in May 2007. The EU's current tariff levels for TV sets and camcorders are about 14% and 5%, respectively. The removal of these tariffs for Korean firms would cause significant disadvantage to Japanese competitors.

- **Direct shipping requirement.** Negative perceptions of FTAs were, to a certain degree, expected prior to the interviews. However, the problem of the direct shipping requirement when imported goods are shipped via a third country, raised by several firms during interviews, was relatively unknown. This is a potentially important issue for promoting free trade in Asia. According to an interviewee, Asian FTAs tend to require direct shipment. It is a common business practice that exported goods are temporarily accumulated at regional headquarters for inventory adjustment before being shipped to their final destination while some FTAs, like the ASEAN–PRC FTA, have no provisions to allow indirect shipment. According to a representative of a manufacturer, it is likely that if such a regional headquarters is not located in an FTA country, then the FTA is not applicable to the shipment even though it comes from an FTA partner country. This representative stated that they had not experienced such a requirement in other regions' FTAs, so the direct shipment requirement was rather surprising.

Among the electronics firms we interviewed, most had not changed business plans in response to Japan-related FTAs. One firm had changed logistics only. This is simply because the impact of FTAs is limited so far for the electronics industry. As confirmed by the experiences of interviewees, FTAs generate and divert trade. However, most Japanese firms have already established internationally fragmented production systems and the FTAs so far concluded do not have significant influences over firms' business plans. The Japanese government maintains a list of possible future FTAs.²⁰ Thus, many interviewees noted that their companies may change business plans in response to FTAs in the future. Also, almost all interviewees answered that their companies studied the texts of FTA provisions that may affect their businesses.²¹ In general, firms are deeply interested in the implementation of existing FTAs and negotiations for future FTAs that may affect Japanese firms' business environments.

4.3.4 Rules of Origin

The concern over the “spaghetti bowl phenomenon,” the complication stemming from overlapping ROO by many FTAs, was apparent in our interviews with firms in the electronics industry. However, it should be noted that no interviewees expressed that their companies had experienced inconveniences stemming from the phenomenon. Indeed, one interviewee noted that the issue of overlapping ROO had not caused any problems, but speculated that it would be problematic in the future (Table 15). The extent to which the spaghetti bowl phenomenon matters varies across industries. In the case of the electronics industry, the usage of FTAs is limited because of the ITA and other local schemes for tariff reduction, so the phenomenon is not problematic in this industry.

All two interviewees utilizing FTAs noted that the existence of different ROO leads to increasing operating costs.²² For example, one firm hired ex-customs inspectors who were knowledgeable about the ROO of NAFTA when it started to use that agreement. An interviewee from this firm noted that such an operation was possible in the case of NAFTA because its market size was large enough. This comment suggests that complicated ROO regimes could easily impede the overall benefits of FTAs when firms are forced to choose among FTAs.

²⁰ This list includes bilateral agreements between Japan and Viet Nam, Switzerland, Australia, India, and Korea.

²¹ There is one company that does not study FTA provisions. This is because all their products are subject to the ITA.

²² As shown in Table 15, three firms answered that the existence of different ROO leads to increasing operating costs, where two of them were utilizing FTAs and the third one was not.

Accordingly, it is not surprising that all of the interviewed firms now utilizing or planning to utilize FTAs supported ROO regimes that were harmonized in a simple manner. Most interviewees noted that change of CTC is more preferable to the VA criterion. According to interviewees, CTC was supported in the following sense: (i) purchasing sources of general parts are frequently switched depending on market conditions such as the timing of delivery. Such production processes tend to elevate the costs of verifying compliance with ROO; and (ii) following the VA criterion may reveal confidential information such as the composition of materials of chemical products to outsiders (e.g., certifying bodies) thorough the process of certification.²³

Two electronics manufacturers in our sample noted that the certification method of ROO mattered: the Japan-related FTAs require certification by a certifying body approved by the government whereas some other FTAs, such as NAFTA, rely on self-certification.²⁴ According to these manufacturers, the self-certification system is superior to the current certification method in the following two respects. First, in self-certification, importers have to prove that imported goods qualify for preferential tariffs by FTAs. Because the primary beneficiaries of such tariff reductions are importers, placing the burden of proof on importers is reasonable. Second, from the point of view of exporters, self-certification means there is no need to wait for certification of ROO. It usually takes only one or two business days for JCCI, the certifying body in Japan, to issue certificates. However, one interviewee stressed that even one day crucially mattered because the company always made a great deal of effort to reduce inventory costs by improving the distribution system.

4.3.5 Policy Issues

While all sample firms noted that government agencies provided information on FTAs via the Internet, the evaluation of such online information services varied. Some firms rated them as average; others gave low assessments. According to an interviewee that gave low ratings, online information offered by the government and JETRO was too general. Through the interviews, we found that two types of online information were requested the most: information on FTAs to which Japan was not party and more detailed information on tariff-reduction schemes. One interviewee noted that while finding information on Japan-related FTAs was not difficult, it was difficult to find information on other FTAs between foreign countries. As for the second type of information most requested, interviewees commented that they needed the preferential tariff rates of their products.

Asked where they seek help for problems in utilizing FTAs, most interviewees indicated the government (MOFA and/or METI) and business associations such as the Japan Electronics and Information Technology Industries Association. In fact, business associations organize committees composed of representatives from member companies, which work as conduits through which the governments and businesses exchange information and views on FTAs.

4.4 Textiles and Garments

4.4.1 Industry Profile

The process of manufacturing textiles and garments is composed of four steps: spinning and yarn making, weaving or knitting, dyeing, and manufacturing. The upstream is in general more capital-intensive than the downstream. According to interviewees from a textile manufacturer, while their spinning and yarn making factories are located in Japan, PRC, and

²³ Some interviewees noted that the VA criterion would be occasionally more convenient than CTC. For example, if manufacturers produce the key intermediate goods by themselves, it would be easy to verify that VA criteria are met. An interviewee said the best practice would be for firms to be able to freely choose either the CTC or VA criterion.

²⁴ For example, AFTA and Mercosur take similar certification methods to the Japan-related FTAs.

some ASEAN countries, factories for weaving and knitting are in the user markets, such as European countries. This is partly because many rules of origin require the process of weaving or knitting to take place within the market to benefit from preferential tariffs. Some textile firms have plans to export high-value-added textiles to the PRC or Viet Nam for to manufacture clothing and bring it back to Japan.

In order to see the impact of FTAs on the Japanese textile and garment industry, we met with managers from nine firms, including a trading company that coordinates the production of clothing. We conducted these interviews between July 2007 and March 2008. In each case, we asked to meet with someone directly responsible for dealing with FTA issues.

4.4.2 Utilization of FTAs

As of the survey period, two interviewed firms used the Japan–Thailand FTAs. They operate factories in Thailand to manufacture clothes. Three firms used AFTA and two firms used the ASEAN–PRC FTA

Among the several FTAs Japan has under negotiation, the FTAs with ASEAN, Indonesia, and Korea were chosen by interviewed firms as those that they were planning to use. Therefore, while the interviewed firms in general showed interest in FTAs, the current utilization of FTAs is low.

4.4.3 Impact of FTAs

Interviewees emphasized that FTAs were in general beneficial. More concretely, three firms pointed out increased export sales due to improved market access, and two firms expected that importing to Japan would become easier. Some other firms pointed out the possibility of product concentration and new business opportunities. While we should note that the utilization of FTAs by the textile and garment industry is very low, the responses from interviews suggest that the industry is interested in FTAs.

With respect to impediments to using FTAs, interviewees pointed out small tariff reduction by FTAs and increasing documentation costs. However, it should be noted that a few firms used the Japan-related FTAs, which implies that most interviewees had not experienced procedures for ROO certification. Indeed, one interviewee noted that partly because the company outsourced exporting and importing businesses, it was not easy to understand how it could increase profits by using FTAs. This interviewee also pointed out that uncertainty involved with FTA negotiations increased the difficulty of the utilization of FTAs.

Due to lack of experience with FTAs, firms were less decisive about the impacts on their business plans: all interviewees noted that FTAs might change their business plans or that they did not know. Similarly, half of the interviewees noted that they had not investigated FTA provisions. Four interviewees recommended that less demanding administration of ROO would promote the use of FTAs; another interviewee thought that the coverage of products subject to preferential tariffs should be increased. The remaining simply answered that they did not have any particular ideas.

4.4.4 Rules of Origin

Some textile firms interviewed expressed concerns over overlapping ROO. However, it should be noted that there were no interviewees who explicitly expressed that their companies had experienced inconveniences stemming from the phenomenon. Indeed, some other interviewees noted that they did not know how the issue of overlapping ROO could be serious. For the most part, interviewees did not give decisive answers: many of the interviewed firms noted that the issue of ROO might increase business costs and the adoption of harmonized ROO might be beneficial.

The textile industry has a common opinion on the preferred regime of ROO: change of CTC combined with specified production process requirements. The reason that the textile and

clothing industry prefers the CTC criterion is twofold. First, the fact that tariff codes conveniently change according to production processes makes CTC a better option. In the case of synthetic fibers, spinning and weaving changes chemical matters to yarn with HS 5401–5406, weaving and knitting changes the codes to 5407–5408, and then manufacturing clothing further changes the codes to HS 6201–6217. Second, other major free trade areas such as NAFTA and EU use the CTC criterion for the textile and garment industry.

4.4.5 Policy Issues

Although three interviewed firms acknowledged that government agencies provided information on FTAs via the Internet and business consulting services, no firms use such services. This is because the industry does not use the Japan-related FTAs. So far, firms in the industry obtain necessary information on FTAs through business associations in the industry.

When seeking help for problems encountered in utilizing FTAs, most interviewees indicated the government (MOFA and/or METI) and business associations such as the Japan Chemical Fibers Association (JCFA). In fact, as in other industries, business associations organize committees composed of representatives from member companies, which work as focal points through which the governments and businesses exchange information and views on FTAs.

5. SUMMARY OF FINDINGS AND POLICY IMPLICATIONS

Based on the analysis of firm-level evidence, we can conclude that the impact of free trade agreements (FTAs) involving Japan on business activities is smaller than estimated by the computable general equilibrium (CGE) model, mainly because few firms are utilizing FTAs. The findings from the study are summarized below.

- (i) Because a large number of firms are already operating in Asia, for small parts suppliers FTAs do not offer large advantages. Also, differentiated products that are not sensitive to changes in prices are not suitable for FTAs because production volume is small.
- (ii) FTAs involving Japan may improve business environments because the FTAs provide opportunities for the business sector to participate and contribute at business and private talks related to FTA agreements.
- (iii) With the Information Technology Agreement in effect, most information technology-related products are traded without tariffs. In addition, investment promotion schemes that exempt tariffs on intermediate goods for export purposes, like a BOI scheme, are available.
- (iv) The phaseout tariff schedules by which tariffs are eliminated gradually over 10 years makes the impact of FTAs small, dampening the motivation for enterprises to use FTAs.
- (v) The current FTAs have documentation costs that are burdensome to exporters and reduce the incentives for firms to use FTAs. Under such a system, FTAs are better utilized for intra-firm trade rather than inter-firm trade.
- (vi) The rules of origin (ROO) issue impedes the utilization of FTAs. While the application and certificate fee is small, the administrative costs to prepare documents are costly for firms.
- (vii) Time delays incurred to obtain certificates of origin from organizations conflict with “just in time” production.

- (viii) The value content (VC) rule is costly to firms because it can be difficult to calculate the VC (or local content) for a single-part item when purchasing sources of parts and prices frequently change according to market conditions. Such production processes tend to increase the costs of verifying compliance with ROO. The VC rule also requires information about costs and procurement sources. When information on OEM suppliers is confidential because of patents and proprietary terms, firms may opt out of using the FTA.
- (ix) The change of tariff code (CTC) rule is a better practice than the VC rule. The Bill of Materials (BOM) that describes the flow of the production process for a final product can be used as the CTC rule certificate if the tariff code numbers are added to this document. However, negotiation on the digit level of the CTC is a difficult matter. More importantly, even with the CTC rule, delays still exist in procuring certificates of origin.
- (x) In Japan, due to limited human resources, documentation costs can be high. Taking into consideration costs and benefits of EPAs, the overlapping FTAs might force firms to use FTAs selectively. As a result, FTAs will be utilized only for high-volume and high-MFN-tariff products for intra-firm trade. This may not apply to situations in ASEAN countries where labor costs are relatively low.
- (xi) Small and medium enterprises (SMEs) and firms in the less developed countries face challenges to using FTAs. FTAs benefit most large enterprises but penalize smaller firms.

The following policy recommendations for governments are extracted from our study.

- (i) Address the low levels of awareness among firms, especially among SMEs, through information dissemination campaigns. Frequent seminars on how to use of FTAs should be held.
- (ii) Disclose operational guidelines to increase predictability and reduce administrative costs to acquiring certificates of origin for exporters. Equally, information on rules of origin and phaseout tariff schedules and comparisons with MFN rates should be well publicized to firms.²⁵
- (iii) Reexamine and improve the self-certificate system used to prepare documentation. The US self-certificate system should be an example.
- (iv) Promote unilateral tariff liberalization. Rules of origin are cumbersome, and unilateral tariff liberalization on an MFN basis provides attractive alternative options for exporters.
- (v) Launch trade facilitation measures, such as quick customs clearance, which would enhance the “just in time” production system in production networks.
- (vi) Promote region-wide plurilateral FTAs over bilateral FTAs to mitigate the “spaghetti bowl” problem. This enables firms to utilize FTA preferential tariffs among the concerned countries by adopting a regional cumulation rule.
- (vii) Promote a simple multilateral trade system that does not require cumbersome procedures. Develop multilateral trade negotiations at the WTO alongside FTAs.

²⁵ The Japan Customs website publishes tables of FTA tariffs vis-à-vis MFN rates but there are no phaseout tariff schedules in the same table.

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