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## THE DEVELOPMENT AND THE IMPORTANCE OF ASIAN AGRICULTURAL SECTOR IN GLOBAL ECONOMY

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**Abstract:** The study is an attempt to characterize changes in production and consumption of selected agri-food products in the countries of Southeast Asia. The author analyzes a foreign agricultural trade, including especially the changes in export and import in value as well as changes in shares in international agricultural trade. The purpose of paper is to characterize the main development trends in Asian agricultural markets and their role in the global economy.

**Key words:** Southeast Asia, agricultural trade, agri-food sector, newly industrialized economies.

### 1. Introduction

Over the last two decades, economic integration in the world's economy has proceeded with accelerating steps, transforming the planet into a global market place and production system. Besides this globalization and the crucial role of the highly developed economies, the newly industrialized economies from East Asia (China) and other emerging South Asia's economies (India) are more and more important. These economies recently called "emerging", today in the world economy stand out as one of the key players in the global economy. Moreover, it applies not only to those two mentioned above leading countries, but also to most of the economies in the Asian region, which in the new conditions are nowadays undergoing an accelerated socio-economic, geopolitical, and even cultural transformation (e.g. Malaysia). In a way, current good economic situation in Asian countries, especially in emerging economies, is an effect of participation in the globalization process, but basically it has been stimulated by bold structural reforms, macroeconomic stabilization, market liberalization and valuable new institutional arrangements (e.g. the World Trade Organization and regional treaties, negotiated agreements with the EU). It is also believed that relatively "open economic policy", understood as a tariffs' reduction, barriers' elimination and simplification of foreign direct investment (FDI) rules and the rise of industry and services accompanied by urbanization have contributed as

well. When the European markets continue to operate in the shadow of the crisis, at the beginning of 2010 China and six ASEAN founding countries: Brunei, Indonesia, Philippines, Singapore and Thailand sign a free trade agreement (FTA).

Interestingly, Asian countries have the potential for tremendous achievements in agricultural sector, however, in view of ongoing changes resulting in accelerated economic growth in recent decades, and systematically declining share of agriculture in GDP, this sector is wrongly often omitted.<sup>1</sup> Such simplification can be avoided if we remember that agriculture is subject to specific natural and climatic, production and socio-cultural determinants, especially when “Asian tigers” potential in agricultural sector is taken into consideration. There is a considerable diversity within the region in terms of stage of development, agricultural area, share of population living in rural areas and finally agricultural production, consumption and international agri-food trade.<sup>2</sup> It is worth noting that – as a result of changes in the contemporary global economy – the agricultural markets of these countries are increasingly becoming dependent on international trade. The liberalization of world’s agricultural trade contributes successively to the change of the terms, the size and dynamics’ growth, the nature and distribution of the benefits among the participating countries,<sup>3</sup> increasing pressure of global competition. At such a prospect, for the purpose of this study the author posed the identification of the importance of agricultural Asian markets in the global economy.

## 2. Data and methods

The analysis, focused on the years 1997-2007 (1997-2005 as regards consumption), is based on statistical data from FAOSTAT and World Bank.

The article on agricultural sector in Asia, as mentioned, is based on a sample of six developing economies. In East Asia we include China. In Southeast Asia, Thailand, Vietnam and Malaysia are included as one of the largest economies, and in South Asia we include India and Bangladesh. In 2007, these economies (all of them WTO members) accounted for barely 9.3% of worldwide GDP but almost 33% of global agricultural value added and 42% of the world’s population.<sup>4</sup>

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<sup>1</sup> K. Anderson, W. Martin, *Distortions to Agricultural Incentives in China and Southeast Asia*, Agricultural Distortions Working Paper 69, 2008, [www.worldbank.org/agdistortions](http://www.worldbank.org/agdistortions); R.M. Bautista, D.A. DeRosa, *Agriculture and the New Industrial Revolution in Asia*, TMD Discussion Paper No 13, International Food Policy Research Institute, 1996, [www.ifpri.org/publications](http://www.ifpri.org/publications).

<sup>2</sup> *Rapid growth of selected economies. Synthesis Report*, FAO Regional Office for Asia and the Pacific, Policy Assistance Series 1/1, 2006; *Rapid growth of selected economies. Republic of Korea, Thailand and Viet Nam*, FAO Regional Office for Asia and the Pacific, Policy Assistance Series 1/3, 2006; *Rapid growth of selected economies. China and India*. FAO Regional Office for Asia and the Pacific, Policy Assistance Series 1/2, 2006.

<sup>3</sup> J.W. Bossak, W. Bieńkowski, *Międzynarodowa zdolność konkurencyjna kraju i przedsiębiorstw. Wyzwania dla Polski na progu XXI wieku*, SGH, Warszawa 2004.

<sup>4</sup> The World Bank, *Data Catalog*, 2010, <http://data.worldbank.org/data-catalog>.

The author attempts to examine key trends in Asian production and consumption of selected agricultural products. In addition, the analysis considers foreign agricultural trade in 1997-2007, including changes in trade turnover in value and import and export growth. The share of selected agri-food products in total agricultural balance has been determined as well.

### 3. The production and consumption of selected agricultural products

In the years 1997-2007, China and India were the leaders in production and consumption of the most of selected agricultural products.

The production of cereals in China within a decade exceeded the volume of production in the United States and even reached 150% of the European Union production. In turn, the production in India has risen continuously and in 2007 has reached the level of 37.3 million tons higher than in 1997, that was comparable with EU level (Table 1).

**Table 1.** Global and Asian production of selected agri-food products in 1997-2007 (million tons)

Country	1997	2000	2003	2005	2007	1997	2000	2003	2005	2007
	Cereals					Oilcrops primary				
Bangladesh	29.7	39.5	40.0	41.1	44.7	0.2	0.1	0.1	0.1	0.1
China	445.9	407.3	376.1	429.4	457.7	12.5	15.1	14.8	16.3	14.6
India	223.2	234.9	236.6	240.0	260.5	8.9	7.8	8.4	10.3	11.9
Malaysia	2.2	2.2	2.3	2.4	2.5	10.4	12.4	15.1	16.9	17.8
Thailand	27.6	30.5	31.5	34.5	36.0	0.8	0.9	1.2	1.2	1.4
Vietnam	29.2	34.5	37.7	39.6	40.2	0.3	0.3	0.3	0.3	0.4
EU	292.1	277.7	252.1	288.0	261.5	9.5	9.3	10.2	11.3	12.1
Japan	13.3	12.8	10.8	12.4	12.0	0.0	0.1	0.0	0.0	0.0
USA	336.5	342.8	348.3	366.5	415.2	15.6	16.1	14.5	18.1	15.5
World	2095.3	2060.4	2089.5	2268.6	2349.0	98.0	109.9	124.1	143.3	148.8
	Milk					Meat				
Bangladesh	2.2	2.1	2.4	2.6	2.9	0.4	0.4	0.5	0.5	0.6
China	10.1	12.4	21.9	32.0	39.8	54.7	62.1	66.3	71.2	70.4
India	70.9	79.7	86.7	95.6	103.3	4.7	5.2	5.7	6.2	6.6
Malaysia	0.0	0.0	0.0	0.0	0.0	1.0	0.9	1.1	1.2	1.3
Thailand	0.4	0.5	0.7	0.9	0.8	1.9	1.9	2.2	2.0	2.2
Vietnam	0.1	0.1	0.2	0.2	0.3	1.6	2.0	2.5	3.0	3.3
EU	154.6	155.5	155.3	154.2	153.3	42.2	43.1	43.4	42.8	43.7
Japan	8.6	8.5	8.4	8.3	8.0	3.1	3.0	3.0	3.0	3.1
USA	70.8	76.0	77.3	80.3	84.2	34.9	37.6	38.7	40.0	42.0
World	550.6	578.6	615.3	647.2	680.7	216.5	234.5	249.1	261.6	272.4

Source: own calculations based on FAOSTAT database ([www.faostat.fao.org](http://www.faostat.fao.org), as at 20.04.2010).

It is noteworthy that both China and India produced over one third of global cereal production, whereas together with Malaysia they can be treated as leaders in agricultural market, with 30% share of world's oilcrops production. On the other hand, despite predominance of European Union countries in dairy production (during analyzed period, European supply represented from 28% in 1997 to 22.5% in 2007 of global production), India played an important role in this market as well. In 2007, 15.17% of world's milk production came from this country. It is noteworthy that together with China, accounting for only 5.83% of global supply, they produced almost twice as much milk than the United States and almost the same volume as the European Union. The opposite trend was observed in the meat market, where in 1997-2007 over a quarter of global meat production was represented by Chinese supply whereas only 2% came from India. Within a decade China produced over ten times more meat than India.

**Table 2.** Consumption of selected agri-food products in Asian countries and in the world in 1997-2005 (kg/per capita/year)

Country	Annual % growth			Country	Annual % growth		
	1997	2005	1997-2005		1997	2005	1997-2005
Cereals excluding beer				Meat			
China	170.54	155.63	-1.1	China	43.99	54.14	2.6
Thailand	122.3	128.75	0.6	Thailand	27.94	26.75	-0.5
Vietnam	178.08	186.45	0.6	Vietnam	20.60	34.92	6.8
Bangladesh	164.62	181.8	1.2	Bangladesh	3.26	3.14	-0.5
India	157.11	145.62	-0.9	India	4.52	5.05	1.4
Malaysia	147.01	159.90	1.1	Malaysia	52.13	51.31	-0.2
USA	115.32	110.76	-0.5	USA	116.21	126.61	1.1
Japan	117.87	114.19	-0.4	Japan	41.96	45.44	1.0
EU*	118.91	126.74	0.8	EU*	81.58	84.32	0.4
Oilcrops				Milk			
China	8.13	6.85	-2.1	China	8.05	23.64	14.4
Thailand	19.72	24.87	2.9	Thailand	28.94	26.00	-1.3
Vietnam	3,81	4.95	3.3	Vietnam	2.65	11,17	19.7
Bangladesh	0.4	0.72	7.6	Bangladesh	14.27	15,05	0.7
India	6.94	6.87	-0.1	India	59.81	65,24	1.1
Malaysia	15.74	10.72	-4.7	Malaysia	57.72	44,83	-3.1
USA	5.03	6.49	3.2	USA	252.85	256,47	0.2
Japan	9.69	9.82	0.2	Japan	67.75	64,57	-0.6
EU*	3.28	3.33	0.2	EU*	198.69	207,02	0.5

\*For EU countries weighted average was calculated.

Source: own calculations based on FAOSTAT database ([www.faostat.fao.org](http://www.faostat.fao.org), as at 20.04.2010).

It should be underlined that though in both mentioned Asian economies cereal consumption *per capita* was significantly higher than in developed countries (U.S., Japan, EU), the downward trend in average annual consumption was observed (China – 1.1%, India – 0.9%) (Table 2).

In terms of oilcrops consumption, Thailand and Malaysia took the leadership. In 1997, the average annual *per capita* consumption was over twice higher than in China and India (19.72 and 15.74 kg, respectively). Rapid and dynamic economic development in Southeast Asia is accompanied by changes in structure of agri-food product's consumption, consisting mainly of growth in products of animal origin. It should be also highlighted that in the years 1997-2007 in Asian economies (excluding Thailand, Bangladesh and Malaysia) milk and meat consumption grew from year to year. The largest annual increase in consumption level of both products was observed in Vietnam and in China (Table 2), whereas in India the higher volume of milk was consumed. In 2005, consumption *per capita* reached the level of 65 kg, nevertheless it was three and four times lower than in the European Union and in the United States. Meanwhile, Chinese *per capita* consumption of dairy products in 2005 amounted to less than 24 kg.

Data shows that despite such a dynamic growth observed in production and consumption in Vietnam, Bangladesh, Malaysia and Thailand, these countries still lag behind two fastest growing economies of the region: Chinese and Indian. It may be assumed that actual situation is the result of population growth as well as of historical, geopolitical prerequisites, structural and system reforms followed by the urbanization process. As a consequence, the observed tendencies lead inevitably to taking western consumption and production patterns.<sup>5</sup> Data analysis confirms that Asian economies, reducing gradually the level of production and consumption of traditional agricultural products (such as cereals and oilseeds), direct their attention at products of animal origin,<sup>6</sup> but it is worth noting that in terms of ongoing economic growth, relatively low level of milk and dairy products consumption in all countries of Southeast Asia reveals the high potential of these markets, particularly in relation to import.

#### 4. International trade in agricultural products

The growing importance of the potential and prospects for Asian agricultural markets can be seen by analyzing the balance of foreign trade of agri-food products among investigated countries (Table 3). A decade between 1997-2007, for such “emerging”

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<sup>5</sup> K. Dorjee, S. Broca, P. Pingali, *Diversification in South Asian Agriculture: Trends and Constraints*, ESA Working Paper No. 03-15, 2003, [www.fao.org/es/esa](http://www.fao.org/es/esa).

<sup>6</sup> P. Pingali, Westernization of Asian diets and the transformation of food systems: Implications for research and policy, *Food Policy* 2007, Vol. 32, No. 3.

markets with high dynamics of development allows to capture the characteristic trends.

It should be noted that in global export as well as in import of agricultural products China had a dominant position. This country exported goods accounting for 3% of world's agricultural export. On the other hand, its share in global import showed an upward trend, and reached 5.3% in 2007 (Table 3). As a result, negative state of balance was observed in 2007 (–20.2 billion USD), making China the largest net importer of all the Asian countries investigated in the article, which exported agricultural products with a value representing from 5 to 6.65% of world's export and imported 3.4% of world's agri-food products (in 2007 it was a value of 30.3 billion USD). Apart from China and Bangladesh, within a decade a positive balance of trade was observed in the rest of Asian economies. In this group Thailand was the biggest net exporter, where in 2007 exports exceeded imports by 12.7 billion USD.

**Table 3.** Agricultural trade in Asian countries and in the world in 1997-2007 (million USD)

Country	Export					Share in global agricultural export (%)	
	1997	2000	2003	2005	2007	1997	2007
Agricultural products							
China	13 446.7	13 081.3	16 884.4	20 524.2	27 749.1	2.9	3.2
Thailand	8 692.2	7 275.3	10 284.3	12 276.6	17 903.9	1.9	2.0
Vietnam	2 265.1	2 298.5	2 488.0	3 605.0	5 637.0	0.5	0.6
Bangladesh	148.6	99.4	103.2	210.5	339.6	0.03	0.04
India	5 655.5	4 949.6	6 504.4	9 019.6	16 747.9	1.2	1.9
Malaysia	7 349.8	5 821.0	9 580.6	10 779.0	17 672.7	1.6	2.0
EU	199 992.6	183 428.8	246 851.2	306 766.4	393 986.8	43.7	44.9
USA	62 544.4	56 480.1	62 304.9	65 347.7	92 679.5	13.7	10.6
World	457 791.2	411 275.1	525 061.8	654 361.4	876 410.0	100.0	100.0
Country	Import					Share in global agricultural import (%)	
	1997	2000	2003	2005	2007	1997	2007
Agricultural products							
China	16 324.0	15 358.8	23 456.0	33 471.2	47 958.7	3.5	5.3
Thailand	3 054.1	2 690.1	3 528.4	4 242.9	5 164.6	0.7	0.6
Vietnam	812.7	1 422.0	1 515.1	2 363.0	4 553.6	0.2	0.5
Bangladesh	1 375.1	1 684.4	1 868.4	2 289.4	3 951.4	0.3	0.4
India	2 577.0	2 877.4	4 908.9	5 360.5	7 773.6	0.5	0.9
Malaysia	4 374.0	3 792.0	4 333.3	5 982.1	8 932.3	0.9	1.0
EU	204 289.0	182 032.6	252 649.3	306 946.8	404 982.2	43.6	44.8
USA	41 066.8	44 949.9	53 480.2	60 609.1	74 650.8	8.8	8.3
World	468 650.7	433 173.9	550 806.0	673 681.4	903 430.7	100.0	100.0

Source: own calculations based on FAOSTAT database ([www.faostat.fao.org](http://www.faostat.fao.org), as at 20.04.2010).

It is also noteworthy that among the analyzed countries Vietnam maintained the highest rate of export growth (in 2007 it was more than five-fold higher than in 1997) and at the same time it was slightly lower than the growth rate of import (in 2007 import value represented 560% of import in 1997). Especially remarkable are the indicators of changes in foreign trade in agri-foods for India: in 2007 export surpassed three times the level from 1997, while import accounted for 287%. Despite the development of agricultural trade in Southeast Asia countries, their share in total international agri-food balance remained still modest. Between 1997 and 2007 the value of agricultural export in all countries of the Asian region, represented on average 18-20% of the European Union value of agri-food export. A similar trend was also observed in terms of Asian import where within a decade its value amounted for 13-20% of the value of the EU agricultural import. At the same time, growth in agricultural trade contributed to the fact that in 2007 six economies from Southeast Asia region collectively exported agricultural products of value 6.6 billion USD lower than the United States whereas they imported agri-food products that in value exceeded the American import.

## 5. Concluding remarks

The analysis leads to the conclusion that the subject of our interest – “Asian tigers” – are increasingly important in creating global agricultural market. Their favourable economic situation, the prospect of rapid growth and progressive urbanization process mean that these countries are among the largest producers of agricultural products, particularly in cereals, meat and milk. The dynamic income growth in these countries also reshapes consumer preferences, converging them to European ones. Although there is still a relatively high level of *per capita* consumption of cereals, it appears to be a clear upward trend in consumption of livestock products. Also despite relatively small share in international agricultural trade (sometimes more than several fold times lower than in the European Union or in the United States), it seems to be a growing trend in the international trade balance. Remarkably, the most countries of Southeast Asia region became self-sufficient in terms of agriculture. What’s more, many of them evolved and changed the status from agri-food importer position to rapidly gaining new markets exporter.

When Nobel Prize winner Paul Krugman, in January 1998 published the article “What happened to Asia?”,<sup>7</sup> it was difficult to predict what direction of real economic policy would be taken in Southeast Asia countries. That was the beginning of the decade analyzed in this case study. And even after this not too long period some interesting remarks appeared:

- initial trends of transformation in Asian countries from agricultural economies to “hi-tech” ones change now the direction of evolution,

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<sup>7</sup> P. Krugman, *What Happened to Asia?*, <http://web.mit.edu/krugman/www/disinter.html>.

- those countries that have successfully penetrated way of high development tend to support indigenous agricultural economies in order to become more independent from external markets and protect where possible self-sufficiency.

The consequences can be gradually noticed in Asian agricultural markets. Therefore, it seems likely that:

- demand growth for agricultural commodities will be in the nearest future a result not only of economic development but also of continuously increasing global population (it is estimated that by 2015 there will be around 7 billion people in the world),
- increasing demand for agricultural products will be derived from their application in the biofuels production and alternative energy sources as well (nowadays China is the leader but the trend is clear and promising for the entire group of Asian countries),
- there is also a prospect of agricultural export growth in Asia to e.g. European markets (constantly negotiated tariffs and free trade agreements).

## References

- Anderson K., Martin W., *Distortions to Agricultural Incentives in China and Southeast Asia*, Agricultural Distortions Working Paper 69, 2008, [www.worldbank.org/agdistortions](http://www.worldbank.org/agdistortions).
- Bautista R.M., DeRosa D.A., *Agriculture and the New Industrial Revolution in Asia*, TMD Discussion Paper No 13, International Food Policy Research Institute, 1996, [www.ifpri.org/publications](http://www.ifpri.org/publications).
- Bossak J.W., Bieńkowski W., *Międzynarodowa zdolność konkurencyjna kraju i przedsiębiorstw. Wyzwania dla Polski na progu XXI wieku*, SGH, Warszawa 2004.
- Dorjee K., Broca S., Pingali P., *Diversification in South Asian Agriculture: Trends and Constraints*, ESA Working Paper No. 03-15, 2003, [www.fao.org/es/esa](http://www.fao.org/es/esa).
- FAOSTAT, [www.faostat.fao.org](http://www.faostat.fao.org).
- Krugman P., *What Happened to Asia?*, 1998, <http://web.mit.edu/krugman/www/disinter.html>.
- Pingali P., Westernization of Asian diets and the transformation of food systems: Implications for research and policy, *Food Policy* 2007, Vol. 32, No. 3.
- Rapid growth of selected economies. China and India*. FAO Regional Office for Asia and the Pacific, Policy Assistance Series 1/2, 2006.
- Rapid growth of selected economies. Republic of Korea, Thailand and Viet Nam*, FAO Regional Office for Asia and the Pacific, Policy Assistance Series 1/3, 2006.
- Rapid growth of selected economies. Synthesis Report*, FAO Regional Office for Asia and the Pacific, Policy Assistance Series 1/1, 2006.
- The World Bank, *Data Catalog*, 2010, <http://data.worldbank.org/data-catalog>.



## ROZWÓJ I ZNACZENIE AZJATYCKICH RYNKÓW ROLNYCH W GOSPODARCE ŚWIATOWEJ

**Streszczenie:** W opracowaniu podjęto próbę scharakteryzowania zmian w produkcji oraz konsumpcji wybranych artykułów rolno-żywnościowych w krajach Azji Południowo-Wschodniej. Analizie poddany został także handel zagraniczny tymi artykułami, w tym najwięcej uwagi poświęcono obserwacji zmian w eksporcie i imporcie w ujęciu wartościowym oraz zmian udziału handlu w międzynarodowym bilansie obrotów artykułami rolno-spożywczymi. Opracowanie ma na celu scharakteryzowanie głównych tendencji rozwojowych azjatyckich rynków rolnych oraz ich znaczenia w gospodarce światowej.