

Global Food Price Inflation

Implications for South Asia, Policy Reactions, and Future Challenges

Sadiq Ahmed

The World Bank
South Asia Region
South Asia Regional Programs Unit
December 2008



Abstract

The surge in global commodity prices of the past few years has presented a tremendous development challenge for South Asian countries. The large loss of income from the terms of trade shock has worsened macroeconomic balances, fueled rapid inflation, and hurt growth. Although commodity prices have come down recently, the benefits are being clouded by the emergence of a severe global financial crisis. The adverse consequences of the food price hike for the poor are large; the global financial crisis could further worsen the situation due to falling economic opportunities and government revenues. South Asian countries need to accelerate reforms to avoid facing a serious downturn in economic

activity, investment, exports, and income. Governments in South Asia have responded by stabilizing domestic food prices through a number of short-term measures, tightened monetary policy to reduce inflation, and increased spending on a range of safety net programs for the poor. Some of the policies employed, such as export bans, are not consistent with the long-term welfare of the country or the region. Safety net interventions need to be made consistent with a longer-term poverty reduction strategy and fiscal sustainability. Most importantly, policy attention now needs to shift toward efforts to increase farm productivity, improve rural infrastructure, and lower the vulnerability of the poor.

This paper—a product of the South Asia Regional Programs Unit of the South Asia Region—is part of a larger effort in the region to promote more and better regional cooperation in South Asia. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at Sahmed2@worldbank.org.

The Policy Research Working Paper Series disseminates the findings of work in progress to encourage the exchange of ideas about development issues. An objective of the series is to get the findings out quickly, even if the presentations are less than fully polished. The papers carry the names of the authors and should be cited accordingly. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the views of the International Bank for Reconstruction and Development/World Bank and its affiliated organizations, or those of the Executive Directors of the World Bank or the governments they represent.

Global Food Price Inflation: Implications for South Asia, Policy Reactions, and Future Challenges¹

Sadiq Ahmed

I. Introduction

The surge in global commodity prices of the past few years has presented a tremendous development challenge to South Asian countries. On a net basis South Asia is estimated to have suffered an income loss equivalent to some 9.6 percent of GDP between January 2003 and April 2008. Although much of the income loss resulted from the hike in petroleum prices, the surge in food prices between January 2007 and April 2008, especially of staple food--wheat and rice--has created tremendous adverse social impacts in South Asia. All countries have witnessed an unprecedented surge in food prices, although India was able to limit the increase owing to good harvests and timely interventions using stock management and public food distribution. Net food importing countries like Afghanistan, Sri Lanka, and Bangladesh have suffered the most from the food price crisis.

The adverse effect of the rise in global commodity prices on macroeconomic balances has been substantial. South Asian countries have seen a sharp increase in fiscal deficits and a worsening in the balance of payments. Inflation has been hit badly. For the first time in South Asia's history, all countries have simultaneously experienced double-digit inflation rates, with 20 plus rates in Afghanistan, Pakistan, and Sri Lanka. Economic growth is showing signs of a slowdown as countries seek to arrest the deterioration in macroeconomic imbalances and rising inflationary pressures through demand management measures. The emerging global financial crisis is adding fuel to the fire, with further adverse consequences for macroeconomic balances and growth.

The twin global crises of higher commodity prices and financial turmoil have come at a time when most South Asian countries are in a state of political transition. Afghanistan, Bangladesh, and India are facing national elections within the next 12 months. Nepal and Pakistan have recently emerged from the election process with new governments in place under a hugely different political environment than previously. Sri Lanka is still fighting a civil war. So, arguably, the political economy of policy management has seldom been so challenging in South Asia. In all countries, the immediate political economy concern is to stabilize domestic food prices and lower inflation. This concern is easy to see when one looks at the adverse consequences for poverty reduction. The share of food consumption in total consumption is extremely high in South Asia, averaging nearly 50 percent as compared to 17 percent in the United States. It is even higher for the poor, who as a result have been hurt most by the increase in food prices.

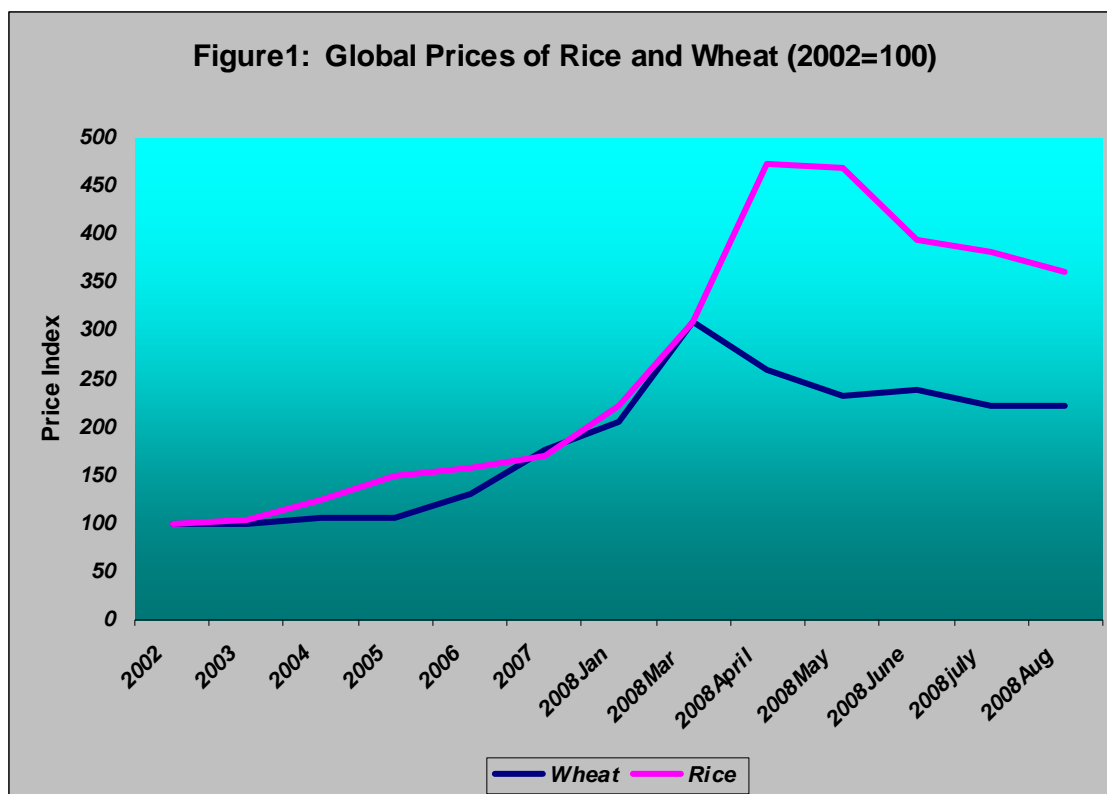
¹ The author is with the World Bank in Washington DC. The paper benefitted from country policy notes prepared by world bank staff. Comments from Adolfo Brizzi, Ambar Narayan, Hassan Zaman, Mansoor Rashid and Tara Vishwanath are gratefully acknowledged. Veronica Minos Lazarus and Moutushi Islam provided competent research assistance. All views expressed in the paper are those of the author and do not necessarily reflect the views of the World Bank Group. Errors are the sole responsibility of the author.

While much of the immediate policy focus has been on food price stabilization, especially for staple foods—wheat and rice-- the implications of the various short-term price stabilization policies for longer-term supply response, growth, economic efficiency and fiscal sustainability have not always been analyzed or thought through. South Asian countries have also intervened to put in place various safety net programs to protect the poor. This has been a combination of activating or expanding existing schemes and introducing new schemes. The efficiency and effectiveness of these schemes in terms of outcomes and consistency with fiscal sustainability in an environment of external shocks and very tight fiscal space also need much more thought, analysis and review.

The main objective of this paper is to provide input to the policy debate and analysis of how South Asia needs to position itself to respond effectively to the global food price crisis. To put this debate in proper context, the paper first provides a brief analysis of the nature of the global food price crisis focusing on the two staple food items--wheat and rice—that have occupied the primary attention of policy makers. It shows the strong positive link between the prices of food and energy, which emphasizes the need to look at them together. Section III of the paper then looks at the supply, demand and price situation in South Asia for these staple food items, explaining why prices have diverged so much between countries within the region and in comparison with global prices. In Section IV, the paper reviews the impact of the food and fuel price crisis in South Asian countries in terms income, macroeconomic balances, inflation and poverty. How the various countries have responded on the policy front is reviewed in Section V. Section VI looks at the longer-term issues and challenges, including the consistency of short-term actions with the longer-term agenda. Finally, Section VII provides some concluding observations.

II. Global Food Price Inflation

Global food prices have been on an upward trend for a fairly long time, particularly since 2005. Prices accelerated starting in January 2007. Based on the Food and Agriculture Organization's (FAO) World Food Price Index, international food prices in April 2008 were 60 percent higher than 12 months earlier. World food prices have in particular been driven by higher grain prices. Two staple food grain of special importance to South Asia are wheat and rice. The international price of wheat more than tripled between 2002 and March 2008 (figure 1). The wheat price was relatively stable until 2006, but surged in 2007 and early 2008, reaching a global peak in March 2008. The price has since then come down, but as of August 2008 it remained 70 percent higher than the average price in 2006. The price of rice increased nearly five-fold between 2002 and May 2008, when it reached a global peak. Rice price started rising since 2004, but the spike came in 2008 when the price more than doubled in five months between January and May. Rice price has also come down after May. Even so, as of August 2008, international rice price was 128 percent higher than the average in 2006. These large increases in prices of food grain have huge adverse implications for world poverty.



Source: IMF International Financial Statistics and World Bank's Global Economic Monitoring Database

Global food prices have increased because of a combination of factors including rising population, rapid economic growth in emerging markets, high energy and fertilizer prices, increased use of food crops for bio-fuels, rapid demand increase for some food crops, depreciation of the US dollar, and declining global stocks of food grains due to changes to buffer stock policies in the US and the European Union. Back-to-back droughts in Australia, and growing global demand for grains (excluding for bio-fuel production) have been modest contributors and on their own would not have led to large price increases. Commodity investors and hedge fund activity also seem to have played a minor role. Although empirical evidence is scarce, the prevailing consensus among market analysts is that fundamentals and policy decisions are the key drivers of food price rises, rather than speculative activity (World Bank 2008a).

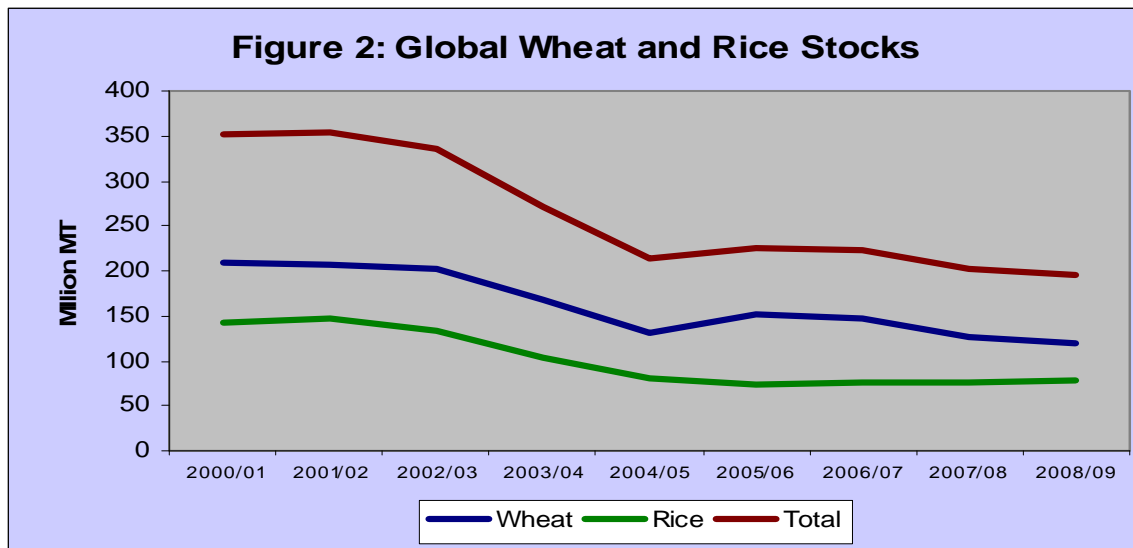
III. Global Supply-Demand Imbalance

Table 1 shows the world production and consumption trends for wheat, rice and foodgrain over the past 10 years. A number of interesting results emerge. First, between 1999 and 2008 world food consumption has grown faster than production causing a fairly substantial drawdown of stocks (figure 2). Second, wheat production faced difficulties over the 2005-2007, but there has been strong recovery in 2008-2009. Third, in contrast to wheat, rice production increased significantly during 2005-2008 and overall production has basically exceeded consumption.

Table 1: World Foodgrain Demand-Supply Situation, 1999-2009
(millions of metric tons)

Year	Wheat		Rice, milled		Food Grain	
	Production	Consumption	Production	Consumption	Production	Consumption
1999/00	586.7	585.0	408.9	399.8	1,873.60	1,867.60
2000/01	582.9	585.0	398.9	395.3	1,844.80	1,864.80
2001/02	583.1	587.1	399.7	413.4	1,877.90	1,908.00
2002/03	568.7	605.3	378.3	408.0	1,822.80	1,917.20
2003/04	553.8	588.6	391.9	414.0	1,862.40	1,948.10
2004/05	625.7	606.9	401.3	409.3	2,043.60	1,995.60
2005/06	620.9	624.4	418.3	415.8	2,018.90	2,033.60
2006/07	596.3	616.9	420.2	420.6	2,005.30	2,053.50
2007/08	610.5	622.1	429	426.6	2,115.50	2,114.90
2008/09	670.8	649.8	430.8	427.7	2,190.60	2,170.60

Source: USDA

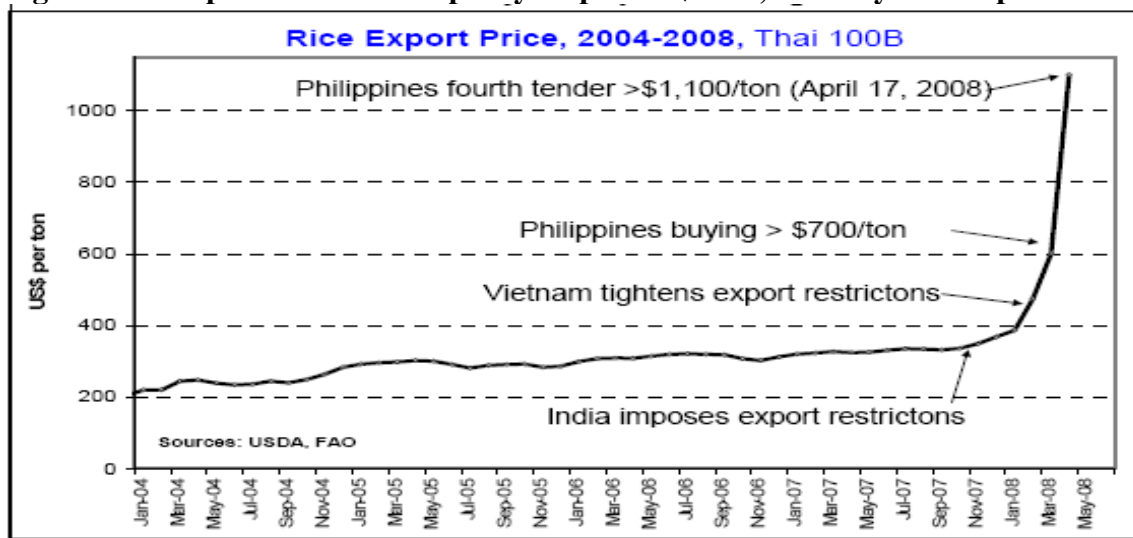


Source: USDA database

To what extent do these trends explain the rising prices? The drawdown of reserves during 1999-2008 is a clear indication of a global tightening of food markets with obvious implications for rising prices. The acceleration of wheat price increases during 2006-2008 is partly explained by the large imbalance between supply and demand in this period, accentuated of course by adverse market expectations and the generally low short-term supply-demand elasticities. But the behavior of rice prices and its acceleration in 2007-2008 is not explained by demand-supply imbalances. As noted earlier, unlike wheat overall rice production exceeded consumption during 2006-2008 and yet prices hit the roof. One needs to look at other factors. Two critical factors are trade policies and cost of production.

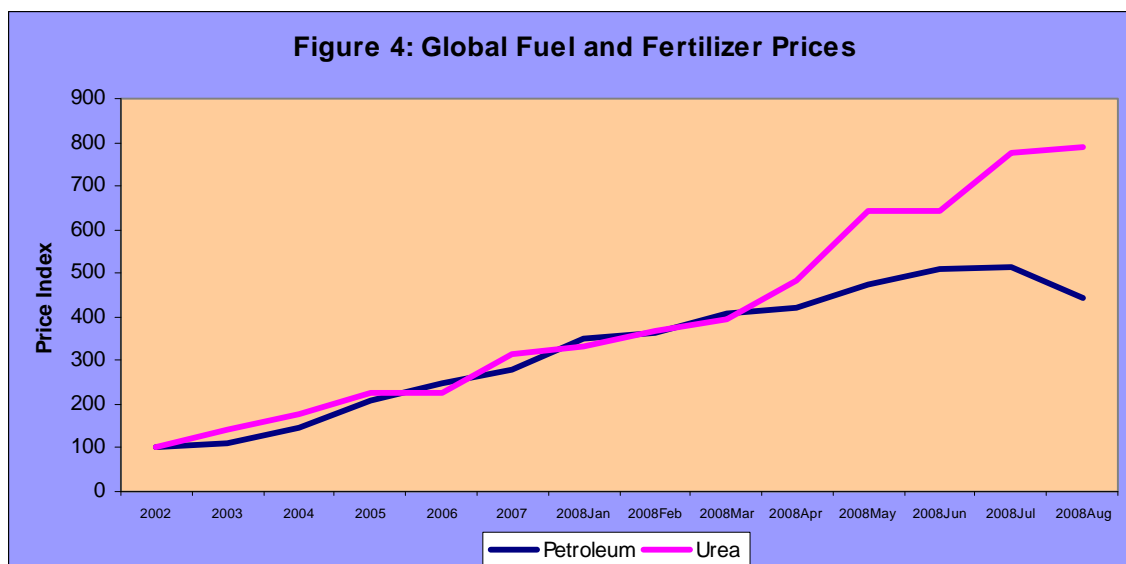
Adverse Effects of Trade Policy Bans: The introduction of export restrictions and bans — such as those imposed by India and China on rice, or by Argentina, Kazakhstan, Pakistan, and Russia on wheat — has further restricted global supply and aggravated shortages. Initial actions by a few large exporting countries prompted others to quickly follow suit, undermining trust in the market and leading to worse outcomes for all. The result has been a self-reinforcing price spiral. This is well illustrated for the rice market in a recent study by Brahmabhatt and Christiaensen (2008). India’s decision to ban rice exports (except for ‘Basmati’ rice) was quickly followed by export restrictions placed by Vietnam and other major players, with an immediate impact on prices. Actions by large rice importers, such as the Philippines, which organized large tenders to obtain needed rice imports against this background of shrinking traded supplies, further aggravated the problem (see Figure 3).

Figure 3: Rice prices and recent policy responses \$/Ton; January 2004-April 2008



Source: Brahmabhatt M and L Christiaensen (2008) 'Rising Food Prices in East Asia: Challenges and Policy Options'

Surge in cost of production: A second and more long-term factor is the rising cost of production. Key inputs, such as fertilizer, diesel, electricity and transport have all gone up tremendously at the global level linked to energy prices (figure 4). The increase in fertilizer prices is particularly telling, rising more than by four times between 2002 and 2008; the sharpest increase came after 2006. This increase in cost of production is an important structural factor that explains why prices have rice and wheat prices increased so rapidly in the past 2 years.



Source: IMF IFS Yearbook, World Bank Commodity Prices

Expected Near to-Medium-Term Outlook for International Food Prices

While short-term fluctuations in food production compounded by trade restrictions had a negative impact on short-term food prices, one good news for near-term prices is the bumper global harvests for wheat in 2008-09. Rice production has also increased. As a result, stocks are being replenished putting a downward push to global prices. The lifting of the trade bans will help lower prices further. Yet, it is clear that the underlying economics of food markets has changed substantially and unless energy prices were to collapse to the levels found in 2004, the global price of rice and wheat will not likely return to the pre-crisis prices of 2004. Expected outlook for prices in the near to medium term are shown in Table 2. These projections show the substantial reduction in projected annual average oil and fertilizer prices from the peak levels in 2008. While these projected input prices are significantly lower than the local peak (especially for oil that reached a monthly average of \$134/per barrel in July 2008), they are substantially higher than the average prices in 2004 reflecting the realities of world demand and supply. Also, as the global recession eases commodity prices are likely to rebound.

Table 2: Projected average global wheat and rice prices, 2007-2010

	2007	2008	2009	2010
Oil (\$/barrel)	72.5	101.2	74.5	75.8
Rice (\$/MT)	326.4	660.0	446.0	459.0
Wheat (\$/MT)	255.2	330.0	255.0	262.0
Fertilizer (\$/MT)	309.4	544.0	388.0	299.0

Source: World Bank Prospects for the Global Economy (November 2008)

Food Situation in South Asia²

Supply and Demand Factors: Tables 3 and 4 show the trends in rice and wheat production and consumption in South Asia over 2000-2008. Total food production (rice

Table 3: South Asia Food Grain Production (1000 MT)

		2000/2001	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
Rice	Afghanistan	169	157	260	174	312	315	362	335	168
	Bangladesh	25,086	24,310	25,187	26,152	25,600	28,758	29,000	28,600	29,400
	India	84,980	93,340	71,820	88,530	83,130	91,790	93,350	96,430	96,000
	Nepal	2,808	2,774	2,752	2,752	2,968	2,857	2,804	2,810	2,850
	Pakistan	4,802	3,882	4,479	4,848	5,025	5,547	5,200	5,500	5,600
	Sri Lanka	1,940	1,820	2,058	1,900	1,974	2,100	2,145	2,200	2,300
	<i>South Asia</i>	<i>119,785</i>	<i>126,283</i>	<i>106,556</i>	<i>124,356</i>	<i>119,009</i>	<i>131,367</i>	<i>132,861</i>	<i>135,875</i>	<i>136,318</i>
World	398,902	399,700	378,318	391,861	401,298	418,313	420,164	428,989	430,751	
Wheat	Afghanistan	1,469	1,597	2,686	3,480	2,293	4,265	3,200	3,800	1,500
	Bangladesh	1672	1610	1510	1253	976	820	740	1200	800
	India	76,369	69,680	71,810	65,100	72,150	68,640	69,350	75,810	78,400
	Nepal	1,184	1,157	1,258	1,344	1,387	1,442	1,394	1,395	1,400
	Pakistan	21,079	19,024	18,227	19,183	19,500	21,612	21,277	23,300	21,500
	<i>South Asia</i>	<i>101794</i>	<i>93088</i>	<i>95511</i>	<i>90380</i>	<i>96326</i>	<i>96799</i>	<i>95981</i>	<i>105325</i>	<i>103620</i>
	World	582,899	583,078	568,708	553,838	625,738	620,851	596,273	610,537	670,751

Source: USDA Database

Table 4: South Asia Food Grain Consumption (1000 MT)

		2000/2001	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
Rice	Afghanistan	385	427	440	369	455	516	550	485	343
	Bangladesh	24,958	25,553	26,100	26,700	26,900	29,000	29,764	30,600	30,600
	India	75,960	87,611	79,860	85,630	80,861	85,088	86,940	90,760	93,000
	Nepal	2,828	2,793	2,762	2,756	3,029	2,859	2,863	2,870	2,910
	Pakistan	2,615	2,540	2,545	2,595	2,550	1,896	2,257	2,450	2,420
	Sri Lanka	2,020	2,075	2,100	2,075	2,139	2,150	2,152	2,287	2,376
	<i>South Asia</i>	<i>108,766</i>	<i>120,999</i>	<i>113,807</i>	<i>120,125</i>	<i>115,934</i>	<i>121,509</i>	<i>124,526</i>	<i>129,052</i>	<i>131,349</i>
World	393,291	412,455	405,681	411,615	406,545	411,629	417,017	421,962	425,519	
Wheat	Afghanistan	2,043	2,597	3,186	3,930	3,293	4,765	4,250	4,700	3,800
	Bangladesh	2866	2950	3000	3050	3000	2950	2800	2900	2850
	India	66,821	65,125	74,294	68,258	72,838	69,971	73,358	75,850	77,600
	Nepal	1,194	1,158	1,266	1,361	1,407	1,462	1,408	1,415	1,420
	Pakistan	20,500	19,800	18,380	19,100	19,600	20,900	21,900	22,400	22,600
	Sri Lanka	850	801	875	931	950	1,000	817	825	850
	<i>South Asia</i>	<i>94,294</i>	<i>92,451</i>	<i>101,028</i>	<i>96,655</i>	<i>101,118</i>	<i>101,078</i>	<i>104,563</i>	<i>108,120</i>	<i>109,150</i>
World	583,564	587,816	603,659	581,173	605,943	618,197	618,703	619,007	647,079	

Source: USDA

² Due to data limitations, the paper is not able to cover Bhutan and Maldives

and wheat) grew at a slow pace of 1.0 percent per annum as compared with consumption growth of 2.3 (Table 5). South Asia's production growth has been slower than world production while consumption growth rate has much exceeded the world consumption growth rate. This is partly owing to a faster pace of expansion of South Asia's population, but also reflects a positive income elasticity.

There are significant differences at the country level in terms of production and consumption behavior, but all countries share the common result that on average food consumption has exceeded production during 1999-2008. In India, South Asia's largest grain producer for both rice and wheat accounting for 71 and 76 percent of production respectively, wheat production has barely expanded during 1999-2008 although rice production has shown a healthy trend. In Pakistan, a primarily wheat consuming country and accounting for 21 percent of South Asia's total wheat production, the production has fluctuated widely on a year-to-year basis but has been basically flat in 2000-2008, like in India. The other large foodgrain producer, Bangladesh, which is primarily a rice consuming country and accounts for 20 percent of South Asia's rice production, has registered a production growth of 2.0 percent per year in rice. In sharp contrast to the production pattern, the rate of growth of food grain consumption in all three large producing countries have outstripped production.³

The story is similar in the smaller countries of Afghanistan, Nepal and Sri Lanka. The data are not very reliable for Afghanistan, but it is a hugely food deficit country and relies mostly on wheat imports from Pakistan. Nepal's rice production has stagnated but wheat production has expanded; overall foodgrain consumption growth exceeds production. In Sri Lanka, which is primarily a rice eating country, production of rice has been somewhat higher than production of wheat, allowing Sri Lanka to reduce its reliance on wheat imports.

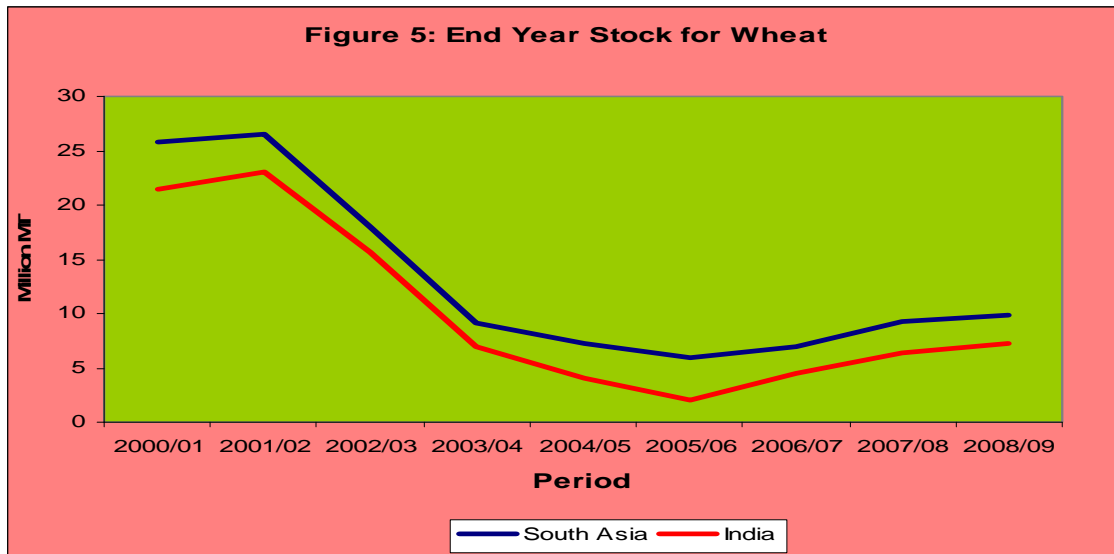
Table 5: Annual growth rates in production and consumption of food in South Asian Countries, 2000-2008 (percent)

Countries	Production growth			Consumption growth			Population growth
	Wheat	Rice	Total	Wheat	Rice	Total	
Bangladesh	-8.8	2.0	1.5	0.0	2.6	2.3	1.6
India	0.3	1.5	1.0	1.9	2.6	2.3	1.7
Nepal	2.1	0.2	0.8	2.2	0.4	0.9	2.3
Pakistan	0.3	1.8	0.8	1.2	-1.0	1.0	2.6
Sri Lanka	0.0	2.2	n.a.	2.0	0.0	1.6	0.9
South Asia	1.6	0.2	1.0	2.2	2.4	2.3	1.9
World	1.8	1.0	1.5	1.3	1.0	1.2	1.1

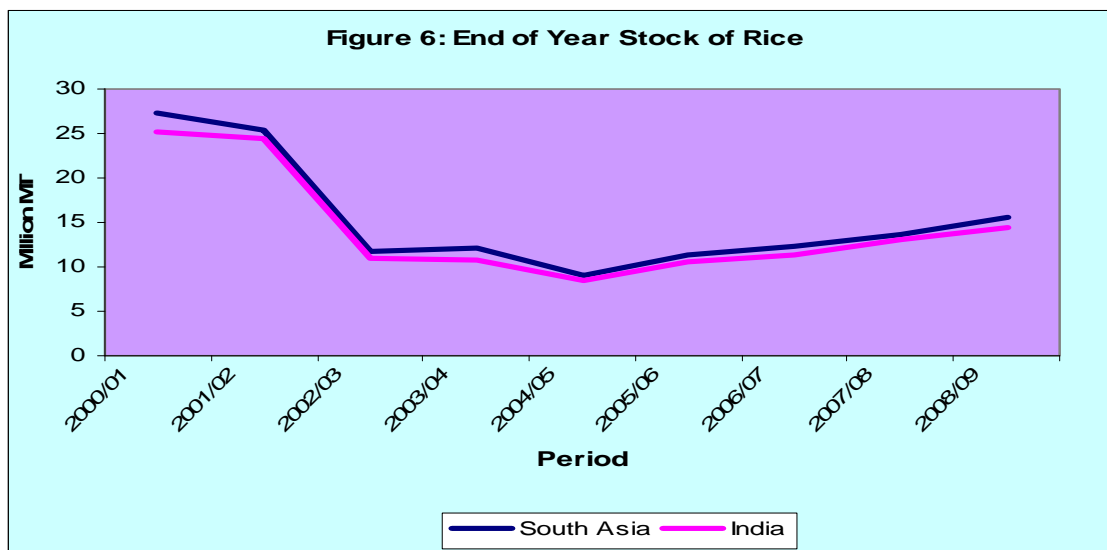
Source: Production, Consumption growth rates calculated from Tables 3 and 4. Population data from World Bank World Development Indicators

³ Surprisingly, however, Pakistan's consumption growth for foodgrain is substantially lower than the population growth rate suggesting negative income elasticity. This could alternatively reflect data problems.

What are the implications of these production and consumption trends for food availability and prices? In 2000 South Asia had a production surplus of almost 11 million MT of rice and 7.5 million MT of wheat. By 2008 the wheat surplus had vanished and converted into a deficit of about 6 million MT. The rice surplus also fell to around 5 million MT. The production shortfalls in wheat were met mostly by drawdown of reserves (Figures 5 and 6). South Asia's largest grain producer, India, had built up a huge foodgrain stock, partly for food security reasons and partly to provide price support to farmers. Thus in 2001/02 India had accumulated stocks of 25 million MT of rice and 25 million MT of wheat. These reserves were drawn down over the coming years, mostly to meet the consumption gap in wheat but also to reduce fiscal cost and physical wastage through rice exports. By 2005/06 the wheat stock had fallen to only 2 million MT causing a reversal in policy to build up reserves. Rice stocks also started rising in 2004/05 recovering from the low levels of 9.5 million ton. By 2008/09 stocks had recovered to 8 million MT for wheat and 15 million MT for rice. This obviously added



Source: USDA Database

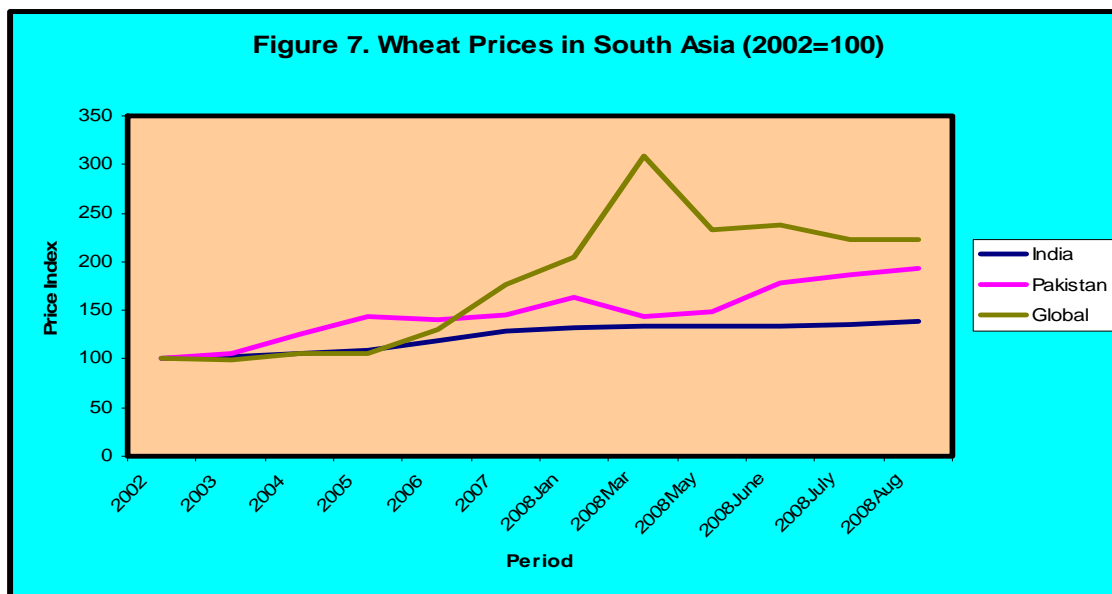


Source: USDA Database

to the demand pressure for both wheat and rice. Thus, India imported 6.7 million MT of wheat in 2006/07 and 2 million MT in 2007/08 as compared with almost zero imports in the past 6 years. Regarding rice, exports declined from a peak of 5.5 million MT in 2006/07 to only 2.0 million MT in 2008/09. These developments in domestic supply-demand balances suggest that similar to global experience, domestic food shortages are an important factor underlying food price pressures in South Asian countries.

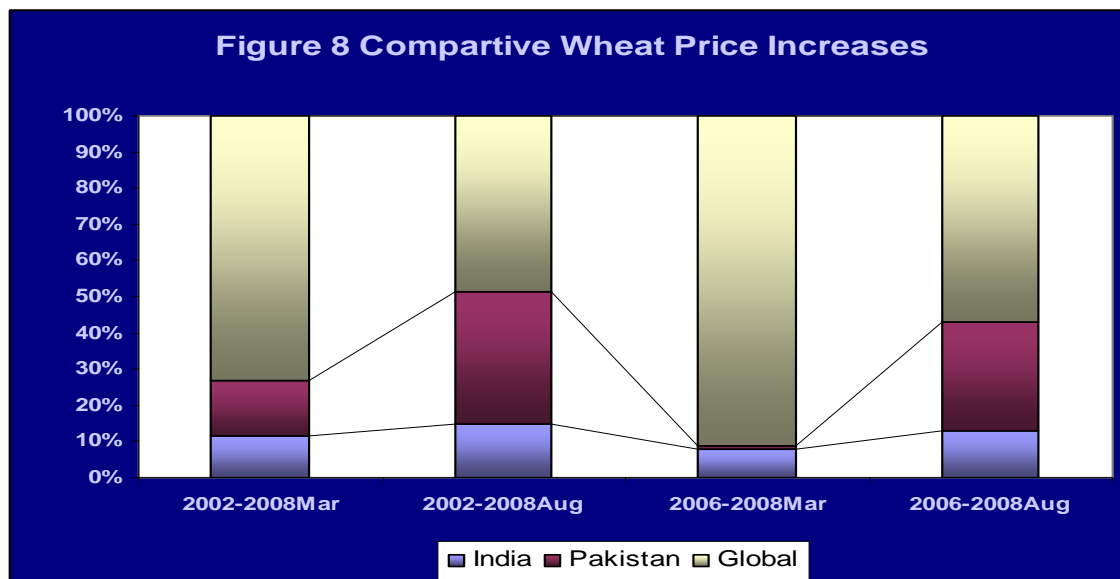
At the country level, foodgrain prices moved differently from the global prices and within the region. In terms of staple food wheat consumption is concentrated in Afghanistan, India and Pakistan who account for about 90 percent of total wheat consumed in South Asia. Rice, on the other hand, is more widely consumed in all countries. So, in looking at price trends and impact, we will take these considerations into account.

The trend in wheat prices in South Asia's major wheat consuming countries is shown in Figure 7. Unfortunately, comparable data for Afghanistan is not available. So we will rely on fragmented data. Figure 7 shows that wheat prices in both India and Pakistan increased in response to the global pressure, but the increases were much less intense,



Source: Compiled from various data sources of concerned authorities

especially in India (figure 8). Indeed, India managed to maintain a fairly stable wheat price that increased by only 33 percent between 2002 and 2008 March and by only 12 percent between 2006 and March 2008. Pakistan experienced sharper increases, but they happened in two phases. The first phase was between 2003 and 2005 and the second phase between March 2008 and August 2008. In total, the wheat price increased by 98 percent between 2002 and August 2008; it increased by 37 percent between 2006 and August 2008. Afghanistan on the other hand suffered much more. Although longer term trend data are not available, short term data shows that the wheat prices increased by 157 to 259 percent between May 2007 and 2008. (Table 6). These increases are even sharper than by global standards. The marked regional variation in price increases in Afghanistan suggests the low mobility of food grain within the country due to poor trade logistics and security problems.



Source: Staff estimates

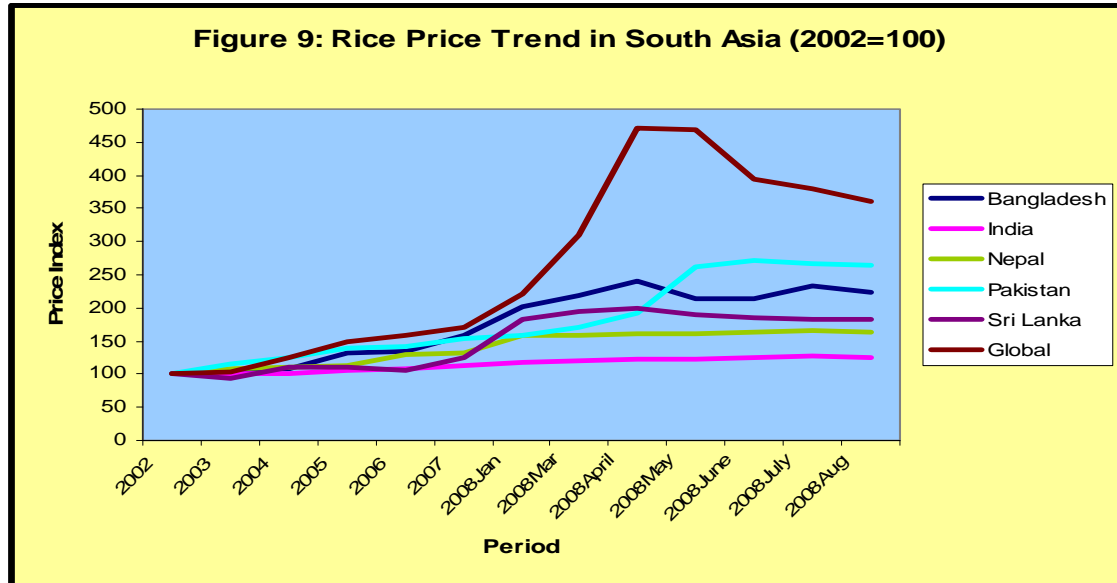
Table 6. Wheat Prices in Afghanistan

Region	Prices (Afs/kg)		Percent Change from May 2007
	May 07	May 08	
Kabul	13.3	39.0	193%
Kandahar	12.0	35.8	198%
Jalalabad	11.2	35.8	221%
Heart	11.7	34.0	190%
Mazar	9.9	35.5	259%
Faizabad	17.3	44.4	157%

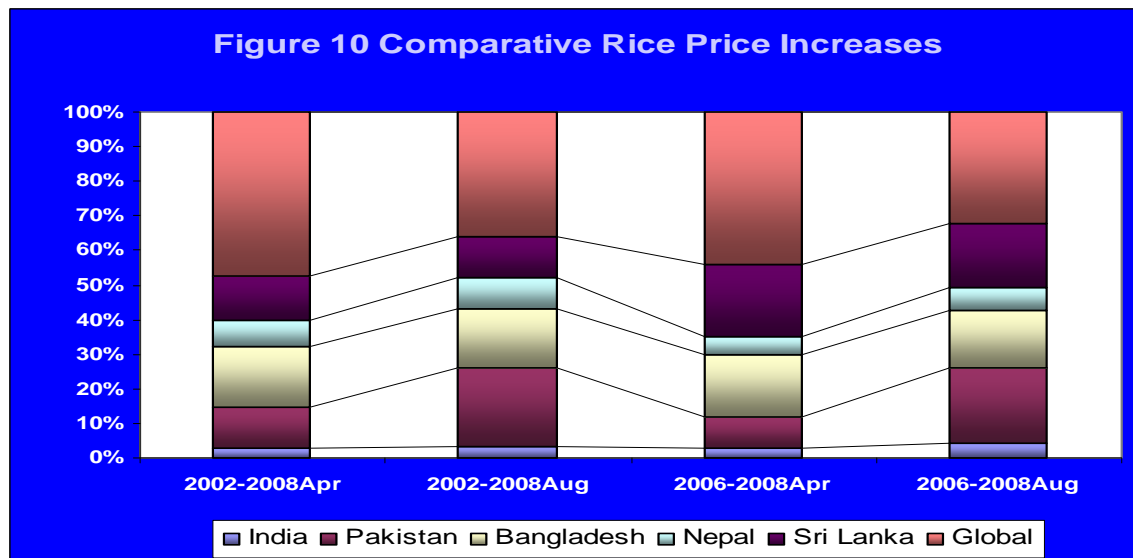
Source: World Bank (2008)

The movement in rice prices is shown in Figure 9. As in the case of wheat, South Asian rice prices on average rose less than in the global market and there are marked differences by countries. For the period as a whole, Pakistan witnessed the most rapid increase followed by Bangladesh, Sri Lanka, Nepal and India (Figure 10). Again, as in the case of wheat, India experienced the lowest price increase in the region, which is strikingly lower than the global price rise and the rest of the region.

There are two interesting questions: Why did South Asia experience substantially lower price increases of wheat and rice than the global market? And secondly, how did India manage to virtually insulate its economy from higher global rice and wheat prices? The answer to the first question lies in that all South Asian countries, except Afghanistan, largely rely on domestic grain production. The dependence on trade is low and most



Source: Compiled from various data sources of concerned authorities



Source: Author calculations

countries use trade restrictions and fiscal policy interventions that put a wedge between international and domestic prices, especially during an upswing. In the case of Afghanistan, domestic production on average substantially falls behind consumption needs, leading to a relatively large reliance on trade, especially from Pakistan. So the combined effects of higher global wheat prices and Pakistan's export ban caused wheat prices in Afghanistan to surge much higher than elsewhere. Regarding the second question, there are a number of factors that helped India insulate its economy from global price increases. First, India experienced a very good wheat and rice harvest in 2007-2008. Second, it was much more agile in anticipating the need to build up stocks and responded very quickly with release of food through public distribution. Third, India tightened

export restrictions with a view to protecting domestic consumers. India’s policy response on the trade front has led to a major political economy debate in South Asia about the role of trade in agriculture. We will turn to this debate later.

IV. How Has the Food and Fuel Crisis Affected South Asia?

(i) Macroeconomic Impacts

Severe terms of trade loss. While South Asia relies relatively less on grain imports, its reliance on petroleum and other commodities is quite large. As a result, given the sharp increase in commodity prices, the region has experienced severe terms of trade loss, deterioration in the external and internal balance, and adverse economic and social impact on the poor. Figure 11 shows the effects of the terms of trade shock in South Asia relative to other regions, while Figure 12 shows the impact by countries within South Asia. Figure 11 tells a striking story. On a net basis South has suffered the most loss of income as a percent of GDP among all developing regions.

Within South Asia, the picture at a country level is quite divergent (Figure 12). Losses range from 34 percent for the tiny Island country of Maldives to 8 percent for Bangladesh. Much of the loss has come from petroleum, where all countries have lost. In the food sector, Maldives, Nepal, Bangladesh and Sri Lanka lost out quite a bit from the global price hike. Although reliable data is not available for Afghanistan, the loss from oil and food price crisis is likely to be substantial for Afghanistan, which is especially vulnerable on food account and faced steepest price increases in the region.

Figure 11: Comparative Regional Income Loss from Terms of Trade Shock

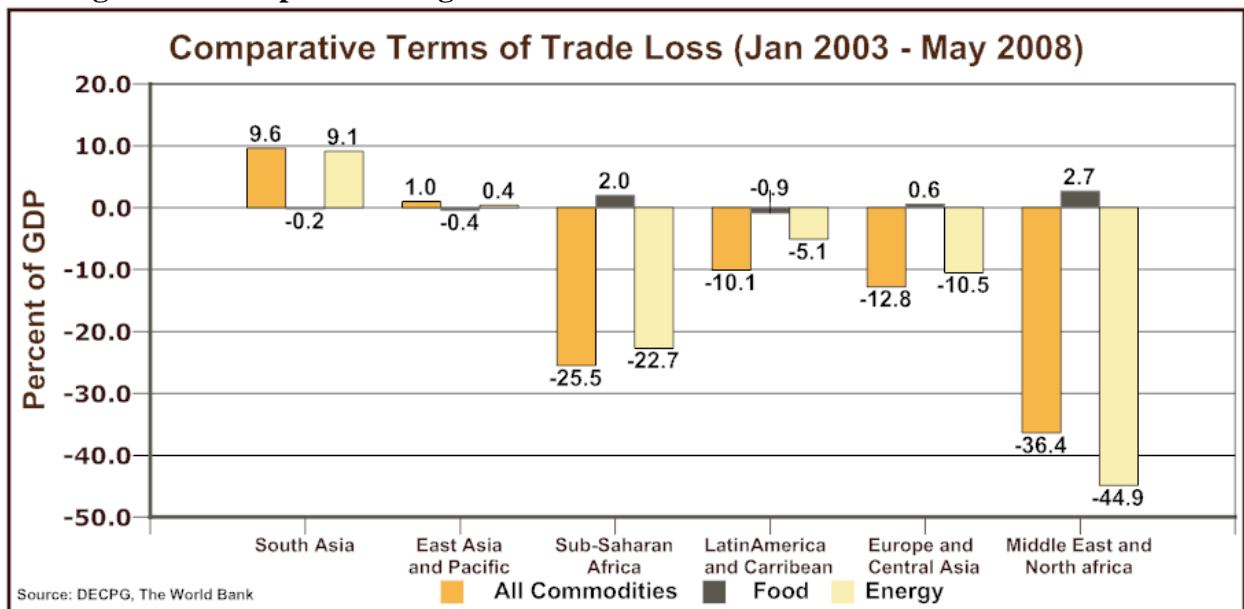
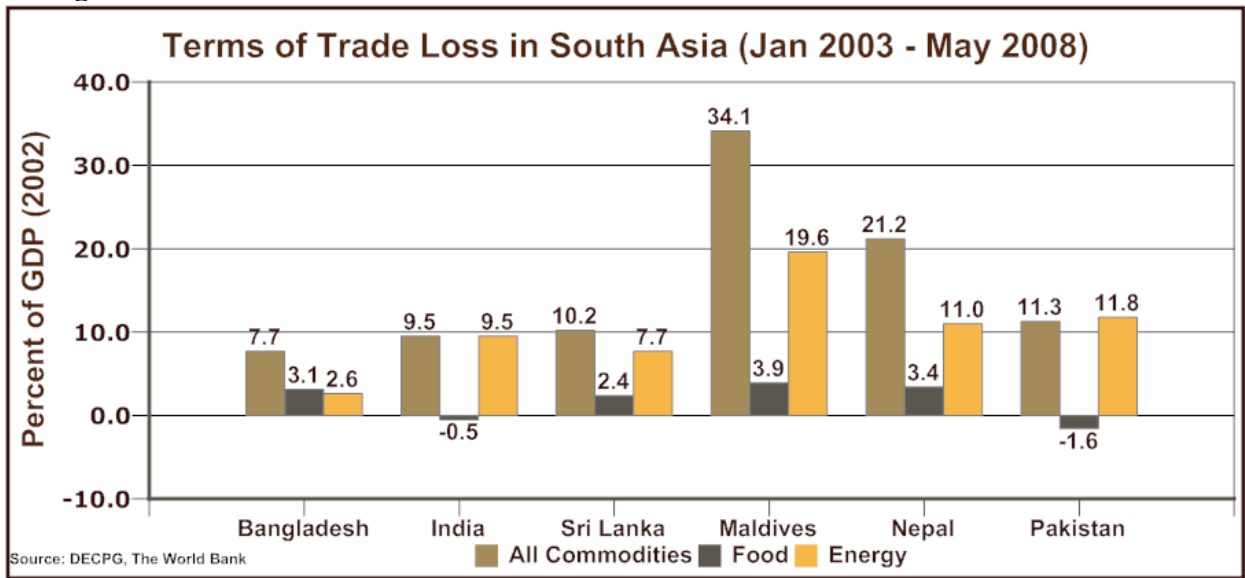
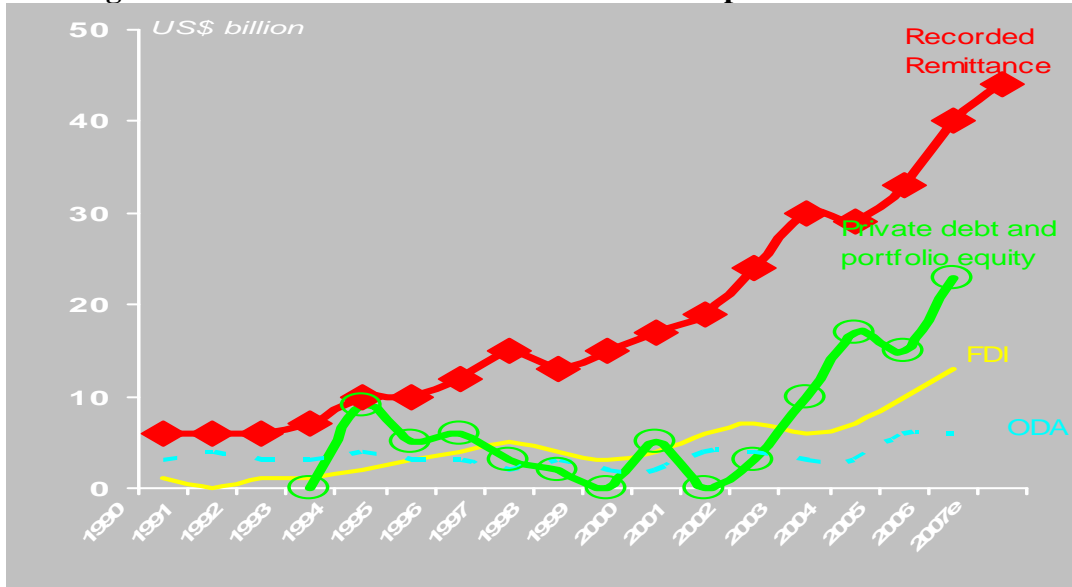


Figure 12: Income Loss from Terms of Trade Shock in South Asian Countries



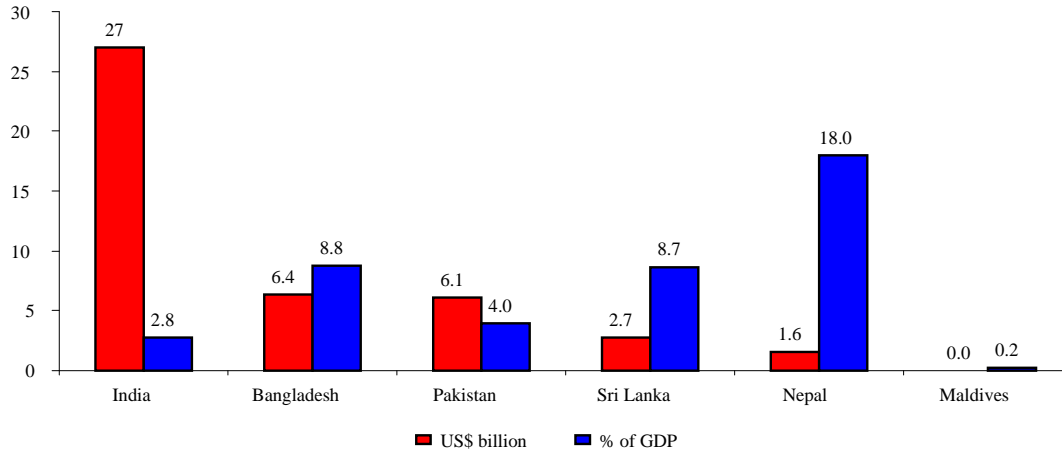
Deterioration in fiscal and external balances. The large loss of income from terms of trade shock was partially compensated by rising remittances (figures 13a-b). Nevertheless there has been a negative impact on the external balances of most South Asian countries (Figure 14). Pakistan suffered the most rapid deterioration in the current account balance, which turned from a surplus of around 4 percent of GDP in 2003 to a deficit

Figure 13a: Trend in Remittance and Other Capital Inflows in South Asia



Source: DECPG, World Bank.

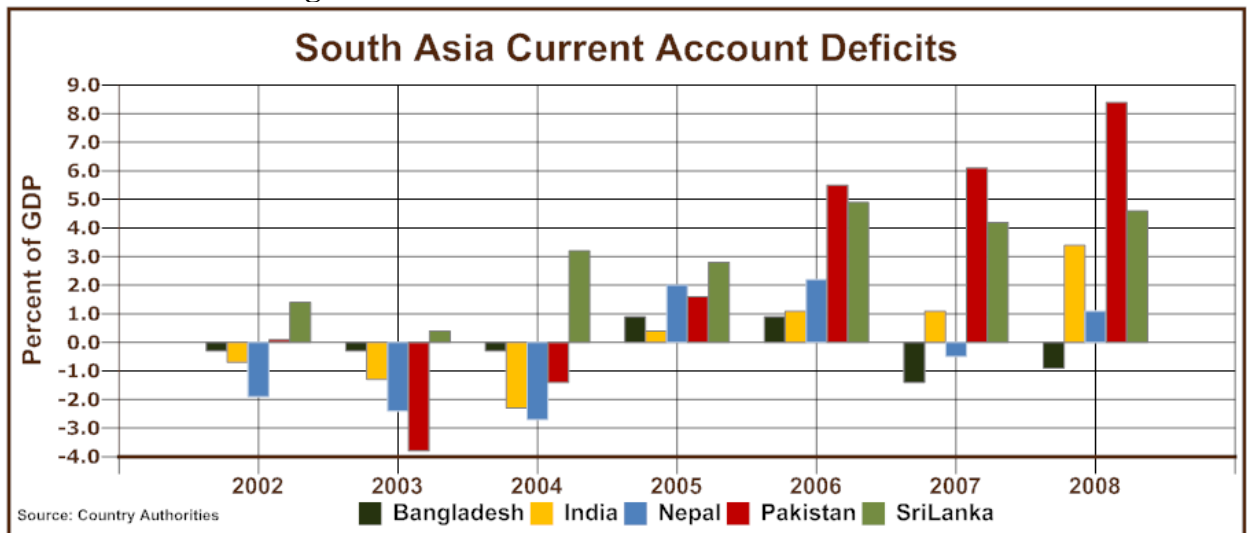
Figure 13b. Remittance Inflows in South Asian Countries in 2007



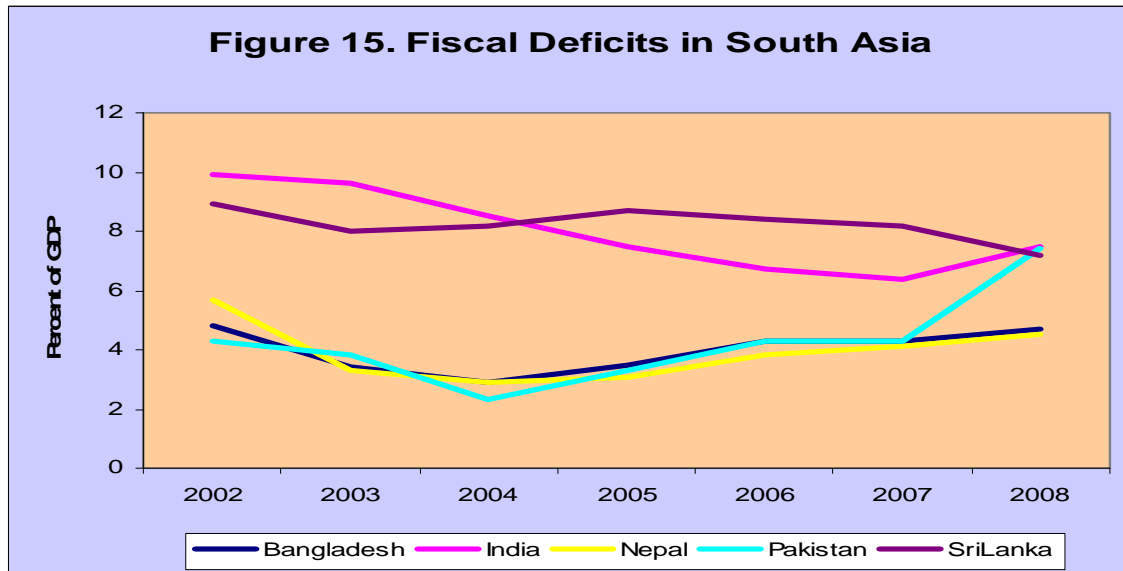
Source: Data from country authorities

of over 8 percent of GDP in 2008. Sri Lanka similarly experienced a substantial increase in the current account deficit. Even in India, the current account widened sharply from a surplus of more than 2 percent of GDP in 2004 to a deficit of over 3 percent in 2008. The current balance in Nepal that was in surplus for a fairly long period finally turned into a deficit in 2008. Bangladesh also lost on the trade account, but continued to enjoy a surplus in its current balance owing to remittances. These differential effects reflect a number of factors including: the relative magnitude of terms of trade shocks, the differences in compensating growth of remittances, and policy responses. Bangladesh in particular benefitted tremendously from the growth in remittances. India and Bangladesh took measures to tighten demand. Pakistan and Sri Lanka were already facing balance of payments pressures from expansionary fiscal and monetary policies; the terms of trade shocks accelerated the deterioration.

Figure 14: South Asia Current Account Deficits



Concerning fiscal balance, all countries except Sri Lanka registered large deterioration (figure 15). The fiscal deficit widened most for Pakistan, rising from 2.4 percent of GDP in 2004 to 7.4 percent in 2008. India had made good progress in reducing fiscal deficit between 2003 and 2007. This progress was reversed in 2008 due to a sharp increase in the fuel subsidy (growing from 1 % of GDP in FY2007 to an estimated 4% of GDP in

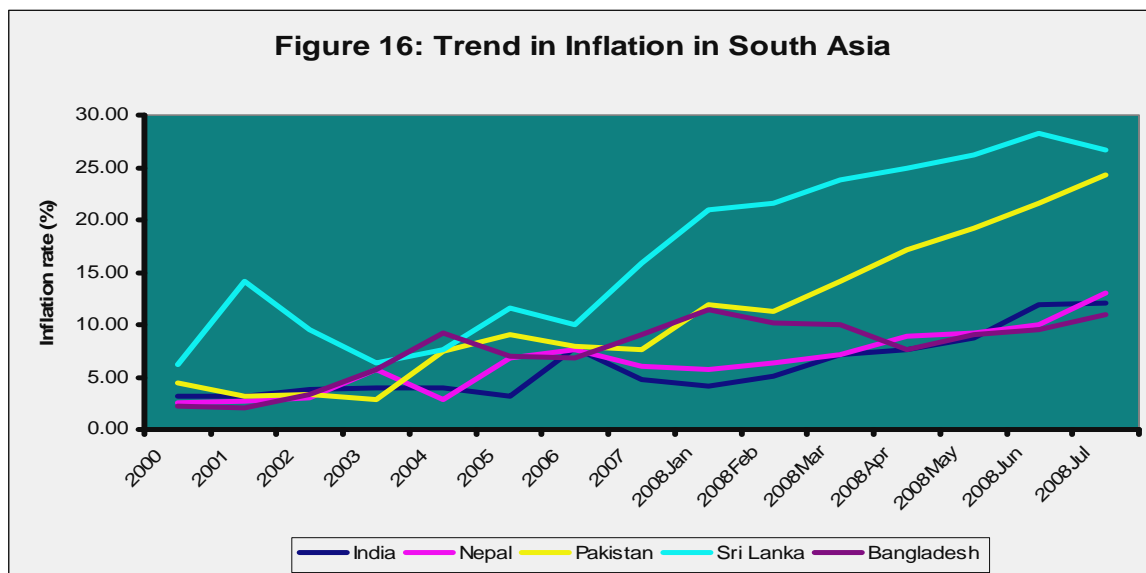


Source: Data collected from concerned government authorities

FY2009) that threatens to wipe off the gains made so painfully over the past few years. Bangladesh took steps to contain the fiscal deficit. Even so, budget deficit widened to almost 5 percent in 2008 and is projected to grow further, mostly due to increases in food and petroleum subsidies and spending on safety nets⁴. Nepal’s fiscal deficit has also grown from its low level in 2004 owing mainly due to fuel subsidy. Sri Lanka is the only surprising exception. It has long suffered from high fiscal deficits linked to the ongoing civil war. As a result, it had little space to expand further the deficit. Instead, Sri Lanka passed on most of the global price increases in petroleum to consumers.

Impact on inflation: Rising food and fuel prices have been a major source of inflationary pressure in South Asian countries (Figure 16). In Afghanistan, Sri Lanka, Pakistan, Bangladesh and Nepal, food prices made a bigger impact on inflation than fuel prices. In India, however, the main surge to inflation came from fuel price increases. Pakistan experienced the most rapid change in the rate of inflation, rising from 8 percent in 2006 to 25 percent in July 2008. This is in part due to the global food price hike, but also due to domestic demand pressure emerging from unsustainable macroeconomic policies. Sri Lanka had already been experiencing inflationary pressure from expansionary fiscal and monetary policies; the surge in food and fuel prices accelerated the pace. Afghanistan’s inflation hike came primarily from food prices. Since the increase in grain prices for Afghanistan much exceeded other South Asian countries

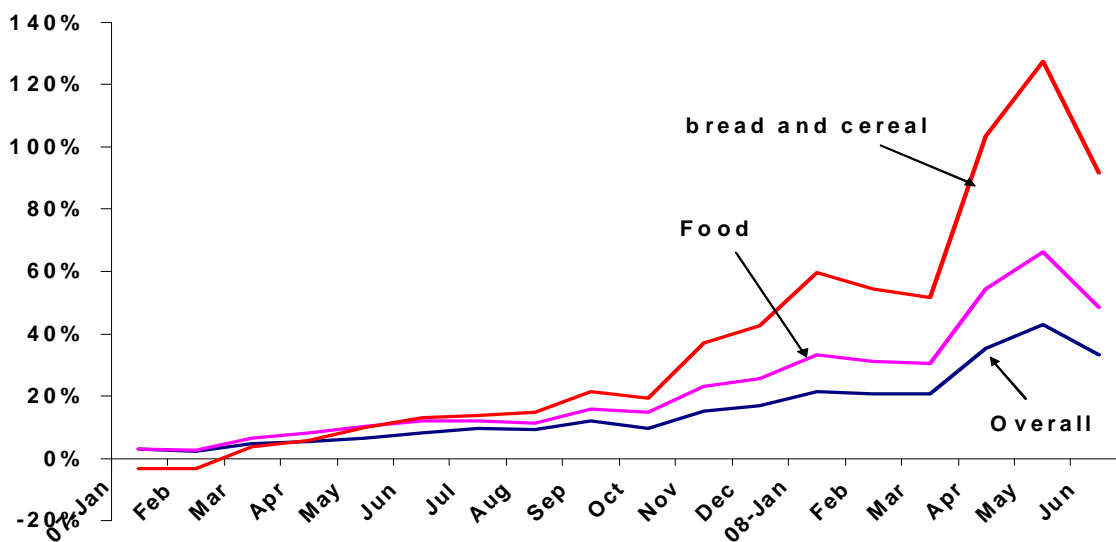
⁴ Includes off-budget subsidies. Recent reduction in world fuel prices if sustained will help keep fiscal deficit at the 5% of GDP level.



Source: IMF International Financial Statistics and government authorities

the inflation acceleration was quite intense (Figure 17). With the recent decline in global grain and petroleum prices, inflation rates are coming down in South Asia even though the effects of the decline are partly offset by rapid currency depreciation in India and Pakistan.

Figure 17: Food and Non-Food Inflation in Afghanistan, January 07-June 08



Source: Central Statistical Office, Government of Afghanistan

Poverty and Distributional Impacts

The impact of rising food prices on poverty in an individual country depends on several factors including: (i) the extent world market prices are passed through to domestic prices; (ii) the initial poverty level and number of people clustered around the poverty line; (iii) the number of net buyers or net sellers of the commodities in question; (iv) the share of poor people's budgets devoted to food overall and key staples in particular; (v) the extent of own-consumption relative to market purchases; and (vi) the effect of food price increases on real wages of poor people. (World Bank 2008a).

A recent study in eight countries estimates that the rise in food prices between 2005 and 2007 increased poverty by 3 percentage points on average. Extrapolating these results globally suggests that, as a result of the rise in food prices, total world poverty may have increased by 73-105 million people. (World Bank 2008a)

For South Asia, a definitive analysis of how the food price increase affected poverty is currently underway using country level data⁵. Preliminary findings from the study indicate that the net effect will be to increase poverty significantly. This can be appreciated from the following points. First, South Asian poor on average spend between 25-60 percent of their total income on staple food; this share rises as we go down the expenditure/income scale. Second, there are many more poor household who are net buyers of staple food than net sellers. Third, availability and access to official safety net programs is hugely limited by inadequate fiscal space and weak institutions.

Among all South Asian countries, Afghanistan arguably is most vulnerable to increases in staple food prices. Unfortunately, as noted, Afghanistan also suffered the most increase in prices in the region. Afghanistan's sensitivity to food prices can be gauged from the fact that Afghanistan's poverty estimates range from a low of 33 percent in the normal food season to 42 percent in the lean season. Some 35 percent of Afghan households do not meet their minimum daily calorie intake and 46 percent are classified as having very poor dietary diversity and poor food consumption.

For Pakistan, a simulation based on the 2005/006 PSLM suggests that the 73 percent food price inflation between January 2007 and July 2008 would lead to a 3.2 percentage point increase in the national poverty headcount rate.

In the case of Bangladesh, a simulation study assessed the impact of a nearly 40 percent increase in retail rice price between May 2007 and April 2008. In the short run, a majority of households are adversely affected by the rice price increases because only 17 percent of Bangladeshi household are net suppliers of rice. In the absence of any wage adjustment, the increase in rice price reduces real household's expenditures by an average of 5 percent. The impact is larger for urban (5.5 percent) than for rural households (4.6 percent). The impact is much worse for the bottom quintile, where average income declines by 10.5 percent as compared with less than 2.5 percent for the top two quintiles. Among the occupation group, only households headed by farmers (24 percent of all

⁵ A regional policy note on food price impact on the poor is in progress.

households) benefit from rice price increase. But even among farmers those with landholdings less than 1.5 acres tend to be hurt. The adverse effect is highest for households headed by agricultural or non-agricultural day workers, and lowest among households headed by salaried workers. With a 5 percent increase in nominal wages, average income declines by 3 percent for the population and 7.7 percent for the bottom quintile. Regarding poverty impact, using the 2005 HIES survey, the rice price hike is estimated to increase the poverty headcount rate by 5 percentage points in the absence of any wage increase and by 3 percentage points assuming a 5 percent nominal wage increase, compared to what the poverty rate would have been in the absence of the price shock.⁶ The simulation also suggests an increase in income inequality since the poorest of the poor absorb a greater share of the burden of price increase in view of their larger share of expenditure on staple food in the consumption basket

In Sri Lanka, according to the World Bank's Poverty Assessment, a large share of the population is clustered around the poverty line, implying that relatively small changes in per capita consumption can lead to relatively large changes in poverty rates. Simulations based on the 2006-07 HIES indicate that the 83 percent increase in rice prices between June 2007 and May 2008 would lead to a 5 percentage points increase in the poverty head count. Moreover, adverse effects on calories consumption per day, which is already low, would be expected.

As we saw earlier, of the South Asian countries India experienced lower food price increases than others. Nevertheless, the prices of wheat and rice increased faster than normally between 2006-2008. Given that only about a fourth of all households are net sellers of these cereals, a majority of households would be adversely affected by these price increases. Among farmers also not all benefit: a majority of marginal and small farmers appear to be hurt by price increases, with benefits of increases remaining largely limited to large farmers. Among non-farm households, rural poor households lose the most (a 10% decline in total consumption), followed by rural non-poor and urban poor households.

V. South Asia's Response to the Food Crisis: Short-term Responses

Given the adverse implications of the food price increases for the poor and the political transition, it is understandable why South Asian policy makers were willing to take any policy step that would help stabilize domestic prices without worrying too much about the potential long-term effects. Hence, much of the immediate actions were focused on stabilizing prices and not on supply response or other dimensions of policy management, including the fiscal impact. The types of policy actions taken in each of the countries are conveniently summarized in Table 7. These fall in four broad categories: trade policy

⁶ These estimates do not imply that poverty headcount rate in 2008 would be 5 or 3 percentage points higher than that in 2005. Such an interpretation would be incorrect since that would ignore the poverty reduction that would have occurred between 2005 and 2008 due to strong and stable economic growth. Rather, the poverty impact estimated here is a comparison with what would have been the case had there been no rice price shock in 2008

Table 7: Country Policy Responses

Country	<u>Economy-wide Policies</u>				<u>Social Protection Programs</u>			
	Reduce taxes on foodgrains ²	Stock management	Export restrictions	Pricing policies	Cash transfer	Food for work	Food ration/stamp	School feeding
Afghanistan*	√					√		
Bangladesh*	√	√	√ Imposed ban on rice exports	√	√	√ Long history and being expanded	√ Food Rations eliminated but millions of poor households get Vulnerable Group Feeding (VGF) cards which entitle them to 15 kg. grains per month.	√ Was replaced by cash grants but is being restarted.
Bhutan	√	√		√	√			√
India	√	√	√ Imposed ban on wheat and non-Basmati rice exports, and high taxes on Basmati rice exports	√		√	√ Maintains a pretty active public food distribution system	√
Maldives	√	√		√	√ For specially vulnerable groups			√
Nepal*			√ Imposed ban on rice exports			√		√ Limited coverage
Pakistan*		√	√ Imposed ban on wheat exports	√	√		food ration/stamp programs have not been implemented (the caretaker government announced that food ration cards would be introduced, but it never happened)	√
Sri Lanka*	√		NO explicit ban on rice exports although trade protection and other measures have kept domestic prices above international prices.	√	√		√	School feeding program has very limited reach.

Source: Country authorities

measures; stock management and public distribution; pricing policy measures; and safety net measures.

(a) Trade Policies: Almost all countries reduced import duties on food items. For example, India lowered import duties/tariffs on edible oils, wheat flour, semi/wholly milled rice, maize, butter and asked states to impose limits on stocks of commodities under the Essential Commodities Act. Bangladesh similarly lowered import duty on a range of food items and initiated a crack-down on domestic hoarding, which back-fired and was abandoned. Afghanistan lowered tariff on wheat and wheat flour from 2.5 percent to zero. Nepal also lowered import duties on food. Sri Lanka uses a 35% tariff on rice imports to keep domestic rice prices high for producers. When domestic rice prices started rising the government initially waived the tariff, but re-imposed it for fiscal reasons. However, Sri Lanka lowered duties on a range of other food items like lentils and edible oil.

In a further effort to control domestic food prices, most South Asian countries also clamped down on food exports by imposing export taxes or other levies or, worse, choked off food exports altogether through export bans, thus making the situation in neighboring food-deficit countries particularly dire. India, for example, put a stop on all non-Basmati rice exports and wheat and imposed prohibitive tariff on Basmati exports. Pakistan banned wheat exports as well as restrictions on domestic inter-provincial wheat.⁷ Bangladesh and Nepal followed suit and imposed export bans on rice.

Buffer Stock and Public Distribution

In South Asia India has the most extensive public food grain distribution system covering some 600 million consumers, believed to be the largest in the world. India's food stocking policy has a multiplicity of objectives: manage crisis situations; provide incentive to farmers; provide low-price supply to consumers. Pakistan maintains food stock basically for price support but also to keep prices low for consumers. But unlike India, Pakistan sells off most of the procured wheat to millers at subsidized prices. The price effect for consumers is indirect. Bangladesh had gradually moved away from food stocks for public distribution to market transactions based on private sector. Publicly held stocks were kept at low level mainly to meet emergency situation. Normal supply shortages are met through imports. Sri Lanka, Nepal and Afghanistan basically rely on the market for supply decisions. Nepal benefits from open-access to India's food market and as such has not seen the need for public distribution. Sri Lanka, however, uses price controls and import duties to regulate domestic foodgrain production, supply and prices.

We saw earlier (Section III) that armed with rising fiscal costs and waste from massive stock-piling, India had rapidly drawn down its reserves between 2000 and 2007. But anticipating food shortages, India quickly moved to build up the stocks of wheat through imports and rice through public procurement. These food market interventions on the supply side then enabled India to use the public distribution system to stabilize domestic

⁷ There is clear evidence that export bans imposed by India and Pakistan has aggravated the foods crisis in South Asia, and this issue is much debated.

grain prices very successfully.⁸ Other large South Asian countries also moved, although less successfully than India, to build up stocks and stabilize domestic prices. Bangladesh traditionally had maintained a low food stock and relied much more on private imports to meet domestic shortfalls. The global food price crisis, accentuated by crop losses from floods and cyclone, and trade ban by India reduced the effectiveness of this strategy and exposed Bangladesh to far more rapid increases in domestic rice and wheat price increases than in India. However, the government intervened by importing food, even though at rising cost, and distributing some 0.5 million tons of coarse rice the market through Open Market Sales (OMS) through official channels as well as authorized dealers at subsidized prices. It also sought to build up its stock from a low of 0.4 million metric tons of rice in June 2007 to 0.9 million tons in June 2008 through imports as well as domestic procurement once the crops recovered from the external shocks.

In Pakistan, a wheat exporting country, as international prices started rising, there was an initial surge in wheat exports. To stem the domestic price increases the government banned exports and accelerated release of wheat from its stocks. So, from September 2007 to March 2008, the Government released around 4.3 million tons of wheat from its strategic reserve and distributed to flour mills at subsidized rates. However, while the government succeeded in lowering the rate of increase of domestic wheat prices, the wedge between domestic and international prices, caused a huge amount of wheat smuggling as well as private stock piling. So, in response to domestic shortages, the government also imported about 1.7 million tones of wheat. In addition, the government raised the procurement price of wheat from US\$163/ton and to US\$240/ton to narrow the difference between domestic and international prices to create an incentive for farmers to sell to the domestic market and to discourage smuggling and hoarding.

In Sri Lanka, the Government capped the retail price of Samba rice at Rs 70 per kilo, about 30 percent lower than the prevailing market price. With respect to buffer stocks, there is a long legacy of state intervention in the domestic paddy market. During the 2007 *Maha* season, the Government purchased about 90 million of paddy, equivalent to 4.5 percent of the total harvest. However, Government intervention is primarily aimed at securing a minimum price for farmers, and since farm gate prices have been rising rapidly since 2007, the Government has not made any purchases during the 2007 *Yala* harvest, or the 2008 *Maha* harvest. Recent reports suggest that the Government is considering to gradually establishing strategic rice reserves to be able to better control price swings.

Nepal traditionally maintains very low strategic reserves (less than 10K MT) and very limited public distribution. But it also intervened to augment supply through public distribution, especially after the imposition of trade ban by India. The only country where an active stocking arrangement and public distribution does not exist is Afghanistan. However, the World Food Program (WFP) has played an important role in augmenting domestic availability through imports.

⁸ However, as Dorosh (2008) has pointed out this was not without cost in terms of lower earnings from rice exports.

Pricing of Inputs and Outputs

Maintaining low food prices has been a key policy objective in most South Asian countries. Since low prices tend to discourage production, a complex system of subsidies, production controls, public procurement and distribution have emerged in South Asia with the twin objectives of maintaining low grain prices for consumers while also providing incentives to farmers through input subsidies and price support based on public procurement. On the input side, almost all farm inputs: water, power and fertilizer are subsidized in varying degrees in most countries. Thus, in India, most states heavily subsidize power consumption by farmers ranging up to 100 percent subsidy (zero power tariff) with a view to subsidizing irrigation. Power tariffs for farmers have not been adjusted despite the substantial increase in fuel costs. All countries subsidize diesel to lower transport cost as well as to reduce irrigation costs. In response to an effort to contain the unsustainably large increase in budget subsidy, countries have taken steps recently to partially adjust diesel prices. The largest adjustment happened in Sri Lanka, which has basically passed on the international oil prices to consumers. Bangladesh, India and Nepal have also adjusted domestic fuel prices, but diesel remains heavily subsidized. Pakistan did the least adjustment in passing on the increase in fuel price increases. Regarding fertilizer, whose price surged more than four-fold between 2002 and August 2008, much of the cost increase is absorbed by the government budget including in Sri Lanka. Indeed, along with the diesel subsidy the growing cost of fertilizer subsidy is a key factor underlying the expansion of fiscal deficits in South Asian countries.

On the output side, policy intervention has sought to reduce prices for consumers in Bangladesh, India, Nepal and Pakistan through augmentation of domestic supply based on open market sale and public distribution, and through price cap in Sri Lanka. Afghanistan does not have an active government intervention program. To offset the adverse effects on farmer incentives, governments in India and Pakistan have tended to provide support prices to farmers through public procurement. Thus, India raised minimum support price (MSP) for wheat from Rs. 850 per 100 kilogram in 2007 Rs 1000 in 2008. Similarly, the procurement price of rice was raised from Rs 650 per 100 kg. to Rs 775 per kg. In Pakistan, the government raised the procurement price of wheat from US\$163/ton to US\$240/ton to narrow the difference between domestic and international prices and to create an incentive for farmers to sell to the domestic market rather than resort to smuggling and hoarding. Bangladesh set a procurement price for rice that is about 15 percent lower than the prevailing market price. In effect, this has provided a floor on the domestic rice price. Sri Lanka did not see the need to intervene to provide additional incentives to farmers as the producer price of rice was some 70 percent higher than the price last year despite the ceiling imposed by the government.

Safety Nets

All South Asian countries intervened to provide some kind of safety net protection to its most vulnerable citizens. Among all South Asian countries, Sri Lanka has the most

extensive set of social safety net programs, particularly in the form of cash transfer programs targeted towards the poor and vulnerable groups. On the other hand, Afghanistan has very little organized national safety net system and is naturally most vulnerable to exogenous shocks. These safety net interventions include generalized public food distribution, targeted food distribution including food for works, school meals, conditional and non-conditional cash transfers, and employment guarantee schemes.

Generalized public food distribution system: As noted, India has the most extensive coverage of the public food distribution system (PDS) in South Asia. India's PDS has come under serious criticism for corruption, inefficiency and high fiscal cost. Various reforms have sought to address these concerns but problems remain. The contribution of the PDS to stabilizing food prices quickly in the face of global food price turmoil is seen in India as an important success for public policy and has presented a challenge to conventional thinking on the merits of public role in food distribution in countries with a large number of poor, high political sensitivity to food price increases, and administrative capacity constraints to implementing well-targeted safety net programs. Public food distribution in Pakistan has helped stabilize prices somewhat, although it is indirect and has been much less effective than in India.

Targeted food distribution: A range of targeted food distribution programs exist in South Asia. In India (Andhra Pradesh), rice is being made available at the hugely subsidized price of Rs. 2 per kilogram to 18.7 million families below poverty line (BPL) having ration cards. Each family will be entitled to 20 kg of subsidized rice every month supplied through government-run fair price shops. The government of Bangladesh has authorized Open Market Sales (OMS) of coarse rice in urban townships at subsidized rates. The approach here is to use self-targeting, given the low quality of rice and the long lines. Additionally, Bangladesh has intensified the use of the Vulnerable Group Feeding Program to reach out the poorest of the poor. All South Asian countries, except Afghanistan, have used the school feeding programs to reach the children group, who are among the most vulnerable to food price shocks. Several countries (Afghanistan, Bangladesh, Nepal and India) have expanded their food for work programs to provide a safety net for the unemployed. In the case of Nepal and Afghanistan this expansion has been of the WFP food for work program, while Bangladesh in particular has a long history of using this program.

Conditional and Unconditional cash transfers: Public cash transfer programs exist in Bangladesh, Pakistan, Sri Lanka, Nepal, and the Maldives. Conditional cash transfers (e.g. stipends) exist in many countries too (Nepal, Pakistan, and Bangladesh). Conditional Cash Transfers for the poor are being piloted in Nepal, Bangladesh and Pakistan. The use of cash transfer programs is limited by the lack of proper institutional arrangements. The programs are still evolving but hold the prospects of providing effective safety net cover if these are well designed and administered.

Rural Employment Guarantee Schemes: One of the earliest rural employment guarantee schemes in South Asia was initiated by Maharashtra in the early 1990s. In 2007 India

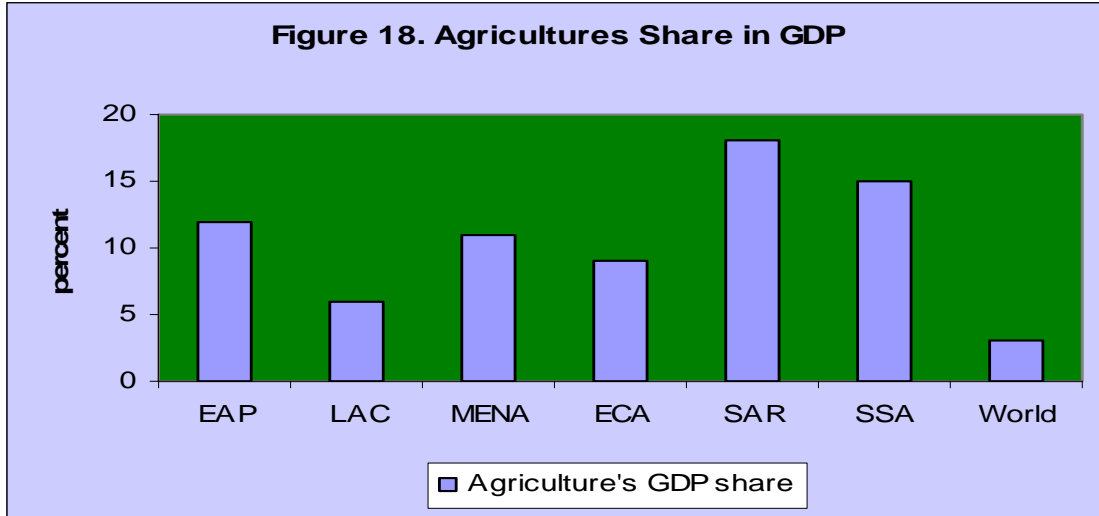
initiated a similar program called National Rural Employment Guarantee Scheme (NREGS) as a means to address the poverty problems of the ultra-poor that do not have any alternative job opportunities. Bangladesh has also introduced a rural employment guarantee program, estimated to cost about taka 24 billion (2 percent of GDP) for providing employment to the rural poor in economically depressed areas during the lean agricultural seasons.

While the global food price has helped South Asian countries to refocus on the safety net issues, which is overall a weak area of policy, there are major issues relating to efficiency, corruption, and fiscal cost that need careful research and analysis. For example, safety net reviews that evaluate public safety net program have now been conducted in Pakistan, India, Maldives, Sri Lanka, Bangladesh and Nepal. These show that some schemes work well, but that their efficiency could be improved via investment in their capacity to target, deliver benefit, improve accountability, and improve monitoring and evaluation. Many of the schemes are new (cash transfer programs, employment guarantee schemes) which require careful review in terms of design and implementation before wider replication. Moreover, the lack of a central strategic body which coordinates the myriad of safety net programs currently in place is a serious weakness given large unmet needs and finite resources. Limited fiscal space in particular requires focus on the few schemes that have worked well in South Asia and other developing countries.

VI. Longer-Term Policy Issues and Challenges: Moving Forward

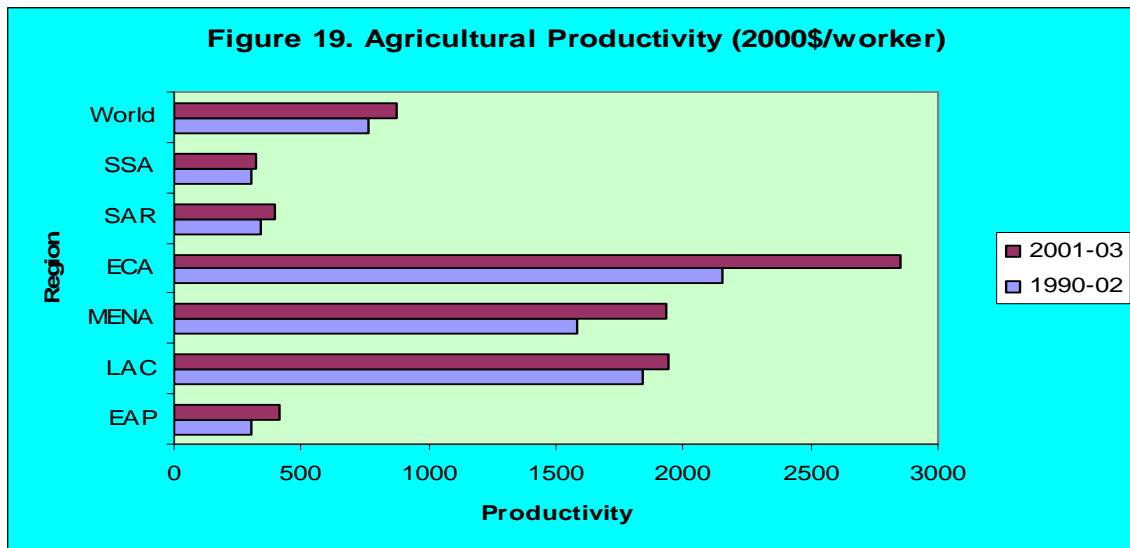
The large magnitude of the terms of trade shock along with the acceleration of food prices, especially staple food grains of wheat and rice, have clearly imposed a tremendous burden on South Asian countries, especially on the low income economies of Afghanistan, Bangladesh and Nepal. Governments have responded in varying degrees to contain the rise in prices as well as to mitigate the adverse effects on the poor. Yet, the negative impact remains substantial and further efforts are needed to respond more effectively to the external shocks. While the recent decline in food and fuel prices are a welcome development for South Asia, this gain is being clouded by the onslaught of the global financial crisis that is threatening to substantially lower exports, investment and economic growth. Continued high food prices and supply shortages will aggravate the situation. Policies taken by governments in the first round were aimed at stabilizing food prices. Some of the policies like trade bans, price controls and subsidies may have been justifiable as short-term response on political economy grounds, but they have adverse implications for efficiency and resource allocation over the longer term. As well, the fiscal space is scarce and the magnitudes of the subsidies entailed are not likely to be sustainable. Similarly, the efforts of governments to initiate safety net programs are laudable; yet there is a need to examine the programs carefully to ensure their effectiveness and fiscal sustainability. Finally, the longer term agenda of addressing the supply problems in agriculture remain to be fully tackled. At the heart of South Asia's supply response is the challenge of farm productivity. Issues related to farm productivity, trade policies, stock management, input-output pricing and safety nets are reviewed briefly below.

a) Agriculture Productivity: Despite rapid growth since 1980, South Asia’s dependence on agriculture remains substantial. While agriculture’s contribution to value added has declined rapidly, it still remains higher than most regions (figure 18). More



Source: World Bank 2007.

importantly, between 35-50 percent of the labor force remains reliant on agriculture for livelihood, suggesting very low average productivity (figure 19)⁹. Since world commodity prices of energy and fertilizer are likely to remain substantially higher than the levels in 2004, the only sustainable way of reconciling higher input costs with low

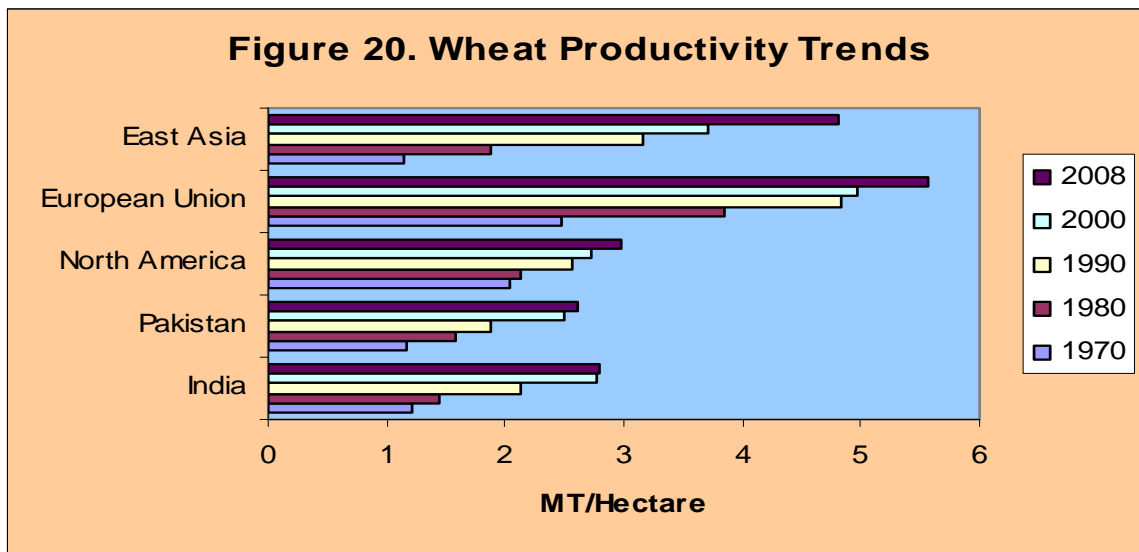


Source: World Bank 2007.

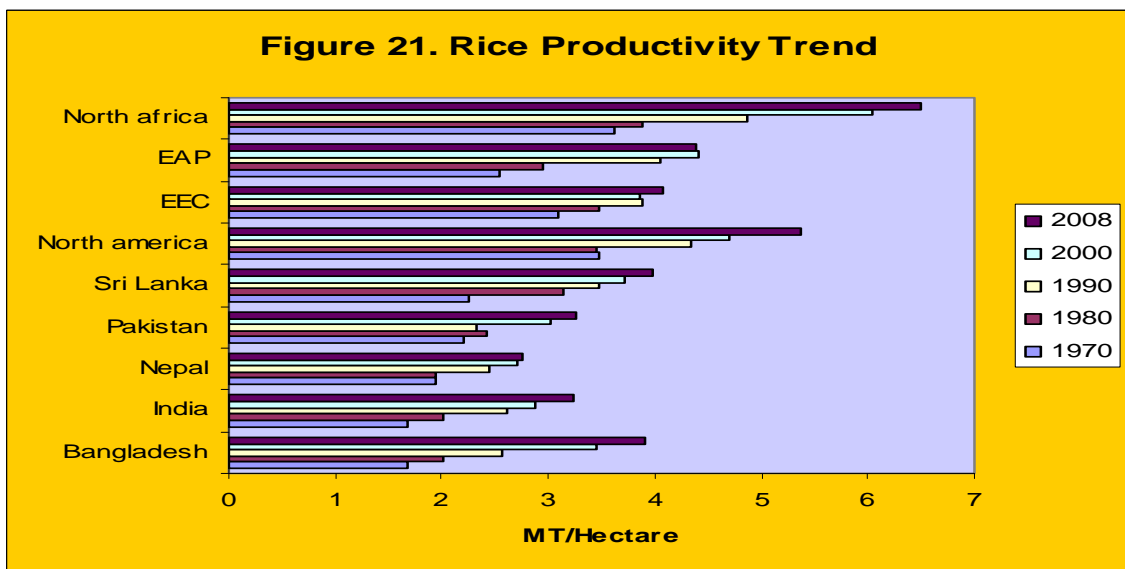
⁹ Employment shares range from a low of 35 percent in Sri Lanka to a high of 50 percent for Bangladesh (World Bank 2007).

and stable prices of wheat and rice for citizen's is to pay attention to farm productivity. This is among the most urgent policy focus for South Asian governments.

The scope for productivity improvements is clear from figure 19, but this can be seen more specifically from the productivity comparisons of the two major food crops, wheat and rice. The trends in productivity improvements in South Asia and global comparators for wheat and rice per hectare of land cultivated are shown in figures 20 and 21.



Source: USDA database



Source: USDA database

Focusing on land productivity is particularly important in South Asia where land endowment is likely to emerge as a binding constraint. Regarding wheat, the two major South Asian wheat producing countries (India and Pakistan) achieved substantial gains in productivity between 1970 and 2000, but faced stagnation since then. Productivity

improvements and yield per hectare compare positively with North America but yield remains way behind EEC countries and East Asia. For example, India faces a wheat productivity gap of 40 percent with East Asia and 50 percent with EEC. Concerning rice, South Asian countries show significant gains since 1970, especially in Bangladesh and Sri Lanka. Yet the productivity gap with most of the world (except Sub-Saharan Africa) is large. For example the average per hectare yield in the better performing South Asian countries of Sri Lanka and Bangladesh is still 40 percent lower than the yield in North Africa, 25 percent lower than North America, and 10 percent lower than in East Asia. The rice productivity gaps are larger for India and Pakistan, and the largest for Nepal.

The yield gaps in South Asia for both wheat and rice are huge and suggest the need for urgent policy attention to find ways to catch up with the performance in the high-yielding countries. This entails addressing issues relating to technology, inputs (especially water, fertilizer and energy), pest control and farmer incentives. The range of policies that impact on productivity include incentive policies for farmers (pricing policies, ownership and tenancy issues), timely availability of key inputs, farm credit, crop insurance and public expenditure. The rising cost of energy, the emerging water shortages, and the frequency of natural disasters especially from flooding and drought, suggest also the need to pay attention to global public goods such as climate change, cross-boundary water sharing arrangements and regional energy trade. More and better regional cooperation can be an effective way to manage the farm productivity challenge and ought to be a key element in the design of future food policy strategies in South Asia (Ahmed 2008).

(b) Trade policies: The economic case for reforming agricultural trade policies to enhance global welfare is quite strong. This requires coordinated efforts in both developed and developing countries. A concise summary of the trade reforms at the global level is contained in Chauffour (2008). In practice, agriculture trade policies tend to get enmeshed in political economy issues and using purely economic rationale for advocating trade policies for agriculture is fraught with risk of being ignored by policy makers. This is partly because of the huge reliance of the labor force on agriculture for income, but also because of the objectives to maintain food prices low for consumers and avoid the kinds of disruption illustrated by the global food price crisis. So, we are essentially in the second best world. All South Asian countries are engaged in substantial domestic production of food items, especially food grain. Food self-sufficiency is also a driving force in policy making in the area of agriculture strategy and trade policy. Reliance on trade is subsidiary. On balance India and Pakistan are net exporters of food while Afghanistan, Bangladesh, Nepal and Sri Lanka are net importers (Table 8).

While the first best arguments against trade protection in terms of comparative advantage and efficiency of resource allocation are often well known at the policy level, from the political economy perspective the real policy choice is how to balance these concerns with the political economy issues of protecting the incomes of farmers and avoiding supply disruptions for consumers. The sharply adverse consequences of extreme trade policies, such as a ban on exports employed during the crisis by many countries including

Table 8: South Asia Trade Balance for Raw Food

Country	Net Imports (US\$ million)				Net Imports as % of all imports)			
	1980/81	1990/91	2000/01	2004/05	1980/81	1990/91	2000/01	2004/05
Sri Lanka	-73	-110	-167	-248	-5	-5	-3	-3
Bangladesh	-224	-196	-317	-674	-13	-7	-4	-6
India	31	313	1,214	1,865	0	2	3	2
Nepal	13	6	1	-53	7	1	0	-4
Pakistan	155	0	512	465	4	0	7	3
Afghanistan	23	12	-53	-82	9	3	-8	-3

Source: UN COMTRADE Statistics

Note: Food is defined as raw food, excluding all cash crops, processed food products and seafood

in South Asia, are illustrative of the importance of drawing the right balance in the policy choice. The evidence is clear that these restrictions accentuated the price volatility, especially in the thinly traded rice market, and created added uncertainty facing food importing countries. Trade restrictions also increase the cost of food security as countries tend to build larger food stock reserves than necessary to counter uncertainty in trade.

On average trade policies for agriculture are more restrictive in South Asia than in other regions (see Table 9) suggesting the scope for lower protection. The efficiency loss from these high trade restrictions needs to be carefully evaluated against the gains. Importantly, trade barriers among neighbors are not very effective over the medium to long term, given physical proximity and informal trade opportunities. Trade cooperation with neighbors would appear to be a more potent way of managing food security than trade bans because such bans simply fuel high-cost informal trade and rent seeking at the expense of both the farmers and the consumers.

Table 9: Trade Restrictiveness in Agriculture in 2006

	Overall Trade Restrictiveness Index	Tariff Trade Restrictiveness Index
East Asia	26.6	8.7
Europe and Central Asia	25.9	10.3
Latin America & Caribbean	28.1	6.6
Middle East and North Africa	32.3	12.1
South Asia	46.4	31.4
Sub-Saharan Africa	24.9	13.8

Source: Kee, Hiau Looi, Alessandro Nicita, and Marcelo Olarreaga, "Estimating Trade Restrictiveness Indices."

c) Food Stock and Public Distribution System: This is another area of controversy. Most countries maintain some kind of a stock to respond to supply shortages in a crisis situation. Some countries also maintain stocks to support a public distribution system. The goal here is to reconcile the twin objectives of giving farmer appropriate incentives through higher prices but moderating the effects on consumers by providing subsidized supplies to low income group through the public distribution system.

The subject of food stocks has been studied at length. A recent review of South Asian food stock system is available in Dorosh (2008b). The key questions that have emerged from the experience of South Asia and elsewhere include: multiplicity of objectives; efficiency of public distribution versus markets; corruption and wastage; role of trade; and fiscal costs. India's experience best illustrates these various issues and the challenges of trying to reconcile them. Historically, the growing cost of production has forced the government to accumulate a huge stock of rice and wheat at increasing prices. In particular, wheat prices until 2006 were higher in India than internationally owing to the incentive policy, raising issues about efficiency of domestic supply. At the same time, the government's objective to keep prices low for consumers led to subsidies, contributing to a growing fiscal cost of public food distribution. Concerns also emerged about losses from theft and corruption, and wastages from storages. Despite these costs of the food stocking policy, India nevertheless feels vindicated by the ability to manage the global food price crisis much better than most countries of the world based on its food stocking and public distribution policies. Thus, the Indian policy maker is able to declare: "Thank goodness we did not listen to the Washington Consensus advice of letting markets work. If we did, rice and wheat prices would have soared and impoverished millions of India's poor people".

Even so, there is a need to rethink the right balance between food stocks and trade. Maintaining some level of stocks to meet emergency situation and global crises such as during 2007-08 is a sound policy decision. Working out that prudent level while keeping an eye on fiscal cost, theft prevention and stock wastage is important. Participating in the global food market through trade with appropriate safeguards on domestic availability through foodstocks is a better policy option than to impose trade bans or prohibitive tariffs.

d) Input-output pricing policies: The complex system of pricing interventions have distorted incentives, reduced the efficiency of farm production and added to the fiscal burden. Importantly, this has tended to divert attention away from addressing the productivity challenge. The key to resolving South Asia's food challenge is to raise productivity. Importantly, the recent price increases for food crops provide policy makers a golden opportunity to revisit the whole support strategy for food policy. The improved terms of trade in favor of agriculture resulting from the global commodity price boom allows South Asian governments to let farmers benefit from these higher output prices while removing the fiscally expensive and inefficient subsidies. The resources thus saved could be redirected to areas that support farm productivity including spending on rural infrastructure (roads, irrigation, rural electricity), farm technology, research and extension. Food security concerns on the supply side are possibly best addressed by focusing on farm productivity rather than through subsidized inputs.

e) Safety nets: An effective safety net system is a key aspect of tackling food security on the demand side¹⁰. The immediate response of South Asian governments to use the existing safety net programs involving public food distribution is an understandable response to the food price crisis. However, South Asian governments are also well

¹⁰ For a useful review of the role of safety nets in poverty reduction strategies, see Ravallion 2006.

advised to carefully think through doing so more effectively as well as using other programs for the medium to long term. A review of international experience suggests the following broad guidelines to build upon in developing comprehensive safety net programs.

- The root cause for poverty must not be overlooked in designing safety net schemes. The most sustainable way of reducing poverty over the long-term is to ensure that policies protect economic growth and promote employment.
- The design of an effective public expenditure program that supports economic growth and employment needs to be a key component of a comprehensive strategy for safety nets. Thus, for example, a public expenditure program that links safety net programs with creating rural infrastructure and ties cash transfers with basic health and education (i.e. conditional cash transfer programs) is likely to yield better outcomes in terms of social protection than those which provide generalized subsidies.
- Reduction of various vulnerabilities emerging from natural disasters and lack of access to credit would need to be a key component of an effective safety net strategy. Micro credit schemes, for example, have played an important safety net role in a number of South Asian countries, especially Bangladesh. Formal insurance schemes for ex-ante risk reduction can also be very helpful, but they are almost non-existent in South Asia. Most importantly, South Asia is yet to develop a comprehensive strategy to address the vulnerabilities emerging from climate change and lack of cross-boundary water cooperation.
- Cash transfer programs are preferred to food or other in-kind transfers because cash increases the purchasing power of households and provides households with choices of how they meet their most pressing needs. Examples of conditional cash transfers that have worked well include the Food-for-Education Program in Bangladesh, Mexico's PROGRESA program and the Bolsa Escola in Brazil.
- The development impact of food based programs can be strengthened with the use of nutritionally fortified grains. A small share of food based safety net programs use fortified grains and a recent IFPRI evaluation in Bangladesh highlights their potential. Estimates show that providing vitamin A and zinc supplements are a highly cost-effective intervention when one takes into account the longer term development benefits of a well nourished child.
- A common difficulty of implementing targeted programs during crises arises especially in countries which do not have a well designed and effective program in place. In such cases, it may be more feasible to focus on existing self targeted programs that can be scaled up relatively quickly. Well known examples of these programs in South Asia are the food for works program and the employment guarantee schemes. The food for works program target unemployed workers to support the creation of infrastructure, such as rural roads or irrigation schemes. On average these programs have worked well, although the monitoring of administration and accountability needs to be strengthened.
- Concerning, employment guarantee schemes, the best known example in South Asia is the Maharashtra's EGS. In 2007, India initiated an even more ambitious National Rural Employment Guarantee Scheme (NREGS). Bangladesh has

followed suit by announcing a similar program in 2008. These programs can be an effective way of reducing vulnerability and supporting the poor provided these are designed well. The fiscal cost of these schemes also needs to be watched and managed. The most important issue here is the wage level. The experience with the Maharashtra scheme suggests that wages were set too high, resulting in employment rationing (Datt and Ravallion 1993). Self targeting will work only if the wage is set at a relatively low level so that the non-poor have no incentive to enter this program. The other important aspect is community involvement in the choice of projects to ensure that the work program creates assets that are useful to the community.

VII. Concluding Remarks

The surge in global commodity prices of the past few years has presented a tremendous development challenge for South Asian countries. The large loss of income from the terms of trade shock has worsened macroeconomic balances, fueled rapid inflation and hurt growth. While commodity prices have come down recently, the benefits are being clouded by the emergence of a severe global financial crisis. The adverse consequences of the food price hike for the poor are large; the global financial crisis could further worsen the situation due to falling economic opportunities and government revenues. South Asian countries need to accelerate reforms to avoid facing a serious downturn in economic activity, investment, exports and income.

Governments in South Asia have responded by stabilizing domestic food prices through a range of short-term measures, tightened monetary policy to reduce inflation, and increased spending on a range of safety net programs for the poor. Some of the policies employed, such as export bans, are not consistent with the long-term welfare of the country or the region. Safety net interventions need to be made consistent with a longer-term poverty reduction strategy and fiscal sustainability. Most importantly, policy attention now needs to shift toward efforts to increase farm productivity, improve rural infrastructure, and lower the vulnerability of the poor. In this regard, the increase in food crop prices provides a golden opportunity to policy makers to re-examine the complex system of input-output pricing interventions, reduce spending on input subsidies and instead refocus public spending on areas that will raise farm productivity (irrigation, rural roads, rural electricity) and move toward strengthening their safety net systems to address chronic poverty, but also respond to provide basic needs in times of economic shocks and natural disasters. Public policy also needs to focus on reducing the vulnerabilities resulting from climate change and inadequate attention to cross-boundary water management. More and better regional cooperation can be an effective way to manage the farm productivity challenge and lower the vulnerability of the poor and ought to be a key element in the design of future food policy strategies in South Asia.

References

- Ahmed, Sadiq. 2008. *Regional Cooperation for Food Security in South Asia*, Mimeo, South Asia Region, Washington DC: World Bank
- Brahambhatt, M and I. Christiaensen. 2008. “Rising Food Prices in East Asia: Challenges and Policy Options”, Mimeo, East Asia and Pacific Region. Washington DC: World Bank.
- Chauffor, Jean-Pierre 2008. “Global Food Price Crisis—Trade Policy Options”, *PREM Notes*, Number 120, June 2008, Washington DC: World Bank
- Datt, G. Martin Ravallion and Shubham Chaudhuri 1993. “does Maharashtra’s ‘Employment Guarantee Scheme’ Guarantee Employment? Effects of the 1988 Wage Increase”, *Economic Development and Cultural Change*, vol. 41, January 1993, pp.251-75
- Dorosh, Paul 2008a. “ Food Price Stabilization and Food Security: The International Experience”, *Bulletin of Indonesian Economic Studies* 44(1): 93-114
- Dorosh, Paul. 2008b. *Public Foodgrain Stocks and Price Stabilization in South Asia: Historical Experience and Policy Options*. Mimeo. South Asia Region, Washington DC: World Bank.
- FAO and SAARC. 2008. *Regional Strategies and Program for Food Security in the SAARC Member States*. Rome: FAO
- Ravallion, Martin. 2006. “Transfers and Safety Nets in Poor Countries: Revisting the Trade-Offs and Policy Options”, in Abhijit Banerjee, Roland Benabou and Dilip Mookerjee (eds) *Understanding Poverty*, Oxford University Press.
- World Bank 2007. *Agriculture for Development: World Development Report 2008*. Washington DC: World Bank.
- World Bank, 2008a. *Double Jeopardy: Responding to High Food and Fuel Prices*. Washington DC: World Bank