Rising Food Prices in East Asia: Challenges and Policy Options

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SUMMARY

Large increases in international food prices in 2007 and early 2008 have become a key concern for policy makers East Asia. The food price increases – especially those for rice – are likely to have a significant impact on the living standards of many, particularly the poor. Enhanced regional and international collaboration are critical in addressing the problem of high world food prices, together with good domestic policies that help protect the poor and strengthen food security. Regional bodies like ASEAN or ASEAN+3 can play a key role in furthering such a coordinated international response.

Among the key reasons for higher food prices are biofuel policies in advanced countries. These policies aim to promote an alternative, more climate-friendly source of energy, but have also induced a sharp increase in world demand for grains and in grain prices. So there is an urgent need for more international dialogue to decide whether the benefits from current biofuel policies really justify the costs, or whether a new global deal can be struck, allowing a more open and stable global market in food, as well as continued progress towards environment-friendly energy sources.

Upward pressure on grain prices from biofuel policies, rising energy costs and the falling U.S. dollar have been exacerbated by recent export restrictions introduced by rice exporting countries concerned about food security. An agreement between the main participants in the international rice market to reduce or remove major restrictions could play an important role in lowering prices to sustainable levels. This is in the interest of exporters, who wish to maintain their export markets, and of importers, for whom high prices are inflicting hardship on consumers, particularly the poor.

Rising food prices are contributing to higher inflation and will - at a minimum - slow the pace of poverty reduction in most developing countries in the region. Several types of domestic policy responses can help protect the more vulnerable as well as strengthen food security.

Interventions to ensure household food security by strengthening targeted safety nets should have the highest urgency. Targeted cash transfers to vulnerable groups help to protect vulnerable groups directly without reducing incentives to local farmers, although food-for-work, public works programs and emergency food aid distribution can also help.

Many countries are also undertaking measures to reduce domestic food prices through changes in trade policies, changes in domestic taxes and subsidies, and through administrative measures. Reductions in import tariffs and domestic taxes on staples are among the common measures implemented, although attention has to be paid to the fiscal costs and financing of such measures.

In the medium term, there is much scope for increasing rice production in an environmentally sustainable way, through better agronomics, reduction in post-harvest losses, and more efficient water management. A regional partnership between countries, the International Rice Research Institute (IRRI) and bilateral and international funding agencies could foster the widespread diffusion of more advanced, off-the-shelf, agronomic technologies. However, to sustain rice yield increases further in the future, more public investment must go to agricultural R&D which only amounted to 0.4 percent of agricultural GDP in Asia compared with 2.4 percent in developed countries.
1. Introduction

Large increases in international food prices in 2007 and early 2008 have become a key concern for policy makers in East Asia. The increases are likely to have a significant impact on the living standards of many, particularly the poor. By March 2008, dollar nominated world food prices were more than two and a half times higher than in early 2002. Almost three quarters of this increase occurred since the start of 2007, and about half since the beginning of 2008. (Figure 1). Recent sharp increases in international rice prices are of particular concern in East Asia. Food comprises 30 to 50 percent of the consumption basket of the average household in East Asia (compared to 15 percent in the United States). Within that, rice accounts for one third of the daily caloric intake, followed by wheat (12.4%), pork (8.8%), corn (4.4%), soybean and palm oil (3.4% and 1.8% respectively).

This note examines the reasons for the surge in world food prices, in particular of rice. (Section 2). It reviews the economic and poverty impacts of rising food prices in East Asian countries (Section 3). It concludes by assessing policy responses undertaken by East Asian economies so far, and discusses policy options going forward, including the importance of regional and international cooperation in addressing high food prices (Section 4).

2. Rice and other international food prices: trends and determinants

The rise in international rice prices since 2004 – reaching over $1000 a ton in April 2008 – is partly the result of global factors that have led to large increases in wheat and other grain prices as a group, and partly of export restrictions by food surplus countries concerned about food security. The global factors include rising energy costs, the falling dollar and – most
importantly - policies that have induced a sharp increase in biofuel demand for grains, although their impact on rice is more indirect than for crops like maize and wheat. These upward pressures on rice prices have been exacerbated recently by export restrictions in rice exporting countries, especially in a context of relatively low international stocks. These restrictions aim to restrain domestic rice prices and secure domestic rice supplies in the face of a volatile international market, but have had the unintended consequence of provoking preemptive restrictions by other exporters and distress buying by importers, contributing to further price increases in the thinly traded international rice market.

**Global factors**

*Recent World Bank studies suggest that rising energy and fertilizer prices and the falling dollar have contributed about 35 percent of the rise in world food prices.*

This has occurred directly through higher fuel costs in agricultural production (for example fuel costs for machinery, irrigation systems and transport), and indirectly, because energy is a major input in the production of fertilizers and agricultural chemicals, which in turn are essential inputs in crop production. Rice, in particular, is fertilizer intensive. Dollar weakness has been estimated to increase dollar commodity prices with an elasticity between 0.5 and 1.0. However, since food price changes are not closely correlated with dollar weakness it is likely that the impact was at the lower end of this range.

*Increased biofuel demand has been the largest contributor to the overall surge in world grain prices.* Concerns over oil prices, energy security and climate change have prompted governments to encourage production and use of bio-fuels. This has

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4 Baffes (1997).
5 Numerous countries have set standards or targets for use of bio-fuels the production of which is further facilitated by implicit or explicit subsidies and trade barriers. The E.U. has set a goal of 5.75 percent of motor fuel use from bio-fuels by 2010. The U.S. has mandated the use of 15 billion gallons of ethanol from traditional sources (primarily maize) by 2015 as well as 1 billion gallons of bio-diesel by 2012. Brazil will require that all diesel oil contain 2 percent bio-diesel by 2008 and 5 percent by 2013, and Thailand will require 10 percent ethanol in all gasoline starting in 2007. India mandates a 5 percent ethanol blend in nine states, and China is requiring a 10 percent ethanol blend in five provinces. The U.S. has a tax credit available to blenders of ethanol of $0.51 per gallon and an import tariff of $0.54 per gallon, as well as a biodiesel blenders tax credit $1.00 per gallon. The EU has a specific tariff of €0.192/liter of ethanol (€0.727 or $1.09 per gallon) and an ad valorem duty of 6.5 percent on biodiesel. EU member states are permitted to exempt or reduce excise taxes on biofuels. First generation biofuels include starch and sugar rich crops such as maize and sugar cane which are converted in ethanol (mainly used in the US and Brazil) and oil rich crops and seeds such as soybeans and palm oil which are converted into biodiesel (especially popular in the European Union). Production of most first generation biofuels is thus in direct competition with the use of land for food production. Jatropha, a drought and pest resistant tropical bush with oil rich seeds growing on marginal lands is a notable exception. Second generation biofuels, on the other hand, are based on cellulose rich materials such as wood chips, crop residues and algae, and thus not in direct competition with land for food crops,
led to increased demand for bio-fuel crops, such as maize, soybeans and palm oil. Almost all of
the increase in global maize production from 2004 to 2007 (a period when grain prices rose
sharply) went for bio-fuels production in the U.S., while existing stocks were depleted by an
increase in global consumption for other uses. Land use changes due to increased use of maize
and oilseeds for biofuels led to reduced plantings of wheat, the subsequent depletion of world
wheat stocks to record lows, and a surge in wheat prices.

The impact of biofuel use on rice prices is less direct than for other grains or oilseeds,
since rice is not used for biofuel production and rice land is not easily switched to other biofuel
crops. However, the surge in wheat prices is being reflected in rice prices because wheat and
rice are substitutes in consumption and imports. As Figure 2 indicates, rice prices had recently
fallen to exceptionally low levels compared to wheat. This has led to increasing substitution of
rice for wheat in consumption which in turn has contributed to the underlying firmness in rice
prices and their rising trend during 2007. Based on the historical relationship between wheat and
rice prices since 1990, the high level of wheat prices in early 2008 (itself largely reflecting
increased use of biofuels) would suggest rice prices around $600 a ton, up from $326 in 2007.
(Mitchell, 2008). That however is rather less than the further rise in rice prices to over $1000 in
April, for which recent changes in trade policies are more of a factor.

The unintended consequences of recent trade policy actions

The general rise in world grain prices has fostered a growing apprehension among
governments in the major rice consuming countries in East and South Asia about a possible lack
of access to food, which could lead to further politically sensitive increases in domestic food
prices. As a result some have taken preemptive trade policy measures to secure access to food
supplies, which have had a snowball effect, as other governments then also judge it prudent to
take such preemptive measures, contributing to a further surge in world food prices that no
government on its own would have wished for. Among rice exporting countries, the tendency
has been to ban or restrict rice exports, so as to increase supply and lower prices in the domestic
market. Among some rice importing countries, on the other hand, it has led to distress buying by
parastatal importers, with flotation of massive tenders at increasingly high bid prices.

As Figure 3 suggests, the recent acceleration in world rice price increases began with
India’s decision to restrict rice exports on October 9. India’s decision was in response to surging
world prices for wheat, a major food consumption and import item in India. This event neatly
demonstrates how price increases in other grain markets which are more directly affected by
biofuel policies have ended up also pulling rice prices higher. Rice export restrictions have also
been imposed by Vietnam, China, Cambodia, Indonesia and Egypt. Large purchase tenders
made by the Philippines, the world’s largest importer, have occurred at increasingly high prices,
reaching over $1000 a ton in mid April.

but the technology to break cellulose into sugars distilled to produce ethanol or gasify biomass is not yet
commercially viable (World Bank, 2007).

6 From 2004 to 2007, global maize production increased 51 million tons, biofuel use in the U.S. increased 50 million
tons and global consumption for all other uses increased 33 million tons, which caused global stocks to decline by
30 million tons (Mitchell 2008).
Much of the observed increase in food prices is likely to persist for the medium term, though rice prices are expected to come down substantially from their extraordinary April 2008 peaks. Food crop prices (including rice) are expected to remain high in 2008 and 2009 and then begin to decline as supply and demand respond to high prices; however, they are likely to remain well above the 2004 levels through 2015 for most food crops (Table 1). Forecasts of other major organizations (FAO, OECD, and USDA) that regularly monitor and project commodity prices are broadly consistent with these projections. Predictions of high food price in the medium run find particular support from the expected continuing impact of policies aimed at achieving energy security and reduced carbon dioxide emissions through rapid expansion of biofuels production. This may present strong trade-offs with food security objectives (see Section 3 below).

Table 1. Indices of projected real food crop prices, 2007=100.

<table>
<thead>
<tr>
<th>Real Prices</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize</td>
<td>100</td>
<td>122</td>
<td>129</td>
<td>124</td>
<td>110</td>
</tr>
<tr>
<td>Wheat</td>
<td>100</td>
<td>134</td>
<td>132</td>
<td>129</td>
<td>100</td>
</tr>
<tr>
<td>Rice</td>
<td>100</td>
<td>145</td>
<td>153</td>
<td>160</td>
<td>145</td>
</tr>
<tr>
<td>Soybeans</td>
<td>100</td>
<td>124</td>
<td>122</td>
<td>118</td>
<td>105</td>
</tr>
<tr>
<td>Sugar</td>
<td>100</td>
<td>120</td>
<td>130</td>
<td>130</td>
<td>136</td>
</tr>
</tbody>
</table>

3. Impact on countries and households

Macroeconomic Impacts

Macroeconomic effects due to higher food prices are expected to be relatively small at the level of national income and the balance of payments—as distinct from possible effects on living standards of the poor. Economies such as Cambodia and Lao PDR are expected to see fairly small negative effects, while those such as China and Philippines could see somewhat larger net losses of approximately 0.5 percent of GDP due to higher cereals and/or edible oil prices. On the other hand, rice exporters such as Thailand and Vietnam likely will see substantial income gains because of high rice prices, and Indonesia and Malaysia to a lesser extent because of edible oil exports.

Headline inflation has picked up in many East Asian economies, notwithstanding the repress of fuel and energy prices through price controls in some of the major economies. As Table 2 indicates, headline inflation has moved up into the 5-10 percent range in most countries in the latest available month. While the impact of rising international food prices on overall domestic inflation tended to be somewhat muted in 2007 due to the relatively small size of international price movements and the appreciation of many local currencies against the dollar, the large scale of international food price inflation in the first quarter of 2008 is likely having a bigger impact. Domestic food price inflation in China and Vietnam was running at 20-30 percent in the latest available month of 2008, while it was close to 10 percent in several other larger economies. (Table 2). While international food price inflation is certainly not the only factor promoting higher overall inflation in East Asia – supply shocks in domestic agriculture (such as last year’s swine fever epidemic in China), domestic overheating and rapid credit growth are also contributing factors in some economies – it is increasingly one among these factors.

Distributional Impacts

As noted, the share of food in the consumption basket of the average East Asian household is between 2 to 3 ½ times as large as that in a developed country like the US. It ranges between 30 and 50 percent of household consumption (31 percent in Malaysia, 34 percent in China, 36 percent in Thailand, 40 percent in Indonesia, 43 percent in Vietnam, and 50 percent in the Philippines). In Cambodia the share of food in total consumption is 59 percent in rural areas and 40 percent in urban. Internationally traded food products are also a large proportion of
the food consumption of the poor – 56 percent in Cambodia for example, and 64 percent in Vietnam.

*The impact of food price increases on the poor also depends on whether they are net food buyers whose real income will be reduced by higher food prices, or net sellers of food, who will tend to benefit.* The urban poor and landless rural workers are generally net food buyers, as, typically, are a significant fraction of poor small landholders. Given that most of the poor live in rural areas – 93 percent or the $1-a-day poor in East Asia are rural – the poverty effects of the food price increase are most felt in rural areas.

In Cambodia smallholder net buyers make up 25.8 percent of the poor, rural landless 11.5 percent and urban poor 8.4 percent, with another 18 percent being small landholders who are self-sufficient but not net sellers of food. In Vietnam the proportion of net buyers among the poor is 47 percent (of whom three quarters are small rural landholders), with another 19 percent being net self-sufficient. In Indonesia 76 percent of the poor are net rice buyers, including some 72 percent of the rural poor. Here it is estimated that every 10 percent increase in rice prices reduces the real value of the expenditure of the poorest tenth of the population by 2 percent. In the Philippines it is estimated that for the poorest 30 percent of families, rice constitutes 17 percent of their total consumption and 27 percent of their total food expenditures. It is estimated that 73 percent of rural and all urban households – many of whom are much poorer than many net rice producing households – are vulnerable and adversely affected by high rice prices. Some two thirds of the marketable surplus of rice comes from the wealthiest 40 percent of rice farmers.

*Other things being equal, the surge in food prices is likely to increase poverty in the low and lower middle income countries of the region, although against that must be set the poverty reducing impact of continued robust economic growth.* We estimate that every 1 percent increase in per capita consumption reduces the poverty rate for East Asia as a whole by around 1 percent (at the $1 a day level). In the medium term there will also be a supply response to higher prices, as some net food buyers become net food producers. What the overall effect of these complex interactions on poverty rates in the region in 2008 will be is not yet clear, but it seems likely that, depending on how much food prices increase during the year, the pace of poverty reduction in the region will not be as rapid as in the recent past and in some countries may even reverse. (Poverty rates at the $1 a day level fell by 11-12 percent a year in 2002-2007, those at the $2 day level fell by 8-9 percent a year.).

### 4. What can governments do?

Rising food prices are quickly taking on a high profile around the region, eliciting a range of policy responses. Broadly speaking policy interventions can be divided into three classes. In order of urgency these are (i) interventions to ensure household food security by strengthening targeted safety nets; (ii) interventions to lower domestic food prices through short-run trade policy measures, tax and subsidy policies or administrative action, and (iii) interventions to enhance the medium-term food supply. Within all three categories of policies there are preferred options that are more effective and equitable. Table 3 provides an overview of some of the nearer term policy responses that have been undertaken in selected East Asian economies.

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7 World Bank (2006) ‘Making the new Indonesia work for the poor’
Ensuring household food security via targeted safety nets

**Targeted cash transfers to vulnerable groups are widely thought to be a ‘first best’ way of addressing food insecurity.** Targeted cash transfers support the purchasing power of the poor without distorting domestic incentives to produce more food, and without reducing the incomes of poor food sellers (as occurs with price controls and food export restrictions). Examples include cash or near-cash transfers\(^8\) that are conditional upon meeting a requirement (such as low income, location or occupation) or engaging in a mandated behavior (such as sending children to school). Various kinds of cash transfer programs are currently used in both middle and low income countries including Brazil, China, Ethiopia, Egypt, Mexico, Mozambique, South Africa, Sri Lanka, and Tunisia. Several of these countries are adjusting current programs in response to the rise in food prices.

**Table 3. East Asia: Near Term Policy Responses to Rising Food Prices**

<table>
<thead>
<tr>
<th>Country</th>
<th>Economy wide policies</th>
<th>Existing social protection programs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reduce import tariffs</td>
<td>Export restrictions/export tax</td>
</tr>
<tr>
<td>Cambodia</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>China</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Fiji</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Indonesia</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Lao PDR</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Malaysia</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Mongolia</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Papua NG</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Philippines</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Solomon Isl.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Thailand</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Timor Leste</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Vietnam</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Source: World Bank staff assessments.

*Only China is currently implementing a targeted cash transfer scheme in East Asia, although Indonesia and Philippines are studying or developing pilot schemes* (Table 3). In Indonesia the policy package adopted by the government in February includes eliminating import tariffs and taxes on soybeans, providing a direct price subsidy to small scale producers of soybean-based foods, increasing the export tax on palm oil to control cooking oil prices, subsidizing cooking oil for low income households, eliminating VAT on cooking oil, increasing the monthly quota of subsidized rice for poor households, removing the import tariff on flour, relaxing flour fortification standards, and strengthening the role of the state logistics agency (Bulog). In addition the Government of Indonesia is now working to develop and pilot a conditional cash transfer program targeted at 500,000 extremely poor families. The pilot program has the potential to provide a safety net for the very poor against shocks such as rising fuel and food prices, while also helping families ensure access to basic health and education.

\(^8\) Food stamps are the most often used form of near-cash transfer.
services. Indonesia’s Community Cash Transfer program also provides grants to communities for increasing school enrollment and healthcare utilization rates. Similarly, the Government of the Philippines is designing a conditional cash transfer scheme as a medium term safety net policy that could absorb shocks for the poorest, including food price shocks and to improve targeting in its subsidized rice program (see below). It is also exploring the possibility of replacing that program with an unconditional cash transfer scheme.

*The scale, targeting efficiency and value of such transfer programs tends to be directly related to overall levels of development, given the administrative complexities and fiscal costs entailed.* Net additional spending on cash transfer programs should be financed in a fiscally sustainable way. However a well-targeted cash transfer program may not always represent an additional fiscal cost. It may even represent a fiscal saving if it is used to replace more costly and inefficient forms of social protection, such as an untargeted or poorly targeted food subsidy. In the Philippines, for example, the current rice subsidy scheme is estimated to cost at least Php26.3 billion (about 0.4 percent of GDP or $650 million). Despite the large expenditure, poor targeting of the rice subsidy means that the bulk of the benefits are obtained by the middle and upper classes rather than the poor.

The feasibility of targeted cash transfer programs must also be carefully assessed with respect to each country’s administrative capacity and the political economy surrounding the implementation of the program, rather than on any rule of thumb. There are significant examples of low and lower middle income countries that have successfully implemented targeted cash transfer schemes, sometimes very quickly. Indonesia, for example, rapidly implemented a temporary unconditional cash transfer scheme in 2005/06 to compensate the poor for a reduction in fuel subsidies.

When cash transfers cannot be rapidly put in place (for instance, because of the difficulty in targeting vulnerable groups; see Box 1), *food-for-work* and *public works programs* represent valid alternatives. Evaluations of Argentina’s *Trabajar* program, and of the *padat karyas* (i.e. public works) programs that Indonesia established after the financial crisis show that these type of programs can significantly benefit the poor while, if compensation is kept low enough, also achieve lower leakage than targeted food subsidies. *School feeding programs* can also improve the food intake of school-age children and (indirectly) their families, but do not cover all vulnerable groups. *Emergency food aid distribution* should represent a temporary measure aiming at quickly assisting vulnerable groups until other programs are put in place. However the physical transfer of food is costly, often suffers from significant leakages and may have growing disincentive effects on local production if it becomes entrenched beyond the initial emergency.

It is difficult to reach all vulnerable groups with a single social protection program. *The optimal response should therefore consist of a set of fiscal measures and social protection interventions that cover all vulnerable groups, minimize overlap and address both the short and the medium term.* The response should start from existing social protection programs, subsidies, tariffs, and import/export restriction, as well as a realistic appreciation of the political economy associated with existing programs. The response should try to minimize operational costs and leakages, while taking account of the time needed for implementation. (Implementation of more sophisticated programs, while taking more time, could also help develop a framework for responding to future crises.) Annex Table 1 compares features of different social protection programs, including the time needed to set up and expand programs, costs and leakages.
Box 1: Short- and medium term targeting strategies

Targeting the right beneficiaries is among the most challenging and costly tasks in all social protection programs that are not universal by nature. It can take several months to develop a roster of beneficiaries of a specific social protection program. Nevertheless, while developing well-targeted social protection programs is clearly the best long-term solution, especially from the angle of fiscal sustainability, short to medium term responses ought to be based on the scope and coverage of each country’s existing social protection programs. The following points highlight short and medium term ways to expand social protection coverage.

*It is often quickest to expand the scope and coverage of existing social protection programs, in particular of cash transfers.* A major challenge in assisting the poor during crises is reducing the time needed to implement an emergency response. The most efficient way is to expand the scope and coverage of already existing social protection programs. Pakistan, for instance, is in the process of expanding ration shops for wheat, and Ethiopia has increased the cash transfer amount of its main safety net program by a third. Cash transfers programs are particularly well-suited to channel additional aid during crises. Targeted cash transfers are the least distorting response in times of crises, require little additional logistical resources and, once in place, it is relatively straightforward to extend coverage to additional beneficiaries.

*It is important to consider alternative ways to achieve a reasonable level of targeting in the short term.* It is difficult, if not impossible, to achieve good household targeting in the short term. But this does not mean that the only viable alternatives are costly programs with universal coverage. Ideally targeting should be developed from comprehensive surveys of household or individual characteristics; but when a rapid response is essential targeting can also be geographical, or based on easily observed and pre-determined individual characteristics, such as age, or weight to height ratios. Brazil, for instance, initiated a coupon program in the 1980s that distributed food through government-run supermarkets every two weeks, but, after an evaluation, found it cheaper to subsidize food for all customers in very-low income neighborhoods, even if that implied some leakage.

*Food price subsidies need to be used with care.* Because general price subsidies transfer income to everyone, their fiscal cost is high. Food price subsidies could therefore be restricted to geographical areas in which the poor are concentrated (for instance, by subsidizing food in registered small neighborhood stores), or by focusing subsidies on food or non-food items mainly consumed by the poor.

Ensuring household food security by lowering domestic food prices

So far most interventions by East Asian countries have concentrated on reducing domestic food prices through changes in trade policies, changes in domestic taxes and subsidies and through administrative measures such as price controls (Table 3).

*A number of grain exporters have recently restricted grain exports as a means of increasing supply and lowering prices in the domestic market.* In East Asia Cambodia, China, Indonesia and Vietnam have joined India and Egypt in announcing restrictions on rice exports or raising export taxes. As discussed earlier, rice export restrictions in one country have fostered competitive export restrictions by others, contributing largely to the massive recent rice price increases in the thinly traded world rice market, sharply increasing food costs in countries that depend on rice imports.

*While appealing to exporting countries from a short term domestic political perspective, these measures could have significant negative consequences both for exporters and their customers.* The recent restrictions run the danger of destroying confidence in the global rice
market as a source of food security and of stimulating support for protectionism and moves towards “self sufficiency” in the importing countries, leading to a destruction of export and trade opportunities, at a high cost to growth and efficiency. Export restrictions also tend to have a limited impact on domestic price levels and a pronounced negative effect on earnings and incentives for domestic farmers, while also encouraging smuggling. It is notable (and commendable) that Thailand, the world’s largest rice exporter has avoided export restrictions, thereby cementing its long term reputation as a reliable global supplier. A later section suggests that cooperative regional or international actions are a way of reversing the recent breakdown and panic pricing levels in the world rice market.

**Other options to lower domestic prices include reducing tariffs and other taxes on key staples.** Many countries impose tariffs on food imports to encourage domestic production and boost government revenue. In times of sharply increasing prices, reductions in food tariffs and taxes are an easy-to-implement way to provide some relief to consumers, albeit at some fiscal cost. Removal of import barriers simply allows the country to obtain food at the lowest possible cost, whether this is through imports or from efficient domestic food producers. Some 24 of 58 developing countries sampled by the World Bank have recently reduced import duties and VAT in the wake of rising food inflation. In East Asia China, Fiji, Indonesia and the Solomon Islands have reduced import barriers on food, while Cambodia, China, Indonesia, Fiji and Mongolia have reduced (or plan to reduce) domestic food taxes.

The present incentive to reduce food import barriers also presents an opportunity to pursue more permanent trade reform in countries with significant controls on rice imports, for example the Philippines and Indonesia. The Philippines is in fact now considering a reduction in import tariffs and liberalization of the import market. Some express concern that private traders will not have sufficient capacity to rapidly fill the rice import gap. Experience from Bangladesh and Madagascar underscores the importance of transparency and policy consistency in liberalizing the rice market and fostering private trader participation (Box 2).

The fiscal cost of lower food taxes and additional social protection expenditures will require financing through increases in other revenues, reduced spending on lower priority areas or increased borrowing. Whether a country can reduce food taxes, and, if it does, how it finances such reductions will depend on its initial fiscal and macroeconomic position, its administrative capacity to raise other revenues (for example taxes whose incidence falls more on upper income groups), the availability to cut other less socially valuable expenditures and the government’s ability to borrow at reasonable cost. Although there are some differences, in general most East Asian countries have improved their fiscal positions in recent years, reducing fiscal deficits and public debt to GDP ratios. Thus *East Asian economies may be reasonably well placed to address the fiscal costs of reducing food import protection or domestic food taxes.*

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**Box 2: Lessons for successful rice market liberalization from Bangladesh and Madagascar.**

Bangladesh allowed private trading in grains in the early 1990s. Following a massive flood in mid-1998, 2.4 million tons of private sector imports stabilized domestic prices at import parity levels. The government also scaled up public safety net programs. Dialogue between the government and private traders contributed to this success. Officials learned from private traders about changing conditions in

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9 Removal of import quotas or other quantitative restrictions on imports would not entail a direct loss of fiscal revenues however.
international markets, shipping, port problems and domestic transport. Private traders had a forum to learn about government policies and express their concerns.

Madagascar liberalized rice markets in the mid-1980s while maintaining high import tariffs and taxes to protect domestic producers. In early 2004, a production shortfall coincided with a rise in world prices and a sharp depreciation of the currency. The slow pace of private commercial imports led the government to float tenders for commercial imports of rice. But, they also left open the possibility that tariffs on these imports might be waived or rebated and set an official sales price below the tariff-inclusive import parity price. As a result, private sector import trade was discouraged, and the government did not have sufficient rice to meet all demand at this official price. It had to ration sales, and a parallel market at a price above import parity levels developed.

These experiences suggests that while competitive private markets can react more quickly to changing market conditions at a lower (overall and fiscal) cost, successful involvement of the private sector requires a level playing field, a transparent, consistent policy and dialogue with the private sector to minimize uncertainty.


Many East Asian economies have also responded to the food price increases by either maintaining or extending price controls or, in some cases, by maintaining or extending consumer subsidies on staples like rice (China, Fiji, Malaysia, Mongolia, Philippines, Solomon Islands, Timor-Leste, Thailand). These measures may be helpful for managing expectations and stabilizing conditions for short periods but have significant longer run costs. The risk with price controls is that they discourage production by domestic farmers, are often difficult to enforce, and encourage illegal activity such as black markets. As noted above, generalized subsidies on basic food items such as rice can easily become a big fiscal cost. Even if they are intended to be a form of social protection for the poor, poor targeting often means that middle and upper income groups get most of the benefit of the subsidies.

Measures to stimulate a medium-term grain supply response

High prices do present an opportunity to stimulate food grain production and enhance the contribution of agriculture to medium-run growth. Higher grain prices can help reverse a generally declining trend in government, private sector and donor investment in the agricultural sector. Agriculture producers such as Brazil, Malaysia and Thailand have increased investments in agricultural research and extension in recent years, bolstering agricultural productivity and reducing agricultural risk. China is following suit by rapidly increasing its investment in agriculture under its 11th 5 year plan.

However, some of the short-run trade policy options discussed above may limit the scope for longer-term solutions. For example, policy responses that seek to control markets through mandated grain prices, export restrictions, forcible procurement, or direct government involvement in marketing activities are likely to lower the food supply response over the medium term. In contrast, investment in public goods such as demand led extension and agricultural research and development to foster better agronomics and better incentives and regulations to stimulate more efficient water use can go a long way in helping farmers take full advantage of higher food prices.
There is substantial scope for an environmentally sustainable supply response through better agronomics, reduction in post-harvest losses and more efficient water management. In most East Asian countries the land frontier has been closed, while population growth and urbanization continue to reduce the area available for agriculture. The rising demand for feed grains, following diet diversification into meat, and bio-fuels further increase pressures on land for rice production. With an estimated 500 million people in East Asia living in absolute water scarcity, maintaining irrigated food production through large extractions of water from rivers or the ground is unsustainable. Climate change further adds to the uncertainties. In short there is little scope to increase rice production through expansion of land under cultivation or irrigation.

Nevertheless more widespread use of existing agronomic practices and technologies alone could increase rice yields in East Asian countries by at least 25 percent (and up to 80 percent). Improved nitrogen and potassium management techniques could readily result in yield increases of about 0.5 ton/ha in East Asian countries such as Indonesia, Thailand, the Philippines and Vietnam. About 25 percent of the value of the total crop in South East Asia could be saved through better post harvest technology and infrastructure. Increases in irrigation efficiency (currently in the range of 46-65 percent compared with 85-90 percent in Australia and the US) can also be achieved through better water management, incentives and regulation.10

A demand-driven regional outreach initiative and more public investment in agricultural R&D are key. Widespread diffusion of more advanced agronomic, post harvest and water management technologies could be fostered through a regional outreach initiative in a partnership between countries, the International Rice Research Institute (IRRI) and bilateral and international funding agencies. Many countries are also currently underinvesting in agricultural research and development (R&D). While public R&D spending in developed countries reached 2.36 percent of their agricultural GDP in 2000, it was only 0.53 percent in developing countries, 0.4 percent in Asia, and 0.13 percent in Vietnam. Given the long time lag between the discovery, distribution and adoption of new rice varieties, increasing public spending on agricultural R&D today is critical to sustain staple crop yield gains in the future.

Managing domestic price volatility when world food stocks are low. Low worldwide buffer stocks of rice are among the factors contributing to today’s volatile international prices. International experience has so far suggested that the optimal strategy for domestic food price stabilization and food security in developing countries involves market based instruments (including reliance on the world markets and the use of future contracts as insurance against price spikes) combined with targeted safety nets. This avoids some of the efficiency losses and fiscal costs associated with government management of buffer stocks and food distribution. This dual domestic food security strategy of reliance on market forces and safety nets has proven to work well when food price volatility emanates from domestic supply shocks (as during the 1998 floods in Bangladesh), when world markets are sufficiently supplied, and when exporters’ interest are closely tied to the global market. International rice markets have been generally characterized by just such conditions over the past decade. The strategy has however come under pressure in the present conjunction of relatively low world rice stocks with two other factors: sharply increased demand for grains due to biofuels demand, and the absence of an adequate framework of rules and cooperative institutions to govern international rice trade. Strengthening international cooperation on biofuels and on avoiding international market disruptions could

10 Just addressing poor land layout, for example, through better leveling and higher bunds to retain wet season water has been shown to increase yields in Cambodia by 27 percent. A shift from area based to volume based charges for irrigation water in the Tarim Basin in China resulted in a 17 percent decrease in water use.
therefore be very helpful in avoiding a reversion to costly buffer stock policies and in ensuring that the substantial efficiency gains from international food trade will not go lost in the future.

**Regional or international cooperation?**

The preceding discussion has stressed the important role of restrictions on rice exports in the latest surge of prices on the thinly traded international rice market, a development also underpinned by rising biofuel demand and low worldwide buffer stocks. While export restrictions have generally been imposed for understandable motives of securing domestic rice supplies, they have had the unforeseen result of provoking other rice exporters into also taking defensive measures to restrict rice exports. Meanwhile major importers have felt compelled to launch huge public tenders at almost any price. The surge in international prices to over $1000 a ton could ultimately lead to domestic prices in exporting countries being pushed higher rather than lower, which was the original intention of the export restrictions.

However no individual rice exporter may be willing to pull back from the “beggar-thy-neighbor” export restrictions that are the principle reason for the recent price surge unless others do as well. A collective agreement between the major rice producers and consumers could play a crucial role in defusing the current market disruption. Given their important role in regional collaboration, bodies such as ASEAN or ASEAN+3 could play a leadership role in convening a “disarmament conference” between the major players to discuss the needed actions.11 Since around 90 percent of world production and consumption occur in South and East Asia, a meeting of the leading producers and consumers in just these two regions may be sufficient. Countries could agree to reduce or remove export and import restrictions for a temporary period, reviewing more permanent agreements later.

The potential impact of such an agreement could be substantial as illustrated by the 40 percent drop in world wheat prices on April 24 following Ukraine’s cut back in its export restrictions and prospects of bumper wheat harvests in areas such as the Black Sea basin, Canada and Europe. The underlying fundamental conditions for the rice market also look relatively benign in the year ahead. World rice production in the last 3-4 years has been growing at just over 1 percent a year, a little more than sluggish world consumption growth of around 0.8 percent a year. The USDA projects a further 1 percent rise in world rice production in 2008, which together with estimated world rice stocks of around 77 million tons, should comfortable cover demand growth for the year. Indeed India and Indonesia have already announced the likelihood of bumper rice crops.

In this spirit, the Philippines has already called for an emergency ASEAN meeting on rice and the rice crisis will be discussed at the upcoming G8 meeting in Japan. Short run actions to stop the escalation of rice prices could include agreement by China, Japan, and Thailand to sell down some of their large rice stocks. China is holding 38 million tons of rice stocks according to USDA estimates. Japan is holding around 1.5 million tons of US rice purchased under trade agreements, in addition to stocks of domestic rice. Thailand has 2.1 million tons of government rice stocks in addition to an additional two million tons held by private exporters and rice mills. Under current conditions, placing even an additional 1-2 million tons of rice on the world market would have a big impact on prices.

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11 This includes the establishment of the ASEAN Emergency Rice Reserve in 1979 which has subsequently been complemented by the East Asia Emergency Rice Reserve under ASEAN +3. While the amounts in these reserves may currently be too small to dent the current rice price peaks, these agreements do provide an ideal political platform to discuss coordinated actions for addressing the current rice price crisis.
Finally, **there is an increasingly urgent need for greater international engagement and collaboration to address the competing demands of energy and food security.** Biofuel mandates, trade tariffs and subsidies in the advanced countries have distorted world food markets and have played an important role in rising world food prices. Against these costs, which are felt most sharply by the poor, is the potential for an alternative low-carbon, more climate-friendly source of energy.\(^{12}\) More analysis and international dialogue is needed to decide whether the benefits from the current mix of policies really justifies the costs, or whether a new global deal can be struck covering both clean energy and food.\(^{13}\) Analysts have suggested that such a deal could entail a drawback or elimination of those policies that are contributing to the high food prices facing consumers today, in particular first generation biofuels policies in developed countries and agricultural export restrictions and import controls in developing countries. Freer agricultural trade along these dimensions can be combined with enhanced support for research and development into new clean energy and alternative energy technologies, or other forms of international cooperation on climate change.\(^{14}\)

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12 However it has been estimated that converting rainforests, peatlands, savannas, or grasslands to produce food-based biofuels in Brazil, Southeast Asia, and the United States creates a 'biofuel carbon debt' by releasing 17 to 420 times more greenhouse gases (GHG) than the annual GHG reductions these biofuels provide by displacing fossil fuels.

13 According to a recent IFPRI study, most scenarios of increased biofuel use imply substantial trade-offs with rising food prices. These trade-offs are dampened, although not eliminated, when technological advances in biofuel and crop production are considered. (IFPRI, IMPACT results, 2006).

14 New technologies could include second generation biofuel technologies that rely on waste products rather than food crops, and which avoid the land use changes and greenhouse gas emissions associated with current biofuel programs.
Annex Table 1: Rapidity and efficiency of response of selected Social Protection programs.

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Minimum time required to set up the program</th>
<th>Minimum time required to expand an existing program</th>
<th>Costs</th>
<th>Leakages</th>
<th>Country examples</th>
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<tbody>
<tr>
<td>Targeted cash transfers</td>
<td>Three to six months</td>
<td>To increase the payment, 1 payment cycle; to expand the set of beneficiaries, 1-2 months.</td>
<td>The median administrative cost of cash transfer programs is 10% of the total budget; costs however vary significantly with coverage and the level of the payments.</td>
<td>The accuracy of targeting depends on time and resources invested. In Indonesia, only 60% of the Unconditional Cash Transfers went to the poorest 40%, while in Brazil's Bolsa Familia, 94% of the funds went to the poorest 40%.</td>
<td>When it lowered the fuel subsidy, the Indonesian government put in place a targeted cash transfer in less than three months. Local authorities were responsible for initial targeting, and transfers were distributed directly to beneficiaries via the post office system. Haste led however to higher leakages.</td>
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<td>(Unconditional means-tested cash transfers)</td>
<td>Three to six months minimum, depending on the accuracy of targeting.</td>
<td></td>
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<tr>
<td>Conditional Cash Transfers</td>
<td>9-12 months</td>
<td>To increase the payment, 1 payment cycle; to expand the set of beneficiaries, 1-2 months.</td>
<td>The median administrative cost of CCT programs is 8%.</td>
<td>As above.</td>
<td>Mexico spends 0.4% of GDP on Oportunidades, a CCT program that covers approximately 18% of the country's total population. Beneficiaries are poor households with children under 18 years, and it has been estimated that 68% of the payments go to the poorest 20%. Brazil's Bolsa Familia targets poor families with a per capita income of less than US$60 per month (approximately 11.1 million families).</td>
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<tr>
<td>Food for work / public works</td>
<td>Three to six months</td>
<td>One to two months.</td>
<td>In Argentina's Trabajar and Jefes workfare programs, the share of wage costs relatively to project costs varied from 30 to 40%, and administrative costs were less than 2%.</td>
<td>In Argentina's Jefes program, 80 percent of the participants were from the poorest 40%. To achieve good targeting, it is crucial to maintain compensation below the market rate.</td>
<td>In early 2002, over 50% of Argentina's urban population had fallen below the poverty line. In April 2002 the government launched Jefes, a massive workfare program targeting unemployed household heads with at least a minor below the age of 18. In May 2003, nearly 2 million workers were enrolled in Jefes, which had a budget of 1% of GDP.</td>
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<td>Emergency food aid distribution</td>
<td>A few weeks, but lack of food availability may lengthen the delivery time.</td>
<td>A few days minimum (pending food and transport availability).</td>
<td>High. Transport and distribution make up the largest share of costs, which are expected to be at least as high as private costs. In countries with poor infrastructure, administrative costs could amount to half of the budget.</td>
<td>Usually high. Information on poverty and local prices can however improve targeting.</td>
<td>In September 1998, Bangladesh was inundated by a large flood, which caused 10% rice production losses. The first intervention was an immediate relief effort designed to provide emergency food aid to disaster victims. The second was a medium-term program that distributed 16 kilograms of grain per month to poor households selected by local committees. Finally, in December 1998, when the soil was dry enough to permit manual construction of earthworks, the government initiated a Food for Work program.</td>
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References


