

Appendix 6: Sri Lanka¹⁰⁰

In Sri Lanka, rice is the principal staple food item, accounting for 39 percent of total dietary energy supply (average of 2003-05 data). Sri Lanka is not self-sufficient in rice: it imports on average about 5 percent of its total requirement even though this percentage has varied between 1 percent and 20 percent over the past two decades. Though rice has become less important over time (Table A6.1), it remains the largest single category in total food expenditure (together with fish). In 2006, the latest year for which detailed household expenditure data are available, the average person spent about Rs. 250 per month on rice (US\$ 2.50), equivalent to 12.8 percent of total food expenditure. Per capita consumption of rice is 105 kg/year (average of 2004-08) or about 300 grams per day, which provides about 1,000 calories—or almost half of the average total daily calorie intake. Given the importance of rice in Sri Lanka, much of the discussion in this Appendix focuses on rice.

TABLE A6.1 SPENDING ON MAIN FOOD ITEMS, AND SHARE OF TOTAL FOOD CONSUMPTION, 2001 AND 2006

	Rice	Vegetables	Milk and Milk Products	Fish	Condiments
2001					
Monthly Per Capita Expenditure (Rs)	251	145.1	116.7	148.9	126.9
Share of Total Food Consumption (%)	17.1	9.9	7.9	10.1	8.6
2006					
Monthly Per Capita Expenditure (Rs)	252.56	211.4	188.1	252.3	179.9
Share of Total Food Consumption (%)	12.8	10.7	9.5	12.8	9.1

Source: Household Income and Expenditure Surveys 2001-02 and 2006-07, Department of Census and Statistics.

Food price inflation in Sri Lanka during the food crisis was substantial.

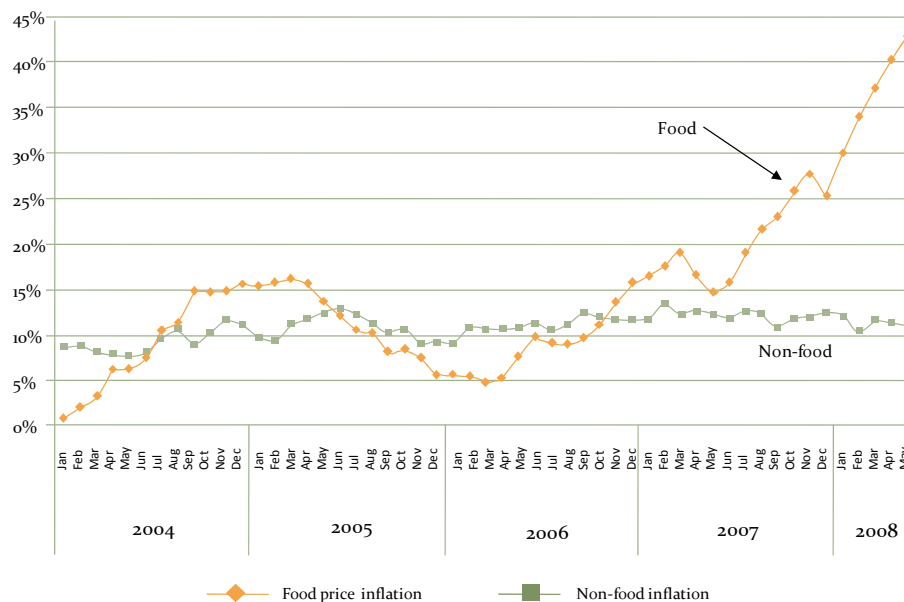
According to data from the Department of Census and Statistics (DCS), average food prices were 40 percent higher in April 2008 than a year earlier. Food makes up 46.7 percent of the total Consumer Price Index (CPI) basket and contributed three-quarters to the total annual increase in the CPI, which came to 25 percent in April 2008.¹⁰¹ As in other South Asian countries, non-

¹⁰⁰ This Annex is partially based on a note prepared by a World Bank team consisting of Kirthisri Wijeweera (SASEP), Terrence Abeysekera (SASDA), Susrutha Goonasekera (SASSP), Mohamed Ihsan Ajwad (SASSH), and Claus Astrup (SASEP).

¹⁰¹ DCS does not publish data for individual sub-components of the food price index, but price data for certain commodities—notably rice—are available from other sources as discussed below.

food price inflation in Sri Lanka used to be higher than food price inflation. However, after mid-2006 this situation reversed and food price inflation substantially exceeded non-food price inflation (Figure A6.1).

FIGURE A6.1 FOOD AND NON-FOOD PRICE INFLATION IN SRI LANKA, 2004-08



Source: Department of Census and Statistics.

The increase in food prices had a particularly severe impact on households who were poor prior to the price increases. According to the 2006-07 Household Income and Expenditure Survey (HIES) just over 15 percent of the population lived below the poverty line in 2006, compared to nearly 23 percent in 2001. A poverty assessment carried out by Bank staff based on the 2001-02 HIES data shows that 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 same HIES¹⁰² indicate that a 10 percent decline in per capita consumption would lead to a 6 percentage point increase in the poverty headcount ratio. According to the 2006-07 HIES, the average poor person consumes about 1,696 kilo calories (kcal) per day, significantly below the recommended norm of 2,030 kcal. The urban poor are among those with the highest calorie deficits, consuming about 1,316 kcal per day, while the rural poor and the poor in the estate sector consume about 1,686 and 1,984 kcal respectively. The Demographic and Health Survey held in 2000 estimated that 29 percent of all children are underweight and 14 percent are stunted.

¹⁰² Summary statistics from the 2006-07 HIES published by the Department of Census and Statistics suggest that inequality has not changed much since 2001-02, implying that the vulnerabilities to income/consumption shocks that were observed in 2001-02 are continuing.

Malnutrition is highly correlated with household welfare, with children from the poorest households being 2.8 times more likely to be underweight than children from the richest households. Maternal undernutrition, too, is high, at 23 percent.

The food price crisis has likely reversed some of Sri Lanka's earlier poverty reduction achievements. As in other South Asian countries, the average share of food in total household expenditure in Sri Lanka is likely to have substantially increased during the period of the food crisis. To accommodate additional food expenditures, households would have had to compromise on other expenditures—including on clothing, healthcare, transport, and education. Poor households in rural areas and the estate sectors were probably most affected. A rapid impact survey conducted by WFP in the North and the East of Sri Lanka indicated that 62 percent of households reacted by purchasing less preferred foods, 68 percent started buying food on credit, and 41 percent sold household assets. The same WFP survey indicated that 80 percent of all households reduced their meal size, 61 percent reduced the number of meals consumed per day, and 30 percent of households would occasionally go an entire day without a meal. To the extent that these coping strategies would have an irreversible impact on nutrition and health, they may entrench intergenerational poverty transfer.

Safety net programs exist in Sri Lanka but they are limited in scope. In Sri Lanka about 2 million households receive cash transfers under two different government safety net programs. The main program is the *Samurdhi* program which provides benefits (cash and food stamps) to qualifying households that are identified through community-based targeting. The program provides benefits to about 1.7 million households and has a budget of about Rs. 9.2 billion (US\$90 million) per year. The *Samurdhi* program has been criticized for its targeting performance: even though it covers 41 percent of the population, it excludes 40 percent of the households in the poorest expenditure quintile.

The second significant safety net program is the *ping padi* program implemented by the Provincial Social Service Ministry under the policy umbrella of the Ministry of Social Services and Social Welfare. This program provides income transfers and social services to the most disadvantaged and vulnerable groups, including the elderly, widowed, and disabled poor people. The benefits of this program have not been revised since 1988 and are much smaller than the benefits granted under the *Samurdhi* program, amounting to only between Rs. 100 and Rs. 300 (US\$1-3) per person per month depending on the number of dependants in the household. The program reaches about 630,000 people and the annual fiscal costs amount to about US\$15 million. Around 250,000 people receive benefits exclusively from the *ping padi* program while 380,000 people receive the *ping padi* benefits in addition to other social

assistance programs (including *Samurdhi*). The *ping padi* program is better targeted than the *Samurdhi* program. Public resources allocated to safety nets have decreased in recent years, from almost 1.6 percent of GDP in 2001 to 1.1 percent of GDP in 2004 and to only 0.3 percent of GDP in 2008.

International rice prices influence the domestic rice price in Sri Lanka.

In early April 2008, the average wholesale price for a kilo of Samba rice¹⁰³ peaked at Rs. 83 compared to Rs. 38 per kilo a year earlier—an increase of 140 percent. The price hike mostly reflected international price trends, but it may have been exacerbated by the fact that the country’s import volumes were significantly higher during November 2007–February 2008—exactly at the time when international prices escalated dramatically. Domestic production declined in 2007 compared to 2006, and combined with enhanced uncertainties about available supply from international markets, this led to some “precautionary” buying of rice in early 2008 and to upward pressure on domestic prices. A continuation of the fertilizer subsidy cushioned farmers from the hike in international fertilizer prices—albeit at a significant fiscal cost. Based on numerical evidence from other South Asian countries it is likely that also in Sri Lanka the majority of households (including large numbers of rural households) are net rice buyers, and therefore suffered welfare decreases during the food crisis.

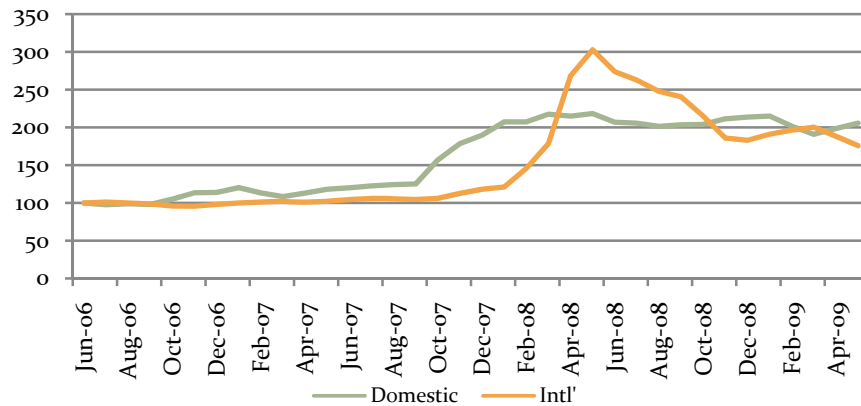
The domestic rice price in Sri Lanka typically follows and exceeds the international price but during the food crisis this trend was broken. Despite similarities in trends, the domestic rice price has traditionally exceeded the international price by a substantial margin (on average by 48 percent since 1990) even though the wedge has been reduced in recent years (figure A6.2). The wedge between the domestic and international price of rice protects the domestic rice market and is implemented mainly through import tariffs which average about 35 percent.¹⁰⁴ However, during the peak of the food crisis (March–September 2008) domestic rice prices in Sri Lanka were kept significantly below international prices, mainly as a result of government price controls (figure A6.2). On April 13, 2008, the government capped the retail price of Samba rice at Rs. 70 per kilo, about 30 percent below the market price prevailing at the time. In defending the decision to impose a price cap, the government argued the need to protect consumers, noting that there was a strong speculative element in domestic prices while accusing millers and wholesalers of collusion. Earlier (in October 2007) the government had already

¹⁰³ Price data for rice concerns the higher quality short grain Samba rice, as opposed to the lower quality long grain Nadu rice.

¹⁰⁴ Import taxes have also been used intermittently to stabilize domestic prices and as such are subject to frequent changes. The protection of the domestic rice market has reduced the incentive for farmers to produce rice for export, and even though Sri Lanka has never imposed a ban on rice exports, the country does not actually export rice.

abolished the import duty on rice, at an estimated fiscal cost of 0.3 percent of GDP. Domestic rice prices started to exceed international prices again early in 2009.

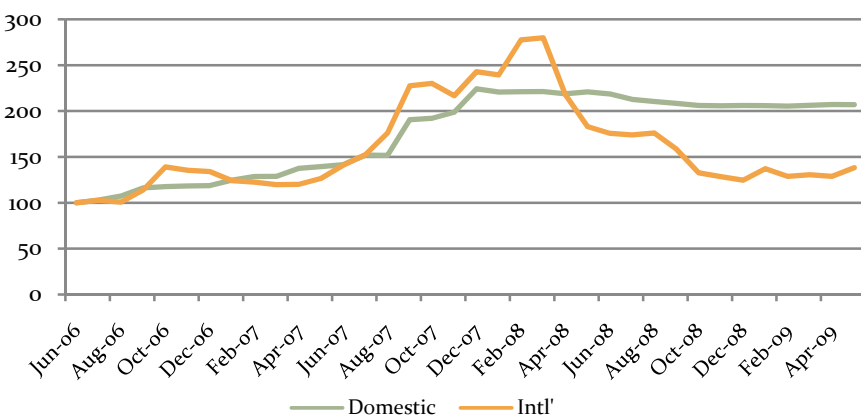
FIGURE A6. 2 RICE PRICE INDICES IN SRI LANKA



Source: Own calculations based on data from Department of Census and Statistics.

Wheat price increases also contributed substantially to food price inflation. Even though Sri Lanka does not produce wheat, the latter has become an important food staple in both rural and urban areas. Wheat and wheat products accounted for 15 percent of total dietary energy supply in 2003-05. On average during 2004-08, per capita consumption (as food) of wheat and wheat products was 52 kg/year, equivalent to about 25 to 30 percent of total cereal consumption. Since all wheat is imported, the domestic price of wheat was allowed to increase in line with the international price during the initial phase of the food crisis in 2007. However, as the world market price continued increasing in 2008, domestic prices were stabilized through price controls. After the international wheat price collapsed in the second quarter of 2008, domestic prices were allowed only a modest decrease and were kept at levels substantially above the world market price (figure A6.3).

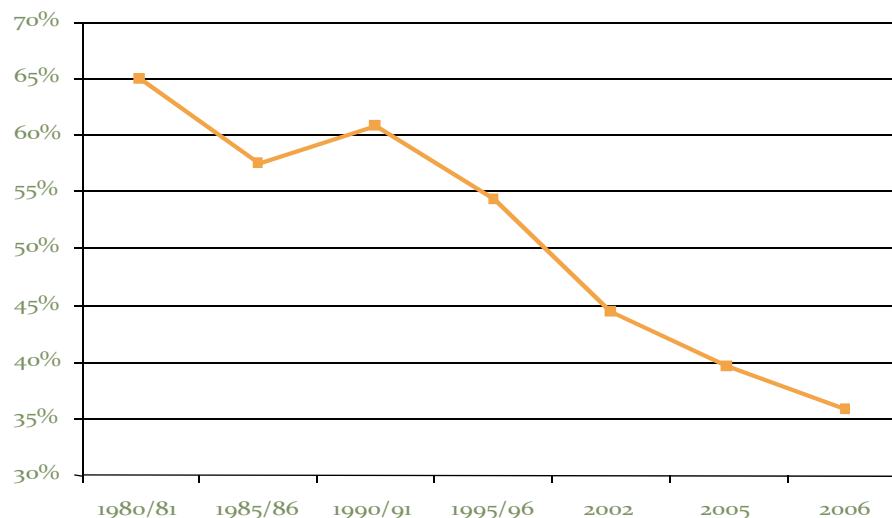
FIGURE A6. 3 WHEAT PRICE INDICES IN SRI LANKA



Source: Own calculations based on data of Department of Census and Statistics.

The share of food in total consumption has declined steadily. In 2006-07, food took 35.8 percent of the average household's total expenditure, down from 60.9 percent in 1990 (figure A6.4). But as in other South Asian countries, food accounts for a much larger share of total expenditure among the poor than among the more affluent. For the two poorest deciles, the food expenditure ratio is about 60 percent, and for about half the population in Sri Lanka food takes more than 50 percent of total spending. This makes the poor particularly vulnerable to food price inflation.

FIGURE A6. 4 AVERAGE SHARE OF FOOD IN TOTAL HOUSEHOLD EXPENDITURE



Source: Department of Census and Statistics.

The composition of food spending has changed significantly over time. The average share of rice in total household expenditure declined from 31.5 percent in 1981 to 12.8 percent in 2006. During the same period the expenditure shares of milk and fish increased: fish accounted for 8.1 percent of consumption expenditure in 1981 but had increased to 12.8 percent by 2006, while the share of spending on milk rose even more sharply, from 3.3 percent in 1981 to 9.5 percent in 2006. Most changes in the composition of household expenditure can be attributed to changes in the relative prices of various food items, given only limited changes in the quantities consumed. For example, annual per capita rice consumption has only declined modestly from 114 kg in 1981 to about 105 kg in 2006. Similarly, annual per capita consumption of fish has also remained relatively stable, at 13.5 kg in 2006 compared to 12 kg in 1981. Table A6.2 shows aggregate consumption levels of major food items based on the two most recent household expenditure surveys.

TABLE A6. 2 AGGREGATE NATIONAL CONSUMPTION OF KEY FOOD ITEMS ('000 MT)

Food Item	Variety	2001-02	2006-07
Rice	Samba	414.2	408.9
	Nadu	663.7	656.3
	Red Rice (<i>Kekulu</i>)	721.8	1020.9

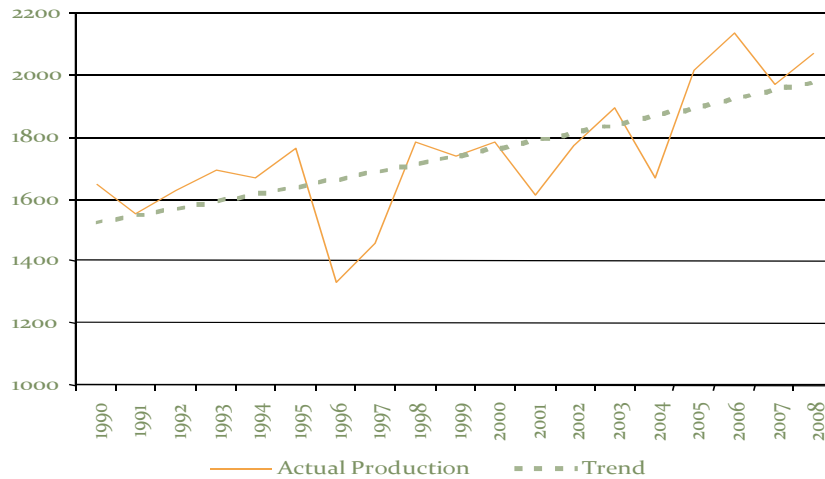
Food Item	Variety	2001-02	2006-07
Vegetables		458.5	476.6
Condiments		182.4	308.5
Milk Products	Fresh Milk (Mill liters)	20.1	22.1
	Powdered Milk	65.9	85.0
	Infant Milk	5.7	6.0
Fish Products	Fresh Fish	159.6	197.0
	Tin Fish (salmon)	13.3	11.9
	Dried Fish	74.1	77.6

Source: Department of Census and Statistics, Household Income and Expenditure Surveys 2001-02 and 2006-07.

Rice production shows an increasing trend. Rice production has increased steadily during the last two decades but with occasional drops (figure A6.5). The drops experienced in 1996, 2001, 2004, and 2007 were primarily due to adverse weather. In 2007, the decrease in output was also partly due to intensification of military operations in the Eastern part of the country (which accounts for more than one quarter of the country's total rice production). The land area cultivated in the Eastern Province during the *maha* and *yala* seasons¹⁰⁵ dropped by 35 percent and 18 percent, respectively, in 2007. This led to corresponding production decreases of respectively 7.7 percent and 4 percent. Heavy rains during the 2007 *yala* harvest season also played a role and damaged the crop in several paddy growing districts. But in 2008 rice production recovered: the 2008 *maha* paddy harvest was 2.1 million MT—a 5 percent increase over 2007 and about 6 percent higher than the average trend value (figure A6.5). The recovery was mainly due to favorable rainfall during the North-Eastern Monsoon period and occurred despite excessive rainfall and flooding in the Eastern Province. But increased farm gate prices also played an important role and led farmers to sow 6.3 percent more area than in 2007 during the *maha* season.

¹⁰⁵ The *maha* (major rainy season) harvest in the spring contributes 60-70 percent of total annual rice production, while the *yala* (minor rainy season) harvest in the fall accounts for the remaining 30-40 percent.

FIGURE A6. 5 PADDY PRODUCTION DURING THE MAHA SEASON (MILLION MT)



Source: World Bank staff calculations.

Past growth in rice production has been driven by yield increases. Rice production increased by an average of 1.2 percent per year over the period 1990-2008, by virtue of an annual increase in yield of 1.4 percent and a small decline of 0.2 percent per year in area harvested (table A6.3). Since 2000, rice productivity has increased at more than twice the rate of the previous decade (1.9 percent per year as opposed to 0.7 percent per year from 1990-99). The increase is explained by increased mechanization of paddy production and by the gradual introduction of higher yielding varieties that are better adapted to the country's diverse agro-climatic conditions.

TABLE A6.3 GROWTH IN RICE PRODUCTION, AREA, AND PRODUCTIVITY

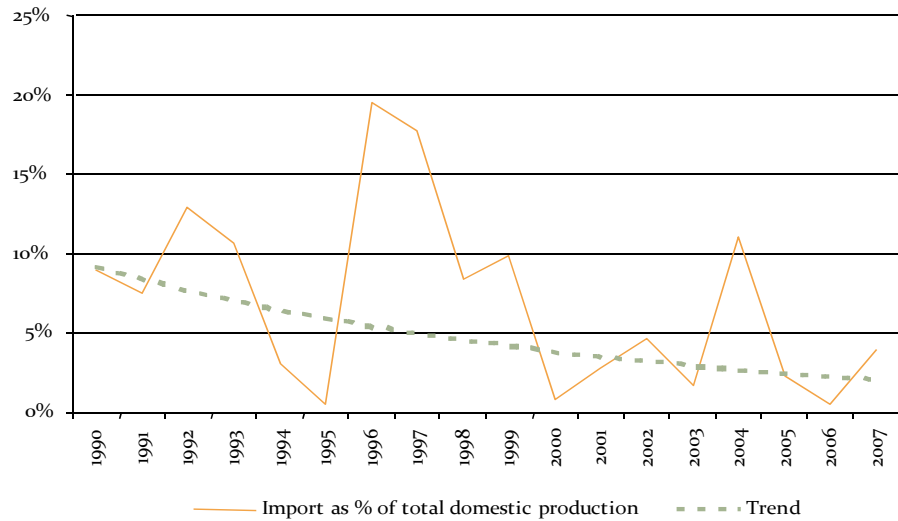
	Average annual change in production (%)		
	Maha	Yala	Total
1990-2008	1.3	1.6	1.2
1990-1999	0.6	2.7	1.4
2000-2008	1.9	1.0	1.3
	Average annual change in harvested area (%)		
	Maha	Yala	Total
1990-2008	0.5	-0.4	-0.2
1990-1999	0.4	1.0	0.6
2000-2008	0.8	-1.0	-0.5
	Average annual change in productivity (%)		
	Maha	Yala	Total
1990-2008	0.8	2.0	1.4
1990-1999	0.1	1.7	0.7
2000-2008	1.0	2.0	1.9

Source: Central Bank of Sri Lanka and World Bank staff calculations..

Sri Lanka is almost self-sufficient in rice. Historically, imported rice has accounted for less than 10 percent of total supply (figure A6.6) and Sri Lanka seems to be moving closer to self-sufficiency. Since the year 2000, imported

rice has accounted for less than 5 percent of total domestic supply on average.¹⁰⁶

FIGURE A6. 6 SHARE OF IMPORTS IN TOTAL RICE SUPPLY

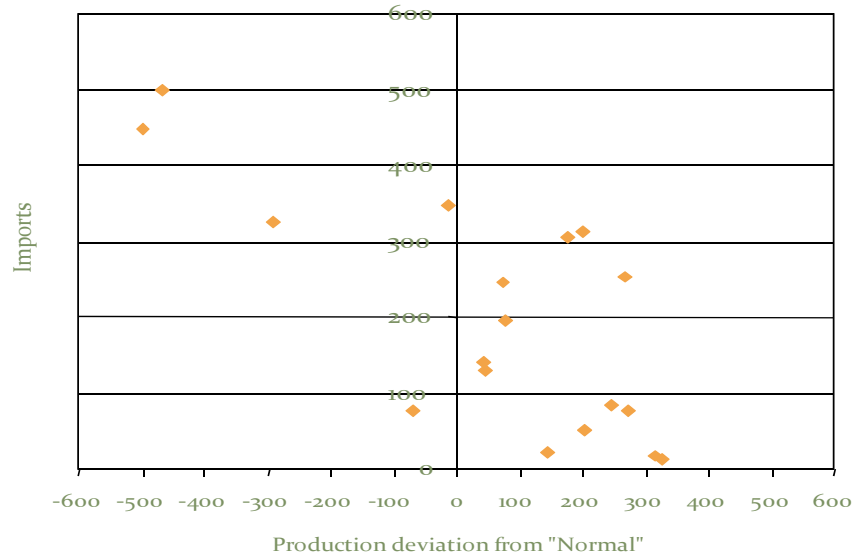


Source: Based on Central Bank data.

Imports of rice serve as a buffer against domestic production variation but do not usually cover the full shortfall in supply. Rice import levels vary significantly from year to year in response to changes in domestic production. That is, imports serve as a buffer against poor harvests, resulting in a significant negative correlation between “excess” domestic production—defined as the difference between actual and trend production—and import volumes (figure A6.7). On average, imports cover only about 50 percent of the domestic production shortfall.

¹⁰⁶ The exception was 2004 when due to a poor harvest imports made up almost 8 percent of total supply.

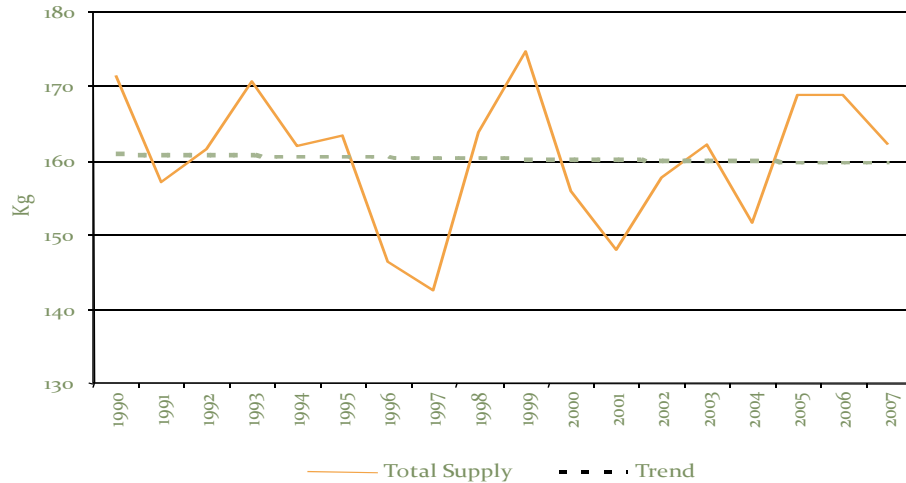
FIGURE A6. 7 RICE IMPORTS AND DEVIATIONS OF DOMESTIC PRODUCTION LEVELS FROM TREND



Source: World Bank staff calculations.

Per capita supply of paddy has remained relatively stable during the last two decades. Total available paddy—i.e. domestic production plus imports—amounted to 162 kg per capita in 2007, which was slightly above the long-term average of 160 kg per capita (figure A6.8). Subtracting allocations for rice seed and processing wastage, which historically amount to about 9 percent, and converting the paddy into rice-equivalents (using a rice/paddy conversion ratio of 1:1.47) suggests that in 2007 the total available rice per capita was about 105 kg.

FIGURE A6. 8 PER CAPITA PADDY SUPPLY (KG/YEAR)



Source: World Bank staff calculations.