

Progress, Issues and Prospect of Agricultural Trade Liberalization in Korea

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Abstract

Korean economy has experienced rapid growth with export-oriented strategy and industrialization under the GATT system. As the Doha round negotiations of the WTO have been standoff since 2001, Korea has actively engaged in the regionalism through FTA negotiations with over 50 countries as a complementary trade mechanism. The Korean government positively promotes FTAs which will improve the deteriorated balance of payment due to the global financial crisis. The objectives of this paper are to analyze trade liberalization focusing on FTAs and to review related issues of agricultural market opening in Korea. Up to now, Korea's efforts to trade liberalization are evaluated to be successful because damage to agricultural sector seems not to be serious as different from those expected before FTAs. Before starting new FTAs and TPP negotiations, the government prepares future-oriented rules of food safety, open dialogues mechanism on market opening with all levels of people, future plan for sustainable food security and ex-post evaluation of concluded FTAs. A challenge of agricultural trade liberalization is to maintain public value of agriculture called to multi-functionality in the future situation that the significance of agriculture in the national economy is likely to decline. Positive trade liberalization provides new opportunities as well as challenges within and between sectors. Therefore, it is a present challenge to define new directions and roles of the Korean agriculture under open agricultural and food system.

Keywords: Trade liberalization, FTA, TPP, Food Security, Food Safety

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I. Introduction

Korean economy has experienced rapid growth with export-oriented strategy and industrialization under the GATT system. However, agriculture sector has been declining since the low productivity of farming has migrated young farmers to urban areas and the Korean government has allocated its budget to manufacturing sector. In addition, the Korean agriculture has undergone significant structural changes since the conclusion of the Uruguay Round (UR) negotiations in December 2003. As the UR agreements under the WTO have been implemented since 1995, all agricultural commodities except rice have been gradually imported and also agricultural subsidies have reduced significantly. As a consequence of the UR agreements, Korea's import liberalization rate for agricultural and forest products has reached 99.1% since only 16 rice-related products were exempted to import.

As the Doha round negotiations of the WTO have been standoff since 2001, all the countries of the world have made efforts to make regional trade agreements such as EU and NAFTA. In responses of the wide spread of regional agreements in the world, Korea has also started Free Trade Agreement (FTA) negotiations with numerous countries aggressively. While the Korean economy has been benefitted in the multilateral trading system of the GATT, Korea has actively engaged in the regionalism through FTA negotiations with over 50 countries as a complementary trade mechanism. The Korean government positively promotes FTAs which will improve the deteriorated balance of payment due to the global financial crisis. It believes that FTAs will provide new economic growth opportunities for the near future. In the pursuit of a series of FTA negotiations, the Korean government has been confronted with strong objections from farmers' associations since the competitiveness of agricultural sector is relatively weak and food security would be worsen after the successful establishment of numerous FTA agreements.

The objectives of this paper are to analyze trade liberalization focusing on FTAs and to review related issues of agricultural market opening in Korea. For this purpose, we review Korean agricultural situation and food security and consumers' safety concern on imported food, the situation and prospect of agricultural trade liberalization by the WTO, FTAs and TPP, and finally discuss implication and future task of agricultural trade liberalization. .

II. Situation of Korean Agriculture and Food Security

Food situation in Korea may be characterized by increasing demand, insufficient production capacity to meet domestic consumption, and increasing imports of major agricultural products. Strong demand has been boosted mainly by successful industrialization and economic growth since the 1970's. While the demand for food has been increasing, production capacity has declined for major staple crops. As a result, Korea becomes more dependent on foreign products to cover excess demand of food.

Table 1 summarizes the demand-supply situation of total grains in Korea. The situation may be characterized by rapidly increasing consumption, steadily decreasing production, and thus declining food self-sufficiency. Most increase in grain consumption is caused by feed grains because of a rapid growth of meat consumption since the mid 1980's. In contrast, the grain for food use has decreased from 6.8 million tons in 1980 to 5.6 million tons in 2009. As meat consumption increases, imports become the dominant source for food supply. The self-sufficiency ratio for grains dropped to 26.7% in 2009 from 80.5% in 1970 as shown in Table 2. Korea's grain self-sufficiency ratio ranks last in OECD. Anxiety of a food crisis escalates since 73% of total grain consumption, 14 million tons, is imported. Average consumption for imported grain in Korea was 456kg in 2007. This is 69kg more than Japan's 387 kg per capita consumption of imported grain. The self-sufficiency ratio of grain will continuously decline if no special effort is made. The heavy dependence of food supply on imports has been causing concerns to Koreans about food security.

Table 1. Grain Supply-Demand Situation in Korea

(Units: million metric tons)

Year	Production	Imports	Exports	Consumption	Food	Feed
1970	7,097	2,115	-	8,825	6,863	584
1980	7,048	5,051	-	12,596	6,860	2,472
1990	7,013	10,022	1	16,282	6,302	6,301
1995	5,816	14,258	-	19,974	6,127	9,373
2000	5,931	14,624	-	19,961	6,164	9,285
2005	5,718	13,851	-	19,847	5,329	8,783
2008	5,044	13,798	-	18,160	5,695	8,405
2009(P)	5,489	15,003	-	20,585	5,667	9,895

Source: Ministry for Food, Agriculture, Forestry and Fisheries, 『Statistical Yearbook of Food, Agriculture, Forestry and Fisheries 2010』

Table 2. Grain Self-Sufficiency Ratios

(Units: percent)

Year	Total Grain	Rice	Barley	Wheat	Corn	Soybeans
1970	80.5	93.1	106.3	15.4	18.9	86.1
1980	56	95.1	57.6	4.8	5.9	35.1
1990	43.1	108.3	97.4	0.05	1.9	20.1
1995	29.1	91.4	67	0.3	1.1	9.9
2000	29.7	102.9	46.9	0.1	0.9	6.4
2005	29.4	102	60	0.2	0.9	9.7
2008	27.8	94.4	40.6	0.4	1	8.6
2009(P)	26.7	98	41.1	0.5	1	8.4

Source: Ministry for Food, Agriculture, Forestry and Fisheries, 『Statistical Yearbook of Food, Agriculture, Forestry and Fisheries 2010』

Rice is the most important crop for farm economy as well as daily diet in Korea. Rice is also a major source of farm income since it dominates agricultural production in terms of cultivated area, volume, and production value. As the economy grew and consumers became richer, the per capita consumption of rice fell from 136.4 kg in 1970 and 106.5 kg in 1995 to 74 kg in 2009. Accordingly, the total consumption of rice also declined in spite of population growth. As shown in Table 3, a significant decrease in planted area for rice was a major factor behind the rapidly declining rice production. During the peak period of the UR negotiations from 1991 to 1995, a 153 thousand hectare, 12.6% of rice planted area was reduced. Conversion of the rice paddy field to upland for more profitable products and non-agricultural use was the main cause of sharp decline in rice production.

The Uruguay Round (UR) agreements made the Korean agricultural situation even worse. The Korean government had to gradually reduce government subsidies for the rice price support program since the reduction of domestic support under the UR agreements has been implemented. What is more important is that, due to the reduction of price support, rice is no longer a stable source of income. The UR agreements also opened Korea rice market through the minimum market access (MMA) provision and the 2004 rice negotiation with the WTO increased rice's MMA imports double under MMA to more than 400 thousand tons instead of tariffication. Judging from historical facts that imports of cheaper foreign commodities, such as wheat, corn and cotton, almost completely wiped out production of those crops in Korea; consequently, the future for rice production cannot be optimistic.

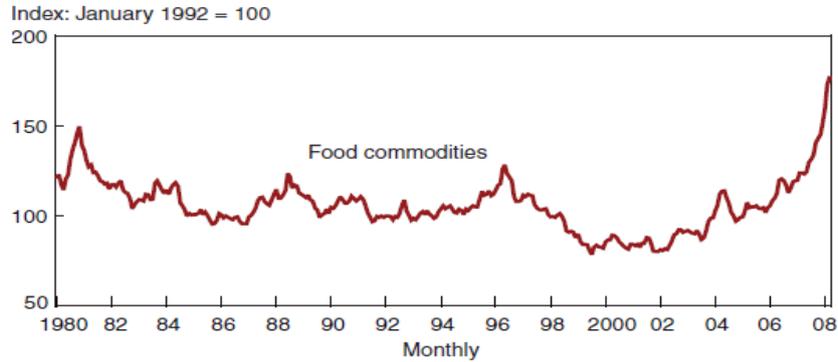
Table 3. Rice Situation in Korea

Year	Planted Area (hectares)	Yield (metric ton/ha)	Production (thousand ton)	per capita consumption (kg)
1970	1,203	3.30	3,939	136.4
1975	1,218	3.86	4,669	123.6
1980	1,233	2.89	3,550	132.4
1985	1,237	4.56	5,626	128.1
1990	1,244	4.51	5,606	119.6
1995	1,056	4.45	4,695	106.5
2000	1,072	4.97	5,291	93.6
2005	980	4.90	4,768	80.7
2008	936	5.20	4,844	75.8
2009	924	5.34	4,916	74

Source: Ministry for Food, Agriculture, Forestry and Fisheries, 『Statistical Yearbook of Food, Agriculture, Forestry and Fisheries 2010』

The World Food Summit in 1996 defined a holistic perspective of food security: “The food security exists when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life.” This definition implies that the food security should include four dimensions: availability, stability, access, and utilization of food. World prices for major food commodities such as grains and vegetable oils have risen sharply to historic highs. Retail food prices in each country have also risen for the last food crisis, raising concerns around the world. Figure 1 shows an index of monthly prices for food commodities that are the basis for human consumption of staple foods. Although prices, measured in nominal dollars, trended slightly downward between 1980 and 2002, there were several short periods, in 1980, 1983, 1988, and 1996, when prices did rise significantly from the previous year. After 2001, prices began to rise slowly and by 2004 reached the level that they had been in the mid-1980s. Since early 2006, food commodity prices rose sharply to a new high, more than 60 percent above what they were 2 years ago.

Figure 1. Movement of Food Commodity Prices



Source: International Monetary Fund: International Financial Statistics.

Rising food commodity prices tend to negatively affect lower income consumers more than higher income consumers. The reasons are as follows. First, lower income consumers spend a larger share of their income on food; staple commodities such as corn, wheat, rice, and soybeans account for a larger share of food expenditures in low-income families. Second, consumers in low-income, food-deficit countries are vulnerable because they must rely on imported supplies, usually purchased at higher world prices. Third, countries receiving food aid donations based on fixed budgets receive smaller quantities of food aid.

In the case that we consider food situation in the Korean Peninsula, combined with the recent spike of global food prices, the situation becomes more unpleasant since North Korea's food security in nutritional and distributional points are projected to be worsened over the next decades. In the past years, household food rations from the North Korea's Private Distribution System (PDS) have been unable to satisfy nutritional requirements of about 70 percent of its total population. Despite favorable weather in 2008 and 2009, North Korea exhibited below-average food production due to the long-term decline of soil fertility and persistent shortages of farm inputs, such as fuel and fertilizer. Since macroeconomic stagnation was also expected to be sustained for a while, North Korea would be highly dependent on food aid and external assistance to mitigate chronic food problems.

Even though it was generally expected that trade liberalization would improve the global food security, chronic importing countries feel uncertain whether or not they may obtain food stably in the future. In particular, high dependency of imports in South Korea and political and economic uncertainties in North Korea threaten food security more in the Korean Peninsula recently since global food prices are rising and uncertain.

III. Progress and Prospect of Agricultural Trade Liberalization

1. Trade liberalization under the WTO System

Korea has been a strong supporter of the multilateral trading system under the GATT and the WTO. The past GATT negotiations have traditionally promoted trade liberalization and tariff reduction in only manufactured products. However, the UR negotiations especially included trade liberalization of agricultural and service sectors. According to the UR agreement, Korea opened all agricultural markets except rice and reduced tariffs and domestic supports since 1995. The implementation periods of the UR agreement were 6 years ending in 2000 for member countries and 10 years up to 2004 for developing countries respectively. In accordance with the expiration of the UR agreement, the WTO launched a new round, the Doha Development Agenda (DDA) in November 2001. However, the DDA negotiation came to a standstill deadlock since it was difficult for all 153 members to reach a mutual agreement in 10 negotiation areas. During the DDA negotiations, individual countries searched for trading partners in the name of regional trade agreement. As the WTO system has got loosed and regionalism, especially FTA, has formed the keynote of free trade in the world.¹

While Korea has actively participated in multilateral negotiations, the future of the DDA is recognized to be pessimistic to be concluded in the near future. Therefore, Korea has been actively pursuing FTAs with major trading partners to overcome current economic difficulties originated from global financial crisis.

2. Progress and Prospect of Korea's FTA Promotion

While Korea participated in FTA negotiations late in early 2000s, it has recognized significance of FTAs, and also participated in FTA negotiations positively. For the successful promotion of FTAs, the Korean government established a roadmap on FTAs in 2003 and set up the FTA Promotion Committee in 2004. Finally, in 2005, the government established an aim for an 'advanced trade nation' and finalized Korea's FTA policy as follows: First, Korea aims to pursue FTAs with large advanced economies or economic blocs and promising emerging markets. Second, Korea aims to pursue FTAs that are high-level in terms of degree of liberalization and comprehensive in terms of coverage and scope. Third, Korea adopts a multi-track approach when negotiating FTAs, meaning that the negotiations can be carried out simultaneously with more than one country when necessary.

¹ According to the WTO, total 285 regional trade agreements in the world are in effect until December 2010.

Fourth, in order to achieve national consensus as part of the negotiation process, Korea aims to pursue a wide range of outreach efforts with the public and private sectors.²

As a consequence of the above efforts, Korea has become one of the countries which are active in promoting FTA negotiations. The FTAs with 5 economic blocs and 17 nations such as Chile, Singapore, EFTA (European Free Trade Association)³, ASEAN and India are in effect. After the FTAs with three countries and two economic blocs came into force, the trade amount with the partners has increased 1.2-3.2 times, and the growth rate of trade has become 0.6-0.8 times higher than before the agreements was not in effect. It was higher by 1.5-1.7 times in comparison to the growth rate of trade with entire nations, as well.

On the other hand, there are 3 concluded FTAs with the US, EU and Peru, which waits for congressional ratification in both countries. Korea also tries to make a conclusion in some other FTA negotiations with GCC (Gulf Cooperation Council), Australia, New Zealand, Columbia and Turkey. Other 3 FTAs with Canada, Mexico and Japan are broken off in negotiations and on the procedures of working-level discussion.

In 2010, Korea has made a series of successful FTA negotiations with big and small economies: a supplemental FTA negotiation with the US in December 2010, the official sign of a FTA between Korea and EU in October 2010, the conclusion of Korea-Peru FTA in August 2010, the opening of Korea-Turkey FTA in April 2010 and the progress of FTA negotiations with Australia and Columbia. More specific information about present conditions of Korea's FTA is offered in Table 4.

It is predicted that FTAs bring beneficial effects on the Korean economy. Especially, promoting FTA negotiations with gigantic economies such as the US, EU, China and Japan would have great effects on domestic economy. However, it would also accompany severe damages on relatively less competitive sectors like the Korean agriculture. While FTAs fall farm prices and income, social welfare increases since people might enjoy more choice of food and consume all commodities at a low price without any seasonal and locational limitation.

Korea started FTA negotiations with countries which would make minimal impacts on agriculture and then moved forward to major trading countries. Korea chose Chile as the first negotiating country because it is located in the diagonally opposite side of the earth and then

² It is shown in the homepage at Ministry of Foreign Affairs and Trade

³ A free trade organization founded in 1960 is composed of 4 countries, Switzerland, Norway, Iceland and Liechtenstein.

negotiated Singapore and EFTA for minimizing the damage to agriculture and food system.

According to agreements of FTAs in effect, the concession of the Korea-Singapore FTA excluded the most sensitive items such as rice, apple, pear and others; therefore, the proportion of the exception was 33.3%. This negotiation also adopted strict rules of origin and custom clearance to prevent imports through roundabout routes. In addition, the governments agreed with adopting bilateral safeguard policy to protect vulnerable sectors. The Korea-EFTA FTA negotiation also had the low level of concession, because EFTA also had high level of protection to agriculture and regards the multi-functionality of agriculture as important like Korea. Thus, the concession with EFTA had 65.8% of the exemption. The Korea-ASEAN FTA agreement has chosen a means of protection such as exemption from the concession and gradual removals of trade barriers about sensitive products. The concession of CEPA (Comprehensive Economic Partnership Agreement) with India had 44.8% of exception on agricultural products. Meanwhile it has not adopted import quota or agricultural safeguard system due to classifying most sensitive items to exemption from the concession. Three FTAs and one CEPA in effect are assessed that they have low level of concession or sufficient protection mechanisms. Therefore, it is generally expected that they have rarely negative impacts on the Korean agriculture.

Chile, the US, and EU are the highly competitive in agriculture. Therefore, it is still controversial and under public discussion whether or not FTAs with the US and EU are concluded and beneficial to Korea. With regard to the ratification of the National Assembly on FTAs with the US and EU in Korea, both the ruling party and the government decided the position that they would submit the ratification of the Korea-EU FTA firstly and wait the Korea-US FTA's ratification until the US Congresses pass the ratification since the FTA with the US would influence the national economy including agriculture as well as politics and social activities enormously.

3. Current Situation of Joining TPP in Korea

It was known to public by a foreign press, last year, that the Korean government was considering taking part in the TPP (Trans-Pacific Partnership)⁴. Most Asia-Pacific countries are currently negotiating or interested in joining the TPP since the U.S. announced its interest to negotiate

⁴The TPP is a multilateral free trade agreement for integrating the economies of the Asia-Pacific region. In order to eliminate all tariffs by 2015, original four members (P4), Brunei, Chile, New Zealand and Singapore, entered into force on May 2006.

with the P4 countries on September 2008. Five additional countries, including Australia, Malaysia, Peru, United States, and Vietnam, are currently negotiating to join the group. And also, Canada, Japan, the Philippines, South Korea, and Taiwan have also expressed interest in the TPP. Currently, the U.S. led the TPP negotiations with P4 countries as political leaders of the nine negotiating countries endorsed the proposal for targeting the settlement of negotiation initiated by President Obama.

Therefore, it is expected that the TPP's influence would become considerable in near future. Bitter disputes would be predicted if the Korean government officially announces joining the TPP, considering that the TPP pursues more comprehensive liberalization and faster tariff elimination than any FTAs and the WTO multilateral negotiations. Moreover, there are countries that have interests in exports of agricultural products, and some nations considering the TPP are competitive in agriculture and food system.

Table 4. Progress of FTAs in Korea (December 2010)

Classification	Countries	Progress
FTAs in effect (5)	Chile	April 1 st , 2004
	Singapore	March 2 nd , 2006
	EFTA	September 1 st , 2006
	ASEAN	July 1 st , 2007
	India (CEPA)	January 1 st , 2010
Concluded FTAs (3)	USA	·The negotiation has been concluded on April 2 nd , 2007. ·The re-negotiation has been agreed upon on December 3 rd , 2010.
	EU	·The negotiation has been concluded on July 13 th , 2009. ·The agreement has been signed on October 6 th , 2010
	Peru	·The negotiation has been concluded on August 30 th , 2010. ·The agreement has been signed on November 15 th , 2010.
FTAs under negotiation (5)	GCC	·The 3 rd negotiation was taken placed during July 8 th -10 th , 2009
	Australia	·The 5 th negotiation was taken placed during May 24 th -28 th , 2010
	New Zealand	·The 4 th negotiation was taken placed during May 12 th -14 th , 2010
	Colombia	·The 3 rd negotiation was taken placed during June 14 th -18 th , 2010
	Turkey	·The 1 st negotiation was taken placed during April, 26 th -30 th , 2010
Stop in negotiation (3)	Canada	·Stopped after the 13 th negotiation during March 25 th -28 th , 2008.
	Mexico	·The 2 nd negotiation was taken placed during June 3 rd -11 th , 2008. ·The negotiation has been stopped tentatively, in favor of Mexico.
	Japan	·The negotiation is stopped after the 6 th round on November, 2004. ·The 4 times of working-level talks after June 2008 to restart
FTAs under consideration (7)	China	·The joint research completed on May 28 th , 2010. ·The 1 st prior consultation was taken on September 28 th , 2010.
	MERCOSUR	·The joint study completed on November 2006.
	China-Japan	·The 1 st meeting of joint study on May 6 th -7 th , 2010
	Russia	·The 2 nd meeting for a joint research was taken on July 2008.
	Israel	·A joint research by private was started on August 17 th , 2009
	SACU	·agreement on opening a joint research on December 9 th , 2008
	Vietnam	·agreement on opening a joint research on March 23 rd , 2010

Source: Ministry of Foreign Affairs and Trade

After President Lee Myung Bak mentioned interests in joining the TPP at an interview with the Asahi Newspaper during the 2010 APEC Summit on November 13th, 2010, the government accelerated to study TPP impacts to the Korean economy. For example, Ministry of Food, Agriculture, Forestry and Fisheries (MFAFF) just started analyzing TPP agreements as well as all concluded FTA agreements in P4 countries and is planning to investigate the TPP's impact on the Korean agriculture and food system this year. On the other hand, the MFAFF made a declaration against TPP to the trade-related Ministries in the government. Even though the preparation of TPP is in the initial stage, the public concerns have already been proliferated in agricultural and sensitive sectors because market opening after joining the TPP would be very tremendous.

4. Food safety Issues with Trade Liberalization

Agricultural trade liberalization would increase the probability of importing food related foreign diseases. Continuous food safety scares have intensified public awareness and concern all over the world. Since the 1980s parallel with trade liberalization, cases of Bovine Spongiform Encephalopathy (BSE), Swine Fever, Foot-and-Mouth Disease (FMD) and Avian Influenza have appeared in many countries, resulting sometimes in death. These food safety crises have escalated consumers' demand for high quality food and increased food safety standards. Food safety problems have also caused a loss of consumer confidence in food marketing chains. After the outbreak of BSE or 'mad cow' disease in Europe and the U.S., food safety concerns about imported beef intensified in Korea and resulted in consumers desiring more information about the distribution and safety of imported beef.

After the opening of the Korean beef market, the percentage of total beef consumption that was imported reached over 50 percent. The heavier dependence on imported beef, however, increased the public's concerns about getting beef-related diseases in the country. Especially, beef from the U.S., which accounted for 60 percent of all imported beef, was temporarily stopped in 2004 due to the 'mad cow' disease. The Korean government did not reopen its beef market to the U.S. until 2007. The increasing dependency on imported beef has made Korean consumers more concerned about the safety of imported beef. Moreover, due to the significantly higher price of Korean beef compared to imported beef, the number of cases of retailers disguising imported beef as Korean beef has also increased. These problems have caused a loss of consumer confidence in food marketing chains and increased anxiety about food safety.

Lee, Han, Nayga and Lim (2011) have studied food safety issues on imported beef in Korea.

They estimated Korean food shoppers' willingness to pay (WTP) for the traceability system of imported beef by an experimental auction. According to their results, consumers are generally willing to pay a 39 percent premium for the traceable imported beef over similar beef without traceability. It means consumers held relatively positive attitudes toward the new traceability system. Moreover, consumers would value a traceability requirement or system for imported beef due to concerns about food safety since the Bovine Spongiform Encephalopathy (BSE) or 'mad cow' disease problem has been an especially sensitive issue in Korea, and consumers' food safety standards have risen due to this problem.

In the process of reopening the Korean beef market to the US, Korea experienced a series of uproar because a lot of people believed the government decided importing unsafe U.S beef to conclude the Korea-US FTA successfully. Just after the inauguration of the President, Lee Myung Bak, this rumor spread all over the country in an instant and people came to streets with candle lights and asked the government to withdraw the decision of reimporting the U.S. beef for six months. Eventually, this uproar made the first Minister of Food, Agriculture, Forestry and Fisheries resign after only six months' service. In addition, the government promised a remarkable improvement in quarantine system, food safety standards and traceability system of imported beef with special funding for livestock development. This is a historical accident related to the Korea-US FTA. It happens that consumers did not believe the safety of imported U.S. beef.

According to the proliferation of FTAs, consumers strongly demanded that the Korean government improve food safety and provide them the tools that would allow them to choose safer food. Therefore, it is of utmost importance to keep developing the food safety and traceability system with trade liberalization.

IV. Review of Agricultural Agreements in Major FTAs

1. Korea-Chile FTA

Korea's concession in the Korea-Chile FTA is on the Table 5. According to the concession, agricultural products, which are recognized as sensitive items in Korea, will be discussed again after the successful conclusion of the DDA negotiations. However, some products, which will be renegotiated after the DDA such as beef, chicken meat, milk serum, plum, mandarin and other vegetables, are opened the market with a tariff rate quota (TRQ). Instead of delaying tariff reduction after the DDA conclusion, Korea guaranteed Chile to export a certain volume of imports at a low in-

quota tariff under the TRQ system. Rice, apple and pear are exempted from tariff elimination because rice is a major staple; apple and pear are exempted due to exotic insects and quarantine negotiation problems. In addition, fresh grape was allowed to apply seasonal tariffs in harvesting season in Korea since grape from Chile is very competitive. Agricultural products in short-term tariff elimination period which is below 5 years show the largest proportion as 54% of total products. Products belonging to long-term tariff elimination period which is more than 10 years are 14.6% of total products.

Table 5. Korea's Concession in the Korea-Chile FTA

Concessions Type/ Tariff Removal Periods	Commodities	Numbers of Items in HS 10 digit (%)
Exception	rice, apple(fresh), pear(fresh)	21(2%)
Seasonal Tariff	grape(fresh)	1
Discussion after the DDA Negotiation	·vegetables: pepper, garlic, etc. ·grains: barley, bean, etc. ·livestock products: eggs, honey, etc. ·fruits: tangerine, jujube, etc. ·others: watermelon, green tea, etc.	373(26%)
TQR and the Discussion after the DDA Negotiation	Beef(400ton), chicken meat(2,000ton; frozen, processed), milk serum(1,000ton), plum(280ton), mandarin(100ton), other vegetables(100ton)	18(1%)
16 years	prepared milk powder, other fruits(dried), etc. ·livestock products: pork, mutton, etc.	12(0.8%)
10 years	·vegetables and flowers: cut-flower, tomato, etc. ·fruits: lemon, dried grape, etc.	197(13.8%)
9 years	other fruit wines ·fruits: peach can, jam, etc. ·livestock products: turkey-meat (600ton of TRQ)	1
7 years	·grains: corn for seed, potato, etc. ·vegetables: other vegetables (frozen), etc. ·others: walnut, etc.	40(2.8%) with 6 items with TQR
5 years	·livestock products: horse, lamb, turkey, etc. ·flowers: tulip, lily (dormant), etc. ·vegetables: leaves of plants, cabbage, etc. ·others: almond, nuts, coffee, etc.	545(38%)
0	·livestock products: seed bull, breeding pig, etc. ·grains: wheat, rye, etc. ·others: golden syrup, beet, etc.	224(15.6%)
Total		1,432(100%)

Source: Ministry of Food, Agriculture, Forestry and Fisheries.

The Korea-Chile FTA was expected to be painful during the negotiation since this agreement was the first signed FTA. Korea therefore introduced a domestic agricultural compensation

mechanism for closing orchards for greenhouse grape, kiwi and peach before signing FTA with Chile. It was evaluated to have effects of supporting prices and increasing productivity. According to a study by government sponsored research institute, KREI, the effect of supporting price was estimated about 3~4 percent in greenhouse grape and 1.5 percent in peach. In addition, it may contribute to improving productivity because the targets of closing orchards were focused on old trees and old farmers. However, the domestic compensation mechanism has some issues to be revised. The reasons are that the compensation mechanism supporting 80 percent of the price gap between market price and base price never worked out, and also the indemnity for closing orchards was too much and supported too many farms.

While the Korea-Chile FTA substitutes imports from other countries to Chile products and also expands imports by tariff reduction and removal, overall evaluation on the Korea-Chile FTA impacts is not serious because domestic production in major importing commodities from Chile, such as pork, grape, red wine, kiwi and others, is also growing.

2. The Korea-U.S. FTA

The Korea-US FTA was concluded in April 2007 and officially signed in June 2007; however, follow-up measures were delayed in both countries. As the congressional ratification procedure was delayed in the US, the early ratification opinion was retreated in the government and the National Assembly. According to the demand of revising the Korea-US FTA from the US automobile industry and the Democratic Party, the US government asked a supplementary negotiation. Therefore, both countries renegotiated and concluded the modification of the initial agreement on automobile and pork in December 3rd 2010. At the supplementary negotiation, Korea extended two more years of a grace period for removing tariffs on pork to January 1st 2016; however, conceded to eliminate automobile tariffs within four years.

The FTA with U.S was agreed with the highest level of concession contrary to the past concluded FTAs as shown in Table 6. According to the concession, agricultural products in short-term tariff elimination are over 60 percent of total items. Rice is also exempted from tariff elimination like other previous FTAs.

It is possible that agriculture sector in Korea is highly damaged from FTA with U.S. The annual average reduction of farm production value was projected to 700 billion won (\$ 626 million US dollar). Especially, 70 percent of agricultural damages from FTA with U.S. come from livestock sector

and 23 percent from fruit sector. Therefore, the government

While the Korea-US FTA is still controversial in Korea, the general public supports its ratification since, two recent surveys by new media resulted in 60% for and 27.3% against and 55.2% for and 28.5% against. The Korean government determined the basic position of the ratification in February 2011. The government position is the ratification of the Korea-EU FTA first and that of the Korea-US next. Therefore, both the ruling party and the government will promote the ratification of the Korea-US FTA in the National Assembly with the consideration of the US progress and situation.

The Korea-US FTA did not set a good precedent for future since Korea still negotiates FTAs with other big countries such as China, Japan, Australia, New Zealand and other countries. It is concerned that other countries may also ask for the additional negotiation after concluding FTA negotiations with Korea.

Table 6. Korea's Concession in the Korea-U.S. FTA

Concessions Type/ Tariff Removal Periods	Commodities	Numbers of Items (%)
Exception	Rice	16(1.0%)
Current Level & TRQ	orange, honey, etc.	15(1.0%)
17 years, Seasonal Tariff	Grape	1(0.1%)
15 years, Seasonal Tariff	potato for chips	0(0.1%)
18 years & TRQ	Ginseng	4(0.3%)
15 years &TRQ	cheese, wheat, etc.	10(0.6%)
12 years &TRQ	sub-feed, modified starch	6(0.4%)
10 years &TRQ	butter, modified milk powder, others(for infants), etc.	11(0.8%)
20 years	apple(Fuji), pear(Asian)	0(0.1%)
18 years	red ginseng	3(0.2%)
16 years	sugar	2(0.1%)
15 years	beef, eggs, etc.	98(6.5%)
12 years	milk cow, frozen onion, etc.	34(2.2%)
10 years	peach, frozen drumstick, etc.	332(24.1%)
9 years	fresh strawberry	1(0.1%)
7 years	beer, ice-cream, etc.	41(2.6%)
until 2014.1.1	pork, etc.	21(1.4%)
6 years	corn oil, etc.	2(0.1%)
5 years	orange juice, tomato juice, etc.	317(20.6%)
3 years	Seaweeds	33(2.1%)
2 years	avocado, lemon, etc.	6(0.4%)
0 years	grape juice, coffee, etc.	578(37.9%)
Total		1,531(100%)

Source: Ministry of Food, Agriculture, Forestry and Fisheries.

3. The Korea-EU FTA

The Korea-EU FTA negotiations started in May 2007 and were finally concluded in July 2009 after the 8th round meetings. Both countries expected that this FTA would be in effect after the congressional ratifications in July 2011. The Korea-EU FTA agreements on removing trade barrier in agricultural market have been reached asymmetrically, considering the agricultural competitiveness of both countries. The details of the Korean concession are shown in Table 7. In general, the concession scope is similar to the Korea-US FTA, but flexibilities on tariff elimination to sensitive products like rice, livestock and dairy products and others were introduced. Korea's tariff removal type and periods on agricultural products are quite extensive from instantly to 20 years. Along with extensive tariff removal periods, various concession types such as exemption, seasonal tariff, TRQ and the combination of concession types and the period of tariff removal were introduced to minimize damages. EU consistently insisted the same concession as the Korea-US FTA during the negotiation periods, yet Korea differentiated the concession allowing a longer period of tariff elimination in pork and dairy products. Particularly, the 10-year grace period of tariff removal in pork belly and neck was allowed. Contrastingly, in the Korea-US FTA's agreements, pork tariffs should be removed until January 1st 2016. In dairy products, the period of tariff removal is as same as the Korea-US FTA, but the lower TRQ requirement was obtained.

Economic impacts on the Korean agriculture by the implementation of the Korea-EU FTA is expected to be quite great, nevertheless the agreement in agriculture was reached asymmetrically because the present proportion of commodities which are in low tariff level is 67.6% in EU and, on the contrary, 20.8% in Korea.

The annual average reduction of farm production value is about 177.6 billion won (\$159 million USD), which is less than one-third of the FTA with the US. The 93% of production value reduction would be concentrated on livestock sector and half of this reduction comes from pork. Damages of domestic livestock in the Korea-EU FTA is severer than that the Korea-US FTA. The government announced a supplementary policy for improving the competitiveness of livestock sector to allocate 2 trillion won (\$1.8 billion US dollar) for next 10 years in November 2010.

Table 7. Korea's Concession in the Korea-EU FTA

Concessions Type / Tariff Removal Periods	Commodities	Numbers of Items (%)
Exception	rice, rice related goods	16(1.09%)
Current Tariffs	soybean, wheat, etc.	26(1.77%)
Current Tariff &TRQ	honey, powder milk, etc.	12(0.82%)
Seasonal Tariff &TRQ	orange(September-February: current tariff+TRQ, March-October: 7 years)	1(0.07%)
Seasonal Tariff	grapes(May 1st-October 15th: 17 years, October 16 th -April 30 th : 5 years)	1(0.07%)
15 years & TRQ	cheese, malt, etc.	6(0.41%)
12 years & TRQ	sub-feed, modified starch, etc.	8(0.55%)
10 years & TRQ	butter, modified milk powder, etc.	11(0.75%)
20 years	apple, pear	2(0.14%)
18 years	green tea, ginger, etc.	7(0.48%)
16 years	white sugar	1(0.07%)
15 years	mandarin, jujube, etc.	92(6.28%)
13 years	Chicken meat(frozen breast and drumstick), sweet potato, etc.	27(1.84%)
12 years	Chicken meat(cold-storage), mixed juice(grape), etc.	16(1.09%)
10 years	pork(pork belly, cold-storage neck), tangerine juice	274(18.69%)
7 years	pork(cold-storage edible innards), tomato, etc.	47(3.21%)
6 years	pork(frozen trotter, sealed one), etc.	3(0.20%)
5 years	pork(others), olive oil, etc.	287(19.58%)
3 years	orange juice, margarine, etc.	13(0.88%)
2 years	Avocado(fresh), lemon, prune(dried)	0(0.20%)
0 years	black tea, flower, feed, etc.	613(41.81%)
Total		1,466(100%)

Source: Ministry of Food, Agriculture, Forestry and Fisheries.

V. Implications and Suggestions

Korean economy has experienced rapid growth with export-oriented strategy and industrialization under the GATT system. As the Doha round negotiations of the WTO have been standoff since 2001, Korea has actively engaged in the regionalism through FTA negotiations with over 50 countries as a complementary trade mechanism. The Korean government positively promotes FTAs which will improve the deteriorated balance of payment due to the global financial crisis.

It is predicted that FTAs bring beneficial effects on the Korean economy. Especially, promoting FTA negotiations with gigantic economies such as the US, EU, China and Japan would have great effects on domestic economy. However, it would also accompany severe damages on relatively less competitive sectors like the Korean agriculture. While FTAs fall farm prices and income, consumer welfare could increase since consumers consume all commodities in the world without any seasonal

and locational limitation.

Korea started FTA negotiations with countries which would make minimal impacts on agriculture and then moved forward to major trading countries such as the US and EU. Korea chose Chile as the first negotiating country because it is located in the diagonally opposite side of the earth and then negotiated Singapore and EFTA for minimizing the damage to agriculture and food system.

Overall evaluation of trade liberalization in agriculture is positive because economic impacts were not serious as expected before FTA agreements. In addition, structural changes in agriculture, mainly through public investment, have been achieved relatively successful after active participation of agricultural trade liberalization. This favorable adjustment to trade liberalization comes from national concerns to agriculture because people in the nation allow the government to allocate fiscal budgets to agriculture. Up to now, agricultural trade liberalization is positively evaluated; nevertheless, the following suggestions should be considered in the future FTA and TPP negotiations.

First, the government should review current rules and regulations on food safety and SPS (Sanitary and Phytosanitary) measures in detail and, if necessary, intensify them to prevent foreign diseases through imported food from spreading out all the country in advance. Since import-related diseases may threaten the life of people, they are controllable with an in-depth preparation and public education. The government makes a full disclosure of correct information on food safety and traceability procedures related to imported food. It cannot be emphasized enough that public investment on food safety system is the first priority of agricultural and food policy to avoid social uproars like ‘mad cow disease’ scare in reimporting the US beef in 2007 in the era of trade liberalization.

Second, in order to achieve national consensus and to persuade people damaged by trade liberalization, the government promotes a wide range of efforts with NGO leaders, consumers, business and academia. The existence of gainers and losers in trade negotiations is inevitable; therefore, the government prepares follow-up measures and policies for sectors and industries that would be expected to be damaged. While tremendous damages were expected in fruit farms after the Korea-Chile FTAs, it is evaluated the competitiveness of fruit farms has improved due to a successful series of countermeasure after the FTA. The government should open a line of communication with people of all levels of society such as farm and NGO leaders. It is an indispensable action of government in the front of the Korea-China FTA and the TPP since farmers, NGOs and small businesses are very anxious about them.

Third, the government should establish diverse measures such as a major staple, rice policy, diversification of importing channels and international collaboration for sustainable food security as a chronic food deficit country. It is an urgent policy issue because a series of recent grain price spikes invokes the importance of food security to the people in chronic food importing countries such as Korea and Japan.

Fourth, it is necessary to evaluate FTAs in effect and concluded as well as case studies of FTAs and the TPP on trading partners. Ex-post studies for the evaluation of FTAs contribute to distinguish between right and wrong parts on negotiations and countermeasures since these evaluations these studies might be very useful to prepare forthcoming FTAs and the TPP.

Agricultural trade liberalization is expected to be further accelerated since Korea is planned to negotiate or currently to negotiate with numerous countries. Particularly, negotiations of the TPP and the FTA with China would have great impacts on the Korean agricultural and food system. As a result, agricultural imports are likely to increase in line with the expansion of trade liberalization and economic growth because consumers demand diverse high-quality food products. As agricultural liberalization is accelerating, the share of agriculture in national economy would decline gradually and lose the role of multi-functionality in agriculture. Therefore, it is a future challenge how to balance between the expansion of trade liberalization and the public value of agriculture.

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