

Current Situation and Prospect of Food Trade in Asian Countries

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Introduction

In Asian countries under the globalization, food trade has been making substantial progress in the recent years. It is playing a strong engine on pushing forward the agricultural development. Through the active food trade, a challenge for creating out new business will be emerging in making up added value and job opportunity.

The purpose of this presentation is put the emphasis on analyzing the current situation of food trade in Asian countries and exploring the prospect.

1. Key Indicators in the Selected Asian Countries

Asia is largely divided into East region (China, People's Rep. of, Japan, Korea, Rep. of and others) and Southeast region (Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, Viet Nam and others). Countries in East region consist of industry and service led economy and agriculture led economy in Southeast region in terms of share on value added by sector. Even in Southeast region, Indonesia, Malaysia, Philippines, Thailand and Viet Nam have already entered into the industry led economy from the view of share on value added. Cambodia, Lao PDR and Myanmar are still agriculture based economy.

China, People's Rep. of recorded significantly higher growth rates of real GDP per capita in 2007-09 with 10.4%, Myanmar following with 9.1%. The other countries remained with the lower growth rates except for Viet Nam with 5.6% and Lao PDR with 5.5%.

Share on exports of goods and services for GDP was higher in Malaysia, Thailand, Viet Nam and Cambodia with over 50 % than other countries while share on import was higher in Viet Nam, Cambodia and Malaysia with over 60 % in 2009.

On the other hand, growth rates of real exports of goods and services in 2007-09 were higher in Cambodia (15.2%) and Myanmar (8.6%) while growth rates of real

imports were higher in Myanmar (17.4%) and Cambodia (15.1%).

It is considered that Cambodia and Myanmar are strongly seeking the market for foreign economies because of small scale in the domestic market. Malaysia, Thailand and Viet Nam are likely to support the higher growth rates and expanded economy by vigorous trade.

Table 1. Key Indicators in the Selected Asian Countries

	GDP per capita at PPP	Growth Rates of real GDP per capita	Agriculture Value Added (% of Total)	Industry Value Added (% of Total)	Growth Rates of Agriculture real Value Added	Exports of Goods and Services (% of GDP)	Imports of Goods and Services (% of GDP)	Growth Rates of real Exports of Goods and Services	Growth Rates of real Imports of Goods and
	Dollars, 2005	% 2007-09	% 2009	% 2009	% 2007-09	% 2009	% 2009	% 2007-09	% 2007-09
East Asia									
China, People's Rep. of	6914	10.4	10.3	46.3	4.4	27.2	22.7	0.2	na
Japan	32620	-1.3	1.4 ^{b)}	27.3 ^{c)}	3.0 ^{b)}	12.6	12.3	-4.6	-4.7
Korea, Rep. of	28036	2.2	2.6	36.7	3.7	49.9	46.0	6.1	2.6
Southeast Asia									
Cambodia	2152 ^{d)}	3.6	32.5 ^{b)}	22.4 ^{e)}	5.4 ^{b)}	52.7 ^{f)}	75.7 ^{f)}	15.2 ^{g)}	15.1 ^{h)}
Indonesia	4149	4.3	15.3	47.6	4.1	24.1	21.3	2.8	1.4
Lao PDR	2264	5.5	32.8	25.2	5.1	na	na	na	na
Malaysia	13493	1.1	9.3	43.4	2.0	96.4	74.9	-1.6	-1.4
Myanmar	na	9.1	38.2	24.4	6.3	na	na	8.6 ^{g)}	17.4 ^{h)}
Philippines	3514	2.0	14.8	30.2	2.7	31.7	30.8	-3.3	2.0
Thailand	8056	1.0	11.6	43.3	1.3	68.4	57.9	0.07	-3.0
Viet Nam	2992	5.6	20.9	40.2	3.4	68.3	78.7	na	na

Note: a) b) c) e) f) are shown in 2008. d) is shown in 2006-08. g) h) are shown in 2005-07.

Source: Asian Development Bank (ADB), *Key Indicators for Asia and the Pacific 2010*

2. Agricultural Production in the Selected Asian Countries

Arable land per agricultural worker was the largest in Japan with 1.61 ha while was the smallest in Viet Nam with 0.26 in 2008. Share on rice harvested area of total arable land was the highest in Viet Nam with 117.7% while was the lowest in Malaysia with 36.4% in 2008. And rice production per ha was the largest in Korea, Rep. of with 7.39 ton/ha while was the smallest in Cambodia with 2.75 ton/ha. Briefly speaking, East Region had much higher land productivity for rice than in Southeast Region except for Viet Nam.

In top 5 value of agricultural production by crops and animals, each country has

different characteristics in reflection with the difference of resource endowments and other reasons. In almost countries, rice is situated at central crop as staple food. Following to the rice, animal products such as meat, egg, milk have secondly important value of agricultural production. Vegetables are following to rice and animal products.

Malaysia and Indonesia are putting comparative advantage on agricultural value to palm oil and natural rubber while putting it on cassava in Thailand and Cambodia, coconuts in Indonesia and Philippines, banana in Philippines, beans and sesame seed in Myanmar, sugar cane in Thailand, coffee and cashew nuts in Viet Nam.

Table 2 Agricultural Production in the Selected Asian Countries

	Arable Land per Agricultural Worker	Share on Rice Harvested Area (% of Total Arable land)	Rice Production per ha	Top 5 Value of Agricultural Production by Crops and Animals (MILS, 2006-08)				
	ha, 2008	% 2008	ton/ha, 2008					
East Asia								
China, People's Rep. of	0.35	27.1	6.56	Pig Meat (46828)	Rice, Paddy (35508)	Vegetables (23726)	Hen Eggs (18527)	Wheat (15518)
Japan	1.61	37.8	6.78	Rice, Paddy (2305)	Hen Eggs (2144)	Cow Milk (2120)	Chicken Meat (1592)	Pig Meat (1264)
Korea, Rep. of	0.92	60.3	7.39	Rice, Paddy (1365)	Pig Meat (1046)	Vegetables (627)	Cow Milk (582)	Chicken Meat (566)
Southeast Asia								
Cambodia	0.81	67.0	2.75	Rice, Paddy (1373)	Cassava (194)	Cattle Meat (131)	Pig Meat (119)	Vegetables (91)
Indonesia	0.53	56.0	4.89	Rice, Paddy (11844)	Palm Oil (5031)	Coconuts (1700)	Chicken Meat (1595)	Natural Rubber (1487)
Lao PDR	0.47 ^{a)}	66.0	3.55	Rice, Paddy (506)	Vegetables (134)	Tobacco (71)	Maize (54)	Cattle Meat (50)
Malaysia	1.21	36.4	3.59	Palm Oil (4989)	Chicken Meat (1158)	Natural Rubber (635)	Palm Kernels (553)	Rice, Paddy (472)
Myanmar	0.92 ^{b)}	77.4	3.72	Rice, Paddy (5718)	Chicken Meat (817)	Beans, dry (721)	Vegetables (597)	Sesame Seed (472)
Philippines	0.44	84.2	3.77	Rice, Paddy (3229)	Pig Meat (1617)	Coconuts (1343)	Bananas (982)	Chicken Meat (799)
Thailand	1.03	70.3	2.96	Rice, Paddy (5957)	Cassava (1793)	Natural Rubber (1656)	Sugar Cane (1285)	Chicken Meat (1153)
Viet Nam	0.26	117.7	5.22	Rice, Paddy (7533)	Pig Meat (2541)	Vegetables (1238)	Coffee, green (900)	Cashew Nuts (764)

Note: a) Agricultural worker is shown in 2005. b) Agricultural worker is shown in 1997.

Source: FAOSTAT, Available at <http://www.fao.org>

3. Food Export and Import in the Selected Asian Countries

(1) Export

China, People's Rep. of, Japan and Korea, Rep. of in East Region are mainly

exporting the different kinds of prepared food such as the processed cereals, vegetables, fruits, animals, fishes and precooked food. On the other hand, in Southeast Region the exported foods are highly different by country. Thailand and Viet Nam are mainly exporting the milled rice, coffee (green) in Viet Nam, Indonesia and Lao PDR, cocoa (beans, butter) in Indonesia and Malaysia, dried beans in Myanmar, fruits like banana, pineapple and its products in Philippines, prepared food in Thailand and Malaysia, chicken meat and sugars in Thailand, cashew nuts in Viet Nam, maize in Myanmar, Cambodia and Lao PDR.

Such a tremendous difference in the exported foods by each country may be based on the difference of natural resource endowment, infrastructure relating to production, manufacturing and marketing and stages of economic development.

Table 3. Top 5 Food Export in the Selected Asian Countries (2006-08)

(Unit: M. \$)

	Food Export Value with Top 5	First	Second	Third	Forth	Fifth
East Asia						
China, People's Rep of	5099.5	Food Prep Nes (1626.5)	Fruit Prep Nes (1056.4)	Apple juice, single strength (989.8)	Vegetables Preserved Nes (861.4)	Paste of Tomatoes (565.4)
Japan	863.1	Food Prep Nes (543.5)	Pastry (107.7)	Beverage Non-Alc (78.1)	Flour of Wheat (71.4)	Rice Fermented Beverages (62.2)
Korea, Rep. of	935.9	Food Prep Nes (479.9)	Bever. Dist. Alc (130.3)	Sugar Refined (130.3)	Pastry (103.7)	Coffee Extracts (91.7)
Southeast Asia						
Cambodia	209	Maize (12.6)	Soybeans (5.7)	Rice Milled (1.7)	Sesame Seed (0.5)	Chillies and Peppers, dry (0.4)
Indonesia	2233.6	Coffee, green (735.7)	Cocoa beans (698.7)	Margarine Short (313.3)	Cocoa Butter (245.2)	Food Prep Nes (240.7)
Lao PDR	340	Coffee, green (21.3)	Maize (10.3)	Fruit Prep Nes (1.1)	Sesame Seed (1.0)	Groundnuts, withshell (0.3)
Malaysia	1308.3	Cocoa Butter (479.4)	Food Prep Nes (310.4)	Pastry (195.8)	Food Prep Flour, Milt Extract (155.8)	Milk Whole Dried (153.1)
Myanmar	764.8	Beans, dry (606.8)	Sesame seed (49.8)	Rice Milled (43.9)	Chickpeas (38.5)	Maize (25.8)
Philippines	1175.1	Bananas (782.0)	Pineapples (145.8)	Fruit Prep Nes (127.3)	Milk Whole Dried (68.0)	Food Prep Nes (52.0)
Thailand	6749.1	Rice Milled (3492.1)	Meat of Chicken Canned (1283.3)	Food Prep Nes (832.2)	Sugar Refined (583.8)	Sugar Raw Centrifugal (557.7)
Viet Nam	4709.1	Rice Milled (1887.3)	Coffee, green (1747.5)	Cashew Nuts Shelled (688.3)	Pepper (Piper Spp) (256.5)	Tea (129.5)

Note: Numerical value in parenthesis is shown on average of 2006-08. Total value summed up the top 5 food import.

Source: FAOSTAT, Available at <http://www.faostat.fao.org>

(2) Import

China, People's Rep. of is highly importing soybeans and its oil at the tremendous value. Maize and chicken meat is following to this. Japan and Korea, Rep of are mainly importing maize, pork, wheat and cattle meat. Wheat is widely imported from the other countries as well. Great value of soybeans and cake of soybeans are also imported from Thailand, Indonesia, Viet Nam and Philippines. Milled rice is imported from Philippines and Malaysia. Different kinds of prepared food are widely imported from Southeast Region.

As far as is concerned in the selected Asian countries, cereals and its products like wheat, rice and maize as well as oil seed like soybean will be categorized as main imported food products. In addition, processed foods and beverage are widely imported from each country, though the specific products will be largely different. It seems that Asian countries may be much closer by means of food trade.

Table 4. Top 5 Food Import in the Selected Asian Countries (2006-08)

(Unit: MLS)

	Food Import Value with Top 5	First	Second	Third	Fourth	Fifth
East Asia						
China, People's Rep. of	19338.4	Soybeans (14485.5)	Soybean Oil (2115.5)	Maize (954.0)	Chicken meat (946.4)	Bever. Dist. Alc (837.0)
Japan	13518.4	Maize (4010.5)	Pork (3627.1)	Wheat (2068.2)	Meat Cattle Boneless (Beef&Veal) (2039.1)	Soybeans (1773.5)
Korea, Rep. of	3950.6	Maize (1434.3)	Pork (726.9)	Wheat (716.7)	Meat Cattle Boneless (Beef&Veal) (560.8)	Food Prep Nes (511.9)
Southeast Asia						
Cambodia	253.0	Sugar Refined (94.8)	Beer of Barley (49.6)	Bever. Dist. Alc (37.0)	Food Prep Nes (36.1)	Food Waste (35.5)
Indonesia	3111.0	Wheat (1324.3)	Cake of Soybeans (745.4)	Soybeans (492.3)	Milk Whole Dried (282.4)	Food Prep Nes (266.6)
Lao PDR	115.9	Bever. Dist. Alc (34.9)	Beverage Non-Alc (29.9)	Food Prep Nes (21.3)	Sugar Refined (15.5)	Coffee Extracts (14.3)
Malaysia	2586.9	Cocoa Beans (879.2)	Maize (559.3)	Sugar Raw Centrifugal (416.0)	Wheat (369.2)	Rice Milled (363.2)
Myanmar	197.8	Food Prep Nes (99.7)	Beverage Non-Alc (36.5)	Coffee Extracts (21.2)	Milk Whole Exp (20.8)	Bever. Dist. Alc (19.6)
Philippines	2448.0	Wheat (690.3)	Rice Milled (589.7)	Cake of Soybeans (463.0)	Milk Skimmed Dry (356.1)	Food Prep Nes (348.9)
Thailand	2068.1	Cake of Soybeans (719.0)	Soybeans (634.6)	Food Prep Nes (275.8)	Wheat (269.0)	Milk Skimmed Dry (169.7)
Viet Nam	1612.6	Cake of Soybeans (661.0)	Bever. Dist. Alc (331.6)	Wheat (287.5)	Food Prep Nes (169.6)	Chicken meat (162.9)

Note: Numerical value in parenthesis is shown on average of 2006-08. Total value summed up the top 5 food import.

Source: FAOSTAT, Available at <http://www.faostat.fao.org/>

4 . Intra-Food Trade and Prospect of Food Trade in Asian Countries

(1) Intra-Food Trade

Grubel-Lloyd (GL) Index is widely used as the measure showing the degree of intra-industry trade. This is formulated as follows.

$$GL_{ik} = \frac{(X_{ik}+M_{ik}) - |X_{ik} - M_{ik}|}{(X_{ik}+M_{ik})} \times 100 = 1 - \left\{ \frac{|X_{ik} - M_{ik}|}{(X_{ik}+M_{ik})} \right\} \times 100$$

X_{ik} ; Export Value on k industry in Country i

M_{ik} ; Import Value on k industry in Country i

When trade direction of k industry is one way, value of export or import will be zero and GL Index will also get to zero. When export value is equal to import value in k industry, GL Index will be 100, which means complete intra-industry trade.

Table 5 shows GL Index on food trade in the selected Asian countries in 2007. According to table 5, GL Index of food and beverage is much higher in China, People's Rep. of (99) and Philippines (90). Specifically denoting the highest GL Index of food by country, it will be shown as follows.

Japan: miscellaneous edible preparations (59)

Korea, Rep. of: Cereal, flour, starch, milk preparations and products (91)

China, People's Rep. of: beverages, sprits and vinegar (98)

Indonesia: edible fruit, nuts, peel of citrus fruit, melon (78)

Malaysia: fish, crustaceans, molluscs, aquatic invertebrates ne (95)

Philippines: beverages, sprits and vinegar (98)

Thailand: coffee, tea mate and spices (86)

Table 5. GrubeL byd Index on Food Trade in the Selected Asian Countries (2007)

Code	Commodities	Japan	Korea, Rep of	China, People's Rep of	Indonesia	Malaysia	Philippines	Thailand
BEC1	Food and beverages	13	38	99	58	66	90	45
BEC111	Food and beverages, primary, mainly for industry	1	0	29	81	22	43	34
BEC112	Food and beverages, primary, mainly for household consumption	14	38	50	55	84	50	31
BEC121	Food and beverages, processed, mainly for industry	14	8	22	25	32	91	72
BEC122	Food and beverages, processed, mainly for household consumption	16	52	52	94	96	71	35
HS02	Meat and edible meat offal	1	3	65	21	6	11	61
HS03	Fish, crustaceans, molluscs, aquatic invertebrates ne	20	53	84	5	95	52	81
HS04	Dairy products, eggs, honey, edible animal products nes	3	6	76	28	61	35	50
HS07	Edible vegetables and certain roots and tubers	4	39	33	49	38	73	25
HS08	Edible fruit, nuts, peel of citrus fruit, melon	8	26	72	78	60	19	68
HS09	Coffee, tea mate and spices	5	10	13	19	44	1	86
HS10	Cereals	0	0	42	4	0	0	15
HS11	Milling products, malt, starches, inulin, wheat gluten	31	32	61	17	48	8	58
HS12	Oil seed, oleagic fruits, grain, seed, fruit, etc, ne	6	28	23	33	15	35	19
HS13	Lac, gums, resins, vegetable saps and extracts nes	21	70	61	70	28	46	55
HS15	Animal vegetable fats and oils, cleavage products et	16	8	8	2	16	38	50
HS16	Meat, fish and seafood food preparations nesl	19	45	2	7	65	6	2
HS17	Sugars and sugar confectionery	18	53	92	16	53	84	10
HS18	Cocoa and cocoa preparations	12	26	82	16	93	26	74
HS19	Cereal flour, starch, milk preparations and products	39	91	65	59	84	71	67
HS20	Vegetable, fruit, nut, etc food preparations	3	39	10	55	76	34	19
HS21	Miscellaneous edible preparations	59	83	51	77	92	32	53
HS22	Beverages, spirits and vinegar	14	59	98	77	79	89	82
HS23	Residues, wastes of food industry, animal fodder	7	9	88	44	75	16	87

Source: Cited from Karada, N (2011), *Japanese Agriculture under the Surge of International Economy*, Iseki, K (eds), *Some Issues on Enhancing the Food Self-sufficiency Ratio in Japan (in Japanese)*, Tsukuba-shicho, pp.25-36. Original data was cited from United Nations (UN), *Comtrade*

Totally, GL Index is higher in terms of fish and its products, vegetable, fruit and its products, cereal products and food edible preparation.

(2) Prospect of Food Trade

Each country in Asian region has made a great progress in the recent years. In parallel with this movement, income per capita has significantly increased, centering urban area on. The increased income contributed to take higher quality food and changed the diet pattern to taking more casual foods. Flowing in lots of information and tremendous development of information and transportation technology made food trade easier within the Asian region. Each country keeping sustainable economic development in the future, food trade in Asia region will be getting more active. Keeping pace with food trade, active foreign investment for food industry will accelerate the food trade as

synergistic effects.

Conclusion

In Asian region, as far as food trade is concerned, a specialization of food trade will be able to be identified obviously on the basis of the difference of resource endowment and the stage of economic development. Countries in East region have comparative advantage on highly processed food. Upper and middle income countries in Southeast region have it on food with high added value. And lower income countries in Southeast region have a lot of raw materials for food processing. Such differences will be attributable to active food trade in Asian countries. And progressive food trade and foreign investment for food industry will keep future promising forward the development of agriculture and food industry in Asian region.

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