

1 Rice Trade in the 2008 Food Crisis

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RICE TRADE IN THE 2008 FOOD CRISIS

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Introduction

From the end of 2007 to the middle of 2008, the world prices of major grains abruptly and drastically surged to unprecedented levels. The price of rice in particular rose much more quickly than other grains, such as wheat and maize, tripling within this very short period. Since rice is a commodity which is produced and consumed as a staple in many developing countries, the impact of the price hike was serious to the economic welfare of poor people. Urban unrest occurred in some countries, while long lines of people seeking cheap rice appeared at governmentally arranged distribution points in other countries.

Numerous articles concerning this unexpected “food crisis” have been published since 2008. Most of the literature discusses the causes of the price surge (Childs & Kiawu 2009; Timmer 2008; Headey 2010; Demeke 2008), the impact of the price surge (Pandey 2008; Aksoy & Isik-Diknelik 2008; Warr 2008; Ivanic & Martin 2008; Abbott & de Battisti 2009; Benson et al. 2008), and the policy implications to prevent future crises (Abbott 2009; World Bank 2008b, c2008; Timmer 2008). As for the causes of the rice price spike, there seems to be a common understanding that the export ban or restrictions by major rice exporters, such as India and Vietnam, and the panic purchase by major importers, such as the Philippines, pushed the price to this height (Childs & Kiawu 2009, pp.6-10; Timmer 2008, pp.81, 88; Headey 2010, pp.2-3; Demeke 2008, p.10).

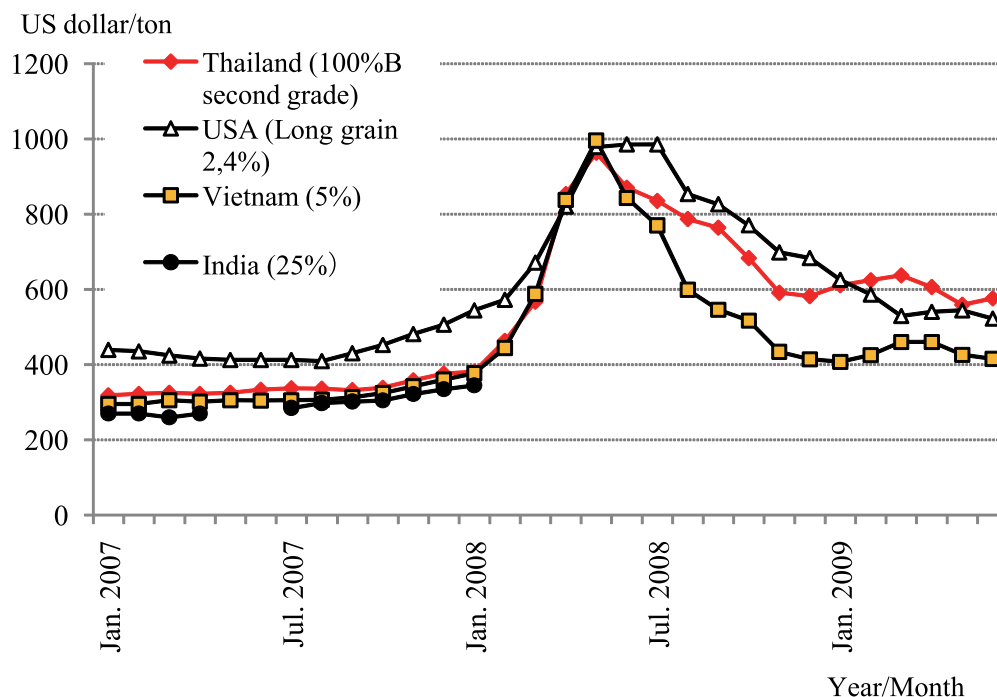
However, the literature does not well address why India and Vietnam banned or restricted their rice exports. Although these countries could have gained by selling rice at higher prices, they restricted rice exports as if they were escaping from the price increase. On the contrary, Thailand, another major rice exporter, did not control its rice export at all. Rather, it implemented a price-support scheme for farmers, even though farm prices were double those of a half year before. Why did India and Vietnam restrict their exports? Why did not Thailand? To identify the causes that brought these different responses, we need to understand the preferences and conditions of each government in their policy choices. Focusing on these three major rice-exporting countries in Asia, this book identifies the salient features of the rice industry in the context of their economic and political conditions, and discusses how these factors affected the responses of each government in the midst of the international price surge.

The following three chapters will be case studies of India, Vietnam, and Thailand, respectively. We describe the situation of rice production and trade, and the policy framework in each country. With this background information, we attempt to understand the reasons the

government chose certain policies to respond to the international price surge of 2008. The responses were successful to some extent in price control, but at the same time, shed light on discrepancies in the policy framework.

In spite of some need for revision in their policy frameworks, we conclude in Chapter 5 that the rice policies in these countries are inevitably planned and implemented with good consideration toward their impacts on the well being of producers and consumers, and their political outcomes. It is unlikely that Asian rice-exporting countries will, in the near future, allow their rice trade to operate freely in accordance with market demands. In other words, the government will, whenever it is necessary for their domestic needs, intervene to control the rice export. This is a precondition when we consider the possible schemes for stabilizing the international rice market.

Before moving to studies of individual countries, we will present, in the remaining parts of this chapter, some basic information which may help readers gain an overview of the international rice market and the 2008 crisis. In the next section, the 2008 food crisis will be reviewed briefly. Then, in the third section, we will have a look at the global rice production and supply, while the fourth section will focus on rice-importing countries, especially the rice balance and the impact of the price surge. In the last section, we will compare three case countries, India, Vietnam, and Thailand, in terms of rice export and macroeconomic conditions.



Source: FAO, *Rice Market Monitor*. Vol.10, No.4 (December 2007); Vo.11, No.2 (July 2008);
 Figure 1-1 Trends of FOB Prices of Major Rice Exporting Countries
 (January 2007 - June 2009)

1. The Food Crisis and World Response

As shown in Figure 1-1, the rice-export price of major exporting countries was stable until August 2007. The United Nations Food and Agricultural Organization (FAO) and the United States Department of Agriculture (USDA) maintained their forecasts until the fourth quarter of 2007, predicting that total world rice production in 2007 would be slightly larger than that of 2006.¹ Even though Vietnam prohibited exporters from concluding new contracts in July 2007, and India started to intervene in low grade rice exports in October 2007, the Thai FOB, an index of international rice price, did not move up significantly. At that moment, it was only the US long grain price that went upward at a comparatively rapid pace because of a domestic supply shortage and a rising futures market (Childs 2007).

The situation changed abruptly in December. The Thai FOB rose 5 percent from the previous month, and even more rapidly thereafter to reach its peak in May 2008, nearly tripled the value of six months prior. Vietnam's 5 percent rice went up more rapidly than Thai rice, and was sold at the same price level of Thai 100 percent white rice, which was usually ranked in a higher grade than Vietnamese rice. No FOB price data for India appeared since there were no trade contracts concluded after January 2008.

This price surge put some importing countries into political difficulties, as will be discussed later. Rice-exporting countries were also shaken by the crisis and started to restrict rice exports in order to secure the domestic supply (Table 1-1). India raised the floor price for allowing export of non-*basmati* rice to prevent low grade rice from flowing out of the country in October 2007. In the same month, China levied an export tax on rice. In March 2008, Vietnam stopped giving permission for exporters to enter into new business contracts with foreign buyers, while Egypt and Cambodia prohibited the export of rice entirely. In April 2008, Pakistan declared the lowest price for allowing export, and Brazil temporarily banned export.

Coincidentally, in May 2008, the international meeting for African development (TICAD IV) was held in Japan, and the food price surge was recognized as a serious problem for less developed areas. The meeting was followed by other international meetings, such as the G8 Summit at Toyako, Japan, and the Food Summit of the FAO at Rome, and a working team was established to discuss this issue on these occasions. The team presented a framework for action in July 2008, which provided for the swift response of the international community to this problem.

As shown in Figure 1-2, the price increase of rice was much more drastic than for other grains. This occurred even though the world rice production and supply volume into the market was not smaller than the previous year. This market volatility can be explained by the structure of world rice supply and demand, as discussed in the next section.

¹ See FAO's *Rice Market Monitor* in March, June, September, and December versions of 2007 (retrieved from www.irri.org) and USDA's *Rice Outlook* in September, October, and December versions of 2007 (retrieved from www.usda.gov).

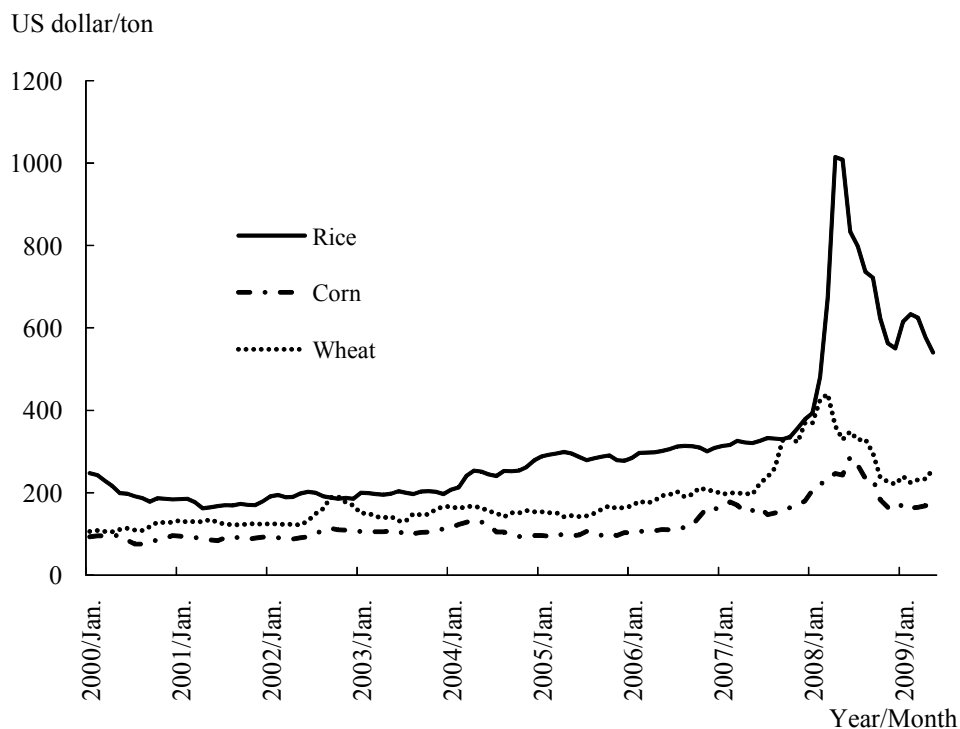
Table 1-1 Chronology of Rice Crisis in 2008

Month/Year	Major Incidents			
	India	Vietnam	Thailand	Others
Jun. 2006	Export of pulses banned.			
Feb. 2007	Export of wheat banned.			
May 2007	Minimum support price (MSP) of rice for 2007-08 announced at 6,450 rupees per ton for common varieties ⁽¹⁾ and 6,750 rupees per ton for Grade A varieties ⁽²⁾ (May 17).			
Jul. 2007		The Vietnam Food Association (VFA) announced a ban on the signing of new rice-export contracts. The announcement was based on the achievement of annual target exports.		
Sep. 2007		The government formally approved the announcement by the VFA.		
Oct. 2007	MSP of rice raised by 500 rupees per ton and export of non-basmati rice banned (Oct 9). The ban was lifted on Oct 31 and a minimum export price (MEP) for non-basmati rice was set at \$425 per ton.			
Nov. 2007	MSP of rice raised by a further 500 rupees per ton (Nov 15).			
Dec. 2007	MEP for non-basmati rice raised to 500 dollars per ton (Dec 27).			China imposed export tax on rice.
Jan. 2008		The government lifted the ban on the signing of new rice-export contracts.		Egypt announced a voluntary export control of rice by private exporters.
Mar. 2008	MEP for non-basmati rice raised to \$650 per ton; that for basmati rice set at \$900 per ton (March 5). Export of edible oils banned (March 17). MEP for non-basmati and basmati rice raised to \$1,000 and \$1,100 per ton, respectively (March 27).	Due to the global price hikes, the government again placed the ban on the signing of new rice-export contracts.		Egypt banned rice export until October 2008. Cambodia banned rice export.
Apr. 2008	Export of non-basmati rice banned and MEP for basmati rice raised to \$1,200 per ton (April 1).		The government decided to release 2.1 million tons of stock to the domestic market. FOB of 100% Thai white rice rose to over \$1,000 per ton.	Pakistan announced a minimum export price. The government of the Philippines announced it would invite tenders of 500 thousand tons of rice for import, but there was no tender. Brazil temporarily banned rice export. In Haiti, the rice price hike caused a riot.

May 2008	Export tariff on basmati rice set at \$200 per ton (May 10).		Rice farmers marched to call for government price support. The government decided to implement the rice pledging program.	The government of the Philippines invited tenders for 670 thousand tons of rice for import, but there was no tender. The Japanese government announced it would divert its imported rice to an assistance for the Philippines (May 20). In the TICAD IV declaration, special attention to the soaring food price was mentioned. The price increase of maize and rice in Somalia caused a riot. In the Philippines, an unsecure supply of low grade rice was seriously felt among consumers.
Jun. 2008	MSP of rice for 2008-09 announced at 8,500 rupees per ton for common varieties and 8,800 rupees per ton for Grade A varieties (June 12).		The rice pledging program started with the pledged price of 14,000 baht per ton.	FAO Food Summit in Rome (June 3-5).
Jul. 2008	Export of maize banned.	The government lifted the ban on the signing of new rice-export contracts. Tax was imposed on rice exports with prices above \$600 per ton.		In Hokkaido at the Toyako G8 Summit (July 7-9), a special declaration for world food security was addressed. United Nations announced an action framework to combat the world food crisis.
Aug. 2008		Tax was changed and imposed on rice exports with prices above \$800 per ton.		
Oct. 2008	Ban on maize export lifted (Oct 15). MSP of rice raised by 500 rupees per ton (Oct 16).		The pledged price is revised to 12,000 baht per ton.	
Dec. 2008		Export tax was abolished.		
Jan. 2009	MEP for basmati rice lowered to 1,100 dollars per ton (Jan 27).			
Feb. 2009	Export tariff on basmati rice is dropped (Feb 2).	The government placed the ban on the signing of new rice-export contracts because of the rapid increase in rice exports.		
Apr. 2009		The government lifted the ban on the signing of new rice-export contracts.		G8 Agriculture Summit (Rome, April 18-20) confirmed the need to work on food security issues.

Source: Nikkei Telecom21, Reuters, Bangkok Post, The Hindu Business Line, and Vietnam Agricultural News.

Notes: (1) Varieties for which grain length is less than 2.5 times grain width. (2) Varieties for which grain length is 2.5 times grain width or greater.



Note: Rice: 5 percent broken milled white rice. Maize (corn): U.S. No.2 Yellow, FOB Gulf of Mexico, U.S. price. Wheat: No.1 Hard Red Winter, ordinary protein, FOB Gulf of Mexico.
Source: International Monetary Fund (IMF) homepage
<http://www.imf.org/external/np/res/commod/index.asp>.

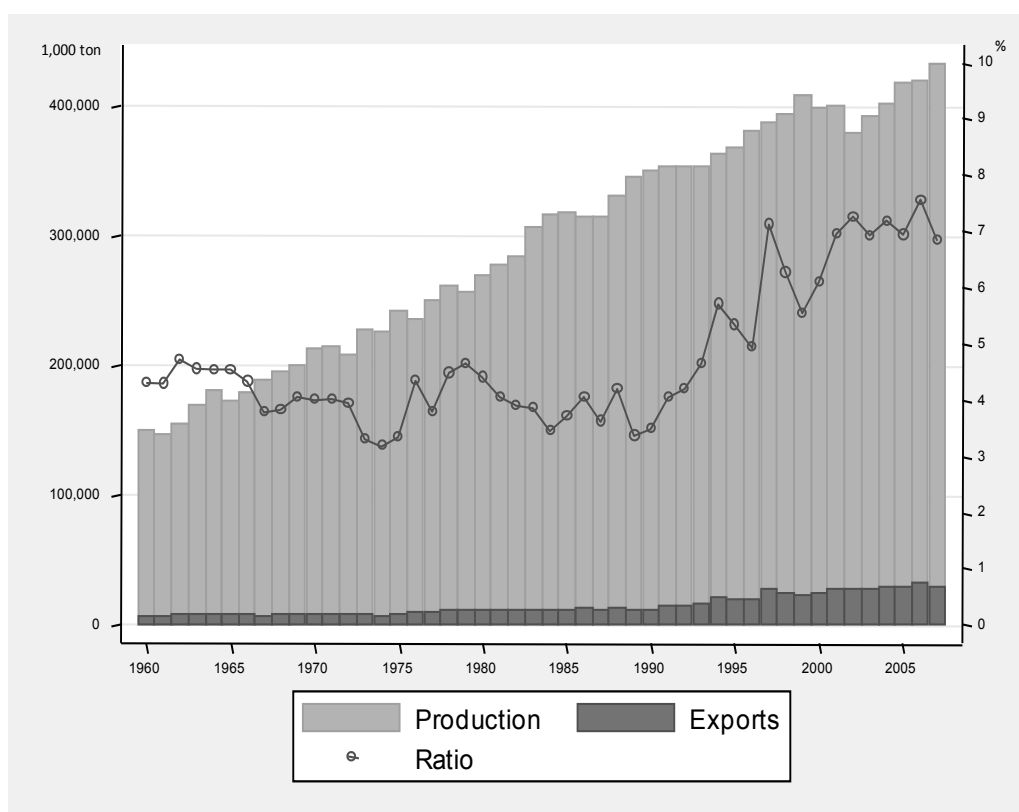
*Figure 1-2 Trend of International Price of Rice, Wheat, and Corn
 (Monthly, January 2000 - May 2009)*

2. Production and Trade of Rice

Major Producers of Rice

Rice is produced all around the world. Rice serves as the staple food in 17 countries of the Asia Pacific Region, 9 countries of the Americas, and 8 countries of the Africa. It also accounts for about 20 percent of total calorie intake in developing countries (FAO 2004). Because rice is resistant to continuous cropping obstacles, it can be grown multiple times per year when favorable climate and water conditions are available. This high-yield nature of rice farming makes it possible to provide enough food to feed a large population in the world.

Ever since World War II, achieving increases in rice production has been a major political challenge for the governments of many developing countries, especially of the Asian countries, in order to meet the growing demand for their staple food. Figure 1-3 shows the world's rice production and trade in the last half-century. It indicates that the long-running



Source: United States Department of Agriculture (USDA), Foreign Agricultural Service, Production, Supply and Distribution Online. (<http://www.fas.usda.gov/psdonline/psdhome.aspx>).

Figure 1-3 Production, Exports and Export-Production Ratio (1960-2007)

efforts of those countries indeed resulted in increased production. Total rice production steadily rose from 150 million tons in 1960 to 400 million tons in 2005. The average annual growth rate was 2.5 percent between 1965 and 1985, while it slowed a bit to 1.8 percent between 1985 and 2005.

Table 1-2 presents the world's top 10 rice-producing countries. China and India account for over a half of total rice production in the world as of 2005. The other top 10 producers, except for Brazil, are also Asian countries. Major producers of rice are thus highly concentrated in Asia. According to Table 1-2, the increase in rice production came mostly from the improvements of rice yield, rather than from the expansion of harvested area, in many individual countries. The yield growth was attributed to the success of the green revolution in rice beginning in the early 1960s. Instead of traditional rice varieties that are prone to lodging, the green revolution introduced modern semi-dwarf varieties with lodging resistance that achieved higher yields through the intensive use of chemical fertilizers and through the proper management of irrigation systems. The wide spread of the green revolution greatly contributed to increased rice production, as well as higher rates of self-sufficiency in many developing countries.

While the increase in rice production has been achieved globally, there were some differences in the growth patterns. A few Southeastern Asian countries, such as Indonesia and

Table 1-2 Major Rice Producers (Top 10 Countries)

	Production		Annual Growth Rate (%)					
	2005		1965-1985			1985-2005		
	Production (million ton)	Share (%)	Production	Harvested Area	Yield	Production	Harvested Area	Yield
China	124,258	30.1	2.65	0.29	2.35	0.35	-0.53	0.87
India	90,698	21.9	2.99	0.59	2.39	1.83	0.27	1.55
Indonesia	35,423	8.6	3.96	1.21	2.70	1.30	0.88	0.68
Bangladesh	27,662	6.7	1.45	0.42	1.03	3.29	0.32	2.96
Vietnam	22,973	5.6	2.17	0.81	1.35	4.01	1.14	2.76
Thailand	18,224	4.4	2.48	2.02	0.45	1.55	0.19	1.36
Myanmar (Burma)	10,414	2.5	1.30	-0.16	1.51	1.92	2.06	0.20
Philippines	9,740	2.4	3.27	0.36	2.89	2.57	1.01	1.55
Brazil	8,295	2.0	2.13	1.34	0.78	0.83	-3.07	4.00
Japan	7,802	1.9	-0.25	-1.31	1.07	-1.25	-1.57	0.33
World Total	413,344	100.0	2.47	0.62	1.84	1.38	0.28	1.16

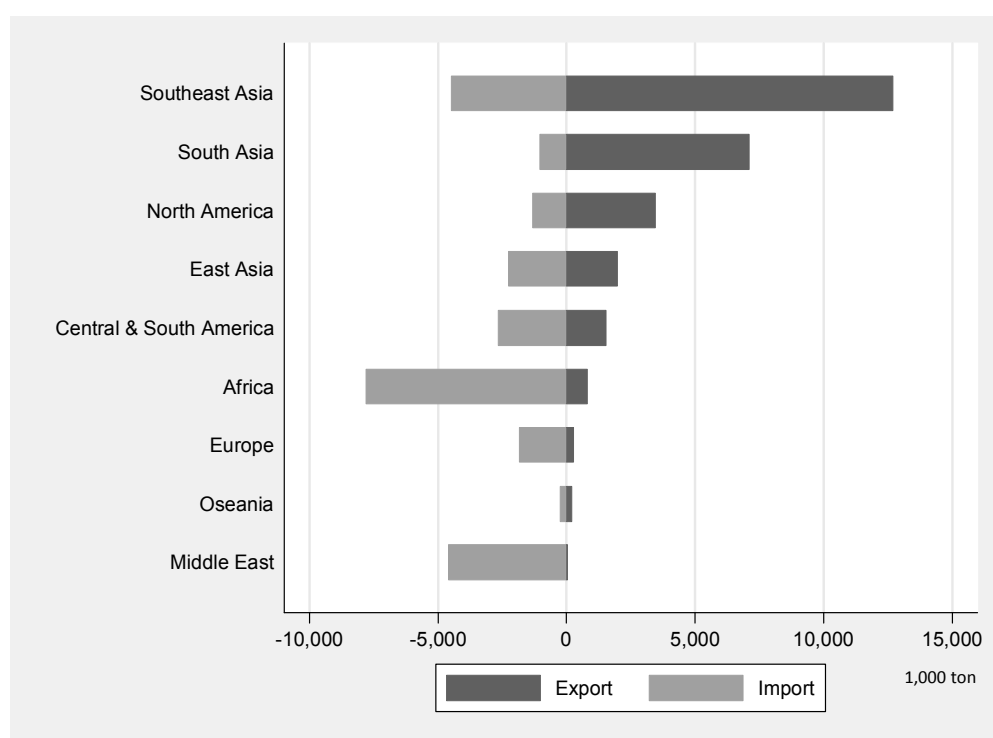
Source: United States Department of Agriculture (USDA), Foreign Agricultural Service, Production, Supply and Distribution Online. (<http://www.fas.usda.gov/psdonline/psdhome.aspx>).

the Philippines in which the green revolution was successfully initiated earlier than other places, experienced faster yield growth between 1965 and 1985, whereas their rice yields grew at a sluggish pace from 1985 to 2005. On the other hand, Vietnam and South Asian countries, where the green revolution started later, experienced the continued growth of rice yield even during the period from 1985 to 2005. The historical process of increased rice production is well described as the successive introduction of modern technologies in different regions in different periods of time. However, the rate of increase in rice production has recently slowed down. This might be due to low rice prices in the international market that have depressed incentives for agricultural R&D and investment.

Major Players in World Rice Market

International trade initially played a relatively marginal role in the provision of rice to people around the world. Since a large fraction of rice production was consumed domestically, the ratio of trade to production remained quite small at 3 to 5 percent from the 1960s until the end of the 1980s, as shown in Figure 1-3. Furthermore, the rate of increase in rice trade had not been higher than that of rice production in the above periods.

Over the last two decades, however, the world rice market has gained in importance, and the trade-to-production ratio has now reached 7 percent. The expansion of international rice trade was partly due to the significant rise in the production surplus in selected exporters, such as Thailand, Vietnam, and India, and simultaneously due to the increased demand of importers, such as the countries of Africa and the Middle East. Although the world rice market has grown to a considerable extent in recent years, trade intensity of rice is still smaller compared to that of wheat, another staple food crop in the world. In fact, the trade-to-production ratio of wheat currently stands at 19 percent. The world rice market on this account is sometimes referred to as the “thin market.”



Source: United States Department of Agriculture (USDA), Foreign Agricultural Service, Production, Supply and Distribution Online. (<http://www.fas.usda.gov/psdonline/psdhome.aspx>).

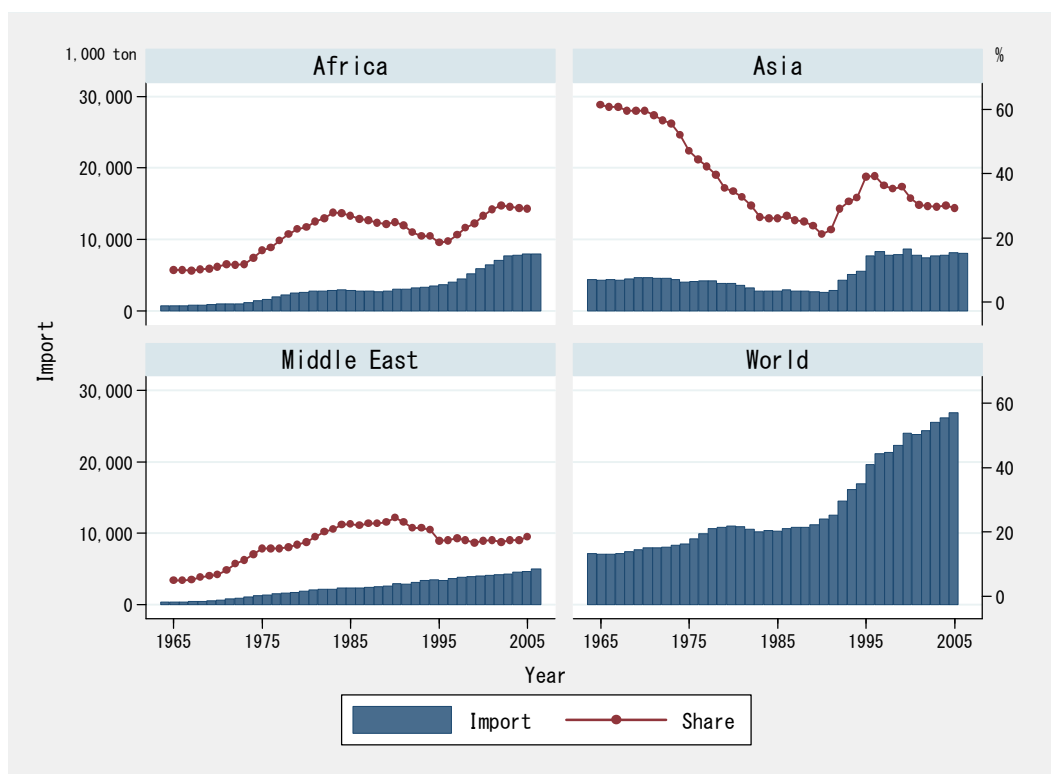
Figure 1-4 Rice Exports and Imports by Region

Table 1-3 Major Rice Exporters (Top 5 Countries)

		Unit: 1,000 tons				
		1965	1975	1985	1995	2005
1	Thailand	1,570	USA 2,063	Thailand 4,398	Thailand 5,505	Thailand 8,871
2	USA	1,568	Thailand 1,667	USA 2,222	India 3,065	Vietnam 4,669
3	China	1,222	China 1,407	Pakistan 1,063	Vietnam 2,944	India 4,416
4	Burma	951	Pakistan 680	China 1,020	USA 2,789	USA 3,317
5	Egypt	442	Burma 449	Burma 540	Pakistan 1,722	Pakistan 2,859
World Total		7,760	8,544	11,801	20,722	29,361
Top 5 Share		74.1%	73.3%	78.3%	77.3%	82.2%

Source: United States Department of Agriculture (USDA), Foreign Agricultural Service, Production, Supply and Distribution Online. (<http://www.fas.usda.gov/psdonline/psdhome.aspx>).

Figure 1-4 depicts the regional export and import volume of rice. Major rice-exporting regions include Southeast Asia, South Asia, and North America. Meanwhile, major rice-importing regions are Africa, the Middle East, and Southeast Asia as well. Evidently, international rice trade is largely between developing countries. In addition, Figure 1-4 indicates that there exist both exporting and importing countries within the same region. Hence, intra- and inter-regional trade patterns are observed at the same time in the world rice market. Table 1-3 presents the top 5 countries with the largest rice exports in different periods in order to understand the change in the composition of major rice exporters. The share of the



Source: United States Department of Agriculture (USDA), Foreign Agricultural Service, Production, Supply and Distribution Online. (<http://www.fas.usda.gov/psdonline/psdhome.aspx>).

Figure 1-5 Rice Imports in Asia, Africa and Middle East

world's top 5 countries reaches over 70 percent across all periods, and international rice trade could be characterized as an oligopoly in structure. The composition of major exporters, however, has varied considerably over time. Until the early 1980s, Thailand and the United States had competed intensely for exports in the world rice market. In the 1990s, the increase in rice exports from Thailand far outpaced that from the United States and, at the same time, new exporters such as India and Vietnam appeared in the market as large exporting countries. While Vietnam had lost its capacity to export because of the war and the failure of the collective production system, the rapid increase in rice production after agricultural reforms in the mid-1980s enabled Vietnam to re-enter the world rice market. Similarly, India has recently strengthened its position in the export market owing to increased rice production as a result of the spread of the green revolution. In India, the public distribution system of staple food could also enhance rice exports, depending on the situation of the global market. These issues are discussed in more depth in the remaining chapters.

Unlike the case of rice-exporting countries, there is a lesser degree of concentration among rice importers. We only focus here on the regional trends in rice imports in Asia, Africa, and the Middle East. The situations in selected importing countries are discussed in the next section. Figure 1-5 shows the rice imports of three major regions. Until the early 1970s, most of the rice trade was destined for Asian countries. International rice trade in the early periods was therefore more or less characterized as a form of intra-regional transaction. The Asian share of imports in the world rice trade decreased continuously during the 1980s and, to the

contrary, Africa and the Middle East emerged as massive importers of rice. This was due to the fact that several countries in Asia had achieved self-sufficiency in rice by the early 1980s and reduced their dependencies on international trade for the provision of rice to the domestic market.

In the 1990s, however, the Asian share of rice imports showed an increasing tendency again. Faced with the diminishing growth of rice yield, Indonesia and the Philippines started importing from other countries under the stress of population expansion. Africa and the Middle East also continued to increase rice imports, and thus trade intensity jumped to 7 percent. It is worth pointing that, during the 1990s, their increased rice imports were facilitated by the stable and historically low level of global rice prices. A main factor behind stable rice prices despite the increased global demand was the strong supply response in selected exporters like Thailand, Vietnam, and India.

3. Production and Consumption in Importing Countries

A closer look at individual countries shows that production and consumption patterns differ greatly across and within the main rice-importing regions. Such differences are likely to influence the future direction of the rice trade.

As Table 1-4 shows, the three largest rice importers in 2006 were Asian countries: Indonesia, the Philippines, and Bangladesh. This was followed by countries from Sub-Saharan Africa and the Middle East. While the Asian importers are characterized by large domestic production, the African and Middle Eastern countries tend to produce less than they import (with the exception of Iran).

Table 1-4 Top Ten Rice Importing Countries in 2006

(Unit: 1,000 tons)

Rank	Country	Rice Production	Net Imports of Rice
1	Indonesia	35,300	2,000
2	Philippines	9,775	1,900
3	Banlgadesh	29,000	1,570
4	Nigeria	2,900	1,550
5	Iran	1,980	1,500
6	Côte d'Ivoire	372	980
7	South Africa	0	952
8	Saudi Arabia	0	941
9	Malaysia	1,385	786
10	Senegal	138	700

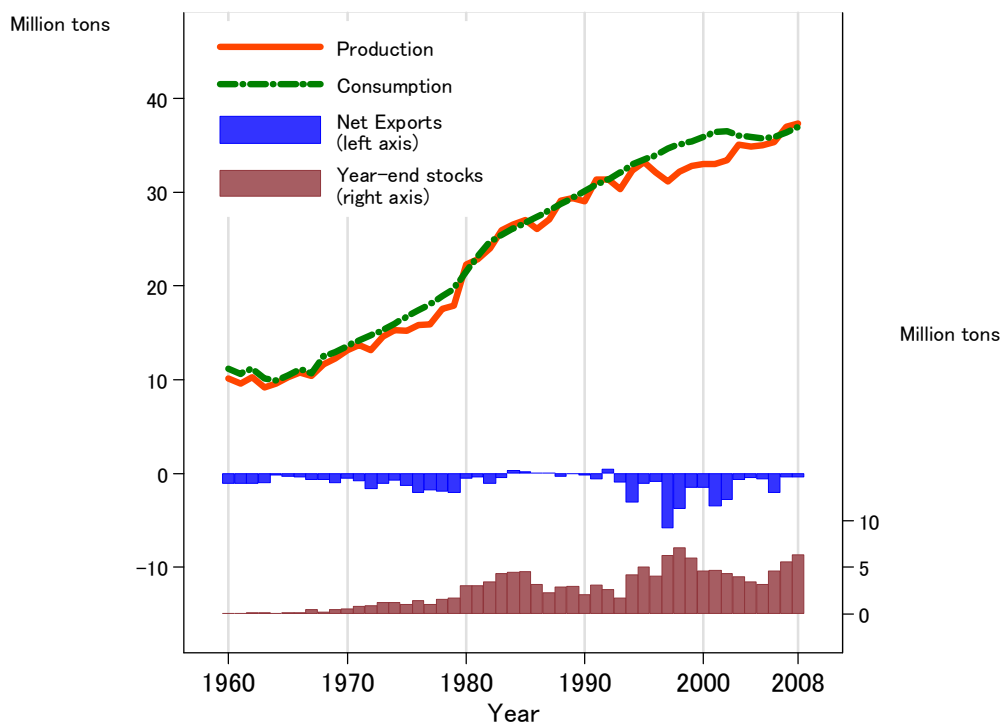
Source : United States Department of Agriculture (USDA), Foreign Agricultural Service, Production, Supply and Distribution Online
(<http://www.fas.usda.gov/psdonline/psdhome.aspx>)

The Asian Importers

As Figures 1-6, 1-7, and 1-8 show, rice consumption and production have grown in parallel in the three major rice-importing countries of Asia. The driving factor of rice consumption in these countries has been the growth in population, although the rate of population growth has gradually declined since the 1970s. While the per capita consumption of rice continues to increase in the Philippines and Bangladesh, in Indonesia it has begun to decrease.

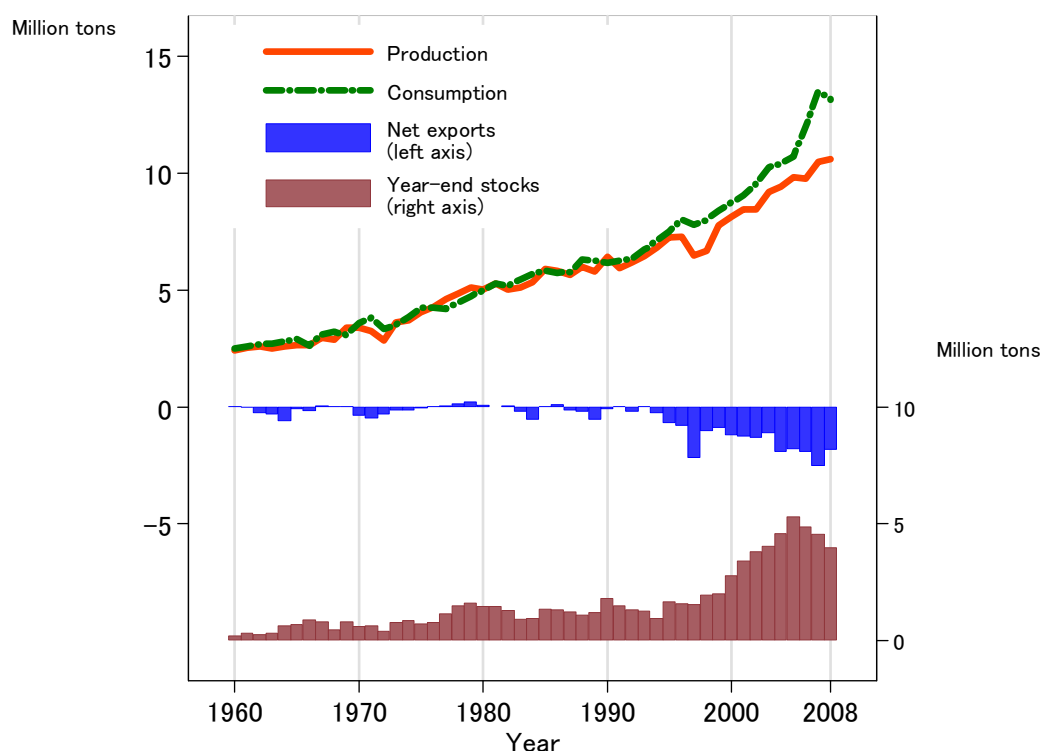
On the production side, rapid yield growth during the Green Revolution period supported the growth of output in Indonesia and the Philippines in the 1970s and 1980s. Productivity growth in these countries stagnated thereafter, but a resurgence in productivity has been observed in the Philippines during the first decade of this century. Productivity has not grown as rapidly in Bangladesh, but it has continued to increase from the 1980s onward.

The three Asian countries generally use rice imports as a way to fill temporary gaps between consumption and production. Figure 1-7 hints that the Philippines, since the mid-1990s, is turning into a perpetual rice importer. However, recent gains in rice productivity indicate that the country is making serious efforts to regain self-sufficiency. Because each of the Asian importers consumes so much rice, large shifts in imports by any one of them have a significant impact on the international rice market. As the figures reveal, rice imports by these countries are characterized by high volatility. Bangladesh, in particular, cannot avoid large



Source: United States Department of Agriculture (USDA), Foreign Agricultural Service, *Production, Supply and Distribution Online* (<http://www.fas.usda.gov/psdonline/psdhome.aspx>).

Figure 1-6 Production and Consumption of Milled Rice in Indonesia



Source: United States Department of Agriculture (USDA), Foreign Agricultural Service, *Production, Supply and Distribution Online* (<http://www.fas.usda.gov/psdonline/psdhome.aspx>).

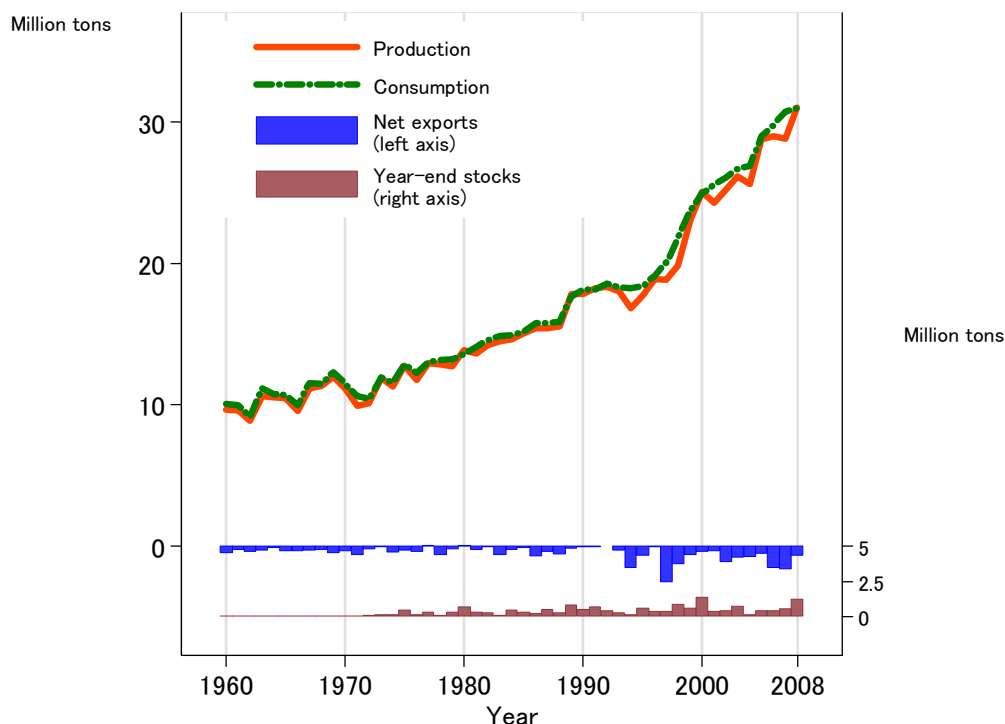
Figure 1-7 Production and Consumption of Milled Rice in the Philippines

production shifts due to the effects of cyclones and large-scale floods. These shifts are translated directly to volatility in imports because the country does not maintain a large buffer stock.

The size of buffer stocks is one aspect that differs across the three countries. To a large extent, this reflects differences in the magnitude of government intervention. In Indonesia and the Philippines, government agencies procure and release rice and other agricultural products with the aim to stabilize domestic prices (Cummings et al. 2006). The large rice inventories of Indonesia and the Philippines seen in Figures 1-6 and 1-7 attest to the size of government intervention in those countries. By contrast, the government of Bangladesh does not maintain a significant buffer stock (Figure 1-8); its aim is to stabilize domestic prices by staying open to international trade (Dorosh 2001).

The Importers of Sub-Saharan Africa and the Middle East

Sub-Saharan Africa has emerged as a major center of rice imports in recent years. West African countries, in particular, import large quantities of rice to augment insufficient domestic production. The two largest importers in West Africa—Nigeria and Côte d’Ivoire—each import more than one million tons of rice per year.



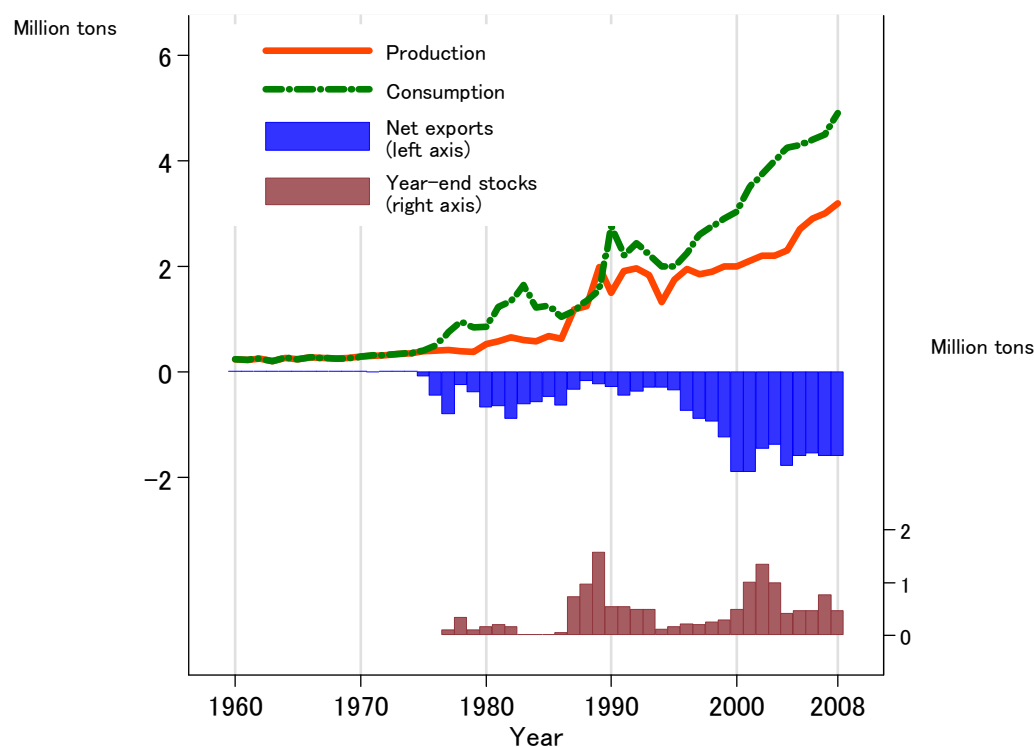
Source : United States Department of Agriculture (USDA), Foreign Agricultural Service, *Production, Supply and Distribution Online* (<http://www.fas.usda.gov/psdonline/psdhome.aspx>).

Figure 1-8 Production and Consumption of Milled Rice in Bangladesh

Figure 1-9 shows the consumption and production of rice in Nigeria. It is evident that consumption growth has far outpaced production growth. The increase in aggregate rice consumption is mostly attributable to an increase in the quantity consumed per capita. This, in turn, is a reflection of the increasing popularity of rice as the main staple food as urbanization progresses. In comparison to traditional staple foods such as coarse grains, rice (parboiled rice in particular) takes less time to prepare, and is thus preferred by the urban residents of Nigeria (Akpokodje et al. 2001).

The growing gap between domestic production and consumption is partly blamed on the low substitutability between imported rice and domestically grown rice. According to Diagna et al. (1999) and Lançon and David Benz (2007), in some West African countries including Nigeria, domestic rice is considered to be of lower quality than imported rice due partly to less advanced post-harvest technologies.

Another interesting group of importers consists of countries such as Saudi Arabia which produce very little or no rice domestically. Saudi Arabia meets the entire quantity of its growing rice consumption through imports. It responded to the international price surge of 2007-2008 by augmenting its strategic food reserves. Saudi Arabia has also invested in the agricultural sectors of food exporting countries such as Thailand, with a view towards securing future supplies. Similar actions have been taken by other Gulf states, such as the United Arab Emirates and Qatar (*Financial Times* 2008; Reuters 2008d).



Source : United States Department of Agriculture (USDA), Foreign Agricultural Service, *Production, Supply and Distribution Online* (<http://www.fas.usda.gov/psdonline/psdhome.aspx>).

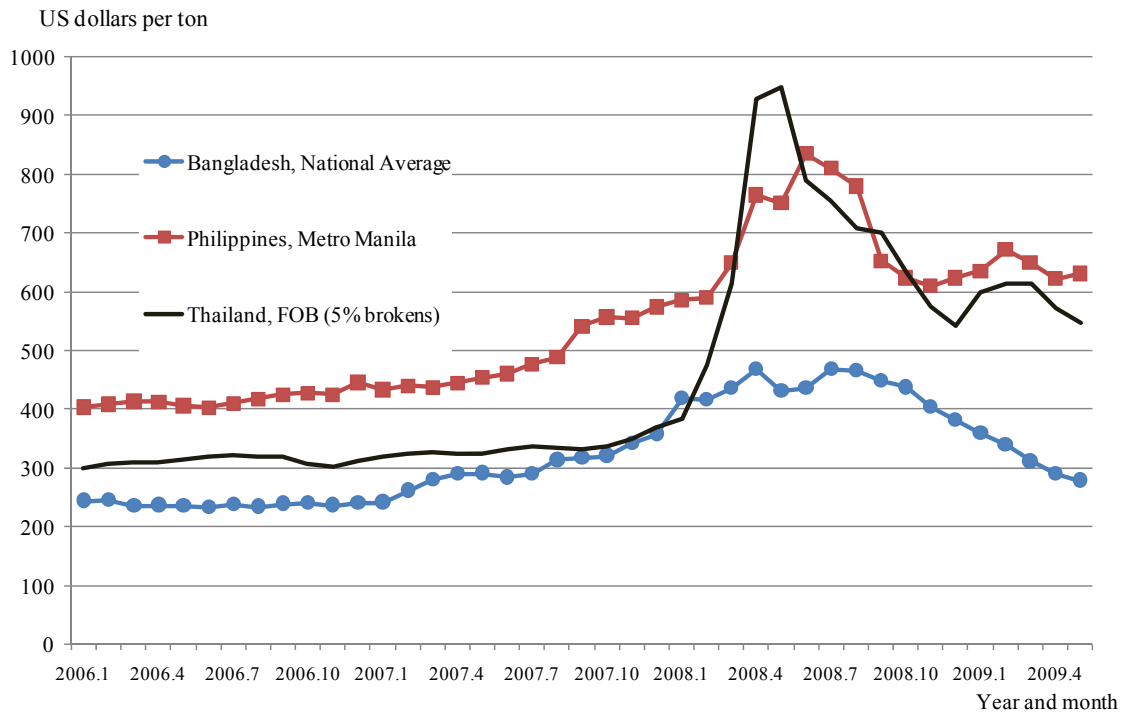
Figure 1-9 Production and Consumption of Milled Rice in Nigeria

Impact of the Price Surge

Figures 1-10 and 1-11 compare the retail prices of rice in the importing countries to the Thai export price. From Figure 1-10, we find that domestic prices in the Philippines and Bangladesh began to increase in mid-2007, before the international price took off. This suggests the existence of domestic shortages in these countries. The large import demand of the Philippines and Bangladesh is likely to have played a role in the subsequent price surge.

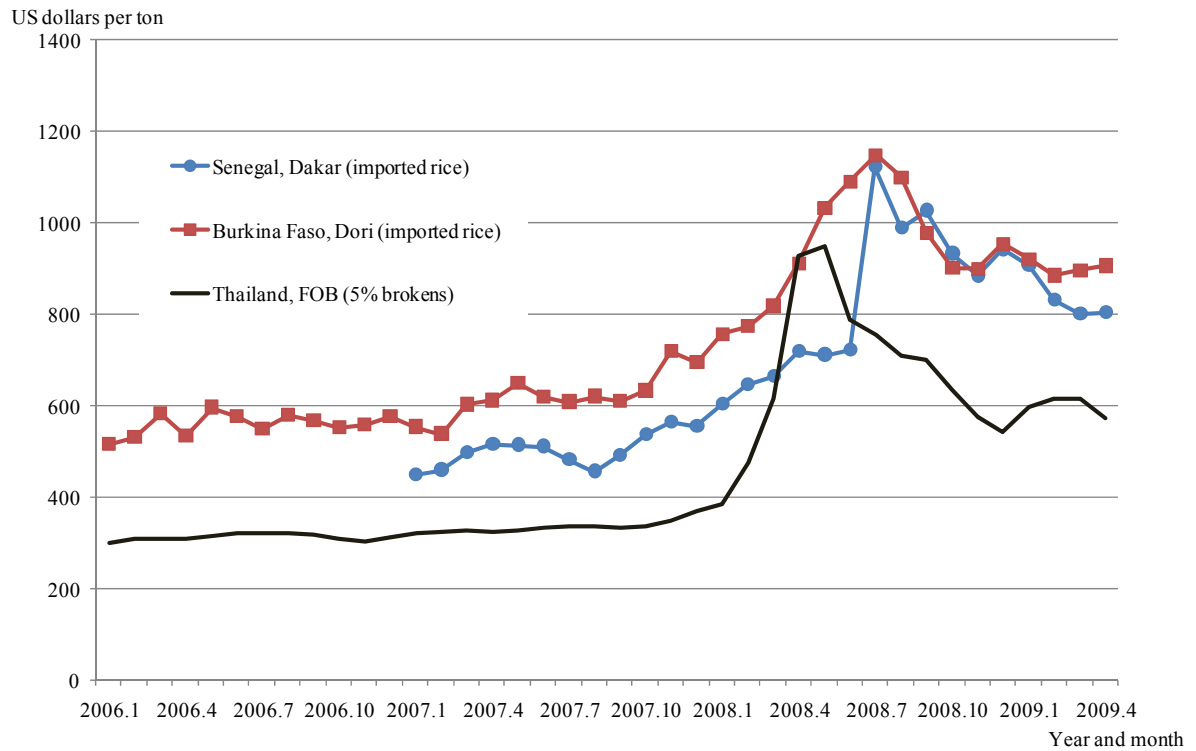
Between April 2007 and the month in 2008 when the rice price peaked (June for the Philippines and July for Bangladesh), retail prices in the Philippines and Bangladesh increased by 88 percent and 62 percent, respectively. This was much lower than the 193 percent increase in the Thai export price between April 2007 and May 2008. Thus, the surge in the international price did not entirely pass through to consumers in the Asian importing countries, suggesting that their governments were somewhat successful at stabilizing domestic prices.

Meanwhile, the domestic retail price of rice in the West African countries rose to far greater heights than in Asia, as Figure 1-11 shows. Part of the difference can be explained by higher baseline prices in Africa, but it is clear from the graphs that the West African governments failed to shield their consumers from the international price surge. The lag between the Thai export price and the West African retail prices also suggests that the markets in West African countries reacted passively to global market conditions.



Source: BULOG, Food and Agriculture Organization (FAO), *Global Information and Early Warning System* (<http://www.fao.org/giews/english/index.htm>), United States Department of Agriculture (USDA), *Rice Outlook Monthly Tables*.

Figure I-10 Retail Price of Rice in Importing Countries of Asia



Source: Food and Agriculture Organization (FAO), *Global Information and Early Warning System* (<http://www.fao.org/giews/english/index.htm>), United States Department of Agriculture (USDA), *Rice Outlook Monthly Tables*.

Figure I-11 Retail Price of Rice in Importing Countries of West Africa

The large increase in domestic retail prices had a significant impact on consumers in importing countries. In order to assess this impact, especially on consumers below or near the poverty threshold, international organizations such as the Food and Agriculture Organization (FAO) and the World Bank have produced estimates based on simulations. According to one study by FAO, a 10 percent increase in the price of rice leads to a 2.5 percent fall in welfare for a family that belongs to the lowest income class in Bangladesh (FAO 2008).

The hardships caused by the price surge led to protests in several countries. In November 2007, demonstrations and riots occurred in Senegal and Mauritania, protesting the rampant inflation in grains and other goods (Reuters 2007; IRIN News 2007). Subsequently, protests also occurred in other West African countries such as Burkina Faso and Côte d'Ivoire that are less dependent on imported food (IRIN News 2008a; 2008c). In the Caribbean nation of Haiti, riots fuelled by a surge in rice prices forced the Prime Minister to resign (Reuters 2008c).

A common feature of these incidents is the dissatisfaction among residents with their governments' inability to suppress the price surge. Most of the affected countries lowered or abolished import tariffs on grains. Some also tried to regulate domestic food prices, but these measures were generally ineffective.² Many of these African countries lacked grain reserves or buffer stocks that could be used for price stabilization. They were also unable to control the flow of border trade. As a result, the governments had no choice but to expose their citizens to the conditions of the international market.

Food-related incidents were also reported in the rice-importing countries of Asia. Demonstrations and riots occurred in Indonesia in March 2008, and then in Bangladesh in April (Reuters 2008a; 2008b). The Asian governments were, however, largely able to appease such demonstrations through the emergency distribution of food. In Bangladesh, several thousand rationing posts were established, where rice was sold at a 30 percent discount to the prevailing market price. Similarly, the Philippine government used the more than twenty thousand outlets under the National Food Authority to distribute rice cheaply (IRIN News 2008b; 2008d).

The governments of the Asian importers were also actively involved in securing rice supplies from abroad. For example, Bangladesh signed an agreement with India, its largest rice trade partner, to procure a large shipment of rice in early 2008 (Kabir 2008). This was made in spite of an export ban imposed by India at the time. Similarly, the Philippine government succeeded in securing a large shipment of rice from Vietnam. On the other hand, it has been pointed out that the desperate rush by Asian governments to secure rice supplies contributed to the price surge (Childs and Kiawu 2009). Other major importing countries with sufficient funds also took actions to secure supplies. For example, the government of Saudi Arabia announced in December 2008 that it would pay an import subsidy of US\$250 for every ton of rice (USDA Foreign Agricultural Service 2007).

As is evident from this overview, the rice price surge in 2007-2008 had a large negative impact on the economies and societies of importing countries. For this reason, the international community has stressed the importance of avoiding such contingencies in the future. Before any meaningful steps can be taken to prevent the reoccurrence of such crises, however, it is necessary to understand the behavior of the main exporting countries.

² For instance, the government of Cameroon placed controls on the wholesale price of rice, but it failed to control retail prices (IRIN News, 2008e).

4. Thailand, Vietnam, and India: Macroeconomic Condition and Positions in Rice Market

Thailand, Vietnam, and India are the three largest rice exporters in the world and provide 60 percent of world trade volume during 2003-2007 (Table 1-5). Thailand is outstanding in its export volume, twice that of the other two, and also in the ratio of export, 50 percent of total production. Rice is definitely an export commodity of this country. India has an extraordinarily large volume of rice production, around four to five times that of the other two. Only a small portion of the production, 5 percent, is channeled to the overseas market. The total production volume is so large that this country can be one of the world's top exporters, even though its rice production policy places prime emphasis on domestic procurement. Vietnam stands at the middle position between the two countries, with 20 percent of total production being exported.

These three countries are categorized as developing countries (Table 1-6). Poverty and malnutrition are still serious problems. Setting the poverty line at US\$2 per day per capita income, three-fourths of the population in India, a half in Vietnam, and 10 percent in Thailand are still under this line. Even if we put the line lower, to the US\$1.2 level, there are still 40 percent and 20 percent of the population under the line in India and Vietnam, respectively. Seventy to eighty percent of the population still live in urban areas in these countries, and the poverty ratio is higher in rural areas than urban areas. Since the population size of India is enormous, only 20 percent of the population who suffer from malnutrition in this country represent 27 percent of the total malnourished population in the world. Adding the malnourished population of Vietnam and Thailand, the figure becomes 30 percent.

Table 1-5 Rice Production and Export of Thailand, Vietnam, and India (Average of 2003-2007)

	Export		Production		Export/ Production
	(1,000tons)	(%)	(1,000tons)	(%)	(%)
Thailand	8,871	30.1	18,224	4.4	48.7
Vietnam	4,669	15.8	22,973	5.6	20.3
India	4,399	14.9	90,698	22.0	4.9
World	29,479	100.0	412,832	100.0	7.1

Source :United States Department of Agriculture (USDA), Foreign Agricultural Service, *Production, Supply and Distribution Online*.
(<http://www.fas.usda.gov/psdonline/psdhome.aspx>)

Table 1-6 Some Macroeconomic Indicators of the Three Countries

	Per capita GDP, 2007 (US\$)	Pop. , 2007 (million)	Population in malnutrition			Ratio of rural pop. (%)	Population under poverty line (2004-06, %)	
			Pop. (million)	Ratio in total pop. (%)	Ratio in the world malnourished pop. (%)		less than \$2/day	less than \$1.2/day
India	1,046	1,125	231	21	27	71	76	42
Thailand	3,846	64	11	17	1	68	12	< 2
Vietnam	805	85	12	14	1	74	48	22
Total		1,274	253	20	30			

Source : The World Bank, database (<http://devdata.worldbank.org>), The World Bank (2008a), and FAO(2008).

In summary, these countries, which provide 60 percent of the trade volume in the world rice market, have a large population of poor and hungry within their domains. Many rural poor produce and sell rice, while consumers are also very often poor in these countries. Since the rise of international price reflects both prices for farmers and consumers, the governments must be alert to alleviate the impact. The price increase may benefit farmers, but hurt the food vulnerable people, and vice versa. Each government has to choose certain policies under this dilemma. The following chapters will shed light on the logic of each government in responding to the international price surge.

Reference

- Abbott, Philip, and Adeline Borot de Battisti. 2009. "Recent Global Food Price Shocks: Causes, Consequences and Lessons for African Governments and Donors." Paper presented at the International Agricultural Trade Research Consortium Analytic Symposium "Confronting Food Price Inflation: Implications for Agricultural Trade and Policies," Seattle, Wash., June 22-23.
- Abbott, Philip. 2009. "Development Dimensions of High Food Prices." OECD Food, Agriculture and Fisheries Working Papers no. 18. Paris: OECD Publishing.
- Akpokodje, Godwin; Frédéric Lançon; and Olaf Erenstein. 2001. "Nigeria's Rice Economy: State of Art." West Africa Rice Development Association.
- Aksoy, M. Ataman, and Aylin Isik-Dikmelik. 2008. "Are Low Food Prices Pro-Poor? Net Food Buyers and Sellers in Low-Income Countries." Policy Research Working Paper no.4642. Washington, D.C.: World Bank.
- Benson, Todd; Nicholas Minot; John Pender; Miguel Robles; and Joachim von Braun. 2008. "Global Food Crisis: Monitoring and Assessing Impact to Inform Policy Responses." Food Polic Report, International Food Policy Institute.
- Childs, Nathan. 2007. "Record Yield Raises U.S. 2007/08 Rough-Rice Production Forecast to 191.8 Million cwt." *Rice Outlook*. September 15. (www.ers.usda.gov).
- Childs, Nathan, and James Kiawu. 2009. "Factors behind the Rise in Global Rice Prices in 2008." United States Department of Agriculture, Economic Research Service.
- Cummings, Ralph Jr.; Shahidur Rashid; and Ashok Gulati. 2006. "Grain Price Stabilization

- Experiences in Asia: What Have We Learned?" *Food Policy* 31: 302-12.
- Demeke, Mulat; Guendalina Pangrazio; and Materne Maetz. 2008. "Country Responses to the Food Security Crisis: Nature and Preliminary Implications of the Policies Pursued." Rome: Food and Agriculture Organization.
- Diagana, Bocar; Francis Akindès; Kimseyinga Savadogo; Thomas Reardon; and John Staatz. 1999. "Effects of the CFA Franc Devaluation on Urban Food Consumption in West Africa: Overview and Cross-country Comparisons." *Food Policy* 24: 465-78.
- Dorosh, Paul. 2001. "Trade Liberalization and National Food Security: Rice Trade between Bangladesh and India." *World Development* 29, no. 4: 673-89.
- Food and Agriculture Organization (FAO). 2004. "International Year of Rice 2004 Fact Sheet No. 3," Rome: FAO Food and Nutrition Division, Food and Agriculture Organization of United Nation.
- _____. 2008. "Soaring Food Prices: Facts, Perspectives, Impacts and Actions Required." Information document for the high-level conference on World Food Security: the Challenges of Climate Change and Bioenergy.
- Financial Times*. 2008. "Foreign Fields." August 20.
- Headey, Derek D. 2010. "Rethinking the Global Food Crisis: The Role of Trade Shocks." IFPRI Discussion Paper no. 00958. Washington, D.C.: International Food Policy Research Institute.
- IRIN News*. 2007. "Senegal: Poverty at the root of violent protests." November 22.
- _____. 2008a. "Burkina Faso: Food riots Shut Down Main Towns." February 22.
- _____. 2008b. "Cote d'Ivoire: Food Price Hikes Spark Riots." March 31.
- _____. 2008c. "Cameroon: Lifting of Import Taxes Fails to Reduce Food Prices." April 29.
- _____. 2008d. "Bangladesh: Middle Classes Scramble for Subsidised Rice." April 4.
- _____. 2008e. "Philippines: Rice Shortage Hits Poor as Government Grapples for Solution." March 27.
- Ivanic, Maros, and Will Martin. 2008. "Implications of Higher Global Food Prices for Poverty in Low-Income Countries." *Agricultural Economics* 39 Suppl.: 405-16.
- Kabir, F.H.M. Humayun. 2008. "Govt Opens LC to Import 0.4m Tonnes of Indian Rice." *The Financial Express (Bangladesh)*. April 7.
- Lançon, Frédéric, and Hélène David Benz. 2007 "Rice Imports in West Africa: Trade Regimes and Food Policy Formulation." Paper presented at the 106th seminar of the European Association of Agricultural Economist.
- Pandey, Sushil. 2008. "The True Price of Rice: Rising Rice Prices Will Negate Progress in Poverty Reduction." *Rice Today*. January-March: 36-37.
- Reuters*. 2007. "Food Price Protests Spread to Mauritanian Capital." November 9.
- _____. 2008a. "UAE Rice Importers Call for 25 pct Subsidy." May 11.
- _____. 2008b. "Manila Eyes More Rice Imports, Indonesia Curbs Exports." April 15.
- _____. 2008c. "Haiti's Government Falls after Food Riots." April 12.
- _____. 2008d. "Indonesians Rally over Soaring Food Prices." March 16.
- _____. 2008e. "Bangladeshi Workers Rampage over High Food Prices." April 12.
- Timmer, Peter C. 2008. "Causes of High Food Prices." In *Asian Development Outlook 2008 Update*, ed. Asian Development Bank, 73-93. Manila: ADB.
- United States Department of Agriculture (USDA), Foreign Agricultural Service. 2007. "Saudi

- Arabia Grain and Feed: Saudi Arabia Issues Rice Imports Subsidy." GAIN Report SA7020.
- Warr, Peter. 2008. "World Food Prices and Poverty Incidence in a Food Exporting Country: A Multihousehold General Equilibrium Analysis for Thailand," *Agricultural Economics* 39, Suppl.: 525-37.
- World Bank. 2008a. *The World Development Indicators: Poverty Data, A Supplement to the World Development Indicators*. Washington, D.C.: World Bank.
- _____. 2008b. "Double Jeopardy: Responding to High Food and Fuel Prices." Paper submitted to G8 Hokkaido-Toyako Summit, World Bank.
- _____. 2008c. "Rising Food Prices: Policy Options and World Bank Response." Paper distributed for information as background to the discussion of recent market developments at the Development Committee meeting, World Bank.