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Abstract

This paper reviews the impact of Korea's FTAs on trade and business, reporting substantial trade growth with FTA partner countries with some exceptions. It also analyzes FTA use by firms, and tries to present the effects of the FTAs on the Korean business firms. According to the paper, Korea's first four FTAs demonstrate big differences in the utilization rates. In general, the degree of FTA utilization was found to be higher with imports than with exports. Korea-Chile FTA utilization rate for Korean imports reported average of 90.5% for the four years since the FTA was implemented. In the case of Korea-Singapore FTA, Korea-EFTA FTA and Korea-ASEAN FTA, however, the utilization rates were average 29.8%, 42.5%, and 43.3%, respectively. The paper identifies the reasons for poor FTA utilizations in those FTAs, and tries to suggest policy implications for improving FTA utilization by firms.

Key words: FTAs; Utilization rate; Business model; Rules of origin; Tariff
JEL classification: F53; F15; F13

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1. **Introduction**

The Korean government's FTA policy was promoted in accordance with the FTA Promotion Roadmap established in 2003 and the FTA promotion modality, but the contents of the FTAs and the countries with which an FTA was concluded vary depending on the promotion period. The Korean government's FTA promotion modality is to promote comprehensive agreements that include trade liberalization for agriculture and goods, investment, and service, and to promote the agreements in which the range of opening up of the market for agriculture and goods is as broad as possible, but this also varies depending on the promotion period. The promotion period can be divided into the periods before and after the Korea-U.S, as shown in Table 1. FTA was concluded. Chile, Singapore, and the EFTA and ASEAN countries are the countries with which Korea had concluded an FTA before the conclusion of the Korea-U.S. FTA, but Korea's FTAs with India and EU were concluded after the conclusion of the Korea-U.S. FTA.

Table 1: Progress of Korea's FTAs

	Before KORUS FTA	After KORUS FTA	Under Current Negotiation	Future FTAs
Period	1998-2007	2007-2010	2010-	1998-
FTA Partner (signed)	Chile(2003. 2) Singapore(2005. 8) EFTA(2005. 10) ASEAN(2006. 8, Goods)	US(2007. 6) India(2009. 8) EU(2010. 4)	Canada, Mexico, Australia, New Zealand, GCC, Mercosur, Russia	Japan, China, East Asia, CJK, South Africa
Major Components	Tariff elimination Market Access for goods	Comprehensive high quality FTA, including services, investment, trade rules	Tariff elimination Market Access for goods	Various policy goals including regional integration

Note: EFTA – European Free Trade Association, GCC – Gulf Cooperation Council, CJK – China-Japan-Korea FTA, Mercosur – South American Common Market

Korea's FTAs have been promoted by stage, and in the early stage, Korea concluded FTAs with small and medium-sized countries, such as Chile, Singapore, and the ASEAN countries. Recently, however, it concluded FTAs with the big economic

blocs, such as the U.S., EU, and India. Moreover, in terms of contents, Korea's FTAs in the early stage focused mainly on the opening up of the market, including the abolition of tariffs, but the FTAs with such countries as the U.S. and the EU countries focused on the improvement of the economic and international trading system. It can be classified as two groups of FTAs: First generation FTAs with Chile, Singapore, ASEAN, and India; and Second generation FTAs with US, EU and EFTA.

Although the first generation of FTAs focused mainly on the opening up of the market, they included Chapters stipulating services, investments, and trade rules, thus never lagging behind the FTAs that Korea has concluded with its neighboring East Asian countries in terms of comprehensiveness. However, the overall quality of the FTAs is poor in Korea's first generation of FTAs. Since the FTAs contain very little about actually changing the trading systems of Korea and of its trade partner countries, the impacts of FTAs was realized in term of trade expansion, and the analysis of FTA performance necessarily focused on FTA utilization based on the opening up of the market.

The Korea-U.S. FTA, however, contains many improvements of economic and trade system, in which more than 30 domestic-economy-related laws should be amended when the FTA is ratified by the National Assembly. Further, in the service sectors, there has been much liberalization and deregulation, and the protective clauses for the investors have been improved at the international level. As such, the research on the utilization of the Korea-U.S. FTA should include diverse deregulations and the utilization of the improved systems besides that of trade.

The Korean government has seldom strongly requested for the improvement of the trading systems of its trade partners when negotiating bilateral FTAs with developing countries. This is because the economic and trade system of Chile, Korea's first FTA counterpart, is the world's top standard despite the fact that Chile is a South American country. There thus has never been any request for the improvement of the system by the Korean business firms that have advanced into such country. Moreover, in the course of their negotiations of an FTA with Singapore and EFTA, the Korean business firms hardly requested for the improvement of the trading systems of the counterpart countries. With regard to the FTA with ASEAN, however, numerous requests from business firms to improve the trading systems of the ASEAN countries

have been received, but the Korean government could not reflect these requests on the agreements because the ASEAN countries have adhered to their agreement position of focusing on the commodity areas.

The paper reviews the impact of FTAs on trade in Section 2, reporting substantial trade growth with FTA partner countries with some exceptions. Section 3 analyzes FTA use by firms, with beginning the discussion on the methodologies on the measurement of FTA use. In addition, the paper presents the effects of the FTAs on the Korean business firms thus far by presenting the FTA business models and relevant cases. The paper tries to assess the business use of four FTAs with Chile, Singapore, EFTA and ASEAN, which are under current implementation, while excluding the Comprehensive Economics Partnership Agreement (CEPA) that Korea concluded with India as it came into effect only in January 2010.

2. FTA Performance of Trade

Korea's trade with its FTA partner countries (Chile, Singapore, and the EFTA and ASEAN countries) was found to increase greatly in both absolute and relative terms compared with the rate of the country's trade with the world as a whole (refer Table 2). Ever since the FTA came into effect, Korea's trade with its FTA partner countries has increased by 20.5~31.6% yearly on average, an increase of eight times the 3.6~19.8% recorded before the FTA took effect. Accordingly, after the FTA took effect, Korea's trade volume with Chile and the ASEAN countries also increased 3.8 and at least 1.5 times, respectively, compared with its trade volume before the FTA took effect.

Table 2: Trade Performance before and after FTA

(unit : Mil. $, %)

	Average of 3 years before FTA(A)		After FTA Implementation(B)		Ratio of Trade Growth(B/A)	
	Volume (M$)	Annual growth rate(%)	Volume (M$)	Annual growth rate(%)	Volume (M$)	Annual growth rate(%)
Chile	1,442	6.9	5,508	24.3	3.82	3.52
Singapore	10,869	19.8	23,472	20.5	2.16	1.08

EFTA	3,005	3.6	6,169	31.6	2.05	8.78
ASEAN	50,488	16.7	72,995	25.0	1.45	1.50

Note: Data for 5 years of Korea-Chile FTA, 3 years of Korea-Singapore FTA, 2 years of Korea-EFTA FTA, 1 years of Korea-ASEAN FTA
Source: Calculated based on Trade Statics of KITA

In particular, compared with the rate of increase in Korea's trade with the world as a whole for the same period, the country's trade with its FTA partner countries increased 1.3~1.8 times its trade with the world (see Table 3). This showed that even though the degree of FTA utilization was not high, the conclusion of the FTA was found to have greatly contributed to trade expansion.

Table 3: Korea's Trade Volume Growth under FTA

(unit: %)

	Annual Trade Volume Growth Rate to FTA Partner Country (A)	Annual Trade Volume Growth Rate to World (B)	A/B
Chile	24.3	13.4	1.81
Singapore	20.5	13.6	1.47
EFTA	31.6	19.0	1.67
ASEAN	25.0	19.2	1.30

Note: Data for 5 years of Korea-Chile FTA, 3 years of Korea-Singapore FTA, 2 years of Korea-EFTA FTA, 1 years of Korea-ASEAN FTA
Source: Calculated based on Trade Statics of KITA

In Korea's trade with Chile, Singapore, and ASEAN, its exports were found to have greatly increased, and its imports were found to have increased relatively more in its trade with EFTA. Table 4 shows the average annual increase rate of Korea's exports and imports; the average growth rate of Korea's export to Chile, whose manufacturing base is weak, was -5.4% before the FTA took effect, but it sharply increased to 35.2% after the FTA took effect. Korea's exports and imports with ASEAN, which has the trade structure in which Korea imports locally produced low-priced goods and exports South-Korean-made high-priced goods, have increased evenly, but there has been no particularly sharp increase in Korea's exports to Singapore, a country that imposes

either no tariffs or low tariffs, and to EFTA, compared with before the FTA took effect[2]. Under the Korea-EFTA FTA, however, Korea's imports increased sharply. The average annual increase rate in imports such as machinery and naphtha from EFTA sharply rose from 0.7% before the FTA took effect to 45.2% after the FTA took effect. Korea levies an average of 7~8% tariffs on parts and raw-material imports, and it is presumed that the abolition of tariffs has contributed to the increase in imports from EFTA.

Table 4: Annual Growth Rates of Exports and Imports

(unit : %)

	Exports		Imports	
	Average of 3 years before FTA	After FTA Implementation	Average of 3 years before FTA	After FTA Implementation
Chile	-5.4	35.2	14.0	18.8
Singapore	23.3	24.7	15.3	13.9
EFTA	7.8	12.4	0.7	45.2
ASEAN	17.7	26.8	15.7	23.0

Diverse factors contributed to the increase in Korea's trade, such as the enhancement of the price competitiveness of the country's products due to the abolition of tariffs, the expansion of investments, and the enhancement of the degree of its products' recognition/credibility. The sharp increase in the country's overall exports and imports in its trade with ASEAN, despite the fact that the tariffs have not yet been fully abolished, can be interpreted as one of positive aspects of the FTA between ASEAN and Korea. According to the Korea Export-Import Bank statistics, the Korean business firms' investment in ASEAN (based on the reported amount) increased from USD900 million in 2005 and USD3.7 billion in 2006, before the FTA took effect, to USD6.2 billion in 2007 and USD5.9 billion in 2008, after the FTA took effect. When the range of FTA preferential tariffs increase and the degree of recognition of the FTA heightens with the passage of time, the rate of the Korean business firms' FTA utilization and Korea's trade with the countries with which it has concluded an FTA are also expected

[2] No tariffs are levied on all manufactured goods in Singapore. The average tariff rate in the manufacturing industry of EFTA is 0.6~2.3%.

to increase[3].

Korea's textile, steel, petrochemical, general-machinery, and automobile parts exports and electric- and electronic-goods imports greatly increased. The rate of increase in the country's textile, steel, and petrochemical exports to all its FTA counterparts, and in its general-machinery exports to all its FTA counterparts save for EFTA, after the FTA took effect was greater than the rate of increase in its exports to the world as a whole. Meanwhile, its automobile parts exports to Chile and ASEAN, and its electric- and electronic-goods exports to Chile, increased relatively more. The rate of increase in Korea's electric- and electronic-goods imports from three countries, except Chile, exceeded the rate of increase in its imports from the world as a whole. Its automobile parts, textile, and general-machinery imports considerably increased under its FTAs with ASEAN and EFTA, ASEAN, and EFTA, respectively.

The implementation periods of the five FTAs currently in effect, except for the FTA with Chile, span three years. As such, it is too early to evaluate them. In the case of the Korea-Chile FTA, the five-year implementation period has passed, and the evaluation reports on the effects of the FTA are being issued. According to the report issued by the Korea International Trade Association (KITA 2009), the Korean business circles evaluate the Korea-Chile FTA favorably and believe that the FTA has had positive effects on the country's production and employment; they are generally satisfied with the Korea-Chile FTA. About 75% of the companies that export to Chile report that the Korea-Chile FTA was helpful in their trade with Chile, and the reasons that they gave for this include the restoration of their price competitiveness against China-made goods, the increase in exports, the enhancement of the degree of recognition of South-Korean-made goods, the increase in the buyers' preference of South-Korean-made goods, and the new cultivation of the Chile market. About 49.5% of the companies that import from Chile responded that they were satisfied with the Korea-Chile FTA, but they pointed out certain matters that have to be addressed, such as the sooner abolition of tariffs, the expansion of the goods eligible for preferential tariffs, and the improvement of the certificate of the country of origin.

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[3] According to the "Degree of Recognition of the Countries in which FTA Has Become Effective" survey conducted by the Korea International Trade Association in June 2008, the degrees of recognition of Chile, ASEAN, and EFTA were found to be 87.9, 61.0, and 37.4%, respectively.

In 2008, five years since the Korea-Chile FTA took effect, the production amount on account of the exports to Chile, the derived value added, and the derived employment increased 9, 4.5, and 4.2 times those in 2003, respectively. Meanwhile, the adverse effects of the Chile-produced agricultural products on Korean agriculture, which were feared before the Korea-Chile FTA took effect, were found to be limited.

Table 5: Growth Rates of Exports and Imports

(unit: annual growth rate, %)

	Export Growth Rate to FTA Partner Country > Export Growth Rate to World	Import Growth Rate to FTA Partner Country > Import Growth Rate to World
Auto and Parts	ASEAN(77.3%), Chile(20.5%)	ASEAN(66.0%), EFTA(52.9%)
Textiles	ASEAN(13.2%), Singapore(3.7%), Chile(3.4%), EFTA(5.4%),	ASEAN(17.1%)
Electrical Products	Chile(15.4%)	ASEAN(18.8%), Singapore(14.5%), EFTA(51.2%)
Steel and Steel Products	ASEAN(32.3%), Singapore(24.4%), EFTA(48.4%), Chile(35.8%)	EFTA(114.9%), Chile(276.1%)
Machinery	ASEAN(35.3%), Chile(44.3%), Singapore(19.6%)	EFTA(28.8%)
Chemicals	ASEAN(20.8%), Singapore(25.3%), Chile(20.1%), EFTA(25.2%)	EFTA(14.9%)

In 2003, before the Korea-Chile FTA took effect, Korea was the eighth biggest exporting country to Chile; it became the fifth largest in 2007, four years after the FTA took effect. Likewise, after the Korea-Chile FTA took effect, the market share of Korean products in Chilean domestic market increased steadily from 3.1% in 2004 to 7.2% in 2007 but fell to 5.6% in 2008, when China and Japan implemented FTAs with Chile.

3. Analysis of Utilization Rate for Rules of Origin

3.1. Index for Measuring FTA Use by Firms

Although there is no consensus for measuring FTA use by firms yet, two methodologies can used: Survey for trading firms and measuring trade share of preferentially treated volume during customs clearance. Business survey was widely used in East Asian economists in recent years, whose example are Takahashi and Urata (2009), Kawai & Wignaraja (2009), Cheong and Cho (2009), and KITA (2008).

Business survey lacks in the consideration of coverage of market access in a specific FTA. That is, to measure how effectively the FTAs are used, the products, which are excluded from concessions, imposed zero tariff rates, and have not been benefited from tariff reduction or elimination yet because of its short implementation period as Korea-ASEAN FTA, are not included to calculate the utilization rate.

In order to figure out the picture of FTA use by firms, the utilization rate and the utility rate are devised. The former is useful when data on trade and actual application of preferential tariffs specified in a FTA, while the latter is used when we should guess the use of FTAs by firms based on issues of rules of origin (ROO) certificate. Authors could access the data for imports under FTAs by contacting Korea Customs and Trade Development Institute (KCTDI), but the data for exporting goods should be provided by importing countries' customs office, which are not feasible in many cases. In the following analysis about Korean exports, Korea-Chile FTA computes utilization rate, which is based on trade data provided by Chilean Customs. On the other hand, in Korea-ASEAN FTA, we estimate 'utility ratio', using the record of issuance of the certificate of origin.

The utilization rate is defined as the rate of imports that actually receive preferential tariff treatment to imports eligible for preferential tariff treatment specified under a certain trade agreement in a certain period. This rate shows how effectively the agreement or FTA is utilized. 0% indicates FTA is not effectively utilized at all, and 100% indicates FTA is perfectly utilized.

$$Utilization\ Rate = \frac{\sum_{partner}^{s\in sector}(M_{p,s}\ entering\ under\ APTA\ treatment)}{\sum_{partner}^{s\in sector}(M_{p,s}\ such\ as\ p,s\ is\ eligible\ to\ APTA\ treatment)},$$

where $M_{p,s}$ denotes the importing country's imports from partner countries.

The utility ratio is defined that the ratio of exports which actually receive preferential tariff treatment in an importing country to total exports from a certain country in a certain period and can be calculated as below: [4]

$$Utility\ Ratio = \frac{\sum_{partner}^{s\in sector}(M_{p,s}\ entering\ under\ APTA\ treatment)}{M_{partner,sector}},$$

where $M_{p,s}$ denotes the importing country's imports from partner countries.

In this paper, FTA utilization rate on imports from each contracting country is estimated with the data provided by KCTDI. Korea's four implemented FTAs, Korea-Chile FTA, Korea-Singapore FTA, Korea-EFTA FTA, and Korea-ASEAN FTA, have been chosen to be analyzed. To avoid any analytic data distortion due to seasonal matters, the utilization rate is calculated by the year based on the implementation date. However, Korean business use of the FTA with ASEAN for exports is calculated in terms of the utility rate, since no data is available.

3.2. Utilization Rate for Korean Imports from FTA Partner Countries

Table 6 presents the utilization rate for Korean imports from four FTA partner countries. It is calculated with imports eligible for preferential treatment and products actually receiving preferential treatment based on data provided by Korea Customs and Trade Development Institute.

[4] To apply for preferential treatment of Korea-ASEAN FTA, a certificate of origin should be issued by the customs in exporting country or an institution certified by a government of exporting country. In Korea, Customs Service and the Korea Chamber of Commerce and Industry are in charge of issuing the certificate of origin for Korea-ASEAN FTA. This study presumed the utility ratio for Korean export based on records in issuing certificates of origin in the first and the second year of implementation with cooperation of Customs Service and the Korea Chamber of Commerce and Industry.

Table 6: Utilization Rate for Korean Imports form FTA Partner Countries

Period	Korea-Chile FTA	Korea-Singapore FTA	Korea-EFTA FTA	Korea-ASEAN FTA
1st Year	77.7%	28.2%	43.2%	38.0%
2nd Year	93.8%	31.4%	41.9%	49.1%
3rd Year	93.6%	-	-	
4th Year	93.3%	-	-	
Total	90.5%	29.8%	42.5%	43.3%

Note: Korea-ASEAN FTA only includes countries that FTA with Korea is actually implemented. Singapore which is connected through Korea-Singapore FTA is excluded.
Source: Calculated based on data provided by KCTDI

The utilization rates for Korean imports from Chile recorded more than 90% except the first year of implementation between April 2004 and March 2005. In the first year, among the total imports of 1.22 billion dollars eligible for preferential treatment, 950 million dollars worth of imports received preferential treatment which led 77.7% of the utilization rate. In the second year between April 2005 and March 2006 the utilization rate reached 93.8% and continuously recorded 93.6% and 93.3% respectively in the third and fourth year. For four years of implementation, of the total imports of 6.46 billion dollars eligible for preferential treatment, 5.84 billion dollars worth of imports received preferential treatment indicating the utilization rate of 90.5%.

The utilization rate for 2 years of implementing Korea-Singapore FTA was 29.8%. In the first year, from March 2006 to February 2007, the utilization rate was 28.2% and in the second year the utilization rate was 31.4% which is slightly higher than the previous year. In general, the utilization rate for Korean imports from Singapore is considered relatively low. It is contributed by the industrial characteristic of Singapore as a transit trading country that is processing products manufactured from neighboring countries and re-exporting them to other countries. Due to this trait, products imported to Korea from Singapore are not likely to meet rules of origin. Especially, Korea's major imports such as General Machinery and Electrical Machinery demonstrate only 6.7% and 17.6% of the utilization rates, respectively, leading average utilization rate to decrease.

The utilization rate for 2 years of implementing Korea-EFTA FTA from September 2006 to August 2008 was 42.5%. The utilization rates for the first and the

second year were 43.2% and 41.9% presenting slight decrease. The imports eligible for preferential treatment, however, increased by 25.4% from 1.18 billion dollars in the first year to 1.48 billion dollars in the second year.

The utilization rate of Korea-ASEAN FTA has been analyzed separately; the first year from June 1st 2007 to May 31st 2008 and the second year June 1st 2008 to May 31st 2009. Korea-ASEAN FTA has been implemented in the order of ratifying the agreement. The agreements have been in effect with Malaysia, Indonesia, Vietnam, and Myanmar since June 1st 2007, with the Philippines since January 2008, with Brunei since July 1st, with Laos since October 1st, and with Cambodia since November 1st in the same year.

This study, considering each date of implementation, calculated the utilization rate only for the trade volume after the agreements have actually been in effect. In the case of imported products from Singapore, importers or exporters are offered an option to choose a profitable deal from either Korea-ASEAN FTA or Korea-Singapore FTA, which has been implemented since 2006. Korea-Singapore FTA provides broader tariff concession than Korea-ASEAN FTA, encouraging Korea-Singapore FTA to be utilized more. Therefore, Singapore is excluded from estimating the utilization rate for Korea-ASEAN FTA.

In the first year, the utilization rate for Korean imports from Indonesia, Myanmar, Malaysia, the Philippines, and Vietnam was 38.0%. Myanmar presented the highest rate among these five countries and the Philippines whose utilization rate was based on for five months from January to May in 2008 presented the lowest rate.

In the second year, between June 2008 and May 2009, the utilization rate, estimated among eight ASEAN countries, was 49.1% indicating more than 10% increase from the first year. Myanmar displayed the highest rate of 87.9% and Laos who has implemented FTA since October 2008 displayed the lowest rate of 1.2%. Table 7 summarizes other countries' utilization rates during the two years of implementation.

Table 7: Utilization Rates for Korean Imports from ASEAN by Country

Countries	2007.6~2008.5	2008.6~2009.5
Brunei	-	58.3%
Indonesia	47.3%	63.5%
Cambodia	-	6.3%
Laos	-	1.2%
Myanmar	83.0%	87.9%
Malaysia	32.3%	36.8%
Philippines	15.1%	38.2%
Vietnam	58.6%	66.5%
Total	38.0%	49.1%

Note: 1) 2007.6~2008.5 includes the utilization rate of the Philippines between 2008.1~2008.5
2) 2008.6~2009.5 considers different dates of implementing Korea-ASEAN FTA for Brunei, Laos, and Cambodia which are July 2008, October 2008, and November 2008.
Source: Calculated based on data provided by KCTDI

Table 8 exhibits the utilization rates for Korean imports from FTA partner countries by product group, which has been classified as 15 groups. In case of imports from Chile, Metal Products occupy approximately 70% of total imports. Primary Products (10%), Chemical and Rubber Products (9%), and Processed Mineral Products (6%) are major imports from Chile. These staples for imports show high utilization rates; Metal Products, the largest imports, show the utilization rate of 90.3%, Primary Products 95.3%, Chemical and Rubber Products 87.1%, and Processed Mineral Products 88.0%. On the other hand, Textiles and Clothes (11.5%) and Other Manufacturing (2.9%) indicate low utilization rates around 10%. Particularly, for four years of implementation, Electrical Machinery and Precision Machinery, imported more than 200 million dollars worth, have not been applied for preferential tariff treatment.

The utilization rate for Korean imports from Chile appears to be highly effective considering the average rate being more than 90%. It is mainly driven by Primary Products and Metal Products which are major imports of Korea, however, some products have shown extremely low utilization rates.

The core imports from Singapore are Chemical and Rubber Products (34% of total imports), Precision Machinery (13%), General Machinery (13%), and Electrical Machinery (12%), which occupy more than 70% of total imports. While the utilization rates for major importing products such as Chemical and Rubber Products, and Precision Machinery are well above average presenting 34.6% and 30.4%, the

utilization rates for Electrical Machinery (17.6%), General Machinery (6.7%), and Metal Products (7.0%) are very low.

In the imports from EFTA countries, Nonmetallic Mineral Products and Chemical and Rubber Products each of which hold about 13% of total imports respectively present 81.5% and 63.8% of the utilization rates. The utilization rate for General Machinery, which takes up major portion of total imports, is only 24.2%. Moreover, the utilization rates for Transport Equipment and Primary Products which occupy small portion of total imports are more than 80% each, but Other Transport Equipment and Electrical Machinery scores relatively low utilization rates.

Lastly, in case of Korea's imports from ASEAN, Primary Products which are mainly manufactured in ASEAN region present high utilization rate more than 90% and the utilization rate for Processed Primary Products recorded 87.7%, which was increased from 79.5% in the first year to 94.9% in the second year. However, the utilization rates for Other Transport Equipment, Transport Equipment, and Electrical Machinery were low. Electrical Machinery which holds approximately 17.2% of total imports eligible for preferential treatment presented only 6.7% leading overall utilization rate to decrease.

Table 8: Utilization Rates for Korean Imports from FTA Partner Countries by Product Group

(Unit: %)

Products	Korea-Chile FTA	Korea-Singapore FTA	Korea-EFTA FTA	Korea-ASEAN FTA
Primary Products	95.3	0.1	81.5	95.0
Processed Primary Products	95.8	26.5	65.8	87.7
Processed Mineral Products	88.0	14.3	54.3	49.5
Leather Products	0.2	87.8	46.3	45.6
Chemical and Rubber Products	87.1	34.6	63.8	43.5
Metal Products	90.3	7.0	33.2	60.0
Other Transport Equipment	-	0.0	1.5	3.1
Other Manufacturing	2.9	0.0	50.2	29.4
Nonmetallic Mineral Products	100.0	74.9	81.5	64.3
Transport Equipment	0.0	44.6	81.4	3.5
Textiles and Clothes	11.5	12.4	76.4	74.7
General Machinery	98.3	6.7	24.2	9.2
Electrical Machinery	0.0	17.6	18.1	6.7
Precision Machinery	0.0	30.4	51.6	13.8

Wood and Paper Products	91.9	73.3	48.1	43.4
Total	**90.5**	**29.8**	**42.5**	**43.3**

Source: Calculated based on data provided by KCTDI, and Kim et. al. (2009)

It is noteworthy that the utilization of Korea's imports from ASEAN shows rapid improvement as it moves from the first to second year of implementation. Gradual growth in enjoying benefit of preferential treatment by small and medium sized importers is presumed to be the major cause of increase in the utilization rate from the first year to the second year. However, low utilization rate on Processed Mineral Products which are primary imports from ASEAN, particularly crude oil and liquefied gas from Indonesia and Malaysia, are regarded to be the main element to lower general utilization rate.

Positive tariffs have been imposed on many of Processed Mineral Products from Indonesia and Malaysia. Especially, between June 1st 2008 and May 31st 2009, on the basis of HS 10-digit, a total of 10 products of Processed Mineral Products imported from Indonesia and Malaysia were eligible for imposing import taxes which are worth 6.84 billion dollars. Tariffs, not preferential duties, were imposed for 3.07 billion dollars worth of imports, which is 44.9% of 6.84 billion dollars.

53.7% of total imports received preferential treatment which is higher than the imports receiving regular tariffs, but it is not satisfying figure considering the fact that a country of origin obviously becomes an exporting country for Processed Mineral Products such as natural gas and crude oil. A complicated trading structure is chief cause for this. As natural gas and crude oil extracted from Indonesia or Malaysia goes through transaction between multinational corporations, it gets difficult to obtain a certificate of origin. Therefore, although products are produced in Indonesia or Malaysia, there would be many cases that they are not eligible to receive preferential treatment. In addition to this, it may also be that FTA tariff preference for natural resources are low so that it is not beneficial enough to use FTAs. Note that tariff refund is possible for imported natural resources. It may be reasonable for Korean importers of natural resources not to apply for preferential tariffs.

Consequently, the utilization rate for Korea-ASEAN FTA is entering a stable phase considering this inevitable situation. The increase of the utilization rate on

General Manufacturing other than Processed Mineral Products from the first year to the second year indicates that domestic importers have improved their cognition of Korea-ASEAN FTA and ability to utilize it effectively.

3.3. Utilization Rate for Korean Exports to FTA Partners

Utilization rate for Korean exports is rather in the center of attention than utilization rate for Korean imports. It is because that high utilization rate for Korean exports to partner country has a direct impact for Korea to consolidate market competitiveness in partner country by lowering the price of exporting products and offers considerable incentive for Korea to pursue FTA.

To calculate the utilization rate for Korean exports to FTA partners, however, data related to customs clearance of partner country is required which is almost impossible without collaboration of its Customs Service. In the case of Korea-Singapore FTA, since Singapore imposes no tariff on most of goods, there is no need to calculate utilization rate. Therefore, this study computes the utilization rate for Korean export to Chile which was possible to gain an access on required data related to customs clearance and estimates the utility ratio of Korea-ASEAN FTA based on a certificate of origin.

First, the utilization rate for Korean exports to Chile under Korea-Chile FTA, which is shown in Table 9, is based on the data between April 2004 and December 2007, for three years and nine months. During that period, total exports received preferential treatment was 5.99 billion dollars and total exports eligible for preferential treatment was 6.18 billion dollars. The utilization rate for Korean exports to Chile under Korea-Chile FTA was 96.9%; the first year of implementing Korea-Chile FTA, from April 2004 to March 2005, the utilization rate was 93.1% which was fairly high from the beginning and kept climbing to 97.7% in the fourth year.

Table 9: Utilization Rate for Korean Exports to Chile : 2004.4~2008.3

(Unit: Thousand US$)

	04.4~05.3	05.4~06.3	06.4~07.3	07.4~07.12	Total
Korea-Chile FTA Preferential Tariff	744,178	1,038,719	1,613,941	2,597,655	5,994,494
Total Exports*	799,377	1,084,471	1,668,897	2,631,235	6,183,979
Utilization Rate	93.1%	95.8%	96.7%	98.7%	96.9%

Note: total exports and average tariff rate of total export are estimated after excluding products which are not used to calculate the utilization rate.

Source: Calculated based on data provided by KCTDI

Korea-ASEAN FTA utility ratio calculated for two years after implementing FTA is shown in Table 10. Just as the utilization rate for Korean imports, in the first year of implementation, from June 1st 2007 to May 31st 2008, the utility ratio for Korean exports to 5 ASEAN countries was 3.9%, and the utility ratio for Korean exports to 8 ASEAN countries dropped to 2.6% in the second year.

The utility ratio for Korean exports to Malaysia was 22.9% which is the highest, Indonesia 1.28%, Vietnam 1.89%, and Myanmar 0.02% in the first year. The utility ratio for Korean exports to the Philippines which was based on five-month- long data from January 1st 2008 was 0.03%. Although the utility rate of Malaysia indicated satisfactory number of 22.9%, this figure includes possible cases that certificates of origin are issued but not leads to actual export.

In the second year, the utility ratios for Korean exports to Indonesia and Vietnam were 4.2% and 3.2% respectively indicating rapid growth, and the utility ratio for Korean exports to Malaysia was only 1.5%. The utility ratios for Korean exports to the Philippines, Brunei, and latter participants of ASEAN which are Cambodia, Laos, and Myanmar displayed less than 1%.

Table 10: Utility Ratio for Korean Export to ASEAN Countries

Country	2007.6~2008.5	2008.6~2009.5
Laos	-	0.0%
Malaysia	22.9%	1.5%
Myanmar	0.02%	0.0%
Vietnam	0.89%	3.2%
Brunei	-	0.0%

Indonesia	1.28%	4.2%
Cambodia	-	0.4%
Philippines	0.03%	0.5%
Total	**3.9%**	**2.6%**

SOURCE: Kim et. al. (2009)

Looking at the utilization rate for Korean exports to Chile by product group, the utilization rates for Processed Mineral Products, Transport Equipment, Primary Products, Chemical and Rubber Products, and Electrical Machinery were high presenting more than 90% and the utilization rates for rest of product groups expect Leather Products, Other Transport Equipment, and Processed Primary Products were higher than 70%.

Major reason for Korea-Chile FTA to display such a high utilization rate is regarded that staple product groups actively utilize Korea-Chile FTA. In the period of the study, Processed Mineral Products, Transport Equipment, Electrical Machinery, and Chemical and Rubber Products which are the core exports of Korea to Chile occupied 91% of total exports eligible for preferential treatment. Each product group exhibited exceedingly high utilization rate which are more than 90%. Particularly the utilization rates of Processed Mineral Products and Transport Equipment were 99% representing perfect utilization of Korea-Chile FTA.

Due to the limitation of access to the required data to estimate Korea-ASEAN FTA utilization rate, it is not possible to calculate Korea's utilization rate of Korean exports to ASEAN. As an alternative, Korea-ASEAN FTA utility ratio was presented.

On the other hand, the utility ratio for Korean exports to ASEAN recorded quite low score. As shown in Table 11, it was 3.9% and 2.6% in the first and second year of implementation, respectively. It showed decline in the utility ratio, however, it may due to some possible data problem.[5] The utility ratios of Primary Products and Processed Primary Products which are relatively accurate on their origins were fairly high exhibiting more than 10% for Korea's exports to ASEAN in the second year. The utility ratio of Wood and Paper Products indicated the highest with 13.4%, and the utility ratios of Chemical and Rubber Products and Metal Products displayed relatively high ratios of

[5] The first COR for Korean exports include some suspicious cases of false issuances.

5.2% and 4.6% in the second year of implementation. On the other hand, Nonmetallic Mineral Products, Textiles and Clothes, and General Machinery demonstrated around 2% and other product groups also showed only 1% or even lower than 1% implying that the export performance utilizing Korea-ASEAN FTA is low.

Table 11: Utilization Rate/Utility Ratio for Korean Exports to Chile and ASEAN by Product Group

(Unit: Thousand US$)

	Korea-Chile FTA (*Utilization Rate*)	**Korea-ASEAN FTA (*Utility Ratio*)**	
		First Year	**Second Year**
Primary Products	96.4%	0.8%	10.6%
Processed Primary Products	69.7%	10.1%*	10.9%
Processed Mineral Products	99.4%	0.0%	0.4%
Leather Products	18.0%	0.0%	0.2%
Chemical and Rubber Products	94.7%	0.8%	5.2%
Metal Products	94.7%	30.2%*	4.6%
Other Transport Equipment	45.9%	0.0%	0.0%
Other Manufacturing	71.3%	0.1%	1.5%
Nonmetallic Mineral Products	74.9%	0.8%	2.6%
Transport Equipment	99.4%	0.5%	1.2%
Textiles and Clothes	84.4%	1.1%	2.3%
General Machinery	87.3%	0.7%	2.8%
Electrical Machinery	90.9%	0.3%	2.0%
Precision Machinery	70.6%	0.0%	0.6%
Wood and Paper Products	83.3%	1.1%	13.4%
Total	**96.9%**	**3.9%**	**2.6%**

Source: Calculated based on data provided by KCTDI and Kim et. al. (2009)

4. Approaches for Active Business Use of FTAs

4.1. Backgrounds for low Rate of FTA Use

Korea's first four FTAs presented above demonstrate big differences in the utilization rates presuming the used of preferential tariff treatment. Korea-Chile FTA

utilization rate for Korean imports reported average of 90.5% for four years which is exceedingly high. In the case of Korea-Singapore FTA, Korea-EFTA FTA and Korea-ASEAN FTA, however, the utilization rates were average 29.8%, 42.5%, and 43.3%, respectively.

The ratio 29.8% reflects the fact that products imported to Korea from Singapore are not likely to meet rules of origin due to the industrial trait of Singapore as a transit trading country that is processing products manufactured from neighboring countries and re-exporting them to other countries. The utilization rate for Korean imports from EFTA was satisfactory indicating 43.2% in the first year but in the second year similar figure was presented, resulted from only 23.7% of the utilization rate for General Machinery which takes up major portion of total imports. Such a low rate is driven due to the use of 'Export Specialization Zone' or 'Drawback' not preferential tariff. The utilization rate for Korean imports to ASEAN under Korea-ASEAN FTA presented an improvement over two year displaying close to 50%.

According to the data of the KITA (2008), which investigated the business use of the FTA preferential tariffs in the course of exporting/importing, more than 80% of all the respondent companies were found not to have utilized the FTA preferential tariffs, and only 18.8% (N=95) of the companies were found to have utilized them. More specifically, only 16.3% of the small and medium-sized companies were found to utilize the FTA, and the rate of utilization was relatively low in relation to textile goods, miscellaneous products, and machinery.

Table 12: Ratio of Business Use of FTAs

(unit: %)

		# of Samples	Utilization Ratio
Total		505	18.8
Firm Size	Large firms	125	26.4
	SMEs	380	16.3
Industry	Agriculture	44	29.5
	Mining	9	44.4
	Chemicals	58	29.3
	Plastic, Rubber, Leather	28	21.4
	Textile, Apparel	85	16.5
	Living goods	25	20.0
	Steel and Steel Products	40	15.0

	Machinery	101	13.9
	Electric and Electrical Goods	92	15.2
	Others	23	8.7

Source: KITA (2008)

As the reasons for the non-utilization of the FTA preferential tariffs, the responses “because the goods are already no-tariff goods or there is hardly any benefit on the whole,” “because of the lack of information about the state of the FTA conclusions or about how to utilize the FTA,” “because there were no requests for certificates of the country of origin from the buyer partner countries,” and “because of the complex and expensive procedures of FTA utilization” accounted for relatively high percentages of the responses.

Table 13: Reasons for Not Utilizing FTAs (N=410)

Reasons for Not Utilizing FTAs	# of Responses	Ratio
Items with zero MFN tariffs or low preferential margin	160	32.32
Lack of information on FTA utilization	153	30.91
No concern for preferential treatment by buyers	65	13.13
Burden for preparing documents and complex procedures	47	9.49
Others	70	14.14
Total	495	100

Note: Multiple answers are allowed
Source: KITA (2008)

The average rate of the actual application of the preferential tariffs to the total export/import amounts of the business firms that utilize FTA preferential tariffs (N=95) was 15% for exports and 19.1% for imports. In terms of items, for exports, the rate was high in the plastic/rubber goods, electric/electronic goods, steel products, and textile goods, and for imports, in the miscellaneous goods, textile goods, steel products, electric/electronic goods, and machinery.

Table 14: Distribution of FTA Tariff Margins

(unit: %)

	Exports	Imports
0%	18.9	11.6
0% ~ 5%	9.5	20.0
5% ~ 10%	8.4	22.1
10% ~ 50%	9.5	12.6
50%	6.3	13.7
No exports or imports	47.4	20.0
Average	15.0	19.1

Cheong and Cho (2009) analyze backgrounds for low business use of FTAs and suggest policy implications for enhancing FTA use. They argue that the government of Korea needs to improve the market access of its FTAs under implementation. Korea's first four FTAs are evaluated to have poor quality.[6] As seen in Tables 13 and 14, Korean firms do not see FTAs with business chances because of low tariff preferences. Korea agreed with Vietnam in negotiating a bilateral FTA between two countries, separately from the ASEAN-Korea FTA under current implementation. The future FTAs should be approached more elaborately and strategically in order to reflect Korean business interests into the FTAs. Bottom-up FTA policies should be adopted now rather than government leads negotiation with following business sectors. Korean business prefers to take advantage of FTAs with large economies such as the U.S. and EU, and these FTA should be implemented as soon as possible. Finally, Korean firms face serious burden in accessing information for FTA use, although they recognize the policy progress of FTA conclusions. The government and industrial associations should provide information on FTA business chances such as FTA business models, which are presented in following subsection.

[6] Even though Korea-Chile FTA records excessively high utilization rates, we could not say that it is a 'high' quality FTA. It is an exceptional case and the reason for high utilization rates in Korea-Chile FTA need to be approached from different perspectives.

4.2 FTA Business Model

4.2.1. Overview

To heighten the business firms' degree of FTA utilization, researches on the FTA business models, led by government organizations, have been conducted in Korea. FTA business models were first introduced in 2007 by Cheong *et al.* (2007) and Seong (2007), and the business circles took great interest in the proposed business models when the FTA Business Models Exposition was held under the auspices of government-civilian organizations such as Korea Customs Service, Korea International Trade Association, and Federation of Korean Industries. Numerous business models were submitted in the 2007-2009 expositions. Most of the business models utilized the preferential-tariffs and country-of-origin criteria and were prepared based on the actual operating data of the business firms.

Table 15: Classification of FTA Business Model

	Cheong *et al*(2007)	Seong (2007)
FTA Business Models	1) Export (Imports) Using Tariff Preference under FTAs 2) Improving Price Competitiveness Using Intermediate Goods with zero tariffs under FTA 3) Change of import sources of parts for satisfying ROO 4) Using more domestic inputs for satisfying ROO 5) Manufacturing at Gaesung Industrial Complex 7) Using FTAs of Korea's FTA partner country 8) Using global FTA networks 9) Investment using FTA networks 10) Combination of investment and FTA hubs	1) Export promotion 2) Cost reduction 3) Networking FTAs 4) Inducing foreign investment 5) FTA hubs

In the book Cheong *et al.* (2007), ten different types of business models utilizing preferential tariffs (e.g., expansion of exports through the reduction of the tariff rates of the FTA partner countries, exporting no-tariff goods based on the partner

countries' FTA, and importing finished goods from the FTA partner countries rather than from others), and investment business models such as those involving the utilization of global FTAs and the shifting of overseas direct investments to the FTA partner countries, were presented. Meanwhile, Seong (2007) categorized the FTA utilization business models into five different models, among them the export expansion, cost-saving, and overseas-investment-inducing models.

These business models are only a few examples of the business models that can utilize the FTAs. So far, the schemes of FTA utilization have been limited to the revitalization of exports and imports of commodities, but when the FTAs with big economic blocs are implemented, the areas where the FTAs can be utilized can be expanded to the Gaeseong Industrial Zone, investments, services, and FTA networks as well as to the preferential-tariffs and country-of-origin criteria. The FTA business models that consider the preferential-tariffs models and the country-of-origin criteria, which are the decisive factors for the expansion of the accessibility to the commodity sector market, can be widely utilized in the early stage of FTA implementation, but in due time, the business models that utilize investments and FTA networks can be revitalized. Moreover, when the off-shore processing of the products of the Gaeseong Industrial Zone has already been recognized in consultation with the U.S. and EU, many business firms are expected to adopt the business models that utilize the Gaeseong Industrial Zone.

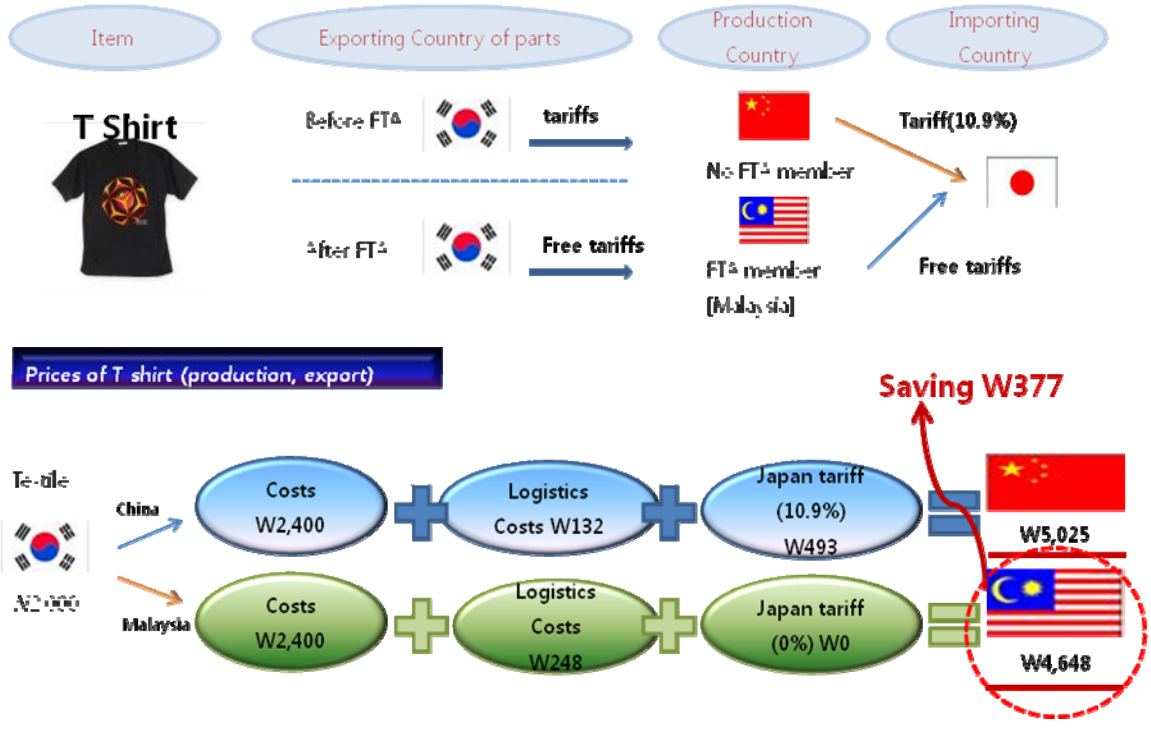
4.2.2. An Example of Models

The main content of Cheong *et al.* (2007)'s second model type, the tariff-free export model utilizing the partner country's FTA, is the maximum utilization of the FTA by exporting raw materials and subsidiary materials to the FTA partner country where finished goods are produced, and then by exporting these finished goods to the FTA partner country's other FTA partner country. For example, in the case of cotton t-shirts in the existing system, a Korean firm exported the raw and subsidiary materials thereof to China, where the cotton t-shirts were made, and then exported the finished goods to Japan. The Korean firm had to bear the 10.9% tariff on the goods it exported to Japan. Ever since the Korea-ASEAN FTA took effect, however, some Korean firms

have been exporting raw and subsidiary materials to Malaysia (with which Korea has concluded an FTA), have been manufacturing the finished goods there, and have then been exporting these with no tariffs to Japan. Note that free exports of Malaysian products to Japan are possible when those products satisfy rules of origin in the Japan-Malaysia Economic Partnership Agreement (EPA). The goods can be exported from Malaysia to Japan with no tariffs because an FTA has come into effect between the two countries.

The use of the aforementioned model causes the prices of the goods imported by Japan to be reduced by 377 won, from 5,025 won under the export system in which goods are produced in China and then exported to Japan, to 4,648 won. The reason that the prices of the goods imported by Japan are reduced when the goods are produced in Malaysia and then exported to Japan is that the processing costs are similar in Malaysia and China (although the cost of transport is higher in Malaysia than in China as Malaysia is farther from Korea than China is) but the Malaysian exports to Japan do not need to bear the 10.9% tariff. It can be seen in this case that exporters can benefit much from their appropriate utilization of FTAs.

Figure 1: Graphical Presentation of Business Model



Certain matters must be attended to, however, when using the aforementioned model for actual business. First, Malaysian products should comply the rules of origin in the Japan-Malaysia EPA. Second, whether the size of tariff preference in the Japan-Malaysia EPA is big enough to enhance the price competitiveness of the Korean exports must be examined. Third, companies should perform market research for their products in Japan. Price is just one of factors which affect the decision for consumers.

5. Conclusion

Section 3 shows that the rate of FTA utilization varies depending on the business firms that were surveyed. The degree of FTA utilization is bound to be higher in the business firms that have recently been trading with the FTA partner countries than in the firms that were randomly sampled from the exporting and importing companies. Even in the latter cases, however, the degree of FTA utilization was found to be higher with imports than with exports, implying that difficulties have been encountered in relation to FTA utilization.

The utilization rate for Korean imports, in general, was assessed relatively effective but the issue is that the utilization rate for Korean exports was not as high as Korea's import utilization rate. Even though the utilization rate for Korean exports to Chile under Korea-Chile FTA indicated impressive figure above 90%, the utilization rate for Korean exports to ASEAN under Korea-ASEAN FTA presented very low figure even after considering the use of the utility ratio.

It is coincide with previous study; according to Cheong & Cho (2009) in a survey only 20.8% of 120 exporting companies in Korea answered to utilize FTA. In another survey done by Institute for International Trade affiliated with the Korea International Trade Association, only 18.8% of 505 exporting companies answered to utilize FTA preferential treatment.

In accordance with Kim *et. al.* (2009), a survey done to 400 ASEAN companies importing Korean products, 68% of companies, which answered they did not utilize Korea-ASEAN FTA, did not know Korea-ASEAN FTA was concluded or even if they knew, they did not know how to use it. It is contrast to the case of Chile, which has

accumulated many experiences and know-how by concluding a number of FTAs, demonstrating the utilization rate for Korean export under Korea-Chile FTA around 90%. Under these conditions, it can be said that the combination of volition and acknowledgement of partner countries is a key element in the utilization of FTA. High utilization rate for Korean imports implies importers have better acknowledgement on FTA than exporters. In the same perspective, low utilization rate implies that importers in partner countries have poor understanding as well as low volition to utilize FTA. A survey performed by KITA (2008) indicated 16% of all respondents indicated the main reason for poor utilization of FTA preferential treatment is the lack of requests on the certificate of origin (CO) from buyers in partner countries.

Since the first FTA with Chile, Korean companies became to understand the importance of satisfying the ROO and keeping related documents for 4-5 years for future verification, even they are allowed to issue CO based on their own judgment and responsibility. Although there is no survey on the effects of the allowance of self-issue of the CO for the application of preferential tariff rates in Korea's FTAs, trade experts point out that third-party issuing system is likely to add another problem in companies' utilization of FTAs, in that companies may worry any losses related with the misuses of their financial statements by competing companies.[7] Even though any business information is supposed to keep classified, they can not be sure about the security of related data. It is not likely for companies to apply for FTA tariffs without substantial preferential margin. Japan introduced self-issue system of CO for the first time in its FTA with Switzerland, while Korea did it in its first FTA with Chile. It is expected that self-issuing system will work as one of incentives for Japanese companies' utilization of FTAs, and the government of Japan is needed to be more active in accepting self-issuing system of CO, while strengthening the penalty for failing verification.

[7] Comments made in the FTA Business Forum (Seoul Press Center, May 2010).

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