

APEC TRADE LIBERALIZATION IN THE AGRICULTURAL SECTOR

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I. Introduction

The Asia-Pacific Economic Cooperation (APEC, hereafter) was formed at the first Asia-Pacific ministerial meeting in Canberra, Australia, in November, 1989 by twelve member economies, Australia, New Zealand, Canada, the United States, Korea, Japan and the ASEAN. It started as a multilateral discussion forum for regional economic problems rather than regional economic integration such as free trade agreement or customs unions.

It was the first summit meeting in Seattle, the United States, in November, 1993 that the APEC earned a high praise for reaching the level of an economic cooperation body and substantially started to deal with regional trade and investment liberalization. At the second APEC summit meeting in 1994, economic leaders from eighteen member economies adopted the Bogor Declaration which announced 2010 and 2020 time schedule of trade and investment liberalization for developed and developing countries, respectively.

In order to promote the implementation of the Bogor Declaration, the APEC summits adopted Osaka Action Agenda in November, 1995, which includes general principles, framework, and actions in specific area of liberalization and facilitation of trade and investment. The leaders also agreed to make and consult detailed action plan for the Bogor Declaration by 1996 and to start implementing the plan from the beginning of 1997.

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The process of APEC trade and investment liberalization may have some practical problems since the general principles of Osaka Action Agenda contain two seemingly conflicting principles: "comprehensiveness" and "flexibility". The former states that "the APEC liberalization and facilitation process will be comprehensive, addressing all impediments to achieving the long-term goal of free and open trade and investment" This implies that any sector and any country cannot be an exception in the liberalization process.

The latter, however, states that "considering the different levels of economic development among the APEC economies and the diverse circumstances in each economy, flexibility will be available in dealing with issues arising from such circumstances in the liberalization and facilitation process." In fact, this can be interpreted as allowing special treatments for a specific sector such as agriculture.

In this study, aspects of agricultural trade in the APEC region will be observed to derive some characteristics of agricultural trade. Then, future perspectives and directions of the agricultural trade liberalization will be discussed based on the effects of regional economic integration in the APEC.

II. Current Situations and Characteristics of Agricultural Trade in the APEC

1. Current Situations of Agricultural Trade in the APEC

The APEC contains several agricultural exporting countries in North America, Oceania and Asia. Among them, the U.S. is the leading exporter of almost all grains and some livestock products as well as cotton and tobacco. Canada, Australia and Thailand can also be classified as exporting countries. On the other hand, Japan is the largest agricultural importing country, followed by China and Korea. As a whole, the APEC is a supplier rather than a consumer in the world agricultural market.

According to Table 1, the U.S. exported US\$ 4.7 billion of wheat in 1993, which corresponds to 56% of the whole APEC export of wheat. Canada and Australia exported 27% and 17% of APEC wheat exports, respectively.

TABLE 1 Trade of Major Grain in APEC(1993)

Unit: US\$ million

	Wheat		Rice		Corn		Soybeans	
	Import	Export	Import	Export	Import	Export	Import	Export
Korea	674	0	35	0	702	0	290	0
Japan	1143	0	41	0	2145	0	1383	0
P.R.China	1008	8	37	266	686	1154	645	102
Taiwan								
HongKong	17	0	157	15	4	0	13	4
USA	227	4668	124	770	67	4474	23	4631
Canada	4	2238	74	1	93	49	57	110
Mexico	233	0	72	0	70	6	523	0
Australia	0	1397	15	161	0	3	13	1
New Zealand	40	0	9	0	3	1	0	0
Thailand	111	0	0	1302	2	28	13	0
Malaysia	185	5	110	0	222	1	131	5
Singapore	32	0	97	0	20	11	12	3
Indonesia	442	0	7	58	68	8	197	0
Philippines	298	0	37	0	0	0	16	0
Brunei	0	0	12	0	1	0	0	0
PNG	15	0	36	0	1	0	0	0
Chile	77	0	12	0	46	22	0	0
APEC total(A)	4506	8316	875	2573	4130	5757	3316	4856
World(B)	16623	14505	5460	4960	9903	8808	7148	6687
A/B 27.1	57.3	16.0	51.9	41.7	65.4	46.4	72.6	

Source: FAO, 「Trade Yearbook」, 1993.

Japan imported US\$ 1.1 billion of wheat, more than 25% of the total imports of wheat in the APEC. China and Korea also imported wheat. The APEC, as a whole, accounts for more than half of the world total exports of wheat.

In the rice market, Thailand exported US\$ 1.3 billion, which is more than half of the whole APEC exports. The U.S., China and Australia are also rice exporting countries. Since Japan, the largest agricultural importing country in the world, and Korea already achieved self-sufficiency of rice, the largest rice importing country is

Hong Kong by importing US\$ 157 million.

The U.S. and Malaysia also imported more than US\$ 100 million of rice. The APEC is a supplier of rice by exporting US\$ 2.5 billion, 52% of the world rice export, while importing US\$ 875 million, 16% of the world rice imports.

The U.S. is the largest corn exporter in the world accounting for US\$ 4.5 billion, which is more than three quarters of APEC corn exports and also more than half of the world corn exports. China is an unstable exporter of corn since it imports corn according to its harvest. Japan, Korea and China are major corn importing countries in the APEC.

The U.S. is the leading exporter of soybean in the world, solely accounting for 95% of the APEC and 70% of the world soybean exports. Canada and China are also soybean exporters. Leading importer of soybean is Japan, followed by China, Mexico, and Korea.

According to Table 2, Australia and the U.S. are two leading beef exporters, followed by New Zealand. Major importing countries are Japan, the U.S., Canada, and Korea. It is noteworthy that the U.S. is an importing and exporting country at the same time, showing "intra-industry trade": importing low quality beef and exporting high quality beef. The APEC accounted for 41% of world beef import and 38% of exports.

China, Canada and the U.S. are three major pork exporting countries while Japan and the U.S. are major customers in the APEC. The APEC is an importer in the world pork market by showing US\$ 1.1 billion of pork trade deficits. It accounts for 41% of the world imports and 28% of exports.

Two main exporting countries of broiler are the U.S. and Thailand. China is also an exporting country. On the other hand, Japan, Hong Kong and Mexico are major importers. The APEC, as a whole, records US\$ 0.2 billion of trade surplus and its share of import is 29% while that of export is 33% of the world broiler trade.

New Zealand is a leading milk exporter in the APEC, followed by Australia and the U.S. On the other hand, Mexico, China and most ASEAN countries import milk. The APEC as a whole, is an importer of milk by showing US\$ 2.3 billion of imports and US\$ 1.9 billion of exports.

TABLE 2

Trade of Livestock in APEC(1993)

Unit: US\$ million										
	Meat Total		Beef		Pork		Broiler		Milk	
	Import	Export	Import	Export	Import	Export	Import	Export	Import	Export
Korea	385	82	330	0	0	62	33	0	42	1
Japan	6513	9	2457	4	2571	0	752	5	181	2
P.R.China	256	1422	170	28	0	1118	58	210	304	28
Taiwan										
Hong Kong	601	166	111	7	71	1	341	143	201	93
USA	2406	4001	1828	1945	436	435	4	953	42	344
Canada	699	977	520	373	32	484	92	10	32	66
Mexico	635	35	230	4	72	18	156	3	490	7
Australia	10	2605	5	2100	3	12	0	6	23	434
New Zealand	19	1624	8	755	4	0	0	1	3	723
Thailand	6	370	5	0	0	1	0	369	178	21
Malaysia	98	8	73	6	0	0	3	2	247	46
Singapore	161	26	49	6	10	1	81	15	156	70
Indonesia	14	20	6	0	0	0	1	2	97	5
Philippines	31	0	29	0	0	0	1	0	230	0
Brunei	20	3	4	0	1	0	14	3	4	0
PNG	58	0	16	0	0	0	1	0	13	0
Chile	77	22	94	0	1	7	0	8	51	13
APEC total(A)	11989	11370	5935	5228	3201	2139	1537	1730	2294	1854
World(B)	32052	30680	14339	13658	7802	7532	5319	5311	10669	10446
A/B	37.4	37.1	41.4	38.3	41.0	28.4	28.9	32.6	21.5	17.7

Source: FAO, 「Trade Yearbook」, 1993.

2. Agricultural Market Conditions

Unlike manufacturing or other non-agricultural sectors, the agricultural market has some features. The first feature is that seasonal variations of supply are unstable, while those on the demand side are relatively stable. Variations of supply are also uncontrollable since agricultural production depends on natural conditions including precipitation and temperature, etc.

Second feature of the agricultural market is that quantities traded in world market account for relatively small portion of

production. Table 3 shows the ratios of export quantities to the world production for main grains and livestock products during the period of 1985 to 1995.

In 1995, the shares are 20.8% for wheat, 13.1% for corn and 12.3% for coarse grain. The export shares for rice and soybeans are 4.7% and 23.7% in 1994. And those for beef and pork were 15.1% and 6.7%, respectively.

Relatively low export shares imply that slight changes in production of some commodities may cause huge changes in international supplies and their prices, since elasticities of demand for agricultural products are generally low.

TABLE 3 Trade Shares of Some Agricultural Products

Year							Unit: %
	Wheat	Rice*	Corn	Soybean*	Coarse grain	Beef	Pork
1985	19.4	3.8	12.9	26.9	11.4	10.8	6.7
1990	19.9	3.6	13.5	23.2	12.4	14.9	7.0
1995	20.8	4.7	13.1	23.7	12.3	15.1	6.7

Note: * items are shares in 1994

Source: USDA, 「P, S and D Database」, 1995

3. Characteristics of Agricultural Trade

Considering the aspects and trends of agricultural trade in the APEC region, characteristics of agricultural trade in the APEC can be summarized as follows.

First, APEC is a major supplier in the world agricultural trade, especially for grain markets. The APEC exports of major grains such as wheat, rice, corn and soybeans account for more than 50% of the world total exports. That means major exporting countries in the APEC may have oligopolistic power of setting prices in the world market.

Second, most agricultural exporting countries are industrialized countries such as the U.S., Canada, Australia and New Zealand while major importing countries except Japan are developing countries such as China, Korea, Indonesia, Malaysia and Mexico. This may suggest the possibility of asymmetric relationships between exporting and

importing countries in the APEC trade liberalization.

Third, due to the protective policies of the major agricultural exporting countries, a large portion of agricultural trade has been subject to distortions¹. So, changes in their production relative to their consumption and in their export support policies may cause a very large impact on quantities exported and market prices(ABARE, 1996).

Fourth, small changes in agricultural production can trigger huge changes in export quantity and international market prices. Because of low export shares to production for most agricultural commodities and stable consumption, slight changes in production will directly affect the quantity supplied and the prices.

Fifth, immobility of production factors is a constraint to the world agricultural production capacity. Land and agricultural equipments are in nature fixed not only in specific areas but also in some special uses. And agricultural labors can be diversified only to the limited uses, at least in the short-run. That means, there exist limits in expansion of world production and supply when the demand for some commodities increases as income or population increases.

Finally, regional trade interdependency between member economies of the APEC is relatively high and increasing. It increased to 68.5% in 1992 from 56.8% in 1980 (Eor and Kim, 1995). Korean import dependency of agricultural commodities on the APEC was 84.1% while that of the total import was 69.3% in 1993. Thus, trade liberalization in the APEC may have a larger impact on agriculture than non-agricultural sectors in Korea.

¹ The leading agricultural export country, the U.S. already implemented various types of export support programs: Credit Guarantee Program(GSM-102/103), Market Promotion Program(MPP), and Export Enhancement Program (EEP) under the "Food, Agriculture, Conservation and Trade Act of 1990." Even after the UR, the new farm bill, "Federal Agricultural Improvement and Reform Act of 1996: FAIR" also maintains the Export Credit Guarantee Program and EEP while it curtails budget for Market Promotion Program.

Canada also operates export credit programs similar to GSM-102/103 of the US.

III. Effects of Regional Trade Liberalization

1. The Form Economic Intergration in APEC

Regional economic integration takes place in the same geographic area among countries with common economic interests. Various measures can be taken to create a single large market by ensuring the free movement of goods and factors of production within the area. When the APEC establishes formal rules and takes the form of an organization for economic cooperation among countries in order to enjoy the economic and technological benefits of a single market, it can have the characteristics of regional economic unity. Namely, a formal and institutional unity is achieved once participating member countries reach a consensus on the form and the conditions of unity and take formal cooperative measures.

As a regional economic unity, the APEC is not just a vertical integration to maintain complementary economic relations between developed and developing countries, exporters of agricultural goods and manufactured goods, but also a horizontal integration between competitive countries with similar levels of economic development and structures.

Basic conditions of customs unions are that there exists the elimination of tariffs on imports from member countries and the adoption of common external tariff on imports from the rest of the world. Another condition of the customs unions is the apportionment of customs revenue according to an agreed formula among member economies.

On the other hand, in the free trade area, member countries should hold the power to fix their own separate tariff rates on imports from the rest of the world. And the rules of origin are emphasized in order to confine intra-area free trade to products originating in or mainly produced in the area.

According to these view points, trade liberalization in the APEC seems to be similar to a free trade area, though the APEC advocates "open regionalism" in that privileges of liberalization are granted to members and outsiders as well. Since there is no common external tariff in the APEC, it is different from customs union, and moreover, it emphasizes the rules of origin.

2. The Effects of Free Trade Area

While a customs union levies a common external tariff against goods from outside countries, member countries of a free trade area manage their own tariffs and rules of origin to prevent trade deflection. Theoretically, integration affects patterns of trade, production and consumption. In addition, there is a change in the allocation of resources and the social welfare of the countries within and outside the bloc.

The effects of free trade area can be classified as a trade creating effect and a trade diversion effect.

2-1. Trade Creating Effects

The elimination of regional tariffs increases trade within the region by shifting production from high-cost countries toward low-cost countries. National production of certain products may decrease or disappear because of imports, resulting in Vinerian trade creation, in high-cost countries. Consumers also gain consumer's surplus because lower tariffs cause import prices to fall (Robson, 1987).

As in Figure 1, before country H and country P form a free trade area, country H has high production costs and the domestic price of agricultural commodity is at P_H . Assume that the tariff rate is high but lower than a prohibitive level. So, it is set at P_{wT_H} .

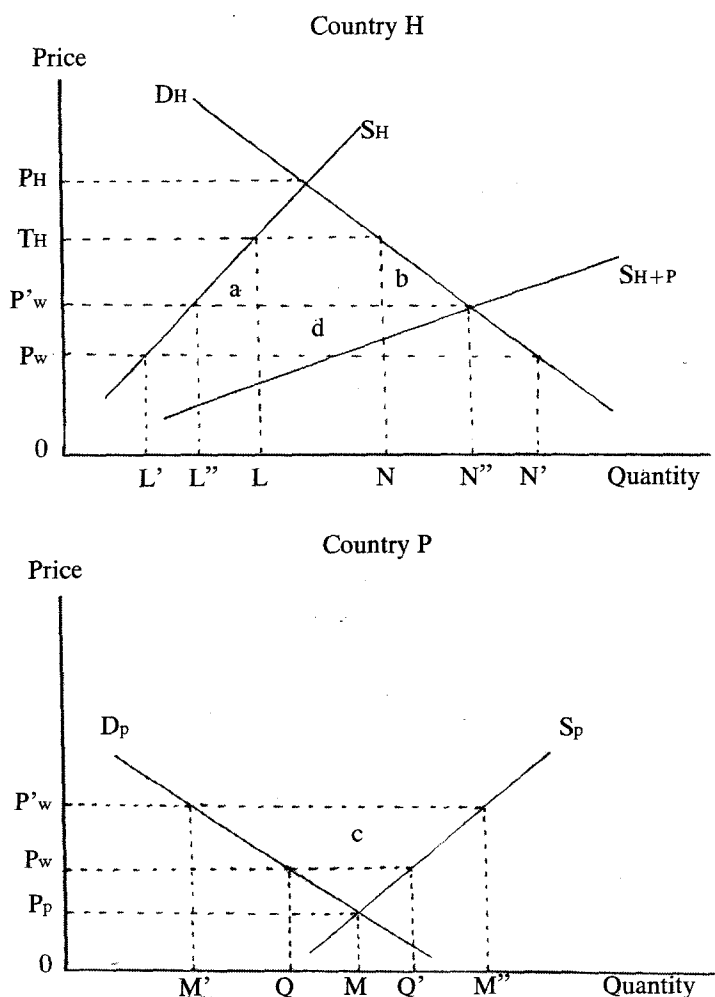
On the other hand, country P is competitive in the world market so that its domestic price is P_P which is lower than the world market price, P_w . Assume that country P accounts for a considerable part of the world market supply. And since the supply curve is upward sloping rather than horizontal, its supply price will go up as demand increases. Also, assume that country P exports some amounts(QQ') at P_w before the free trade area is established.

Country H produces OL and consumes ON before the free trade area. Quantity LN is imported from the world market, including country P and tariff receipts are $LN \times P_{wT_H}$. When tariffs are eliminated under the free trade area, country H's production is reduced to OL' and consumption increases to ON'. So, imports increase to L'N' which are completely imported from country P within the free trade area.

Country P increases its production from OQ' level as export demand from country H increases after the free trade area. The excess demand makes country P produce more and the price also goes up until domestic and export demand decrease. When it produces OM'' , domestically consume OM' and exports $M'M''$ to country H, they can arrive at a new equilibrium price P'_w . That is,

FIGURE 1

The Effects of Free Trade Area



in equilibrium under the free trade area, country P's quantity of exports (M'M'') and country H's imports (L''N'') are equivalent.

In Figure 1, triangle "a" represents the production effect or a Viner-type trade creation, a decrease in domestic production. Triangle "b" is the consumption effect, increased consumption and consumer surplus because of lower import prices following the elimination of tariffs. Together, these triangles represent the total trade creation effects. Tariff receipts formerly captured by the government are then transferred to consumers in the form of increased consumer surplus.

The effect of free trade area in country P is an increase in price to PW' and an increase in supply to MM'' due to the higher export demand. Producer's surplus will increase but consumer's surplus will decrease in country P by higher prices. Reversed trapezoid "c" represents net increase in welfare of country P.

2-2. Trade Diversion Effects

If tariffs are lowered within a region and tariff barriers remain for countries outside the bloc, trade diversion can occur. Production can shift to a producer within the bloc from outside producers even though production costs may be higher.

Thus, consumer's surplus will decrease by the shift in demand from the low-price good to the higher-price good. The trade diversion effect is represented by the rectangle "d" in Figure 1, the difference in price before and after the formation of free trade area (Pw'-Pw) multiplied by the former imports LN.

Trade diversion effects of the APEC trade liberalization will be negative and have distortion on the allocation of resources because countries that had previously imported goods from countries outside the bloc will now import goods from countries within the bloc at higher prices. Thus, total effects of trade liberalization depends on the relative sizes of trade creating effects and diversion effects.

IV. Perspectives of Agricultural Trade Liberalization in the APEC

The APEC trade liberalization will increase demand in most Asian countries since it reduces or removes import inhibitive tariffs in

those countries. As we have observed, the shares of APEC in the world agricultural market supplies of most commodities are considerably high so that world market price will rise as demand in the APEC shifts upward.

Moreover, since exporting countries must reduce export and domestic subsidies as they committed in the UR agreements, domestic production costs of exporting countries tend to increase, other things being equal².

As a result, world market prices of agricultural products will rise by trade liberalization in the APEC.

In a pure economic sense, rise in prices will cause supply to increase and lead to reach a new equilibrium with demand being constant or increasing. But, taking into account the characteristics of agricultural trade, the perspectives of APEC trade liberalization in the agricultural sector would be as follows.

First, trade liberalization will reduce domestic productions and expand imports in importing countries so that trade creation effects will be large. At the same time, trade diversion effects will be relatively small because intra-APEC import dependencies are high and the possibilities of trade diversion from non-member countries to the member economies is relatively low in most importing countries.

Second, due to the immobility of agricultural production factors, trade liberalization and consequently decreasing domestic production may reduce agricultural producer's surplus. And in some cases, trade liberalization may lessen the national economic welfare of the importing country, even though it surely increases a total welfare of the region. Moreover, taking into account continuous economic growth and increases in populations in most developing member economies, decreases in domestic agricultural production and high dependency upon imports might cause serious food security problems in the APEC region and in the world.

Third, the possibility of market failure between exporting and importing countries of agricultural commodities becomes higher as trade become liberalized. Since most exporting countries are

² Developed countries must reduce expenditures for export subsidy by 36% or reduce volume by 21% over 6 years. Also, to promote market access, they should reduce tariffs by 36% on average and 15% for each item over 6 years. All domestic subsidies that may distort trade must be reduced by 20% over 6 years.

industrialized and own a lot of information on the market, most importing countries cannot have the symmetric information which is necessary for negotiations on trade liberalization.

Fourth, since elasticity of agricultural demand is relatively low and export has been only a small portion of the total production, agricultural trade liberalization can cause drastic impacts on world market. A slight change in production may result in multiplied effects on export volumes and market prices.

Fifth, for some member economies, social interests on some specific commodities are traditionally so high and sensitive that price instability of the commodities may cause political and social problems. For example, rice in Korea and Japan is the sensitive item to be treated carefully. "Flexibility" principle of the Osaka Action Agenda is suitable for rice in those countries.

V. Summary and Conclusions

After the settlement of the UR negotiations, the APEC became a substantial forum of trade and investment liberalization. Thus, such issues as liberalization and facilitation of trade, acceleration of the UR implementation, and downpayment for liberalization are included in the APEC agenda. APEC economic leaders adopted Osaka Action Agenda for implementation of the Bogor Declaration. The Osaka Action Agenda contains two principles of "comprehensiveness" and "flexibility" which seem to be conflicting each other. The former implies that liberalization process must cover all areas and countries without any exception while the latter seems to allow special treatments for some specific sectors. They, however, are not conflicting but compatible since "flexibility" can be interpreted as allowing an exception in the means and ways rather than in the objectives of liberalization.

In the world agricultural market, the APEC is a major supplier and some major exporting countries in the APEC may have oligopolistic power. Most agricultural exporting countries are industrialized while major importing countries except Japan were developing countries, which may cause asymmetric information and unfair game problems in the process of agricultural trade negotiations.

Slight changes in agricultural production can trigger drastic changes in export quantity and international market prices because of the low export portion of production with stable consumption. For some member economies, there exist politically and socially sensitive commodities to be treated flexibly.

Immobility of production factors prevents world agricultural production capacity from matching increased demand and may cause serious food security problems in the long run if income and population continuously increase in developing countries. APEC trade liberalization and consequently decreased domestic production may reduce agricultural producer's surplus and national economic welfare of importing countries.

Trade interdependency between member economies of the APEC is relatively high and increasing. Thus, trade diversion effects of the regional economic integration tend to be low, while trade creation effects may be high in the APEC.

Considering these discussions, APEC trade liberalization seems to have double blades; benefits from positive trade creation effects and some problems that may be caused by liberalization. In this sense, it can be concluded as follows.

Two principles, "comprehensiveness" and "flexibility" are not conflicting but compatible with each other and to be observed thoroughly. Since APEC trade liberalization will increase economic welfare of the region, there cannot be an exception in the liberalization.

But, at the same time agricultural trade liberalization should be proceeded flexibly on the "unilateral," "voluntary," "progressive," and "in the long-term" bases. In order to attain the common goals of "sustainable growth," "equitable development" and "national stability", member economies should autonomously implement their own action plans. That's because each member economy can be familiar with its own diverse conditions and circumstances much better than any other country.

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