International Trade in Rice, Recent Developments and Prospects

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The rice International market has been dominated by two major tendencies in the 1990s, first a sharp rise in volumes and, second, a continued slide of international prices, both in real terms and relative to the other major cereals. In spite of the changes undergone, the international rice market continues to be regarded as "highly distorted", "segmented", "thin" and "volatile". This note reviews the factors underlying each of these attributes and discusses whether they continue to cast a good representation of the current rice world market.

I. International Rice Trade –distorted?

Because rice is a lifeline for many poor farmers but also a major food staple for large segments of the population, governments in many developing countries have intervened actively to stabilize domestic prices and promote self-sufficiency. High degrees of external protection have also been established in a number of higher-income countries, to preserve producer's incomes and the environmental benefits arising from rice cultivation.

In many **developing countries**, rice self-sufficiency objectives continue to be pursued as a means to achieve food security. As a result, trade in rice largely remains a residual option, and it is not infrequent to see nations shifting from being a net importer to a net exporter, depending on the outcome of their paddy season. To protect producer and consumers from large price fluctuations, a number of governments intervene to stabilize their market, either through changes in border measures or through government procurement programmes at minimum prices and management of rice government-owned stocks. Concerns over scarcity of supplies have often led to the imposition of rice export limitations, including export bans, ceilings, taxes, minimum prices, etc. On the other hand, rice imports are still under the sole responsibility of state trading agencies in a number of countries, although in the 1990s several of them liberalized imports and allowed the private sector to engage in rice trade. Rice has also been assigned very high bound tariffs (although applied tariffs are often well below those ceilings) and special safeguard provisions under the WTO 1994 agreement.

In several **high-income countries**, the rice sector has been isolated from external competition through high border protection, in the form of outright import prohibitions, state trading monopolies, minimum import quotas, high tariffs or variable duties. Rice in those countries is also subject to export subsidies, credit guarantees and food aid. Since 1995, domestic support to rice producers has been increasingly channelled through direct payments classified as production-neutral, under the "green box", or as minimally distorting under the "blue box", while direct price support has been cut back. Those instruments have been used extensively and, as a result, according to OECD estimates of producer support, rice appears as one of the most protected agricultural commodities.

There have been, however, several instances of trade liberalization over the 1990s which have tended to make rice markets more open to foreign competition. In particular:

On the import[1] side:

- After liberalizing rice imports in May 1988, Brazil starts reducing tariffs in 1990.
- Nigeria lifts its rice import ban in 1994 and imposes ad-valorem tariffs. Since then, these have varied from 50 percent to 100 percent. Recently, the country imposes minimum import prices for tariff calculation purposes, depending on the product origin.
- Senegal eliminates the requirement for prior authorization to import rice in 1992 and liberalizes domestic prices in 1995.
- In 2000, members[2] of the West Africa Economic and Monetary Union (UEMOA) start applying a common external tariff of 10 percent on rice milled imports.
- Bangladesh liberalizes rice trade in 1994. Since then rice has been mainly imported by the private sector, resulting in much higher rice deliveries to the country.
- In 1995, Sri Lanka abolishes the import licensing system and replaces it with a tariff rate (initially of 35 percent).
- Japan and the Republic of Korea open their market to rice under minimum access quota in 1995. The Chinese Province of Taiwan also resorted to the special WTO provision upon joining WTO in 2002. In 1999, Japan opts for tariffication of trade barriers and imposes very high specific tariffs of US$ 2 900 per tonne. Imports of rice to the three destinations have risen since the implementation of these reforms, but as rice stocks accumulated, Japan and the Republic of Korea have also stepped up their exports of rice under food aid programmes.
- In 1999, Indonesia puts an end to Bulog's import monopoly and lets the private sector import high quality rice subject to tariffs. In 2000, the quality import limitation is lifted and a specific tariff of Rupiah 430 per tonne (about US$53 per tonne) is applied. The country has been the major rice importer in the late 1990s, as it faced several production shocks, especially due to El Niño in 1997, which led it to import a massive 6 million tonnes in 1998 and 4 million tonnes in 1999. However, in 2004, the country banned imports, after harvesting a bumper crop.
- In 1995, under the Blair House Agreement, the European Union (EU) introduces the "Margin of preference" for import duty calculation, which links the duty applied on husked and milled rice imports to the level of procurement prices, a mechanism that appears to have boosted rice imports. The Union, which already gets about 40 percent of its total purchases under preferential rate quotas, launches the Everything-but-Arms (EBA) programme in 2001, which grants relatively small duty-free access to rice from least developed countries until 2008 and unlimited access thereafter. In 2004, a new EU rice policy regime is put in place, which cut procurement prices by half. On a provisional basis, the EU lowers import tariffs on husked and milled rice as of

[1] In 2001-03, the top rice importers were Indonesia, Nigeria, Iraq, the Philippines, Bangladesh, Saudi Arabia, the Islamic Rep. of Iran, Brazil, Korea D.P Rep., Cote d'Ivoire, Senegal and South Africa.
[2] Benin, Burkina Faso, Cote d'Ivoire, Guinea Bissau, Mali, Niger, Senegal and Togo

1 September 2004, which is likely to erode the value of preferential access to the EU market, including of the EBA initiative.

- Upon accessing WTO, in 2001, China committed to allow large imports of rice at a low 1 percent tariff. The preferential access quota was originally set at 3.99 million tonnes, rising to 5.3 million tonnes by 2004, with half reserved to Government agencies and half to the private sector. However, actual imports have fallen well short of the quota, despite a contraction in production since 2000. Only in 2004 was there an import surge, in reaction to rising domestic prices. The Government reacted by re-introducing incentives to raise production, with a substantial increase in output anticipated in 2004.
- Although the Philippines allows farmers to import limited amounts of rice, rice trade remains under tight government control, and imports are still mostly carried out by the government state agency.

On the export[3] side:

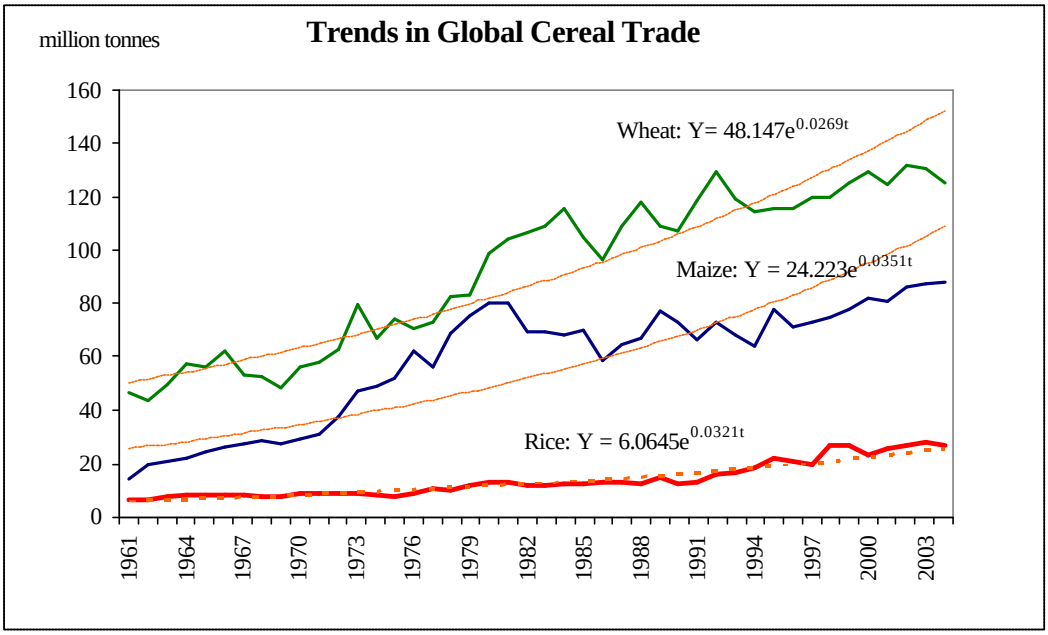
- India lifted the ban on exports of ordinary (non-Basmati) rice in 1994. In 2001, it starts conceding subsidies on non-Basmati rice exports, which propels the country as the second largest exporter in 2002 and 2003.
- Exports of rice from Vietnam are mainly under the responsibility of state trading companies, although private traders have been allowed to participate since 1998. Exports are controlled though the release of licenses. In periods of tight supplies, the Government tends to impose quantitative limitations and minimum sale prices on exports. On the other hand, in the late 1990s and early 2000s, against the backdrop of low world prices, official support in finding out markets has been granted, especially through Government-to-Government deals, often with credits exceeding 2 years.
- Pakistan fully privatized exports in 1996. In 2000, it also eliminates the minimum export prices for IRRI rice.
- Myanmar liberalized rice exports in 2003, but as this resulted in a domestic price spree, it banned rice exports in 2004. The country's exports were erratic in the 1990s.
- China's rice exports remain under the responsibility of the Government. Following a series of bumper crops in the mid-1990s, the country adopted less expansionary production rice policies and fostered large sales abroad (mainly of low quality rice to Africa) as a means to free government storage space. This stance changed radically in 2004, when domestic prices started to soar, and the Government moved back to supportive production policies.
- The EU committed to reducing export subsidies on rice under the WTO Agreement. In 2000, about 132 000 tonnes were exported with refunds.
- Large food aid shipments have been made by the United States and Japan in recent years. Food aid deliveries represent about 5 percent of global trade flows.
- Pakistan, Uruguay and Australia have maintained fairly market-oriented and open trade policies. However, drought problems have constrained the size of their exports in 2002 and 2003.

[3] Leading rice exporters are Thailand, India, Vietnam, the United States, China, Pakistan, Uruguay, Myanmar, Egypt, Japan and Australia

II. Trends and characteristics of the World Rice Market

1. Rising volumes of trade

The volume of rice traded internationally has traditionally been small, both relative to production and compared with the other major cereals. Since 1961, trade has risen from some 7 million tonnes to more 28 million tonnes in 2003, or about 3 percent per year and not markedly different from growth in wheat and maize trade. The expansion in rice trade has been far from steady over period, with a pace of only 2 percent in 1961-89, far slower than the 6 percent growth experienced from 1990 onward.



However, the international rice market is still small relative to the other major cereals, with an average of 27 million tonnes in 2000-2003, about one quarter of the volume traded in wheat and little over one third of trade in maize.

2. Geographical Concentration of Rice Trade

The expansion of global rice trade from 1980 onwards has been driven mainly by growing shipments from the traditional exporting countries, especially Thailand, Vietnam, the United States, Pakistan and China. As a result, there was little change to the make-up of the ten major exporters between since the 1980s, although their relative position changed. In particular, India became the second major source of supplies in 2000-03, after Thailand, while it only figured fourth in the ranking of exporters in the 1990s and sixth in the 1980s. India's export surge in the 1990s and early 2000s was prompted by a changes of policies, in particular the relaxation of the ban on ordinary (non-basmati) rice exports in 1994 and the concession of export subsidies between 2001 and 2003. Vietnam also made considerable inroads, positioning itself as the second most important source of external rice supplies in the 1990s.

Thus, overall, the supply side of the international rice market remained highly concentrated, with the four leading exporting countries (Thailand, India, Vietnam and the United States)

shipping 66 percent of aggregate trade flows in the early 2000s, while the top ten exporters supplied more than 90 percent of the total.

TOP TEN RICE EXPORTING COUNTRIES								
1980-89			1990-99			2000-03		
Major Exporters	**000 tonnes**	**Share**	**Major Exporters**	**000 tonnes**	**Share**	**Major Exporters**	**000 tonnes**	**Share**
World	11,734	100%	World	19,062	100%	World	26,837	100%
Thailand	4,237	36%	Thailand	5,398	28%	Thailand	7,907	29%
USA	2,434	21%	Viet Nam	2,697	14%	India	3,935	15%
Pakistan	1,025	9%	USA	2,641	14%	Viet Nam	3,650	14%
China	710	6%	India	2,122	11%	USA	3,243	12%
Myanmar	482	4%	Pakistan	1,615	8%	China	1,957	7%
India	405	3%	China	1,525	8%	Pakistan	1,931	7%
Australia	388	3%	Australia	541	3%	Uruguay	707	3%
EC 12	369	3%	Uruguay	478	3%	Egypt	627	2%
Viet Nam	364	3%	Argentina	318	2%	Myanmar	553	2%
Uruguay	214	2%	EC 12	263	1%	Japan	469	2%

Viewed from the demand side, much of the expansion of global trade in rice was on account of Asian and of African countries. Deliveries to countries in the Near East and Central America and the Caribbean also grew strongly. Growth witnessed in the 1990s was facilitated by a reduction of border protection, as several countries liberalized their trade policies. However, it also reflected a number of production setbacks, as was the case for Indonesia, which imported exceptionally high volumes in 1997 and 1998, in the wake of an El Niño weather anomaly.

Despite a relatively stable demand by countries in Africa and the Near East, in particular Nigeria, Cote d'Ivoire, South Africa, Iraq and Saudi Arabia, the rice market is highly fragmented and, unlike for exports, the geographical concentration of rice imports remains weak, with the ten major importers responsible for only 40 percent of global trade.

TOP TEN RICE IMPORTING COUNTRIES								
1980-89			1990-99			2000-03		
Major importers	**000 tonnes**	**Share**	**Major importers**	**000 tonnes**	**Share**	**Major importers**	**000 tonnes**	**Share**
World	11,842	100%	World	18,816	100%	World	26,707	100%
Asia	5,760	49%	Asia	9,724	52%	Asia	12,692	48%
Africa	3,035	26%	Africa	4,243	23%	Africa	8,194	31%
Islam. Rep. Iran	674	6%	Indonesia	1,769	9%	Indonesia	2,255	8%
EC 12	664	6%	Islam.Rep. Iran	895	5%	Nigeria	1,710	6%
Saudi Arabia	520	4%	Brazil	858	5%	Iraq	1,100	4%
Indonesia	510	4%	Saudi Arabia	840	4%	Philippines	1,010	4%
Iraq	506	4%	Bangladesh	693	4%	Bangladesh	841	3%
Nigeria	419	4%	EC 12	625	3%	Saudi Arabia	806	3%
Senegal	357	3%	Philippines	602	3%	Côte d'Ivoire	769	3%
Côte d'Ivoire	352	3%	Japan	553	3%	Brazil	747	3%
China, Hong Kong	348	3%	Nigeria	534	3%	Korea DP Rep	743	3%
Malaysia	320	3%	Iraq	517	3%	EC 12	738	3%

3. Changes in the structure of the international rice market

Rice is not a uniform commodity and consumer preferences for specific types and qualities are often entrenched, which limits the scope for substitution. Market fragmentation has thwarted the establishment of internationally recognized grades or standards and delayed the establishment of futures markets. Presently there are more than 50 different published international price quotations for rice.

The international rice market can be broken down into several sub-markets, depending on at least three criteria:

- First, based on the variety, there exist four distinct rices: Indica (a long grain rice), Japonica (a medium grain, which is sticky and humid when cooked), aromatic (a long grain, scented variety[4]) and glutinous rice.
- Each of these can be further distinguished according to the quality of grain, tipically on the percentage of brokens and other factors, including the percentage of impurities, colour and chalkiness of the grain. For distinguishing higher from lower qualities, FAO uses an arbitrary benchmark, with rice containing less than 20 percent of broken rice classified as "higher quality" and rice containing 20 percent or more brokens as "lower quality".
- The degree of processing constitutes another criterion for segmentation of the rice market, with rice traded either in the form of paddy, husked, milled or parboiled rice.

FAO has recently re-examined the structure of rice world trade, relying mostly on the trade by destination statistics of the major exporting countries**.**

STRUCTURE OF RICE TRADE

	1992-1994		2001-2003	
	Quantity	Share	Quantity	Share
	000 tonnes	%	000 tonnes	%
TOTAL TRADE	**15,263**		**26,818**	
Variety:				
Indica	11,663	**76%**	20,068	**75%**
Japonica	2,132	**14%**	3,186	**12%**
Aromatic[2]	1,353	**9%**	3,322	**12%**
Glutinous	115	**1%**	242	**1%**
Quality:				
High Quality	11,781	**77%**	20,226	**75%**
Low Quality	3,482	**23%**	6,592	**25%**
Degree of Processing (forms)				
Paddy	263	**2%**	1,122	**4%**
Husked	508	**3%**	1,077	**4%**
Milled	12,559	**82%**	20,639	**77%**
Parboiled	1,934	**13%**	3,980	**15%**

[4] Aromatic rice includes fragrant Indica rice varieties produced by Thailand as well as Basmati rice exported by India and Pakistan.

The major changes in the structure of the market between 1992-94 and 2001-03, evidenced in the table are as follows:

- Indica rice maintained its leading position among the various traded varieties, with 75 percent of the market, slighly down from the early 1990s. Aromatic rice gained an increasing share of the market, with 12 percent of the total in 2000-03, up from 9 percent in the early 1990s. Such advancement has been at the expense of Japonica rice, which accounted for only 12 percent of the global market in 2001-03, down from 14 percent a decade earlier.
- Lower quality rice has made greater inroads in trade than higher quality rice, and now accounts for 25 percent of total trade. Nonetheless, rice flows continue to consist mainly of high quality rice (less than 20 % broken rice), with 75 percent of the total
- The bulk of rice flowing internationally continues to be in the form of milled rice, with 77 percent, albeit 5 percent less than one decade ago, indicating a growing tendency for trading rice in the form of paddy and husked rice. Parboiled rice also gained market share, accounting for 15 percent of the international rice market in recent years, 2 percent more than in 1992-94.

Most of the highlighted changes can be associated with the increasing importance of Africa and a number of Asian countries as destinations of rice flows. In particular, trade of lower quality rice and parboiled has expanded faster, a reflection of strong import demand by countries in western African (e.g. Senegal, Cote d'Ivoire, and Nigeria) and South East Asia (Indonesia and the Philippines).

The growing importance of aromatic rice varieties in global trade reflects brisk imports to the European Union (mainly Basmati rice which enters the Community under preferential access conditions), the United States, Canada and Australia. However, it has also been associated with large deliveries of Hom Mali (a fragrant rice variety from Thailand) with a high percentage of broken rice to countries in Africa, in particular Cote d'Ivoire, Ghana and Senegal.

On the other hand, high levels of protection have limited growth of imports to Japonica markets such as Japan, the Republic of Korea, the European Union and Turkey

Import tariff structures that favour the entry of the product in its lower-processed forms have also boosted trade in paddy rice, in particular to Latin America and the Caribbean. In this respect, it is noteworthy that, also on the exporter side, paddy rice is often subject to restrictions (or even bans), although recently there was some removal of such restrictions (for instance, in India). Tariff escalation on rice imports and restrictions on paddy rice exports pursue the same objective of protecting domestic rice milling industries.

4. The international market "deepens"

An international commodity market is considered thin when it represents only a small proportion of global production. Thin markets are often subject to large swings in traded volumes, since relatively small changes in production in an important producing country may result in large increases in exports or imports, should that country resort to the international market to dispose of a sudden increase in domestic supplies or to cover a shortfall. Trade on

thin markets is often considered a residual option, often secondary to the alternative of building-up or drawing from domestic reserves.

Since the early 1990s, trade in rice has not only risen in volume terms but also in relation to production, resulting in a "deepening" of the rice international market, which passed from representing a mere 4 percent of global production in the 1980s to 7 percent in 2000-03. The tendency for rice trade to deepen over time contrasts with the patterns in the wheat and maize international markets, which, instead, have "thinned" since the early 1980s. Nonetheless, the rice international market continues to be thinner than that of other two cereals, since it represented only 7 percent of global production in recent years, against 18 percent for wheat and 13 percent for maize.

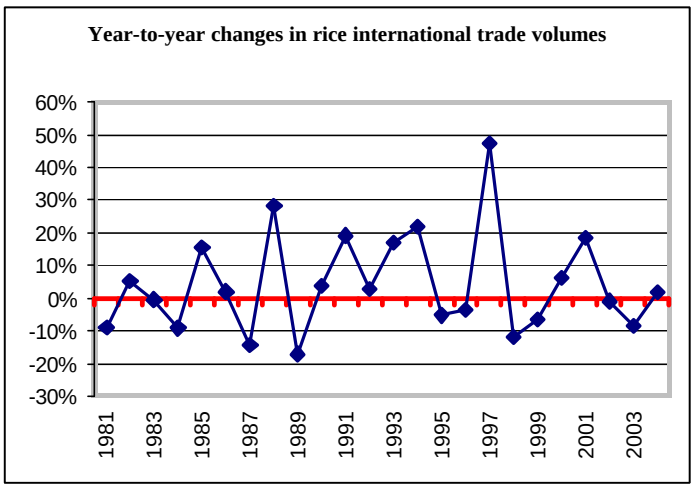
SHARES OF GLOBAL PRODUCTION TRADED ON WORLD MARKETS

	Rice (milled eq.)			Wheat			Maize		
Average	Global Production	Global Trade	%	Global Production	Global Trade	%	Global Production	Global Trade	%
1980-89	305,306	11,734	4%	497,379	97,044	20%	438,592	64,522	15%
1990-99	370,853	19,062	5%	573,607	102,567	18%	547,011	64,207	12%
2000-03	393,464	26,837	7%	576,073	104,777	18%	611,893	78,843	13%

A growing reliance on trade by countries in Africa and the Near East has contributed to such a deepening of the market. In those regions, rice imports now satisfy more than 40 percent of domestic requirements. The contribution is even higher for Central America and Caribbean countries, with half of their rice consumption now consisting of imports. For the developed countries as a group, imports now satisfy about one quarter of domestic utilization in rice.

5. Variability of rice trade flows

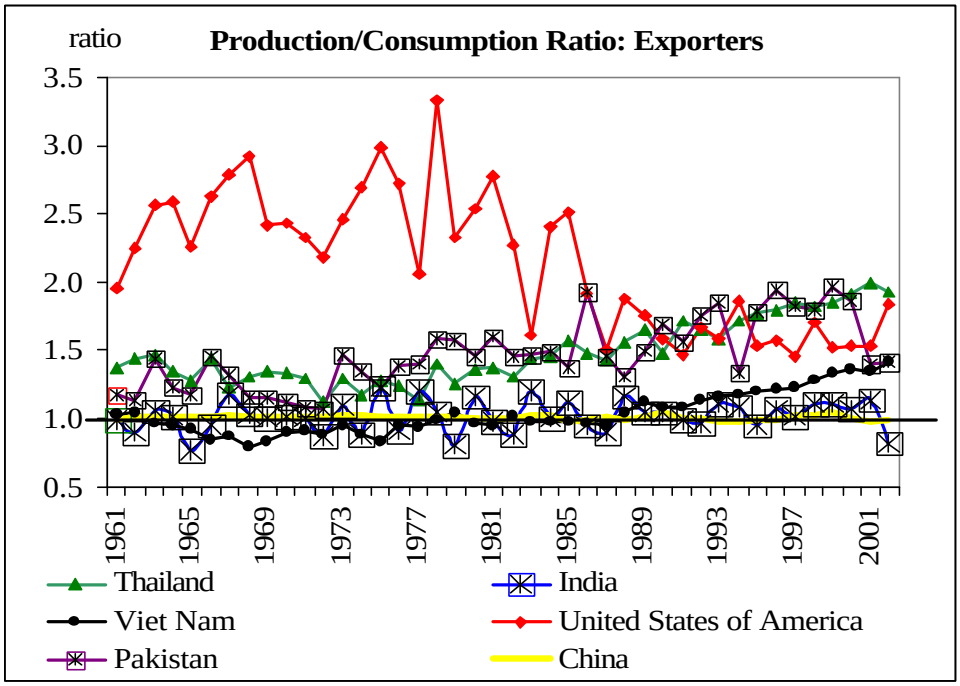
Global trade in rice fluctuated widely over the past two decades, from a minimum of 10.6 million to 28.3 million tonnes. This resulted in a coefficient of variation (CV) of 33 percent between 1980 and 1999, which is high, especially if compared with a 12 percent coefficient of variation of global rice production and with the coefficients of variation of wheat and maize trade, respectively of 6 percent and 8 percent over the same period.

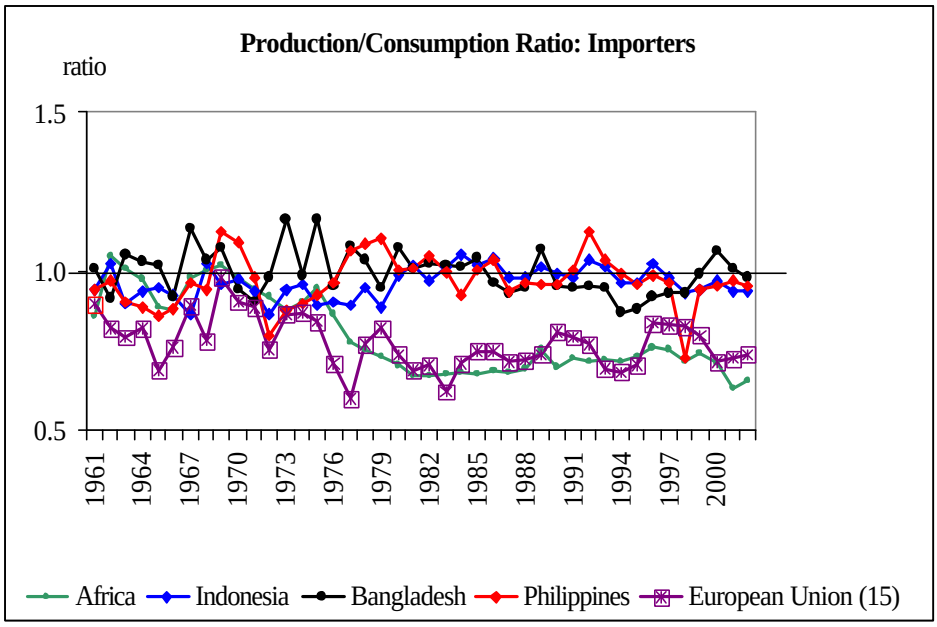


Variability measured decade by decade pointed to greater stability of rice trade. In the 1980s, the volumes flowing on the international rice market fluctuated within a relatively small range of 11million -14 million tonnes, resulting in a measure of variability of the order of 8 percent, not very different from the variability prevailing on the wheat and maize markets, and indicative of rather stable international rice flows. Trade fluctuated within a much broader band of 12 million - 28 million tonnes in the 1990s, which gave rise to a much higher CV of 26 percent.

The large fluctuations in rice trade in the 1990s were the result of sudden surges or drops in import demand and export supplies, arising from the "residual" nature of the international rice market for some major trade players. For instance, imports to Indonesia, the leading rice importer in the 1990s, varied from a minimum of 23 000 tonnes in 1993 to 6 million tonnes in 1998. With many of the major rice importers continuing to hover around self-sufficiency positions, they constitute potential sources of disruption on the international market. Regions like Africa and the European Union, on the other hand, have established themselves as stable markets for rice.

The international rice market has also ceased to be considered as "residual" by the major exporters, which are directing an increasing share of their production to the world market. The greater reliance of trade was evident in Thailand, Vietnam and the United States. On the other hand, China and India, the two major producing countries, have maintained self-sufficiency ratios very close to unity and have preferred to balance their domestic markets by building-up or drawing supplies from stocks, with trade considered only a "secondary" option. However, there have been several instances when the two countries have relied on trade to balance their domestic markets. In particular, bad crops prompted China to sharply increase rice imports in 1988, 1994 and 1995, while, in India, bumper crops and changes in policies resulted in much enlarged exports from the country in 1994, 1995, again in 2001 and 2002.





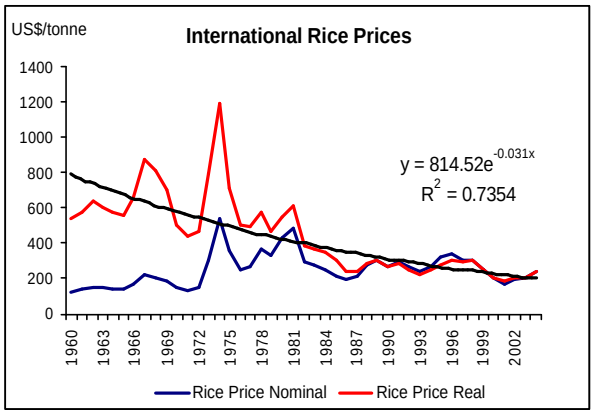
III. Patterns of international rice prices

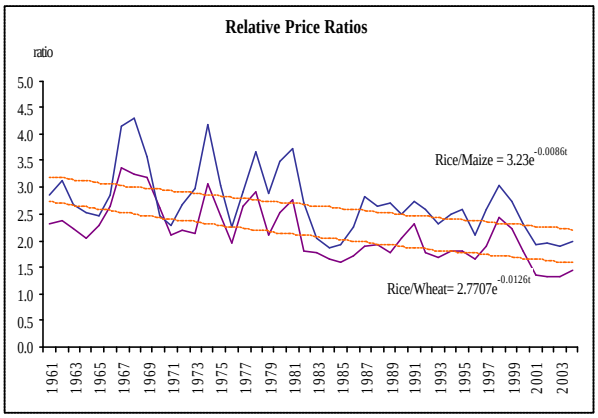
6. International rice price trends

World rice prices, represented by the Thai 5% broken rice, fob Bangkok, did not follow a definite pattern, in nominal terms [5], in the past decades. However, on a real basis (deflated by the Index of Unit Value of Manufactured Goods), there was a distinct[6] tendency for them to decline by 3 percent per year since 1960. Thus, together with the strong expansion in the volume of trade, the world rice market was largely dominated by a long term tendency for world prices to decline in real terms, a pattern which is consistent with the improvements in productivity and reduction in per unit costs associated with the green revolution in the 1960s and 1970s. Falling prices of basic inputs, in particular fertilizers (David Dawe, 2004), also explain the continued tendency for prices to dip in the 1980s.

Rice international prices also lost ground relative to wheat and maize[7], since rice prices are estimated to have fallen by 0.9 percent per year relative to maize prices and by 1.3 percent per year relative to wheat over the 40 year period.

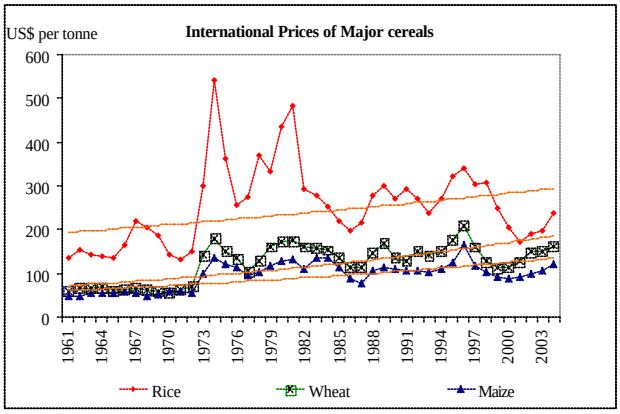
[5] An exponential trend fit resulted in a very poor R^2 of 16 percent.
[6] An exponential trend fit resulted in a R^2 of 74 percent
[7] Rice prices are represented by the Thai 5% broken rice, fob Bangkok; wheat prices by the N.1 hard red winter (Mexico Gulf, fob); maize prices by Yellow N. 2, Gulf Ports, fob; The index of international prices of manufactured goods, 1990=100 was used as deflator.





7. International Price Volatility:

International rice prices have notoriously been prone to large swings and volatility, much larger than that observed in the case of wheat and maize prices. This is evidenced by the measures of annual price variability, which for the period average 1961-2003 are higher for rice than for wheat or maize. However, rice price variation since the 1990s has fallen relative to the other cereals.



Variability of international Prices – Annual Frequency			
CV	Rice	Wheat	Maize
1960s	0.20	0.05	0.07
1970s	0.44	0.37	0.29
1980s	0.32	0.15	0.18
1990s	0.11	0.19	0.18
2000s	0.11	0.14	0.13

The growing stability of world rice prices has resulted in levels of price variability similar to that of the wheat and the maize prices. Actually, at the annual frequency, the coefficient of variation of prices was lower in the 1990s for rice than for wheat of maize, in sharp contrast to the pattern prevailing in the 1960s and the 1980s.

Rice prices at the monthly frequency level also exhibited a distinct tendency to stabilize, with the coefficient of variation estimated at 15 percent in the 1990s, well lower than the 32 percent in the 1980s and 45 percent in the 1970s.

Variability of rice international prices – Monthly frequency				
	1960-69	1970-79	1980-89	1990-99
CV	21%	45%	32%	15%

The growing stability of international rice prices in the 1990s contrasts with the sharp increase in the variability of trade volumes over that same decade. Indeed, while the strong expansion in rice trade was associated with much larger year-to-year variations in the volume of transactions, there was no corresponding effect on international prices, which became les volatile.

Various reasons can be posited to explain this apparent paradox. First, the deepening of trade is likely to have had a stabilizing effect on prices, since individual countries' incursions, either on the import or export sides, are expected to have a lower impact on prices the larger the share of world trade in relation to global production.

Secondly, the greater "dependability" of exporters as sources of supplies is also thought to have contributed to increasing world price stability. For instance, shipments from Thailand, the principal rice exporter, accounted for more than 40 percent of the country's production in the early 2000s, well above the 35 percent it exported a decade earlier. The share of exports in production also surpassed 40 percent in recent years in the United States, Pakistan and Uruguay. Although smaller, it has been rising in Vietnam, the second largest exporter, reaching 16 percent in 2000-03. Variability of supplies from several of the major exporters, especially Thailand, Vietnam and the United States also declined in the 1990s compared with the preceding decade, which has rendered them more reliable and dependable sources of trade. By contrast, exports from China and India increased in volatility.

Thirdly, the existence of sizeable rice inventories and the willingness of governments to keep and manage such reserves in the 1990s have smoothened the impacts of large swings in import demand and export supplies on world prices. The surge of exports by Thailand this year, for example, was possible because of the large purchases that had been made by the Government within the framework of domestic price stabilization and procurement programmes in 2001 and 2002. The availability of large public stocks indeed has allowed the country to meet demand and fill the gap left by other major exporters that had restricted exports this year.

Finally, improved flows of information on rice supply and demand prospects together with improved access to international price quotations have also increased transparency on the international rice market. Better information on the rice global market and prices, together with the adoption of policy disciplines under the WTO and regional agreements, are likely to also have contributed to the stabilization of prices.

IV. CONCLUSIONS AND PROSPECTS

In the past several decades, the international rice market has undergone major changes, in particular a shift in the general policy setting, a strong expansion in the volumes of trade and a lingering tendency for world prices to decline in real terms and relative to the other two most traded cereals, wheat and maize. Nonetheless, the world rice market continues to be regarded as distorted, thin, segmented and volatile. This paper discusses whether these attributes still portray the market.

On the policy front, interventions have diminished in the wake of the market liberalization launched by several countries since the late 1980s. The WTO agreement, in 1994, also disciplined government policies and helped improve market access. Nonetheless, rice

continues to be one of the **most protected commodities in both developing and developed countries**, subject to high tariff and non-tariff barriers, export restrictions or aids, state trading and domestic market interventions.

Since the early 1960s, trade in rice has expanded at about 3 percent per annum, not much different from the pace of growth in wheat or maize trade. However, growth has been far from steady. The liberalization thrust of the 1990s coincided with a period of dynamic **expansion in the volume of rice trade**, which succeeded a decade of relatively lacklustre growth in the 1980s. The volume of rice exchanged rose from a less than 7 million tonnes in 1961 to 24 million tonnes in 2000 and has continued to expand further in the early 2000s, surpassing 28 tonnes in 2001 and 2002. Nevertheless, the international rice market is still small relative to the other major cereals, with an average of 27 million tonnes in 2000-2003, about one quarter of the volume traded in wheat and little over one third of trade in maize.

Rising import demand by countries in Asia and Africa were the main forces underpinning trade in rice in the 1990s and early 2000s. The increases in imports were often a reflection of more open trade policies but were also prompted by several production setbacks, for instance in 1997 in the wake of an El Niño weather anomaly. Despite the consolidation of countries in Africa and the Near East as important and stable destinations of rice trade, the demand side of the **rice international market remains highly dispersed geographically**, with the top ten importers accounting for only 40 percent of the total.

Most of the trade expansion witnessed in the past two decades was met by traditional exporters. Thailand, in particular, has maintained its leadership as the top rice exporter since 1980. Major inroads were made by Vietnam, which became the second most important source of trade supplies in the 1990s, a position it was eclipsed from in the early 2000s, when India started granting export subsidies. Despite changes in the relative positions of the major exporters, **the supply side of the rice international market is still highly concentrated**, with the top four exporting countries (Thailand, India, Vietnam and the United States) supplying 66 percent of trade and the top ten more than 90 percent of the total.

Rice is **not a homogenous commodity** and presently there are more than 50 different published international price quotations for rice. In fact, there are distinct sub-markets featured according to a number of criteria, the most important of which are variety, quality (defined mainly by the percentage of brokens) and the degree of processing.

The expansion of trade witnessed in the 1990s was accompanied by small but significant changes in the **structure of the world rice market** and in the relative importance of each segment. The bulk of global trade continues to be in the form of milled, Indica, higher quality rice (defined as containing less than 20 percent of brokens). However, aromatic rice varieties, lower quality rice and paddy have made large in-roads and have increased market shares. Those gains were mainly at the expense of trade in Japonica, of higher quality and of milled rice.

Most of the highlighted changes can be associated with shifts in the geographical pattern of trade. The increasing importance of Africa and a number of Asian countries as destinations of rice flows, in particular, has sustained a large increase in the trade of lower quality rice. The growing importance of aromatic rice varieties in global trade reflects dynamic imports to the European Union (mainly of Basmati rice, imported under preferential access conditions), the United States, Canada and Australia. However, it can also been associated with large deliveries of Hom Mali rice (a fragrant variety from Thailand), to countries in Africa,

particularly Cote d'Ivoire, Ghana and Senegal, albeit with a high percentage of brokens. On the other hand, high degrees of protection have limited import growth in markets such as Japan, the Republic of Korea, the European Union and Turkey and have constrained the opportunities for expansion of trade in Japonica rice. Tariff escalation, whereby the more processed forms of a commodity are assigned higher tariff rates, has favoured a strong expansion of trade in paddy, principally to Latin America and the Caribbean.

An international commodity market is considered "**thin**" when it represents a relatively small proportion of global production. The international rice market represented only 3 percent to 5 percent of global production in the 1980s, but a strong expansion of world trade since the mid-1990s has made it "**deepen**", as it has come to represent 7 percent of global production in recent years. Nonetheless, the international rice market remains "thin", compared with wheat or maize, the trade of which now accounts for some 18 percent and 13 percent of global production respectively.

Thin commodity markets are often subject to large **swings in** volumes, since relatively small changes supply or utilization in important producing country may give rise to large increases or contractions in their exports or imports. In general, however, such countries have preferred to balance their domestic markets by building-up or drawing supplies from stocks, with trade considered only a "residual" option. Global trade in rice has fluctuated widely over the past two decades, from a minimum of 10.6 million to 28.3 million tonnes, and variability measured by the coefficient of variation (CV) was high at 37 percent compared with a 12 percent variability of global rice production. It was also much higher than variability of wheat and maize trade, which had a CV of 6 percent and 8 percent, respectively.

Variability of rice trade measured decade-by-decade pointed to a greater stability. In the 1980s, volumes exchanged on the international rice market fluctuated within a relatively small range of 11 million -14 million tonnes, resulting in a measure of variability in the order of 8 percent, not very different from that prevailing on the wheat and maize markets. Trade fluctuated within a much broader band of 12 million - 28 million tonnes in the 1990s, which gave rise to a much higher CV of 26 percent. Thus, the strong tendency for international trade to grow in the 1990s was associated with much greater volatility in volumes.

The international rice market has been also characterized by a long- term tendency for **world rice prices** (represented by the Thai 5% broken rice, fob Bangkok) to **fall in real terms** (deflated by the Index of Unit Value of Manufactured Goods) between 1961 and 2003. The decline in constant US$ has been of 3 percent per annum and, in 2003, rice was worth less than 40 percent, in real terms, of its 1961 value. Rice prices also declined **relative to wheat and maize**. If one tonne of rice could be exchanged for 2.5 tonnes of wheat in 1961, it could only be bartered for 1.3 tonnes in 2003. A similar loss of value was evidenced relative to maize world prices.

Although variability in the volume of rice trade rose in the 1990s compared with the 1980s, this did not cause the **variability of world prices** to follow suit. On the contrary, rice prices have become more stable over time, to the point of achieving levels of volatility similar to those exhibited by wheat and maize prices. Actually, on an annual frequency basis, prices in the 1990 were more stable for rice than for wheat or maize, in sharp contrast to the pattern prevailing in the 1960s and the 1980s. Stabilization of world rice quotations was also evidenced on a monthly frequency basis.

Thus, the rising variability of trade flows was not associated with more volatile world prices, which have instead, stabilized. Several explanations can be offered to explain this **paradox**. First, the "deepening" of the international market has meant a greater dependability of supplies. The existence of large buffer stocks, the improved flows of information on markets and prices, as well as the introduction of disciplines on national and international policies are also believed to have fostered price stability on the market, in spite of the wider fluctuations in the volumes of trade.

In summary, it can be said that international trade in rice has become less distorted, less "thin", more unstable volume-wise, but more dependable. This might have important implications for policy makers by encouraging them to lower domestic protection to the rice sector and increase their countries reliance on trade. However, there is still much uncertainty on whether the tendencies observed in the 1990s will linger into the rest of the 2000s and in the decades to come. Against this backdrop, the outcome of the on-going multilateral trade negotiations will be of particular importance in shaping the future of the international market.