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# **PROBLEMS OF WORLD AGRICULTURE**

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**Renata Grochowska<sup>1</sup>**

Institute of Agricultural and Food Economics – State Research Institute in Warsaw

**Katarzyna Kosior<sup>2</sup>**

Tischner European University in Cracow

## **Agricultural policies in the context of regional and global food security concerns – the case of the Asian region**

**Abstract.** The paper discusses the effects of changes in Asian agricultural policies on regional and global food security. It also takes account of the consequences of the “rise of Asia” for the European Union food sector. The Asian region is vitally important for future world food security. On the one hand, it suffers from volatility of agricultural commodity prices; on the other hand, individual countries introduce export barriers reducing supply in the global market as was the case during the 2007-08 food crisis. Therefore, the key question arises as to whether regional integration agreements like ASEAN (Association of South-East Asian Nations) or ASEAN+China can shape agricultural policies of these countries and their food self-sufficiency status. Despite ASEAN’s intention to establish an ASEAN Economic Community by 2015, there was a lack of solidarity during the 2006-08 crisis to ensure food security in the region. Yet, given increasing demands from economic, demographic and climatic pressures, more intense regional cooperation can be expected in the near future. Thus, it is of interest to explore possible common solutions for food security policy in the region as well as their impact on national, regional and global food policies. It is still uncertain whether the Asian countries will adopt outward- or inward-looking policy strategies. There were some initiatives set up, however, due to many controversies between net rice exporters and importers, they failed. Therefore, in what direction will agricultural policies in Asian countries be heading in the foreseeable future? Will Asian countries further develop market mechanisms supporting agricultural prices like export quotas and bans, or will they shift to more “green” and trade-neutral policy instruments consistent with the World Trade Organization’s requirements?

**Key words:** agricultural policy, food security, Asian region

## **Introduction**

Economically, Asia belongs to one of the most dynamic developing regions of the world. The current financial and economic crisis has not affected the Asian economies as strongly as it has affected the economies in the US and Europe. Prognoses indicate that this region will play a leading economic and political role in the world in the coming years.

Despite economic growth there are still a huge number of people in the Asian countries that live below the poverty line. Rising food prices have hit the poorest most severely, causing protests and riots. Political and economic instability in such an important region negatively affects the situation in the whole world.

The latest food crisis of 2007-2008 led to an increase in protectionism in many countries of Asia. Numerous trade restrictions and programs have been introduced to support domestic markets and own citizens at home. This in turn has adversely affected the functioning of the global agricultural markets.

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<sup>1</sup> Assistant Professor, e-mail: renata.grochowska@ierigz.waw.pl

<sup>2</sup> Ph. D., e-mail: kkosior@wse.krakow.pl

Rapid population growth in developing countries, including Asian countries, as well as the increasing fluctuation of food prices will intensify the problem of access to food at a reasonable price in the Asian region. Thus the paper attempts to answer the question of what impact the activities for the preservation of food security in the Asian region will have on regional and global food security situations. For this purpose, actions taken by Asian countries during the 2007-2008 food crisis as well as Asian agricultural, trade and food security policies were analyzed.

## **Changes in agricultural policies in Asian countries**

The optimal strategy for maintaining national food security is a combination of increasing agricultural productivity and properly conducted agricultural policy and trade. Predictable policies not only reduce the negative impacts of measures taken by other countries, but also reduce food insecurity and domestic price volatility at home [FAO 2011].

In the countries of the Asian region ensuring food security is tantamount to striving for self-sufficiency. This is due to two reasons. Firstly, the region's diets are based on rice, therefore any instability in the price of this commodity has prompted Southeast Asia governments to protect the domestic rice price from the international price through the exclusion from countries' tariff systems. Secondly, weak domestic infrastructure in some Asian countries has made imports expensive and difficult, thus governments have implemented policies that ensure sufficient domestic production and the stability of food prices accordingly [Chandra & Lontoh 2010].

Support for agriculture is quite differentiated in the Asian countries. Farm support levels in Japan and South Korea are among the highest in the Organization for Economic Co-operation and Development (OECD) countries. However, a clear downward trend has been observed, as in the case of all OECD countries [OECD 2011]. In turn, support for agriculture in developing countries is quite low when compared to OECD countries (Fig. 1).

The decrease in agricultural support in OECD countries is due to the GATT (General Agreement on Tariffs and Trade) agreements adopted under the Uruguay Round. Agreement on agriculture includes a commitment to reduce domestic support, import barriers and export subsidies that distort international trade. But commitment to lower support levels does not concern individual farm products. Thus reduction of trade distorting instruments refers to very high, historically developed support levels, with which many countries, while reducing the level of support, still have a large margin for negotiation.

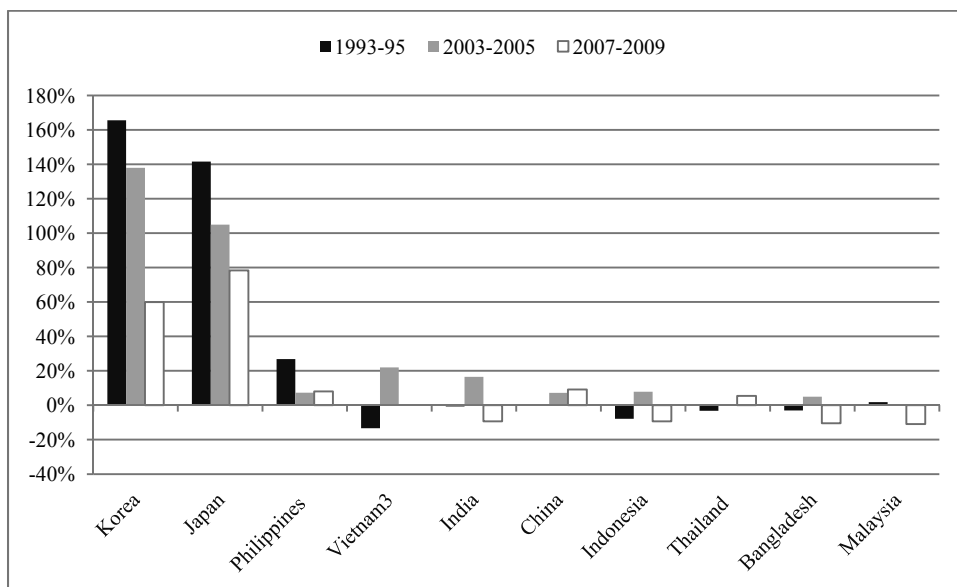


Fig. 1. NRA<sup>1</sup> to agriculture in Asian countries, 1993-95, 2003-2005, 2007-2009<sup>2</sup>

<sup>1</sup>NRA=percentage by which domestic prices for farm products exceed those in international markets,

<sup>2</sup>For China, Japan and Korea years 2008-2010,

<sup>3</sup>Data for Vietnam do not include the years 2007-2009.

Source: Data extracted from Anderson K., Nelgen S., 2012. Updated National and Global Estimates of Distortions to Agricultural Incentives, 1955 to 2010. Spreadsheet at [www.worldbank.org/agdistortions](http://www.worldbank.org/agdistortions), World Bank, Washington DC, March.

Traditional trade instruments (tariffs, import quotas, export subsidies) and producer support (regulation of market prices, direct output and input subsidies) have played and still play a dominant role in agricultural policies of the Asian countries. As mentioned above, these instruments belong to one of the most trade-distorting instruments (and are classified as amber box). Analyses conducted by the OECD show that there is a chance to reduce their negative impact without reducing the size of income transferred to producers [Martini 2011]. However, achieving this in practice would require a change in the forms of support.

Agreements concluded under the World Trade Organization (WTO) lead to a gradual change in agricultural policy instruments. Especially in the OECD countries less is spent to support the volume of production (*commodity outputs*) or the means of agricultural production (*input use*). On the other hand, support based on other parameters, such as agricultural land or number of livestock, with reference to historical or fixed levels for these parameters, has been increasing (instruments included in the *green box* according to the WTO nomenclature). These changes have been observed in Australia, the U.S., Mexico, the EU, Norway and Switzerland. In turn, Iceland, Turkey, Korea and Japan - countries with the highest level of agricultural protection – still rely on traditional market support measures. They do not give up either of price regulation on domestic markets or trade barriers (high duties and import tariffs).

In crisis years, however, the phasing out of traditional agricultural policy instruments has been stopped in many countries. In the situation of extremely high prices, border protection measures and various instruments of domestic support are simply activated. These activities further aggravate instability in global agricultural markets.

Problems of price fluctuations on world markets and high food prices were particularly evident in the years 2007-2008 in developing countries. Policy responses to the crisis, however, were varied, depending on whether the country was an exporter or importer of food. The net rice exporting countries have mainly built up rice reserves or stockpiles and have imposed export restrictions (Thailand, Vietnam). The net importing countries have chosen reduction of import duties, building up of extra reserves and price controls through subsidies. They have also promoted self-sufficiency (Indonesia, Malaysia, Philippines) [Chandra & Lontoh 2010].

The food security in the Asian region mainly depends on domestic agricultural production. Interestingly, despite doubling the volume of imports during the last decade, Asia remains insufficient in food. Most of government interventions focus on short term measures (reducing domestic food prices through trade or price control) and disregard risks of long term food insecurity [Chang & Hsu 2011].

## **Regional integration in Asia: cooperation in agricultural and food security matters**

In the crucial area of agriculture, the Asian region can hardly be seen as a unitary actor with a single interest. A common approach to food and agriculture is, however, badly needed since Asia remains particularly susceptible to natural disasters, climate change and other calamities that jeopardize regional food security. Asian countries are quite diverse both in terms of economic development and agricultural structures [Bergsten et al. 2011]. On the one hand there are countries with quite inefficient and highly subsidized agricultural sectors like Japan and South Korea. On the other hand there are countries belonging to the Cairns Group of agricultural exporters such as Indonesia, Philippines, Malaysia and Thailand. There are also Least Developed Countries in the region (Cambodia, Laos, and Myanmar) that continue to depend on external food aid.

These differences do not ease integration, but at the same time call for relevant mechanisms and measures that would address the existing challenges. Asian countries endeavor to advance cooperation in agricultural and food security matters both under ASEAN's cooperation and with other countries of the region (ASEAN - Association of South-East Asian Nations). The key issue for all countries of the region is to ensure adequate and stable supplies of rice as it plays a fundamental role in the diet of Asian populations.

Already in 1979, the ASEAN member countries signed the Food Security Reserve Agreement that established the ASEAN Emergency Rice Reserve (AERR). The reserve has been based on rice stocks voluntarily earmarked by the member states to address food emergencies. The ASEAN member states also committed to strengthening the food production base in the region, establishing a food information and early warning system, developing post-harvest technologies, adopting effective national stock holding policies and to promoting price stability [Agreement...1979].

However, the system that was adopted has proven ineffective. Firstly, the size of the regional emergency rice reserve was too small to meet food emergency requirements in the region. The earmarked stocks of 87 thousand tons could suffice for only a half-day's supply for populations of the ten ASEAN member countries [Arnst 2009]<sup>3</sup>. In addition, releases from the AERR required bilateral negotiations between a country in an emergency situation and a country providing its earmarked reserve. Not surprisingly, the reserve has never been used, even during serious crisis situations like in 1997 in the Philippines. Countries in need were reluctant to deal bilaterally with the provider-country. They were also afraid that declaring a state of national food emergency could worsen their position and deepen the crisis [Daño & Peria 2006].

Recently, Asian countries have undertaken various initiatives to strengthen regional food security architecture. The ten ASEAN member states, Japan, South Korea and China (under the ASEAN Plus Three cooperation) established the East Asia Emergence Rice Reserve (EAERR). The initiative has been seen as a way for overcoming the inefficiencies of the AERR. It was first proposed as a pilot project for the years 2003-2010. Basically, it aimed to test various mechanisms for releasing rice stocks. The new mechanism received strong support and funding from Japan as well as in-kind contributions from ASEAN member countries, particularly from Thailand [Briones 2011]. Unlike the AERR, the EAERR has been based both on earmarked stocks and physical stocks stored at various locations across the region. The earmarked stocks increased tremendously from the 87 thousand tons under the AERR to 787 thousand tons under the EAERR. Nonetheless, Asian countries failed to develop a common response during the 2007-2008 food crisis. Thus the projected emergency mechanisms proved to be of little value. What was lacking was the coordination between national trade policies to avoid supply and demand shocks in agricultural markets [Headey 2011].

Following the 2007-2008 food crisis, the ASEAN member states adopted an Integrated Food Security Framework and a Strategic Plan of Action on ASEAN Food Security for the years 2009-2013. The framework and the plan aim at strengthening the food security arrangements by focusing on trade and long-term development of agricultural production in the region. The plan also stresses the need for regular consultations, timely and reliable information on regional food security situations and stabilization of food supply in the global markets. The ASEAN member states also adopted a special Multi-Sectoral Framework on Climate Change which addresses the needs of agriculture and forestry sectors in the context of global warming and food security challenges. Most importantly, it has been decided that the EAERR will be converted into the ASEAN Plus Three Emergency Rice Reserve (APTERR) and that it will become a permanent structure for managing food security risks in the region, not only at times of crises. The agreement on the APTERR was reached in October 2011, however, institutional arrangements and trigger mechanisms have not yet been decided [Briones 2011].

It is not clear whether the new framework and the APTERR will yield expected results. Formally, the APTERR stresses the need for strengthening trade linkages among countries of the region and with the rest of the world. However, some also view it as a way for overcoming the WTO commitments, particularly by wealthier countries such as Japan

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<sup>3</sup> The initial amount of earmarked stocks was set at 50 thousand for Philippines, Indonesia, Thailand, Malaysia, Singapore and Brunei. After the accession of four new member states in the 1990s (Vietnam, Laos, Myanmar, Cambodia) it was augmented to 87 thousand tons [Bello 2005].

that find it difficult to lower domestic subsidies linked with production. Physical rice stocks located in other countries of the region, to be resorted to in case of need, could offer a convenient means for sheltering domestic farmers against losses caused by opening markets to imports [Daño & Peria 2006].

Undoubtedly, further development of international trade is the most important step towards ensuring food security in Asia and in the world. Greater liberalization of farm trade increases agricultural competitiveness and productivity. Yet, regional integration in the agriculture sector has never been easy in the Asian region. The agreement on free trade area among the ASEAN member states (AFTA agreement) was signed in 1992, more than twenty years after the formation of the ASEAN. The agreement included *inter alia* the commitment to strengthen agricultural competitiveness and intra-and extra-ASEAN trade in agriculture, fishery and forest products. Nonetheless, although primary and processed agricultural products were covered with gradual tariff reductions (like all other goods, but at a slower pace), the member states still kept the right to the so called temporary exclusion lists and exception lists. E.g. the crucial rice and sugar sectors are still protected by high tariffs and other barriers. In addition, the four member states that acceded to the ASEAN in the 1990s (Vietnam, Laos, Myanmar and Cambodia) have been given the right to use “opt out” from preferential market access for a large number of products [Korinek & Melatos 2009].

Relatively high levels of protectionism in the strategic sector of rice do not foster a stable and predictable system of food security in the region and thus in the world. Although the ASEAN is currently seen as a “hub” for a number of regional Free Trade Agreements (FTAs), there are also concerns that multiplication of the FTAs<sup>4</sup>, which all require the corresponding Rules of Origin, will distort regional markets and paradoxically restrict the free movement of goods.

The 2007-2008 crisis showed a lack of coordination and a lack of solidarity among the Asian nations. Thus it can be expected that deeper integration in the region will be rather an arduous task. In addition, institutional arrangements within the ASEAN do not promote structured cooperation in the Asian region. Unlike the EU, the ASEAN is based solely on intergovernmental modes of decision-making. Yet, the ASEAN member countries do not give up their plans for deeper economic and political integration. There are plans to establish an ASEAN Economic Community by 2015.

Taking into account the problems of the EU, which has become a conglomerate of highly diverse countries and nowadays experiences serious integration problems, one can wonder how such integration would proceed in the Asian region which is similarly diverse. A change of approach to integration may occur along with the increasing levels of wealth among the Asian countries. But also a reverse process is possible – the increasing levels of prosperity may awaken nationalist tendencies and a desire to dominate over other countries.

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<sup>4</sup> These include the ASEAN-China Free Trade Area signed in 2002, the ASEAN- India Free Trade Area signed in 2003, ASEAN-Republic of Korea Free Trade Area signed in 2005, ASEAN-Japan Comprehensive Economic Partnership signed in 2008, ASEAN – Australia – New Zealand Free Trade Area signed in 2010.



## Asian food security in regional and global dimensions

According to forecasts the Asian region will be one of the fastest growing regions in the world in the coming years [Hawthornthwaite & Cookson 2011]. The Chinese economy will trump the US economy by 2025, and India will move closer to the US economy in 2050. The Indonesian economy will be bigger than German, French and British economies in 2050. Also, Asian countries such as Vietnam, the Philippines, Bangladesh, Pakistan, Malaysia, and Thailand may dramatically increase by 2050. Unfortunately, economic growth will not go hand in hand with the reduction of hunger. For the 75% of people in developing countries who live in rural areas, income is derived directly or indirectly from agriculture. Even taking into account the growth of urbanization in these countries, it is difficult to expect significant changes in the food security situation of the poorest.

It should be expected that price volatility in agricultural markets will become more and more frequent, *inter alia* due to tighter links between food and energy prices. Population growth in the Asian region and an increasing demand for food quantity and quality will cause significant pressure on food production. Another factor is the increasing demand for raw materials for biofuel production.

The growing demand for food in China and India, whose populations increasingly prefer diets containing more meat, will play a crucial role. The second element is the increase in energy demand in these rapidly developing economies (one of the major reasons behind the increase in world energy prices). With depleting domestic grain stocks, China and India alone may affect international food prices. For example, cereals stocks in India declined to such an extent that the country decided to limit exports of rice in November 2007, which certainly had an impact on prices of rice in international markets. Asian economies are now interdependent with each other and with the rest of the world. Thus, food security decisions taken in the region will be felt throughout the world.

Rapid depletion of natural resources and the increasing frequency of natural disasters will be the major challenge for the Asian region. These processes contribute to a declining productivity of some agricultural products. Global arable land per person decreased to 0.25ha by 1997 and according to prognoses it will decline to 0.15ha by 2050 [Ewing 2011]. Asian countries are no longer able to increase their agricultural land, potential and limited opportunities are still present in East Asia. Some countries already seek to maximize food production through the use of high doses of mineral fertilizers. Extremely high doses are used for example in China, causing environmental harm and limiting production capacity for crops. An even more severe problem concerns the access to water, particularly in South Asia which is particularly affected by climate change [FAO 2009]. However, one should not expect a decline in food production in Asia in the coming years. In contrast to the EU, these countries apply new technologies such as GMOs and nanotechnology without resistance. Therefore they will become ever greater competitors for the current major food exporters (US, EU).

As already mentioned, many Asian countries will seek to increase their food production to achieve self-sufficiency. However, the question arises as to whether this idea is correct. Some believe that it is better to invest in those areas in which a country performs the best, acquiring thereby the missing funds to buy food. Others still prefer to invest in local production so as to attain self-sufficiency. However, in the era of globalization, each country becomes vulnerable to turmoil in global markets. Therefore, it seems more

appropriate to look for regional or even global solutions that would be helpful in overcoming problems. Unfortunately, special interests of individual countries still dominate the decision-making process. The food crisis of 2007-2008 has clearly demonstrated this problem.

Despite aspirations for self-sufficiency, many Asian countries will be still dependent on food imports. Hence, the global trading system, fair and competitive, is crucially important. The reform of the WTO, which limits the use of trade-distorting instruments (*amber box*) in favor of the *green box* measures, goes in the right direction. However, Asian countries are reluctant to phase out traditional instruments of agricultural support and border protection. Thus, it is difficult to expect significant changes in this regard in the coming years.

This leads to some paradoxes, particularly when we compare the priorities and actions of the EU, China and India. While the EU reduces the level of support to agriculture and converts agricultural policy instruments into non-distorting measures, Asian countries, conversely, increase agricultural support and consistently apply trade distorting policy tools. In this context one can think about the EU's ambitious carbon reduction commitments and the lack of support for the CO<sub>2</sub> cuts from the part of the world's largest emitters, including China and India.

Despite significant differences in interests between countries, common policy instruments and coordinated aid actions should be developed to fight with food crises in the future. Actions are needed at the global level. First, further trade liberalization in agricultural products is necessary. Secondly, long-term strategies should take into account the risks to agricultural productivity caused by climate change and degradation of natural resources. Thirdly, effective aid systems for populations lacking food and agricultural productivity growth in countries dependent on food imports are needed [Headey & Fan 2010].

## Conclusions

The food crisis of 2007-2008 appeared to be more a crisis of confidence (closing of borders, renationalization of policies) than a real physical crisis (the lack of food). Effects of trade restrictions are only short term. With increasing demand for the quantity and quality of food, the Asian region will not be able to ensure food security for the growing population in the longer term.

Asia's abilities to feed itself are important not only for the region, but also for the whole world [Glickman & Swaminathan 2010]. Therefore it is necessary to coordinate joint actions on a regional and global scale. Real reforms of the global food security system are necessary given increasing agricultural price fluctuations and climate changes that affect agricultural productivity.

The question arises as to which global institution could undertake this task. The question is all the more important since we can observe a decreasing relevance and lack of effectiveness of all major international organizations. This also concerns the WTO. Without breaking the deadlock in multilateral trade negotiations and without the adoption of a comprehensive agreement on agriculture the organization of an effective global food security system will not be possible in the longer run. The adoption of a new and comprehensive WTO agreement on agriculture is the best possible solution. However,

experience to date raises doubts as to whether it will be possible to achieve substantial progress on agricultural issues in the near future in an organization consisting of 156 countries. Hence, one can assume that actions taken at a regional level will become more and more important. Asian countries are able to create a very strong region of the world, competitive in relation to existing economic powers like the United States or the European Union.

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