RIETI Discussion Paper Series 07-E-041

Impacts of Japanese FTAs/EPAs: Post Evaluation from the Initial Data

ANDO Mitsuyo
Keio University

RIETI
Research Institute of Economy, Trade & Industry, IAA

The Research Institute of Economy, Trade and Industry
http://www.rieti.go.jp/en/

RIETI Discussion Paper Series 07-E-041

Impacts of Japanese FTAs/EPAs: Post Evaluation from the Initial Data[*]

Version: June 2007

Mitsuyo Ando[♦]

Faculty of Business and Commerce, Keio University

Abstract

This paper attempted to assess impacts of existing Japanese EPAs in their initial years and to draw policy implications for possible future FTAs/EPAs. Our gravity model estimations as well as detailed analysis on trade and actual tariff reduction by EPAs demonstrated that the Japan-Singapore EPA has almost no direct impact on trade since actual reduction of tariffs by the EPA is quite limited. On the other hand, our empirical investigation confirmed a certain degree of positive impact of the Japan-Mexico EPA on trade, particularly on the export side, and investment. Several important outcomes of the EPA beyond tariff removal are also revealed. Discussion on future designs of FTAs/EPAs includes issues on some possible abuse of phasing out tariffs, desirable structure of EPA tariffs, effective utilization of EPAs beyond trade liberalization, and the relationship with multilateral trade liberalization.

---

[*] Prepared for and presented at the International Symposium organized by RIETI, "Assessing Quality and Impacts of Major Free Trade Agreements" on March 22-23, 2007. The author would like to thank Jeffery Schott, Shujiro Urata, and other participants at the symposium and Masahisa Fujita, Ryuhei Wakasugi, and Masahiko Ozaki at the RIETI seminar for helpful comments, the Japanese Maquiladora Association (particularly Kazuaki Kawamura, Masato Murakami, and Masahisa Maeno), Takuya Takahashi, and Jose Castanuela for providing useful information on Mexico, and Alfredo Ferreira for editorial assistance. The author also acknowledges the financial support from Seimei-kai.

[♦] Corresponding author: Mitsuyo Ando, Assistant Professor, Faculty of Business and Commerce, Keio University; E-mail: m-ando@fbc.keio.ac.jp.

1. Introduction

Free trade agreements (FTAs)/regional trade agreements (RTAs) have been negotiated, established, and studied with increasing frequency and intensity. As of March 1, 2007, GATT/WTO has been notified of 396 FTAs/RTAs including 194 FTAs/RTAs in force. Of these, 150 have entered into force since the late 1990s.[1] FTAs/RTAs are likely to have significant economic impacts on its members and non-members. The impacts may be greater when FTAs/RTAs also cover contents other than trade liberalization such as foreign direct investment (FDI) liberalization, trade and FDI facilitation, and economic cooperation. The global surge in interest in all aspects of FTAs/RTAs raises the need for closer evaluation – involving pro-assessment and post-evaluation – of their economic impacts.[2]

Japan is not an exception to the foregoing trends, having been actively involved in development of bilateral/plurilateral trade agreements, particularly recently. As of April 2007, Japan has three bilateral Economic Partnership Agreements (EPAs) in effect with Singapore, Mexico, and Malaysia: the Japan-Singapore Economic Partnership Agreement (JSEPA) was signed/enforced on January 13, 2002/November 30, 2002; the Japan-Mexico Economic Partnership Agreement was signed/enforced on September 17, 2004/April 1, 2005; and the Japan-Malaysia Economic Partnership Agreement (JMEPA) was signed/enforced on December 13, 2005/July 13, 2006. In addition (as of April 2007), Japan has three bilateral EPAs signed with the Philippines on September 9, 2006; Chile on March 27, 2007; and Thailand on April 3, 2007; and two substantive agreements for bilateral EPAs with Indonesia and Brunei. Furthermore, negotiations and studies have started on EPAs/FTAs with a number of other countries, including ASEAN as a whole, Australia, the Gulf Cooperation Council (GCC), India, Korea, Switzerland, and Vietnam.

Most empirical work of estimating the effects of Japanese EPAs or hypothetical RTAs involving Japan has been based on simulation analysis, typically using a computable general equilibrium (CGE) model.[3] [4] This is largely because Japanese EPAs/RTAs are so new that

---

[1] The information on FTAs/RTAs notified to the GATT/WTO is available from the World Trade Organization (WTO) (http://www.wto.org/english/tratop_e/region_e/region_e.htm).

[2] There is a huge amount of empirical analysis on the economic impacts of the over 10-year-old North American Free Trade Agreement (NAFTA), for both ex ante and ex post assessment. See, for instance, Hufbauer and Schott (1992, 1993) for pro-NAFTA analysis, Krueger (1999, 2000) for a preliminary assessment of its early years, Burfisher et al. (2001) for a survey of the impact of NAFTA on the United States, Fukao et al. (2003) for an analysis of trade diversion under NAFTA, and Hufbauer and Schott (2005) for the achievements and challenges of various aspects of NAFTA.

[3] See Ando and Urata (2006) for a survey of the impacts of East Asian FTAs including Japan.

[4] Sazamani, Urata, and Kawai (1995) and Kataoka and Kuno (2003) estimate the cost of trade protection in Japan within a framework of a partial equilibrium model, though their focus is not necessarily on trade liberalization by FTAs.

statistical data that are used to estimate their impacts are not yet available, or because agreements themselves have not yet been concluded. Detailed post-assessment, however, is important, considering Japan's active involvement in developing bilateral/plurilateral trade agreements, particularly in recent years. In this paper, we attempt to assess impacts of existing Japanese EPAs in their initial years and to draw policy implications for possible future EPAs/RTAs. Given the recent enforcement of EPAs and the limited availability of data in the post period, our paper focuses on two existing EPAs: Japan-Singapore and Japan-Mexico.

The rest of the paper is organized as follows: the next section investigates patterns of trade and FDI with EPA partners. The first part of Section 2 provides an overview of patterns of Japanese trade and FDI with Singapore and Mexico to understand the overall structure of their relationship with EPAs. Subsection 2.2 investigates sectoral issues of Japanese trade with Mexico to assess more detailed effects of the EPA on trade and FDI. Subsection 2.3 in turn quantitatively examines the impacts of Japanese EPAs on trade with Singapore and Mexico, using gravity model estimations.[5] The following Section 3 discusses the effects of Japan-Mexico EPA beyond trade liberalization, and Section 4 concludes the paper.

2. Trade and FDI with EPA partners

2.1 Overview

Japan's trade with Singapore has increased (Table 1A). The increase in the past few years, however, cannot readily be interpreted as the result of trade liberalization through EPAs since the actual reduction of tariffs by the EPA was quite limited.[6] From the comparison in Table 1B of the number of tariff lines committed to zero tariffs under the WTO with that under the EPA, tariffs may appear reduced in many tariff lines (commodities). For instance, the number of commodities committed to zero tariffs is 974/5,859 under the WTO/EPA out of 5,859 in all industries on the Singapore side and is 428/486 under the WTO/EPA out of 2,277 in agriculture, fishery, and forestry industries on the Japanese side. In fact, actual tariff removal by EPA is observed in only four commodities in all industries on the Singapore side and no commodity in agriculture, fishery, and forestry industries on the Japanese side. This is because MFN tariff rates are already zero for 4,881 (=5,859-974-4) commodities on the Singapore side[7]

[5] See, for instance, Frankel (1997) and Rauch (1999) for gravity model analysis of regional trade agreements.

[6] See Kimura and Ando (2002) for more detailed discussion on the relationship between GATT/WTO Article 24 and the Japan-Singapore EPA.

[7] Singapore bounded only 4,067 out of 5,859 commodities (69% of total) under the WTO as of 2002. Therefore, some of 4,881 commodities are bounded at positive tariff rates under the WTO with a MFN tariff of zero percent, and the rest are not bounded under the WTO with a MFN tariff of zero percent.

and 58 (=486-428) commodities[8] on the Japanese side.[9] As for non-agricultural commodities on the Japanese side, most tariffs are immediately removed under the EPA; 10 commodities in petrochemicals are excepted.[10] Although we will formally examine the relationship between the expansion of trade and EPAs in subsection 2.3, the expansion of trade between Japan and Singapore can hardly be interpreted as a direct result of tariff removal by the EPA.

== Table 1 ==

As for Japan's trade with Mexico, two peculiar features must be taken into account in analyzing statistical data. First, a large amount of trade between Japan and Mexico transits the U.S. It is therefore preferable to use Mexican imports from Japan for the analysis of Japanese exports to Mexico including those passing through the U.S; roughly speaking (ignoring the c.i.f-f.o.b adjustment), 42 percent of Mexican imports from Japan in 2005 transited through the U.S.[11] Second, a significant portion of Japanese exports to Mexico are "Maquiladora imports" or "other temporary imports" (from the viewpoint of Mexico). In 2005, less than 40 percent of Japanese exports to Mexico were sold to Mexican consumers.[12]

Table 2 shows the rise in Japanese trade with Mexico after the enforcing EPA, particularly on the export side; total exports expand from 8.1 billion US$ in 2001 to 13.1 billion US$ in 2005 and 15.3 billion US$ in 2006.[13] The rapid expansion of exports in the electric

[8] These 58 commodities include coniferous wood and derived products, raw furskins, oats other than those used for sowing, a protein preservative used for manufacturing frozen minced fish, cigarettes containing tobacco, some kinds of spirits, and undenatured ethyl alcohol intended for use in distilling industrial alcohol, among others.

[9] Moreover, major commodities among Japanese agricultural imports from Singapore, such as cocoa butter, cocoa powder, chocolate and other food preparation materials containing cacao, are either subject to zero tariff on a MFN basis or excluded from the list of tariff elimination schedule of Japan in JSEPA (Table 1C).

[10] The schedule of tariff elimination for these 10 commodities in petrochemicals are (i) tariff removal in April 2005 for one commodity, (ii) phasing out tariff removal from January 2003 to January 2010 for seven commodities, and (iii) phasing out tariff removal from January 2005 to January 2010 for two commodities. In addition, 294 mining and manufacturing commodities are excluded from the liberalization list, including petroleum-related products, petrochemical products, and leather products, among others.

[11] Since imports are calculated by country of origin while exports by destination (basically the first reaching country), Mexican imports from Japan include Japanese exports to Mexico through the U.S. In 2005, Mexican imports from Japan are 13 billion US$, while Japanese exports to Mexico are 6.9 billion US$.

[12] "Maquiladora imports" or "other temporary imports" are temporary imports of commodities such as parts and components or capital goods used in producing goods to be exported from Mexico. See JETRO (2006a) for these imports in 2004 and 2005.

[13] Since Mexican imports from Japan by sector in 2006 are available only from January to October, sectoral imports in 2006 are estimated, based on the share of sectoral imports from

machinery, transport equipment, and precision machinery industries contributes to this increase in total exports: in 2006 exports were 1.6 times those in 2001 for electric machinery, 3.8 times for transport equipment, and 4.2 times for precision machinery. The next subsection considers this in greater detail.

== Table 2 ==

Table 3 presents net values of Japanese investment in Mexico on the balance-of-payment (BOP) basis. Since the BOP statistics record net transactions with negative figures indicating the occurrence of outward Japanese investment in a given year, the table vividly illustrates the significant scale of Japanese investment in Mexico in 2005 and 2006.[14] Most Japanese investment in Mexico after the signing of the Japan-Mexico EPA aims at either i) expanding production of built-up (BU) cars in Mexico, ii) establishing affiliates for sales in Mexico by Japanese automobile manufacturers without local production sites, which corresponds to the introduction of a zero-tariff import quota for BU cars under the EPA scheme, or iii) expanding production of flat-panel LCD TVs in Mexico, which reflects increased demand in the U.S. market (Table A.1 in the Appendix). It follows that investment is observed mainly in the transport equipment sector.

== Table 3 ==

Interestingly, a certain degree of announcement effects on investment, i.e., investment before the implementation of the EPA, is observed.[15] A number of investment decisions in Mexico made by Japanese firms were indeed released after the signing of the EPA and before the enforcement, as shown in Table A.1. And, substantial investment was actually conducted, even from January to March in 2005 just before the EPA was enforced.

2.2 Sectoral issues in Japanese trade with Mexico

Japanese exports to Mexico

The major commodity of Japanese exports to Mexico is machinery. While exports are the largest in the electric machinery industry (HS85 in Table 2), exports in transport

January to October in 2006 and total imports in 2006.

[14] Note that investment in Mexico by Japanese affiliates in the U.S. is not included in Japanese investment in Mexico on the BOP basis.

[15] Announcement effects on investment were particularly significant in the case of NAFTA since a period between dates reached to the substantive agreement (August 1992) and signed on the FTA (December 1992) and date of entry into force (January 1994) was long.

equipment (HS86-89) and precision machinery (HS90-92) industries are rapidly increasing.

Table 4 presents major commodities at the HS4-digit level, arranged from that with the largest export share in 2005 on the top, and their tariffs in Mexico including EPA tariffs as of January 2006. Most of the major export commodities are parts and components of electric machinery and transport equipment and BU cars. Exports of a number of parts and components of electric machinery and transport equipment increased rapidly, as shown in the trade index in Table 4, which presents trade values with the base year 2004. As tariffs in Table 4 show, however, most of these quickly expanding exports had already been traded with import tariffs of zero percent on a MFN basis or under Los Programas de Promoción Sectorial (PROSEC). These observations suggest that the EPA may not be a major factor underlying their rapid export growth.[16] [17] For instance, expanded exports of parts and components such as HS8529 (specialized TV and radio parts) and HS9013 (flat-panel LCD), with MFN tariffs of zero percent, reflect an increased demand for flat-panel LCD TVs in the U.S. market; these are produced by Japanese affiliates located near the border between Mexico and the U.S. Increased purchasing power of the Mexican market is another reason behind the expanding exports of electric machinery, including parts and components.

== Table 4 ==

On the other hand, a direct effect toward tariff reduction by an EPA is observed in a rapid increase in exports of BU cars (HS8703 and HS8704). In general, exports of BU cars to Mexico are virtually prohibited, with MFN tariffs of 50 percent. The Mexican government, however, has provided automobile manufacturers producing in Mexico with a zero-tariff import quota, equivalent to 10 percent of local production in the year before in terms of units (Table 5).[18] Therefore, Japanese automobile manufacturers with local production (namely Nissan,

[16] PROSEC is a system introduced to promote domestic production in 22 manufacturing sectors. PROSEC tariffs are lower than MFN tariffs, usually from zero percent to three percent. These tariffs are imposed on designated commodities from the 22 sectors, imported by local producers.

[17] Of course, there are some cases that the large preferential margin of an EPA tariff contributes to trade expansion since PROSEC tariffs cannot be applied to imports of parts and components used for repairing even if they are designated commodities. A Japanese company, Kayaba Industry (a shock absorber producer), for instance, decided to establish its affiliate for sales in Mexico. One of the reasons behind its investment decision is an expectation that a demand for its products used in repairing Japanese automobiles would increase, according to expanding sales of Japanese automobiles in Mexico (JETRO, 2006b). Another reason is that preferential margin between its MFN tariff of 15 percent and its EPA tariff of zero percent is large, while the PROSEC tariff cannot be applied. In such a case, the preferential margin of an EPA tariff would contribute to trade expansion.

[18] A zero-tariff import quota means that the tariff is zero percent within the quota and at the

Honda, Toyota, and Mitsubishi) have exported BU cars with an import tariff of zero percent within the quota.[19] In addition, under the EPA, a zero-tariff import quota for BU cars, equivalent to five percent of sales in the Mexican market in the previous year, is provided to Japanese automobile manufacturers, regardless of whether they produce locally.[20] As a result, some of Japanese automobile manufacturers such as Mazda, Suzuki, Isuzu, and Subaru without local production obtained a zero-tariff import quota for BU cars under the EPA, though the quota is much smaller than that allocated to local producers. Moreover, as discussed above, given this new zero-tariff import quota, some of them have established affiliates for sales in Mexico. In the case of BU cars, the zero-tariff import quota under the EPA has direct and significant effects on Japanese exports to and investment in Mexico.[21] Given the fact that out-quota tariff under the EPA is supposed to be phased out from the base rate of 20 percent or 30 percent to zero percent by April 1, 2011, further impacts of tariff removal on exports of BU cars are expected.[22]

== Table 5 ==

A striking development is the "reverse phenomena" in tariffs between EPA tariffs and MFN tariffs, i.e., EPA tariffs become higher than MFN tariffs, observed for some commodities (Tables 4 and 6). EPA tariffs on some commodities are to be phased out over three to 10 years from the base rates at the level of MFN tariffs in 2003. Mexico reduced MFN tariffs on 9,366 commodities on December 31st in 2004 and those on 6,089 commodities on September 30, 2006. As a result, about a half of the commodities (approximately 10,000) in mining and manufacturing has been subject to this "reverse phenomena" as of January 2007 (see

---

level of the MFN tariff beyond the quota.

[19] Although Mitsubishi Automobiles does not have production sites in Mexico, it can utilize a part of the zero-tariff import quota that is allocated to DaimlerChrysler, with which it has a business alliance.

[20] The total amount of the zero-tariff import quota for Japanese automobile manufactures under EPAs in 2005F/Y (54,839 units) and 2006F/Y (56,585 units) is close to the total amount of zero-tariff import quota for Japanese automobile manufacturers with local production in 2005 (58,218 units) and 2006 (65,305 units).

[21] It would be interesting to investigate whether this increase in sales of Japanese automobiles has an impact on local auto productions by U.S. automobile manufacturers and/or their exports of BU cars from the U.S. to Mexico, when microdata of U.S. firms abroad in very recent years is available. It might also be interesting to examine the impacts on the unit prices if exports were decomposed into those under the zero-tariff import quota and others to obtain necessary unit prices.

[22] MFN tariffs on BU cars rose: although MFN tariffs on BU cars are currently 50 percent, they were 20 percent or 30 percent in 2003, depending on the types. In this case, a choice of phasing out tariffs has indeed had a positive aspect of securing the ceiling of tariffs, though the immediate removal of tariffs is still the first best choice.

highlighted categories with EPA tariffs beyond MFN tariffs in Table 6).[23] Such effects would be unlikely to occur with the commodities subject to immediate tariff removal under the EPA. The gradual removal of tariffs by the EPA, rather than one-shot tariff removal, may cause confusion for exporters, requiring they investigate whether their exporting commodities should be with an EPA tariff or an MFN tariff. In addition, the choice of phasing out certainly postpones the possible positive effects of trade liberalization by the EPA, particularly in cases of "reverse phenomena". Although phasing out tariffs could have an advantage of securing the ceiling of tariffs, disadvantages of their choice seem to be serious.

== Table 6 ==

As a whole, direct and significant effects of EPA on exports at this moment seem to be limited to an increase in exports of BU cars. It does not, however, indicate that no impact on exports of other commodities would be observed in the future. We can expect more significant effects on exports in the future, particularly after the problem of "reverse phenomena" of tariffs is solved.

Japanese imports from Mexico

The major importing commodities are agriculture and fishery products (HS1-24 in Table 2) and mineral products (HS25-27) including salts (HS2501) and molybdenite (HS2613): the shares in total imports from Mexico in 2006 are about 20 percent and 17 percent, respectively. Note that the rise in the price of molybdenite, as a result of an increasing demand for mineral resources in international markets, contributes to the dramatic increase in total mineral imports in 2005 and 2006.[24]

To investigate detailed patterns of agriculture and fishery imports from Mexico, major agricultural commodities imported from Mexico are reported, with their import values, their import shares in total, and their tariffs in Japan, including EPA tariffs, in Table 7. The major features of EPA tariffs are classified into the following: i) introduction of import quota with in-quota tariff at a level half that of MFN tariffs, ii) phasing out tariffs over three to 10 years, iii) tariff reduction from 3 or 3.5 percent to zero percent, and iv) exclusion from the tariff elimination schedule. These features suggest that a certain portion of agricultural imports has been liberalized through EPA negotiations. In addition to exceptions from the tariff removal list,

[23] In the case of NAFTA, no commodity is subject to "reverse phenomena" since the FTA has been in force for some time. In the case of the EU-Mexico FTA, there were about three commodities (out of about 10,000 commodities) subject to "reverse phenomena" in 2006, but the problem was solved in early 2007 with removal of EPA tariffs on relevant commodities.

[24] The import price of molybdenite in 2005 is 2.4 times that of 2004 (JETRO, 2006a).

however, a complicated protection structure in MFN tariffs still remains in EPA tariffs such as price-differential tariffs, specific tariffs, seasonal tariffs[25], and import tariff quota (see Table 7).[26] If the administrative procedure is costly and preferential margin is small, actual utilization of EPA tariffs would be predictably low.

== Table 7 ==

Among import commodities, beef has had the most substantial growth since 2005: 1.7 billion JPYen in 2004, 6.4 billion JPYen in 2005, and 5.2 billion JPYen in 2006. Indeed, Japan introduced an import tariff quota for beef under the EPA: the tariff within a quota of 10 tons is zero percent for the first and second years for market entry, while the tariff beyond the quota is 50 percent or 12.8 percent, depending on the parts of beef. The rapid increase in imports of beef, however, is not a consequence of the introduction of import tariff quotas, particularly in view of the small quota, but rather of the prohibition on the imports of U.S. beef due to Bovine Spongiform Encephalopathy (BSE), after which Mexico surfaced as an alternative import sources.

The commodity with the largest share among agricultural imports from Mexico is pork. As Table 7 shows, imports increased in 2006 for some sorts of fresh, chilled, or frozen pork and prepared or preserved pork (excluding ham, bacon, pressed ham, etc.), though they did not increase in 2005.[27] Japan introduced an import tariff quota for pork under the EPA, combined with a price-differential tariff; the amount of import quota in total (including other categories of pork) from the first to fifth year is 38,000t in 2005F/Y, 53,000t in 2006F/Y, 65,000t in 2007F/Y, 74,000t in 2008F/Y, and 80,000t in 2009F/Y. For fresh, chilled, or frozen pork, in-quota tariffs are i) the difference between 535.53 yen and a value for custom duty per kilogram[28] when an import value for the custom duty per kilogram is more than 53.53yen but not more than the value obtained by dividing 535.53yen by 1.022 (524yen) and ii) 2.2 percent when a value for the custom duty per kilogram is more than the value obtained by dividing 535.53yen by 1.022 (524yen) (see Table 7 and Figure 1).[29] For prepared or preserved pork

[25] Although seasonal tariff does not appear in Table 7, bananas are a sample commodity.

[26] See Ando and Kimura (2007) for the review of agriculture protection in Japanese EPAs (those in effect, those with substantive agreement, and those under negotiation/study).

[27] Imports are 19.7 billion JPYen in 2004, 19.6 billion JPYen in 2005, and 21.8 billion in JPYen in 2006 for fresh, chilled, or frozen pork, while imports are 0.1 billion JPYen in 2004, 0.1 billion JPYen in 2005, and 0.4 billion in JPYen in 2006 for prepared or preserved pork (excluding ham, bacon, pressed ham, etc).

[28] A value for the custom duty per kilogram means an imported price per kilogram before an import duty is imposed.

[29] The in-quota tariff is 482yen when a value for custom duty per kilogram is not more than

(excluding ham, bacon, pressed ham, etc), on the other hand, the MFN tariff of 20 percent remains under the EPA since pork in this category is excluded from the list of tariff elimination, though their imports increase. In sum, the increase in pork imports can be partially interpreted as a consequence of the import tariff quota with EPA tariffs being lower than MFN tariffs but cannot fully be interpreted as an effect of tariff reduction by EPA.

== Figure 1 ==

A slight increase in imports is observed in avocados (from 6.2 billion JPYen in 2004 to 6.4 billion JPYen in 2005 and 6.8 billion JPYen in 2006), mangos (from 1.0 billion JPYen in 2004 to 1.3 billion JPYen in 2005 and 1.6 billion JPYen in 2006), frozen shrimp (from 0.6 billion JPYen in 2004 to 0.7 billion JPYen in 2005 and 0.8 billions JPYen in 2006), and others. Given that reduction of tariffs from the MFN tariff of one or three percent to the EPA tariff of zero percent is marginal so that it could be easily absorbed in exchange-rate fluctuations, the rise in imports of these commodities from Mexico may well be due to some sort of announcement effect on imports. A slight increase in imports is also observed in frozen orange juice: imports are 0.2 billion JPYen in 2004, 0.3 billion JPYen in 2005, and 0.4 billion JPYen in 2006. This increase would be a consequence of introducing an import tariff quota with an in-quota tariff of 12.75 percent (half of MFN tariffs) under the EPA since the preferential margin of 12.75 percent (= MFN tariff of 25 percent - EPA tariff of 12.75 percent) is large, unlike for commodities such as avocados, mangos, and shrimp with low MFN tariffs.[30]

On the import side as a whole, at present, there seems to be some sort of announcement effect from the Japan-Mexico EPA on imports of some fruits and vegetables such as avocados and mangos. Although the introduction of an import tariff quota with in-quota tariffs lower than MFN tariffs reduces, satisfactory effects of such tariff reduction are observed for only some sorts of fresh, chilled, or frozen pork and frozen orange juice.

2.3 Gravity model estimation of Japanese trade

53.53 yen, though imports in this category do not exist at least from 2004 to 2006. For some of other pork and prepared or preserved pork, the in-tariff quota is i) the difference between 577.15 yen and 0.6 time of a value for the custom duty per kilogram when a value for custom duty per kilogram is not more than the value obtained by dividing 577.15yen by 0.643 (897.59yen) and ii) 4.3 percent when a value for the custom duty per kilogram is more than the value obtained by dividing 577.15yen by 0.643 (897.59yen).

[30] Leather shoes and women's cotton trousers are examples of non-agricultural products with an expansion of imports in 2005 and introduction of zero-tariff import quota under an EPA: EPA tariffs for leather shoes are zero within quota and 21.6 percent to 30 percent beyond quota, and those for women's cotton trousers are zero within quota and 9.1 percent to 10 percent beyond quota (JETRO, 2006a).

This subsection formally examines the impact of Japanese EPAs on trade with Japan's counterparts, using gravity model estimations. We investigate whether trade has expanded as a result of trade liberalization by EPAs, considering basic economic conditions/relationships such as distance, size of economy, and income gaps. For this purpose, we first conduct gravity model estimations and then examine the differentials between actual values of trade and fitted values of trade, i.e., theoretical levels of trade predicted by our gravity estimations.[31] To obtain the theoretical levels of Japanese trade with the relevant countries, which are explained by the basic economic conditions/relationships, i) our sample consists of countries listed in Table A.2 with exports/imports of no less than 0.01 percent of Japanese total exports/imports in the corresponding year, and ii) data from 2001 to 2005 are pooled. The equation for our gravity model is as follows:

$$\ln(Trade_i^t) = \beta_0 + \beta_1 \ln(Dist_i) + \beta_2 \ln(GDP_i^t) + \beta_3 \ln(GDPPCgap_i^t) + \varepsilon,$$

where $Trade_i^t$ expresses total Japanese exports to/imports from country i in year t in real terms, $Dist_i$ distance between (capitals of) Japan and country i, GDP_i^t real GDP of country i in year t, and $GDPPCgap_i^t$ real income gap or absolute value of the difference in real GDP per capita between Japan and country i in year t. To identify the effects on exports and imports individually, the gravity estimations are conducted separately for exports and imports.[32] Data on trade values are obtained from UN COMTRADE (online).[33] Note that the wholesale price index in the U.S. is used as a proxy of deflator to convert nominal trade values into real terms. Data on the wholesale price index in the U.S., real GDP, and real GDP per capita are available from World Development Indicators 2006 (online)[34], and distances measures are obtained from the CEPII (centre d'etudes prospectives et d' informations internationals) website.[35]

Table 8 presents our results of gravity model estimations for Japanese exports and

---

[31] The differentials themselves may include factors other than the effects of EPAs. The focus here is on examining their trends before and after the enforcement of EPAs.

[32] Since the countries from which Japan imports pork are very limited, we do not conduct gravity model estimations at sectoral levels.

[33] See the website of UN COMTRADE (http://comtrade.un.org/).

[34] See the World Bank website for the World Development Indicators (http://publications.worldbank.org/WDI/).

[35] The CEPII distance database is available at http://www.cepii.fr/anglaisgraph/bdd/distances.htm. It provides four different measures: two are simple distances (distances between the capitals and between most important cities in terms of population) and the rest are weighted distances incorporating geographical distribution of population inside each country. See the CEPII website ("Notes on CEPII's distances measures" by Thierry Mayer and Soledad Zingnago) for the details. The choice of distance variable does not change our results significantly.

imports. Our results indicate that Japan has a larger (smaller) amount of trade with countries located closer to (farther from) Japan, countries larger (smaller) in economic size, and countries with a smaller (larger) income gap.[36] Table 9 in turn presents differentials between actual and fitted values of Japanese exports to/imports from Singapore and Mexico in real terms and differential ratios in terms of fitted values (= (actual value-fitted value)/fitted value).[37] The following calculation is carried out to compare differentials (values) and differential ratios before and after EPA implementation. Given the timing of implementation, November 2002 (signed in January 2002) for Singapore and April 2005 (signed in September 2004) for Mexico, differential values and ratios are calculated from 2001 to 2005 for Singapore and from 2001 to 2006 for Mexico. Note that figures for Japanese exports to Mexico in 2006 are calculated by using Mexican imports from Japan and 1.05 as a proxy for the c.i.f-f.o.b adjustment. Moreover, real GDP and real GDP per capita in 2006 are estimated, since they are not yet available, by employing estimates of nominal GDP at local currency in 2006, GDP deflator at local currency in 2006 (recalculated with base year 2000), and exchange rate (obtained by using GDP at local currency and GDP in US$ in the base year, 2000), available from the World Economic Outlook Database 2006 (online).[38]

== Table 8 ==

== Table 9 ==

For Singapore, although actual exports and imports have increased, as shown in Table 1A, and their actual values are indeed larger than fitted values, differential values and ratios do not change significantly between before and after the enforcement of EPA (Table 9). This suggests that the Japan-Singapore EPA has had little impact on trade. Actual increase in trade is within the range explained by the basic economic conditions; however, more active trade between Japan and Singapore can also be attributed to the development of international production/distribution networks in East Asia.

For Mexico, on the export side, differential values and ratios are positive, having

[36] Our sample excludes those with extremely small portions of trade with Japan. To examine whether our results are robust, regardless of the coverage of countries, we conduct gravity estimations with several sample sets such as a sample set including all countries with necessary data or a sample set comprised of countries with larger portions of Japanese trade. The results do not change, regardless of the coverage, though the coefficients of variables change slightly.

[37] As is the case with gravity model estimations, the wholesale price index in the U.S. is used to convert nominal values of actual trade into real terms.

[38] See the International Monetary Fund (IMF) website for the World Economic Outlook Databases (http://www.imf.org/external/ns/cs.aspx?id=28).

increased particularly since 2005; actual values of exports are larger than fitted values by 7.6 billion US$ in 2005 and 9.3 billion US$ in 2006, which are equivalent to 3.6 times the fitted values in 2005 and 4.1 times those in 2006. On the import side, on the other hand, differential values and ratios are still negative in 2006. The reduction of absolute values, however, implies that actual values tend to be closer to fitted values. These observations suggest that the Japan-Mexico EPA has had a positive impact on trade, particularly on exports, even after considering basic economic conditions/relationships. As discussed above, the introduction of the zero-tariff import quota for BU cars under the EPA is considered a significant contributing factor in the growth of Japanese exports to Mexico. Although it is not explicitly examined in the gravity analysis in this section, another contributing factor identified is the increased demand for flat-panel LCD TVs in the U.S. market.

3. Effects of the Japan-Mexico EPA beyond trade liberalization

Important outcomes of the Japan-Mexico EPA, besides tariff removal, includes the success of improving the business environment through bilateral consultations at the "Committee for the Improvement of the Business Environment," possible participation in international bidding for contracts of government procurement, and a change in logistics in Japanese trade with Mexico.[39]

Business environment

Chapter 13 of the Japan-Mexico EPA explicitly refers to "the Improvement of the Business Environment", i.e.,. Article 136 affirms their commitment to creating a more favorable business environment through occasional bilateral consultations to improve various issues regarding business environment. In addition, Article 137 confirms their agreement to establish a Committee for the Improvement of the Business Environment involving representatives of private sectors. Representatives of private parties on the Japanese side include Nippon Keidanren, the Japan External Trade Organization (JETRO), Camara Japonesa de Comercio e Industria de Mexico, A.C. (JCCI Mexico) with a membership of over 180 Japanese firms in Mexico, and the Japanese Maquiladora Association (JMA) with a membership of about 70 Japanese firms in Mexico-U.S. border.

The Committee for the Improvement of the Business Environment provides private sectors interests with a channel to directly consult with, and lobby, departments/bureaus of the Mexican government responsible for relevant issues. In addition, annual meeting of the Committee involves obligatory review of reviews on issues raised at the committee in the

[39] Discussion in this section is based on the information mostly provided by the Japanese Maquiladora Association (JMA).

previous year, forcing both Japanese and Mexican sides to make efforts toward improvement. The Committee realizes its aims in several ways. First, issues of interest to the private sector are addressed more effectively than when private sector interests lobby individually, since the relevant government agency must get involved. Second, it is meaningful particularly when several departments/bureaus of the Mexican government are involved with an issue raised by the private sector; furthermore, closer coordination and cooperation between them are necessary.[40] Third, the Committee is useful in developing a network of personal contacts to maintain ongoing consultations between Japanese private sector interests and the Mexican government. Fourth, it has improved communication between Japanese firms and the Japanese Embassy in Mexico so that they can mutually seek action from the Mexican government. As long as issues are within the scope of bilateral consultations, the Committee can provide effective channels to improve the business environment in Mexico.[41]

The issues raised by the Japanese side include i) security, ii) immigration control for entry and exit, iii) intellectual property rights, iv) infrastructure (transportation), v) debt collection, and vi) competitiveness-related matters such as labor issues and energy costs.[42] Greatly improved security at the International Airport in Mexico City is an important outcome.[43] Until October 2004, the federal police was in charge of security inside, while the municipal police was in charge of the outside of the Mexico City International Airport; these agencies were not coordinated. Efforts made through Committee consultations have led to regular meetings between the two to share information, and jointly guard places such as money exchange services areas and airport parking. As a result, the reported number of Japanese victims at the airport has rapidly declined.

Immigration control is another area that has seen important improvements. The Japanese side requested at the Committee in 2005 to facilitate immigration control, particularly on the border near Otay in the U.S., emphasizing complicated procedures of immigration control for entry and exit and inappropriate attitude of officials of the Instituto Nacional de Migración (INM).[44] As a result, immigration control on the border significantly improved as

---

[40] For instance, both the department in charge of industrial policy and that in charge of international trade are involved in the scheme of preferential treatment for exports and imports in the electric machinery industry.

[41] Issues requiring changes in laws are beyond the scope of bilateral consultations at the Committee.

[42] The issues raised by the Mexican side include the quarantine of agricultural imports in Japan.

[43] Security has been worsening, particularly in Tijuana and Mexico City. A comparatively high rate is reported for 2004, including robbery targeting Japanese nationals and transport trucks on route to and/or from airports and ports. Associated costs result in increased production costs for Japanese firms in Mexico.

[44] At the immigration control near Otay, cases are reported in which business people's access to certain locations are inappropriately limited; the submission of irrelevant invitation letters is

follows: a procedure to obtain an FMT (tourist visa) at immigration control was rationalized, the requirement of an invitation letter was abolished, and a branch office of the INM was established near Otay. At the committee in 2006, the Japanese side requested the immediate establishment of the second border at Otay in order for products produced in the area of Tijuana to pass through customs clearance without significant delay.[45] In addition, the Japanese side addressed the importance of developing supporting industries[46] and of improving infrastructure at the port of Ensenada near Tijuana.[47]

Conversely, through the Committee consultations at the committee, some requests from the Mexican government to the Japanese government have been realized. An example is to have started operations by AEROMEXICO of direct services between Tokyo (Narita) and Mexico City via Tijuana twice a week since 18th November 2006. The Japanese Government was originally planning to assign Nagoya Airport, not Narita Airport, to the new direct flight services between Japan and Mexico, insisting that air services agreements are completely unrelated to the Japan-Mexico EPA. The Mexican government, however, insisted at the Committee that EPA member countries have priority in their access quota for Narita Airport. Direct flight services between Japan and Mexico were eventually established between Narita and Mexico City via Tijuana. Considering the worsening security for land transportation, the unnecessarily long time for transport trucks to cross the border, and the transit time in the U.S. needed for those who travel on business between Japan and Mexico, Japanese companies are able to enjoy various benefits of the direct flights between Narita and Mexico City via Tijuana, where most of them are located.[48]

Government procurement

The EPA has provided Japanese firms with a chance to participate in international bidding for contracts of government procurement in Mexico. Government procurement in Mexico, including not only cases of Ministries of the Federal Government but also case of the

---

demanded, and unreasonable fines are imposed, due to misunderstanding by INM officials.

[45] At this moment, it takes three to four hours for trucks to cross the border due to congestion.

[46] Some efforts by public and private sectors in both countries were made to find potential business partners in local supporting industries.

[47] The port at Ensenada is too shallow for large vessels to enter and has insufficient docks. Therefore, when Japanese firms at Tijuana import parts and components from abroad, they often use the U.S. port at Long Beach in Los Angeles and transport the imported parts and components to their factories in Mexico by trucks. However, frequent congestion at the Long Beach port results in delays of up to two weeks in the delivery of parts and components to factories even after they have been loaded. See Urata et al. (2005) for discussion on other aspects of the business environment in Mexico including this issue.

[48] Improved competitiveness of Japanese firms in Mexico, avoiding problems emphasized above, are certainly also beneficial to Mexico.

Comisión Federal de Electricidad (CFE), Petróleos Mexicanos (PEMEX), and Instituto Mexicano del Seguro Social (IMSS), is basically intended to be domestic procurement.[49] Government procurement in Mexico, however, is allowed among FTA/EPA member countries with certain constraints. In other words, international bidding for the contracts by non-FTA/EPA member countries is extremely difficult or impossible. Since the enforcement of the Japan-Mexico EPA, Japanese firms have obtained the right to participate in international bidding under the same conditions as U.S. firms or EU firms; for instance, the Mitsubishi Heavy Industries, Ltd. has received a full-turnkey order from CFE, headquartered in Mexico City, for the construction of a supercritical-pressure coal-fired power plant.[50]

Logistics

Logistics of Japanese trade with Mexico, particularly on the import side, are changing. Regarding major commodities of Japanese agricultural imports from Mexico such as pork and avocados, in most cases, Japanese trading companies in the U.S. used to import them from Mexico and export them to Japan. Since the implementation of the EPA, however, commercial transactions recorded as Mexican exports to Japan have tended to increase even if they are still physically exported from Mexico to Japan through the U.S. One of the reasons for this is that importers in Japan (destinations) must be identified at the time of exporting to obtain a special certificate of the rules of origin required to utilize EPA import tariffs in Japan. Another reason is that the interest of Mexican companies in exporting to Japan has increased, resulting in greater direct commercial transactions. Trade statistics on Mexican exports to Japan tend to more directly reflect actual transactions, including a part of those transactions through the U.S., which used to be regarded as Mexican exports to the U.S. since exports are recorded by destination.

4. Concluding remarks

This paper attempted to assess the initial impacts of Japanese EPAs with Singapore and Mexico. The paper first examined the impacts of trade liberalization by the EPA and then investigated the effects of the EPAs beyond the aspect of trade liberalization. The

[49] The Agreement on Government Procurement (GPA) is a plurilateral, to which only some members of the WTO are parties. Mexico is not a party to the GPA. See the WTO website for details of the GPA (http://www.wto.org/english/tratop_e/gproc_e/gp_gpa_e.htm).

[50] The plant, to be installed at CFE's Pacifico power station, will become Mexico's first supercritical-pressure coal-fired power plant. It will have the capacity to generate 700MW of electricity, making it one of that nation's largest power plants. Operation is scheduled to commence in February 2010. See the MHI website for more detailed information - http://www.mhi.co.jp/power/e_power/topics/2006/mar_02.html.

Japan-Singapore EPA had an important role in a sense that it was the first EPA for Japan. Our gravity model estimations as well as detailed analysis on trade and actual tariff reduction by the EPAs, however, have demonstrated that it has almost no direct impact on trade since actual reduction of tariffs by the EPA is quite limited. On the other hand, our empirical investigation has confirmed a certain degree of positive impact of the Japan-Mexico EPA on trade, particularly on the export side, and investment.

Significant effects of tariff reduction by the Japan-Mexico EPA, however, are limited to an increase in exports of BU cars, reflecting the introduction of an additional zero-tariff import quota for BU cars under the EPA by Mexico that applies to Japanese automobile manufacturers with as well as to those without local production. Although exports of other major Japanese exports to Mexico including various parts and components of electric machinery and transport equipment have also expanded, most of them are already subject to zero percent import tariffs on an MFN basis or under PROSEC. Therefore, the EPA is not a major factor underlying the rapid growth in their exports; rather, an increased demand for some electric machinery and transport equipment in the U.S. and Mexico induced an expansion of their production by Japanese affiliates in Mexico, using parts and components exported from Japan. Importantly, the introduction of a zero-tariff import quota for BU cars under the EPA was also accompanied by a substantial degree of Japanese investment in Mexico, including the investment before the enforcement known as announcement effects on investment. On the import side, a very limited degree of the effects of tariff reduction on some imports was observed, with the introduction of an import tariff quota with in-quota tariffs lower than MFN tariffs.

The “reverse phenomena” in tariffs between EPA tariffs and MFN tariffs exist in some commodities with phasing out tariffs under the EPA on the Mexican side: about half of the commodities in mining and manufacturing are subject to the “reverse phenomena” as of January 2007. The phasing out of tariffs by the EPA, rather than one-shot tariff removal, causes confusion for exporters and also certainly postpones the possible positive effects of trade liberalization by the EPA, particularly when the “reverse phenomena” occurs. More direct and significant effects of the Japan-Mexico EPA on trade of commodities other than BU cars are expected in the future mostly after the problem of “reverse phenomena” in tariffs is solved.

An important outcome of the Japan-Mexico EPA beyond tariff removal is the improved business environment through bilateral consultations at the Committee for the Improvement of the Business Environment under the EPA, involving representatives of private sectors. Another outcome worth mentioning is that with the EPA, Japanese firms have finally obtained the right to participate in international bidding for contracts of government procurement in Mexico under the same conditions as firms of other FTA/EPA partners including the U.S. and EU. Moreover, a change in logistics in Japanese trade with Mexico is

also a notable effect of the EPA.

Future designs of FTAs/EPAs must seriously consider possible abuses of the phasing out of tariffs under FTAs/EPAs, particularly when countries have high MFN tariffs. Moreover, a simple structure of tariffs is preferable to a complicated structure, involving price-differential tariffs, specific tariffs, seasonal tariffs, import tariff quota, and exceptions from the list of tariff removal. If administrative procedures are costly and preferential margins are small, actual utilization of EPA tariffs is likely to be low. Furthermore, it will be essential to create and effectively utilize channels such as the Committee for the Improvement of the Business Environment under the Japan-Mexico EPA, particularly for FTAs/EPAs with countries in which Japanese firms have substantial investment.

A final point for emphasis is the possibility of the effects of RTAs on multilateral trade liberalization. Interpreting the context of MFN tariff reduction explained in the announcement in an official gazette (*DECRETO por el que se modifican diversos aranceles de la Tarifa de la Ley de los Impuestos Generales de Importación y de Exportación*) on December 30, 2004 and August 29, 2006, the main reason why Mexico reduced MFN tariffs unilaterally seems to be that it feared withdrawal of manufacturing multinational enterprises (MNEs) from Mexico. A considerable number of parts and components are imported from East Asian countries with which Mexico does not have FTAs/RTAs. On the other hand, many products are imported at lower imported prices with lower preferential tariffs under various FTAs/EPAs in force. Given these observations, Mexico has realized the importance of the urgent reduction of MFN tariffs in order to avoid withdrawal of MNEs from Mexico. In other words, the development of RTAs sometimes accelerates trade liberalization on a multilateral basis.

Reference

Ando, M. and F. Kimura (2007) "Japanese FTA/EPA Strategies and Agricultural Protection," KUMQRP Discussion Paper No. 2006-024, Tokyo: Keio University.

Ando, M. and S. Urata (2006) The Impacts of East Asia FTA: A CGE Model Simulation Study," KUMQRP Discussion Paper No. 2005-021, Tokyo: Keio University.

Burfisher, M.E., S.Robinson, and K.Thierfelder (2001) "The Impact of NAFTA on the United States," *Journal of Economic Perspectives*, 15. 125-144.

Frankel, J. A. (1997) *Regional Trading Blocs in the World Economic System*, Washington D.C., Institute of International Economics.

Fukao, K., T. Okubo, and R.M.Stern (2003) "An Economic Analysis of Trade Diversion under NAFTA," *North American Journal of Economics and Finance*, 14. 3-24.

Hufbauer,G. C. and J. J. Schott (1992) *Prospects for North American Free Trade*, Washington. D.C., Institute for International Economics.

Hufbauer, G. C. and J. J. Schott (1993) *NAFTA: An Assessment*, Washington. D.C: Peterson Institute for International Economics.

Hufbauer, G. C. and J. J. Schott (2005) *NAFTA Revisited: Achievements and Challenges*, Washington D.C.: Institute of International Economics.

Japan External Trade Organization (JETRO) (2006a) *JETRO White Paper on Trade and Investment 2006*, Tokyo: JETRO

JETRO (2006b) *JETRO Report on the Impacts of the Japan-Mexico EPA in the First Year*, Available at the JETRO website (http://www.jetro.go.jp/biz/world/cs_america/mx/reports/05001225).

Kataoka, G. and A. Kuno (2003) Boeki hogo no kosuto shisan [Measuring the Costs of Trade Protection], UFJ Institute Report, 8 (2), UFJ Institute, Tokyo. In Japanese.

Kimura, F. and M. Ando (2002) "Jiyuu Boueki Kyoutei to Nougyou Mondai (Free Trade Agreements and Controversy about Agricultural Protection)", *Mita Gakkai Zasshi* (*Mita Journal of Economics*) 95-1. 111-137. In Japanese.

Krueger, A.O. (1999) "Trade Creation and Trade Diversion Under NAFTA," National Bureau of Economic Research Working Paper No.7429.

Krueger, A.O. (2000) "NAFTA's Effects: A Preliminary Assessment," *The World Economy*, 23. 761-771.

Rauch, J. E. (1999) "Networks versus Markets in International Trade," *Journal of International Economics*, 48 (1). 7-35.

Urata, S., K. Kozo, M. Ando, and A. Kachi (2005) *A Survey on Impediments to Trade and Foreign Direct Investment between Latin America and East Asian Countries*, Tokyo: Japan Institute of International Affairs (JIIA).

Sazanami, Y., S. Urate, and H. Kawai (1995) *Measuring the Costs of Protection in Japan*,

Washington. D. C: Institute for International Economics.

Table 1 Japanese trade with Singapore and JSEPA

A) Japanese trade with Singapore (Billions US$)

	2001	2002	2003	2004	2005
Exports	14,709	14,191	14,847	17,988	18,436
Imports	5,383	5,011	5,435	6,292	6,695

Source: UN Comtrade.

B) Tariff removal under JSEPA

				Zero tariff commitment under WTO			Tariffs under JSEPA			
	Tariff lines (a)	Trade values in 2000 (billion yen) (b)	Share in total (a/b)	Tariff lines with zero rates committed (c)	Tariff lines: share of zero rates committed in total (c/a)	Tariff values: share of zero rates committed in total	Tariff lines with zero rates committed (d)	Tariff lines: share of zero rates committed in total (d/a)	Tariff values: share of zero rates committed in total	Tariff lines with zero tariff by actual tariff removal from MFN (e)
Japanese imports from Singapore	9,023	664	100.0%	3,087	34.2%	84.2%	6,938	76.9%	93.8%	
- Agriculture, fishery, and forestry	2,277	32	4.8%	428	18.8%	6.6%	486	21.3%	6.9%	0
- Mining and manufacturing	6,746	632	95.2%	2,659	39.4%	88.2%	6,452	95.6%	98.2%	
Japanese exports to Singapore	5,859	2,094	100.0%	974	16.6%	58.8%	5,859	100.0%	100.0%	4

Source: Ministry of Finance, Japan "Outline of the contents of JSEPA (http://www.mof.go.jp/jouhou/kanzei/ka140115d.htm)" and author's calculation.

Notes:

1) Agriculture, forestry, and fishery cover products in HS1-24 plus those listed in the WTO Agriculture Agreement, Annex 1-1-(ii) and products in HS44 and 46 for forestry.

2) Tariff lines with zero tariff commitment under WTO do not include those with zero tariffs on an MFN base and/or those not bounded under the WTO.

3) Products not committed to tariff removal (1,791 tariff lines (=(a)2,277-(d)486)) include fresh fish (tunas etc), food preparation containing cacao, preparations of milk, prepared edible fats, and vegetable fats and oils.

4) 58 tariff lines (=(d)486-(c)428) for agriculture, fishery, and forestry on the Japanese side and 4,881 tariff lines (=(d)5,859-(c)974-(e)4) for all on the Singapore side have already zero tariffs on an MFN base, and thus the number of tariff lines with actual tariff removal is zero and four, respectively.

C) Major commodities of agricultural imports: share in total imports in 2005 and tariffs under EPA

	Share	Tariffs
-Agriculture and fishery total	4.3%	
---Cocoa butter, cocoa powder, chocolate and other food preparation materials containing cacao	1.5%	*
---Preparations of cereals, flour, starch or milk	1.4%	**
-Forestry total	0.0%	
Agriculture, fishery, and forestry	4.4%	

Source: Ando and Kimura (2007).

Notes: Agriculture, fishery, and forestry sectors are HS1 to 24 and 44. * indicates zero tariff under WTO or exclusion from the list of tariff elimination for Japan in JSEPA. ** indicates exclusion from the list of tariff elimination for Japan in JSEPA.

Table 2 Japanese trade with Mexico from 2001 to 2006

(Millions US$, %)

		Exports						Imports					
		2001	2002	2003	2004	2005	2006	2001	2002	2003	2004	2005	2006
Value													
HS1-5	Live animals & products	0.8	0.4	0.5	0.6	1.6	0.9	228.9	244.4	241.7	283.7	324.3	324.7
HS6-14	Vegetable products	1.5	1.2	0.5	0.5	0.8	1.7	150.7	133.6	154.7	179.1	178.7	176.9
HS15	Animal & vegetable oils	0.1	0.2	0.2	0.2	0.2	0.4	2.0	2.0	1.3	3.3	3.2	4.0
HS16-24	Products of food industry	3.4	4.2	3.4	3.9	4.5	6.3	40.9	41.0	34.9	47.4	40.9	49.4
HS25-27	Mineral products	13.3	51.3	21.2	24.7	25.3	70.2	383.3	272.1	250.7	312.2	453.6	479.4
HS28-38	Chemicals	245.9	331.7	270.1	282.6	301.0	327.7	119.6	84.3	100.5	96.3	70.3	72.5
HS39-40	Plastic & plastic materials	337.9	357.1	421.1	472.1	526.3	586.8	30.1	5.3	6.1	7.4	10.4	12.5
HS41-43	Skin, raw material	3.0	4.0	3.4	0.8	0.3	0.4	2.2	1.6	2.1	2.0	2.7	3.4
HS44-46	Wood & wood products	3.0	3.4	3.5	1.3	0.3	0.3	1.3	0.8	0.9	0.7	1.1	0.8
HS47-49	Pulp & paper	47.3	69.8	64.6	44.8	65.7	35.3	2.7	4.0	4.9	4.7	4.0	2.3
HS50-63	Textiles	30.2	27.5	27.2	28.6	33.4	46.1	33.5	26.9	25.1	25.1	30.2	33.8
HS64-67	Footwear, umbrellas	0.1	0.1	0.1	0.1	0.3	0.1	1.3	2.2	1.0	1.4	5.2	5.0
HS68-70	Cement, ceramic, et al.	42.8	87.7	78.6	85.7	173.9	184.2	2.4	2.1	2.6	2.0	1.8	1.4
HS71	Precious stones	2.0	2.8	1.2	2.3	3.0	23.1	50.7	49.2	48.7	88.9	63.0	152.5
HS72-83	Base metals & products	652.2	664.5	640.4	843.2	951.1	1,142.6	5.7	14.4	10.6	42.7	29.6	43.5
HS84	General machinery	1,574.3	1,662.3	1,393.4	2,050.5	2,102.1	2,356.5	372.7	383.0	226.5	206.1	285.5	335.3
HS85	Electric machinery	3,863.8	4,359.6	3,099.9	4,359.2	5,606.7	6,193.5	228.6	221.5	243.6	284.5	308.5	293.8
HS86-89	Transport equipment	670.0	859.0	921.1	1,316.8	1,842.6	2,525.2	249.0	224.0	241.0	227.9	276.3	287.6
HS90-92	Precision machinery	314.6	329.9	397.1	801.0	1,111.7	1,332.4	64.1	48.9	75.5	179.7	226.1	290.3
HS94-96	Various manufactured goods	46.6	56.4	47.9	52.1	59.0	64.4	8.7	22.4	94.9	154.2	189.9	207.7
Others	Others	232.4	475.4	199.2	211.7	267.9	396.0	28.4	15.9	14.8	22.7	30.0	43.3
Total		8,085.2	9,348.5	7,594.6	10,583.0	13,077.8	15,294.0	2,006.6	1,799.7	1,782.2	2,172.0	2,535.2	2,819.9
Sectoral share													
HS1-5	Live animals & products	0.0	0.0	0.0	0.0	0.0	0.0	11.4	13.6	13.6	13.1	12.8	11.5
HS6-14	Vegetable products	0.0	0.0	0.0	0.0	0.0	0.0	7.5	7.4	8.7	8.2	7.0	6.3
HS15	Animal & vegetable oils	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1
HS16-24	Products of food industry	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.3	2.0	2.2	1.6	1.8
HS25-27	Mineral products	0.2	0.5	0.3	0.2	0.2	0.5	19.1	15.1	14.1	14.4	17.9	17.0
HS28-38	Chemicals	3.0	3.5	3.6	2.7	2.3	2.1	6.0	4.7	5.6	4.4	2.8	2.6
HS39-40	Plastic & plastic materials	4.2	3.8	5.5	4.5	4.0	3.8	1.5	0.3	0.3	0.3	0.4	0.4
HS41-43	Skin, raw material	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
HS44-46	Wood & wood products	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0
HS47-49	Pulp & paper	0.6	0.7	0.9	0.4	0.5	0.2	0.1	0.2	0.3	0.2	0.2	0.1
HS50-63	Textiles	0.4	0.3	0.4	0.3	0.3	0.3	1.7	1.5	1.4	1.2	1.2	1.2
HS64-67	Footwear, umbrellas	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2
HS68-70	Cement, ceramic, et al.	0.5	0.9	1.0	0.8	1.3	1.2	0.1	0.1	0.1	0.1	0.1	0.0
HS71	Precious stones	0.0	0.0	0.0	0.0	0.0	0.2	2.5	2.7	2.7	4.1	2.5	5.4
HS72-83	Base metals & products	8.1	7.1	8.4	8.0	7.3	7.5	0.3	0.8	0.6	2.0	1.2	1.5
HS84	General machinery	19.5	17.8	18.3	19.4	16.1	15.4	18.6	21.3	12.7	9.5	11.3	11.9
HS85	Electric machinery	47.8	46.6	40.8	41.2	42.9	40.5	11.4	12.3	13.7	13.1	12.2	10.4
HS86-89	Transport equipment	8.3	9.2	12.1	12.4	14.1	16.5	12.4	12.4	13.5	10.5	10.9	10.2
HS90-92	Precision machinery	3.9	3.5	5.2	7.6	8.5	8.7	3.2	2.7	4.2	8.3	8.9	10.3
HS94-96	Various manufactured goods	0.6	0.6	0.6	0.5	0.5	0.4	0.4	1.2	5.3	7.1	7.5	7.4
Others	Others	2.9	5.1	2.6	2.0	2.0	2.6	1.4	0.9	0.8	1.0	1.2	1.5
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Author's calculation and estimation, based on UN comtrade from 2001 to 2005 and Word Trade Analyzer, website of Ministry of Finance, Japan, and the Mexican government for 2006.

Note: Mexican imports from Japan are used for Japanese exports to Mexico to consider trade through the U.S.. Since Mexican imports from Japan by sector in 2006 are available only from January to October, sectoral imports in 2006 are estimated, based on the share of sectoral imports from January to October in 2006 and total imports in 2006.

Table 3 Japanese net direct investment in Mexico on the BOP basis

(100 million yen)

	2001	2002	2003	2004	2005					2006			
	Total	Total	Total	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Sub-total
Manufacturing (total)					-231	-120	-157	-114	-621	-128	-165	-102	-395
Food					0.01	0.01	0.04	n.a.	0.06	2	n.a.	n.a.	n.a.
Textile					-102	.	.	.	-102	.	.	.	.
Lumber and pulp					.	.	.	.	.	.	.	.	.
Chemicals and pharmaceuticals					-10	n.a.	-0.20	-1	-12	-3	-57	2	-12
Petroleum					.	.	.	.	.	.	.	.	.
Rubber and leather					.	.	.	.	.	.	.	.	.
Glass and ceramics					.	.	.	.	.	.	.	.	.
Iron, non-ferrous, and metals					2	2	1	26	31	n.a.	n.a.	-12	n.a.
General machinery					-3	-22	-32	-11	-67	n.a.	n.a.	-6	n.a.
Electric machinery					-1	-8	-10	-1	-20	-5	-1	0.3	-6
Transportation equipment					-110	-101	-116	-114	-441	-107	-84	-85	-277
Precision machinery					.	.	.	.	.	.	.	.	.
Non-manufacturing (total)					22	-38	-38	-13	-66	-6	-51	-27	-84
Agriculture and forestry					.	.	.	.	.	.	.	.	.
Fishery					.	.	.	.	.	.	n.a.	.	.
Mining					n.a.	-0.07	-0.06	-0.05	-0.2	-2	n.a.	n.a.	
Construction					.	.	.	.	.	.	.	.	.
Transportation					.	.	.	.	.	.	.	.	.
Communications					.	.	.	.	.	.	.	.	.
Wholesale and retail					17	n.a.	-28	-2	-13	3	-10	3	-4
Finance and insurance					.	.	-0.2	-0.7	-0.9	n.a.	n.a.	n.a.	n.a.
Real estate					.	.	.	.	.	.	.	.	.
Services					-2	-15	-7	-10	-35	n.a.	-7	n.a.	n.a.
Quarter total					-209	-158	-194	-127		-134	-216	-129	
Sub-total (Q1 to Q3)	24	324	-308	-14					-561				-479
Total (Q1 to Q4)	-3	-298	-428	-200					-688				

Source: Author's calculation, based on Balance of Payment available from the Bank of Japan's website (http://www.boj.or.jp/theme/research/stat/bop/bop/index.htm#diri; http://www.boj.or.jp/theme/research/stat/bop/bop/dlong/regbop/index.htm).

Notes: "n.a." is used for industries with 1 or 2 cases, while "." is used for industries without any case. "Manufacturing (total)" and "Non-manufacturing (total)" include other manufacturing and non-manufacturing sectors not identified in the table. Figures in "Sub-total" are the sum in the period from Q1 to Q3.

Table 4 Major commodities of Japanese exports to Mexico and their tariffs in Mexico

	Commodity	Sectoral share in total			Trade index (2004=100)		Tariffs for major commodities in each HS4-digit category, as of January, 2006		
		2004	2005	2006	2005	2006	MFN	PROSEC	EPA
8529	Parts specific for some TV and radio	5.59	10.77	14.00	238	362	0%	0%	0%
8703	Automobiles (passenger cars)	6.83	7.68	7.33	139	155	50%	Excl.	0%/20-30%
8542	Electronic integrated circuits	7.59	6.13	5.18	100	99	0%	0%	0%
8708	Parts for automobiles	4.03	4.64	7.57	142	271	10%, 15%	0%, 3%	0%, 11.7%, 14.4%, 16.2%
9013	Liquid crystal devices, lasers, etc	2.63	4.52	5.29	213	291	0%	0%	0%
8532	Condenser	3.46	3.80	2.53	136	105	0%, 10%, 15%	0%	11.7%, 16.2%
8536	Apparatus for switching/protecting electrical circuits	3.29	3.67	3.40	138	149	10%	0%	9%, 11.7%
8473	Parts for office machines (computer)	3.11	3.03	2.67	120	124	0%	0%	0%
8541	Semi-conductor devices	2.64	2.78	2.76	130	151	0%	0%	0%
8507	Storage battery	2.11	2.32	1.70	136	117	0%	0%	0%
8479	Machines with specific functions	3.80	1.83	1.88	60	72	0%, 10%	0%	0%
7210	Flat-rolled products of iron and non-alloy steel	2.20	1.83	1.68	103	110	0%, 14%	0%, 3%	0%, 18%, 25%
8471	Automatic data processing machines and the units	2.29	1.61	0.95	87	60	0%	0%	0%
8525	Transmission apparatus	1.70	1.53	1.08	111	92	0%	0%	0%
3926	Plastic products (other)	1.75	1.47	1.29	104	107	15%, 20%	0%	14.4%, 16.2%, 18.4%
8504	Electrical transformers	1.17	1.32	1.15	140	142	0%, 10%, 15%, 20%	0%	0%, 11.7%, 14.4%, 16.2%
8704	Trucks	1.11	1.24	1.13	137	147	50%, ST for used	Excl.	0%/20-30%, excl. used
8523	Recording media	1.22	1.15	0.98	116	116	0%	0%	0%
8538	Parts specific for some electrical apparatus	0.99	1.07	0.91	134	133	10%	0%	0%, 11.7%
8409	Parts for engines	1.05	1.08	0.82	127	112	10%	0%	0%, 10.4%, 11.7%
8533	Electrical resistors	0.90	0.97	0.95	134	153	10%	0%	0%, 11.7%
8502	Electric generator	0.01	0.85	0.04	7829	410	0%, 10%, 20%	0%	0%, 11.7%, 20.7%
7225	Flat-rolled products of other alloy steel	0.75	0.83	1.26	136	241	0%, 9%	0%, 3%	0%, 13%, 18%
9031	Measuring or checking instruments	0.71	0.83	0.75	144	152	0%	0%	0%
Total		100.00	100.00	100.00	124	145			

Source: Author's calculation and estimation, based on UN comtrade for trade in 2004 and 2005 and Word Trade Analyzer and data provided by the Mexican government for trade in 2006, and JETRO Daily for tariffs.

Note: Mexican imports from Japan are used to consider trade through the U.S.. Since Mexican imports from Japan by sector in 2006 are available only from January to October, annual imports by sector in 2006 are estimated, based on the share of sectoral imports from January to October in 2006 and annual imports in 2006. "ST for used" and "excl. used" for HS8704 mean specific tariffs for used motor vehicles and used cars treated as exceptions of tariff liberalization under EPA, respectively.

Table 5 Zero-tariff import quota for BU cars allocated to Japanese automobile manufacturers by Mexico

Unit: quantity

Automobile manufactures	Quota for local producers		Quota under EPA	
	2005	2006	2005F/Y	2006F/Y
Sub-total: companies with local production	**58,218**	**65,305**	**46,599**	**45,270**
Nissan	27,218	29,305	23,718	23,029
Honda	5,000	9,000	8,900	8,652
Toyota	16,000	17,000	6,664	6,487
Mitsubishi	10,000	10,000	7,317	7,102
Sub-total: companies without local production	**0**	**0**	**8,240**	**11,315**
Mazda	0	0	3,340	5,502
Suzuki	0	0	3,000	4,092
Isuzu	0	0	1,900	1,221
Subaru	0	0	0	500
Total	**58,218**	**65,305**	**54,839**	**56,585**

Source: documents provided at the JETRO seminar.

Notes: 1) Zero-tariff import quota for local producers is provided as 10% of previous-year-local production in terms of quantity. 2) Zero-tariff import quota under EPA is equivalent to 5% of previous-year-sales at the local market in terms of quantity. 3) Mitsubishi automobiles without local production sites partially use zero-tariff import quota allocated to DaimlerChrysler in the same business alliance.

Table 6 MFN tariffs and EPA tariffs importsed by Mexico on imports from Japan

EPA category	EPA base rate	MFN tariff as of Jan. 2007	EPA tariff										
			2005F/Y	2006F/Y	2007F/Y	2008F/Y	2009F/Y	2010F/Y	2011F/Y	2012F/Y	2013F/Y	2014F/Y	2015F/Y
B2	-	10	2.6	2.6	2.6	2.6	2.6	0					
B4	18	10	13.5	9	4.5	0							
B5	10	7	8	6	4	2	0						
	13	7	10.4	7.8	5.2	2.6	0						
	15	10	12	9	6	3	0						
	18	10	14.4	10.8	7.2	3.6	0						
	20	7	16	12	8	4	0						
	23	15	18.4	13.8	9.2	4.6	0						
	30	20	24	18	12	6	0						
B6	18	10	15	12	9	6	3	0					
	18	15	15	12	9	6	3	0					
	23	20	19.2	15.3	11.5	7.7	3.8	0					
	30	20	25	20	15	10	5	0					
B7	13	50	11.1	9.3	7.4	5.6	3.7	1.9	0				
	20	50	17.1	14.3	11.4	8.6	5.7	2.9	0				
	23	50	19.7	16.4	13.1	9.9	6.6	3.3	0				
	30	50	25.7	21.4	17.1	12.9	8.6	4.3	0				
B8	13	7	11.4	9.8	8.1	6.5	4.9	3.3	1.6	0			
	18	10	15.8	13.5	11.3	9	6.8	4.5	2.3	0			
C	10	7	9	8	7	6	5	4	3	2	1	0	
	10	9	9	8	7	6	5	4	3	2	1	0	
	13	7	11.7	10.4	9.1	7.8	6.5	5.2	3.9	2.6	1.3	0	
	13	9	11.7	10.4	9.1	7.8	6.5	5.2	3.9	2.6	1.3	0	
	15	9	13.5	12	10.5	9	7.5	6	4.5	3	1.5	0	
	15	10	13.5	12	10.5	9	7.5	6	4.5	3	1.5	0	
	18	10	16.2	14.4	12.6	10.8	9	7.2	5.4	3.6	1.8	0	
	23	15	20.7	18.4	16.1	13.8	11.5	9.2	6.9	4.6	2.3	0	
	30	20	27	24	21	18	15	12	9	6	3	0	
D	7	5	7	7	7	7	7	7	7	7	7	7	0
	13	7	13	13	13	13	13	13	13	13	13	13	0
	18	5	18	18	18	18	18	18	18	18	18	18	0
	18	10	18	18	18	18	18	18	18	18	18	18	0

Source: documents provided at the JETRO seminar.

Note: The table includes only tariff lines with MFN tariff reduction on December 31, 2004 (9336 tariff lines) and/or September 30, 2006 (6089 tariff lines). EPA tariffs highlighted are those beyond MFN tariffs as of January 2007.

Table 7 Agriculture imports from Mexico and the tariff rates in Japan from 2004 to 2006: major imported commodities in 2005

Commodity	2004			2005			2006			Tariffs			
	Values (bil JPY)	% in agri.	(% in total)	Values (bil JPY)	% in agri.	(% in total)	Values (bil JPY)	% in agri.	(% in total)	WTO	Preferential	Temporary	EPA[viii]
Total	234.8		(100.00)	279.9		(100.00)	328.1		(100.00)				
Agriculture total (HS1-HS24)	55.5	100.00	**(23.64)**	60.4	100.00	**(21.58)**	64.6	100.00	**(19.67)**				
Pork	**19.9**	**35.87**	**(8.48)**	**19.9**	**32.89**	**(7.10)**	**22.4**	**34.66**	**(6.83)**				
Pork (fresh, chilled, or frozen) 1)	0.6	1.12	(0.26)	0.4	0.62	(0.13)	1.6	2.48	(0.49)	(482yen/kg)		*	**
2)	19.1	34.47	(8.15)	19.2	31.71	(6.84)	20.2	31.33	(6.17)	(4.3%)		4.3%	2.2%/4.3%[i]
Internal organs	0.0	0.02	(0.01)	0.0	0.01	(0.00)	0.0	0.04	(0.01)	8.50%	4.3%/*Free		4.3%
Prepared or preserved pork (ham, bacon, pressed ham) 3)	0.0	0.01	(0.00)	0.0	0.02	(0.00)	0.0	0.00	(0.00)	(8.5%)		8.5%	4.3%/8.5%[ii]
Prepared or preserved pork (excl. ham, bacon, pressed ham)	0.1	0.20	(0.05)	0.1	0.25	(0.05)	0.4	0.57	(0.11)	20%			Excluded
Prepared or preserved pork (simply boiled in water)	0.0	0.04	(0.01)	0.2	0.28	(0.06)	0.2	0.25	(0.05)	Free			Free
Beef	**1.7**	**3.03**	**(0.72)**	**6.4**	**10.59**	**(2.29)**	**5.2**	**8.12**	**(1.60)**				
Beef (fresh, chilled, or frozen)	1.4	2.47	(0.58)	5.4	8.97	(1.94)	4.1	6.31	(1.24)	(50%)		38.5%	0%~/50%[iii]
Tongues and livers	0.3	0.57	(0.13)	1.0	1.62	(0.35)	1.2	1.81	(0.36)	12.8%			0%~/12.8%[iii]
Avocado	**6.2**	**11.09**	**(2.62)**	**6.4**	**10.55**	**(2.28)**	**6.8**	**10.56**	**(2.08)**	3%	*Free		Free
Tunas	**6.1**	**10.99**	**(2.60)**	**6.4**	**10.53**	**(2.27)**	**6.1**	**9.44**	**(1.86)**				
Bluefin tunas	6.1	10.99	(2.60)	6.3	10.42	(2.25)	5.4	8.39	(1.65)	3.5%			Excluded
Yellowfin tunas	0.0	0.02	(0.00)	0.1	0.11	(0.02)	0.2	0.24	(0.05)	3.5%			Free[iv]
Melon	**3.4**	**6.05**	**(1.43)**	**2.8**	**4.70**	**(1.02)**	**2.6**	**4.04**	**(0.79)**	6%		From 6% x 6 times[v]	
Coffee	**1.6**	**2.85**	**(0.67)**	**1.9**	**3.10**	**(0.67)**	**1.0**	**1.60**	**(0.32)**				
Coffee, not roasted	1.6	2.81	(0.66)	1.8	3.05	(0.66)	1.0	1.49	(0.29)	Free			Free
Coffee, roasted	0.0	0.04	(0.01)	0.0	0.04	(0.01)	0.1	0.11	(0.02)	12%	10%/*Free	From 10% x 4 times[v]	
Pumpkins	**1.8**	**3.29**	**(0.78)**	**1.8**	**2.94**	**(0.63)**	**2.6**	**4.05**	**(0.80)**	3%	*Free		Free
Alcoholic beverages	**1.6**	**2.97**	**(0.70)**	**1.7**	**2.79**	**(0.60)**	**2.0**	**3.17**	**(0.62)**				
Beer	0.8	1.37	(0.32)	0.8	1.33	(0.29)	1.0	1.61	(0.32)	Free	Free		Free
Distilling alcohol (excl. used for making alcoholic beverage)	0.8	1.47	(0.35)	0.8	1.34	(0.29)	1.0	1.50	(0.29)	16%	25.2yen/l/* Free		Excluded[vi]
Liqueurs and cordials	0.1	0.13	(0.03)	0.1	0.12	(0.03)	0.0	0.06	(0.01)	126yen/l			Free
Asparagus	**1.5**	**2.69**	**(0.64)**	**1.6**	**2.58**	**(0.56)**	**1.5**	**2.34**	**(0.46)**	3%	*Free		Free
Mango	**1.0**	**1.87**	**(0.44)**	**1.3**	**2.22**	**(0.48)**	**1.6**	**2.48**	**(0.49)**	3%	Free		Free
Limes	**0.9**	**1.66**	**(0.39)**	**0.9**	**1.54**	**(0.33)**	**1.0**	**1.61**	**(0.32)**				Free
Sardines (of sardinops spp.)	**0.4**	**0.74**	**(0.17)**	**0.8**	**1.25**	**(0.27)**	**0.4**	**0.56**	**(0.11)**				***
Shrimps and prawns (frozen)	**0.6**	**1.01**	**(0.24)**	**0.7**	**1.13**	**(0.24)**	**0.8**	**1.23**	**(0.24)**	1%	*Free		Free
Grapefruit juice (not containing added sugar with more than 10% of sucrose by weight and a Brix value over 20)	**0.0**	**0.00**	**(0.00)**	**0.3**	**0.58**	**(0.12)**	**0.2**	**0.34**	**(0.07)**	25.5%		From 25.5% x 8 times[v]	
Frozen orange juice (not containing added sugar with more than 10% of sucrose by weight)	**0.2**	**0.37**	**(0.09)**	**0.3**	**0.51**	**(0.11)**	**0.4**	**0.55**	**(0.11)**	25.5%			12.75%/25.5%[vii]

Source: Author's calculation, based on UN Comtrade, for trade in 2004 and 2006 and Ando and Kimura (2006) for others inluding information on tariffs.

Notes: " *Free" denotes free for only those originated in the LDCs.

1) If a value for custom duty per kilogram is more than the upper limit prices for the specific duty applied to partial pork (53.53yen) but not more than the gate price of partial pork (524yen).

2) If a value for custom duty per kilogram is more than the gate price of partial pork (524yen).

3) If a value for custom duty per kilogram is more than the gate price of processed pork (897.59yen).

* Per kilogram, the difference between the standard import price of partial pork (535.53yen) and the value for custom duty.

** Within quota, per kilogram, the difference between 535.53 yen and a value for custom duty per kilogram if a value for custom duty per kilogram is more than 53.53yen but not more than the value obtained by dividing 535.53yen by 1.022 (524yen)

*** 1) Higher rate, either 3% or 0.8 times of the applied MFN tariff rate (the rate obtained by subtracting one-fifth of applied MFN tariff rate from the applied MFN tariff rate), if the applied MFN tariff rate is more than 3%.; 2) Discussion will be required if the applied MFN tariff rates is not more than 3%.

i) Within quota, 2.2% if a value for custom duty per kilogram is more than the value obtained by dividing 535.53yen by 1.022 (524yen). Beyond quota, 4.3%. Tariff quota (total, including other categories of pork) from the first to fifth year for pork is 38,000t in 2005F/Y, 53,000t in 2006F/Y, 65,000t in 2007F/Y, 74,000t in 2008F/Y, and 80,000t in 2009F/Y.

ii) Within quota, 4.3% if a value for custom duty per kilogram is more than the value obtained by dividing 577.15yen by 0.643 (897.59yen). Beyond quota, 8.5%. Tariff quota (total, including other categories of pork) from the first to fifth year for pork is 38,000t in 2005F/Y, 53,000t in 2006F/Y, 65,000t in 2007F/Y, 74,000t in 2008F/Y, and 80,000t in 2009F/Y.

iii) Within quota, 0% for the first and second years for the market entry, and the rates will be discussed for the third to fifth year during the second year, subject to the rates not higher than 0.9 times of the applied MFN tariff rate at the beginning of 2003F/Y. Beyond quota, 50%/12.8%. Tariff quota from the first to fifth year for beef is 10t in the first and second years and, 3,000t in the third year, 4,000t in the fourth year 6,000t in the fifth year.

iv) Discussion will be required for cultured ones.

v) To be removed through 6, 4, or 8 times of annual reduction, starting from the standard rates (6%/10%/25.5%).

vi) Tequila etc are exceptions.

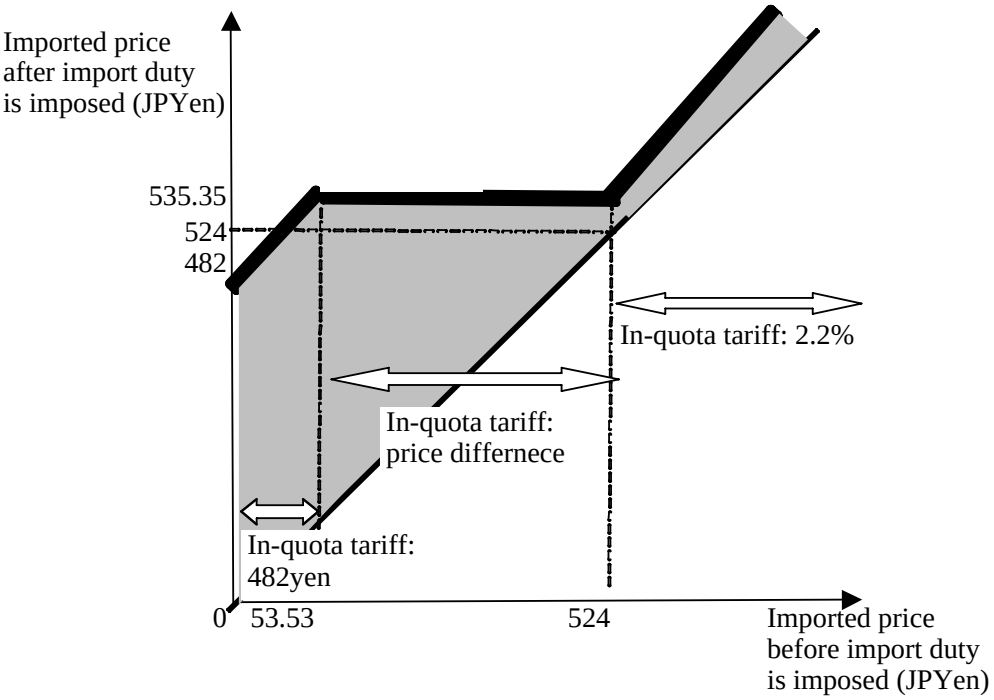
vii) Within quota, half of MFN tariffs. Tariff quota (sum of HS200911, 200912, 200919) is 4000 for the first year, 4250 for the second year, 5100 for the third year, 5950 for the fourth year, and 6500 for the fifth year. From the sixth year, tariffs will be negotiated including the amount of quota.

viii) Other examples of major market access improvement for agricultural, forestry and fishery products are as follows:

- Chicken: within quota, 0% for the first year for the market entry, and the rates will be discussed for the second to fifth year during the first year, subject to the rates not higher than 0.9 times of the applied MFN tariff rate at the beginning of 2004F/Y. Beyond quota, 6%, 11.9% etc. Tariff quota from the first to fifth year for beef is 10t in the first year and, 2500t in the second year, 4,000t in the third year, 6,000t in the fourth year 8,500t in the fifth year.

- Orange: within quota, 0% for the first and second years for the market entry, and the rates will be discussed for the third to fifth year during the second year, subject to the rates not higher than 0.9 times of the applied MFN tariff rate at the beginning of 2004F/Y. Beyond quota, 16% or 32%, depends on the importing seasons.

Figure 1 Imported prices of pork per kilogram before and after import duty is imposed



Notes: pork is fresh, chilled, or frozen. Import duty in shadows is in-quota tariff under EPA.

Table 8 Results of gravity estimation for Japanese exports and imports: 2001-2005

	Export		Import	
Constant	14.40	***	11.74	***
	(8.61)		(5.92)	
Distance (log)	-1.15	***	-1.11	***
	(-10.57)		(-8.93)	
GDP (log)	0.72	***	0.80	***
	(24.69)		(22.55)	
Income gap (log)	-0.15	*	-0.14	*
(diff. in GDP per capita)	(-1.91)		(-1.67)	
# of observations	456		421	
Adjusted R2	0.680		0.666	

Source: Author's estimation.

Notes: countries included are those with more than 0.01% of total Japanese exports/imports in the corresponding year. * indicates statistical significance at the 10% level, ** indicates statistical significance at the 5% level, and *** indicates statistical significance at the 1% level,

Table 9 Differentials between fitted and actual trade values and differential ratios

	Singapore				Mexico			
	Exports		Imports		Exports		Imports	
	Millions US$ (real)	Ratio to fitted value	Millions US$ (real)	Ratio to fitted value	Millions US$ (real)	Ratio to fitted value	Millions US$ (real)	Ratio to fitted value
2001	12,713	6.87	3,932	2.81	4,906	1.80	-473	-0.19
2002	12,415	6.47	3,607	2.48	6,256	2.29	-660	-0.27
2003	12,313	6.27	3,735	2.51	4,195	1.52	-788	-0.31
2004	14,252	6.79	4,114	2.56	6,332	2.24	-600	-0.23
2005	13,297	6.06	3,940	2.34	7,587	2.63	-496	-0.19
2006	-	-	-	-	9,283	3.14	-336	-0.12

Source: Author's estimation, based on Table 8.

Notes: differentials are the values obtained by subtracting fitted values from actual values. The wholesale price index in the U.S. is used to convert trade value into real terms. Figures for Japanese exports to Mexico are based on Mexican imports from Japan with c.i.f-f.o.b adjustment. Real GDP and real GDP per capita for Mexico and Japan in 2006 are estimated by using current GDP at local currency in 2006, GDP deflator at local currency in 2006 (recalculated with base year 2000), and exchange rate since they are not available yet.

Table A.1 Japanese investment in Mexico: released after Japan-Mexico EPA was signed in September, 2004

Released date	Name of Japanese enterprise	Industry sector	Business lines
Sep, 2004	KYOCERA Corporation	Electronic parts/optical equipments	Establishment of a new plant for production of solar battery module for the U.S. market
Oct, 2004	Tohoku Pioneer Corporation	Electronic parts	Establishment of a new parts plant near the production site of speakers (for automobiles and entertainment equipments)
Nov, 2004	Kansai Paint Co., Ltd	Paints	Announcement of establishing a joint venture with PPG Industries (U.S.) for sales of automotive painting
Nov, 2004	Ajinomoto Co., Inc.	Food products	Establishment of a branch of its affiliate in Brazil in Mexico City
Dec, 2004	Mazda Motor Corporation	Automobiles	Establishment of an affiliate for sales at the local market
Dec, 2004	Nifco Inc.	Industrial plastic products	Movement of production facilities for automotive fasteners from Ohio in the U.S. (production started in January, 2005).
Dec, 2004	UNIPRES CORPORATION	Pressed auto parts	Expansion of production lines (additional large pressing machines and assembly lines)
Jan, 2005	KURIYAMA CORPORATION	Rubber products	Establishment of an affiliate for sales of industrial rubber hose, fully owned by the affiliates in the U.S.
Jan, 2005	Fujita Corporation	Construction/real estate	Establishment of a branch in Mexico City in Nov. 2004
Jan, 2005	Bridgestone Corporation	Tires/rubber products	Establishment of the third plant in Mexico for production of automotive tires mainly for the North American market (production started in July 2007)
Mar, 2005	Kayaba Industry Co., Ltd.	Hydraulic equipments	Establishment of an affiliate for sales
Mar, 2005	MUNEKATA CO., LTD.	Plastic components	Introduction of the latest molding machines to produce exterior frame for flat-screen TV for the U.S. market
April, 2005	Isuzu Motors Limited	Automobiles	Establishment of a joint affiliate with Mitsubishi Corporation for sales of pickup trucks
May, 2005	Calsonic Kansei Corporation	Auto parts	Introduction of module production system
May, 2005	Hirotec Corporation	Automotive door parts	Establishment of the second plant in Mexico with the joint company for the production of auto parts sold to the GM local affiliate
June, 2005	TAKAMATSU MACHINERY Co., Ltd.	Machine tools	Scheduled to establish a center of maintenance/checking services for machine tools
July, 2005	Nissan Motor Co., Ltd.	Automobiles	Renovation of production facilities in the Aguascalientes plant to start production of low-price-compact cars for the North American market
Sep, 2005	Suzuki Motor Corporation	Automobiles	Establishment of 5 affiliates for sales in addition to an existing affiliate for sales of motorcycles
Sep, 2005	Mitsuba Corporation	Electrical components	Establishment of a new production site for die-cast components for the affiliate in the US
Nov, 2005	Honda Motor Co., Ltd.	Automobiles	Expansion of auto parts production lines in 2005 and 2006, establishment of storage plant in 2005, and expansion of automobiles in 2006
Dec, 2005	PIOLAX, INC.	Automotive plastic parts	Expansion of existing local plant aimed at increasing production and production lines for expansion of transactions with Japanese auto manufactures
Dec, 2005	Mitsubishi Heavy Industries, Ltd.	Heavy equipments	Improvement of production facilities in the plant of joint venture for an increased demand in the U.S. market
Jan, 2006	Fuji Heavy Industries Ltd.	Automobiles	Development of distribution network with local dealers for imports and sales of U.S. and Japanese automobiles including SUBARU
Jan, 2006	JATCO Ltd	Auto parts	Improvement of production capacity for automotive step-less speed change device (mainly for Nissan cars sold in North America)
Jan, 2006	TOTO Co., Ltd.	Sanitation equipment	Establishment of production site for sanitary chinaware for the U.S. market
Jan, 2006	Toyota Motor Corporation	Automobiles	Improvement of production capacity of the Mexican plant to expand the production of pickup truck and truck deck
Feb, 2006	SMK Corporation	Electronics	Introduction of additional production lines to improve production capacity of highly-functional remote controls for the U.S. market
Feb, 2006	Marubeni-Itochu Steel Inc.	Iron and steel	Establishment of a new coil center, in response to production expansion of consumer-electronics and automobiles.
Mar, 2006	MUNEKATA CO., LTD.	Plastic components	Improvement of production capacity of the plant to produce exterior frame for flat-screen TV, in response to an increased demand by Japanese consumer electronics makers

Source: JETRO (2006b).

Table A.2 List of countries for gravity equation

Algeria	Ecuador	Kazakhstan	Pakistan	Tanzania
Angola	Egypt, Arab Rep.	Kenya	Panama	Thailand
Argentina	El Salvador	Korea, Rep.	Papua New	Trinidad and
Australia	Estonia	Kuwait	Guinea	Tobago
Austria	Ethiopia	Latvia	Paraguay	Tunisia
Azerbaijan	Fiji	Lebanon	Peru	Turkey
Bahrain	Finland	Liberia	Philippines	Uganda
Bangladesh	France	Libya	Poland	Ukraine
Belgium	Gabon	Luxembourg	Portugal	United Kingdom
Belize	Germany	Madagascar	Romania	United States
Bolivia	Ghana	Malawi	Russian	Uruguay
Botswana	Greece	Malaysia	Federation	Uzbekistan
Brazil	Guatemala	Malta	Saudi Arabia	Vanuatu
Cambodia	Honduras	Marshall Islands	Singapore	Venezuela, RB
Canada	Hong Kong, China	Mauritania	Slovak Republic	Vietnam
Chile	Hungary	Mauritius	Slovenia	Yemen, Rep.
China	Iceland	Mexico	South Africa	Zambia
Colombia	India	Mongolia	Spain	Zimbabwe
Congo, Rep.	Indonesia	Morocco	Sri Lanka	
Costa Rica	Iran, Islamic Rep.	Mozambique	Sudan	
Croatia	Ireland	Netherlands	Sweden	
Czech Republic	Israel	New Zealand	Switzerland	
Denmark	Italy	Nicaragua	Syrian Arab	
Dominican Republic	Jamaica	Nigeria	Republic	
	Jordan	Norway		

Note: Countries listed here have no less than 0.01% of total Japanese exports or imports in the period from 2001 to 2005 at least once and also have access to all contol variables.