

GUIDANCE FOR RESPONSES

from the Human Development Sector
TO RISING FOOD AND FUEL PRICES



Further Resources

This note provides guidance on how the social safety net, nutrition, health, and education sectors should respond to rising food prices. For additional in-depth information on this topic, which is discussed in summary format in this report, refer to the following key resources:

Margaret Grosh, Carlo del Ninno, Emil Tesliuc, and Azedine Ouerghi with the assistance of Annamaria Milazzo and Christine Weigand. 2008. *For Protection and Promotion: The Design and Implementation of Effective Safety Nets*. Washington, DC: World Bank

This book provides a comprehensive treatment of safety nets—not only the *why*, but also the *when*, *which*, and *how to*. It builds on and informs the academic literature with a wealth of learning from policy and operational documents, including those from the World Bank's work with over 100 countries. The book provides a measured and experienced treatment of a complex topic.

World Bank. 2006. *Repositioning Nutrition as Central to Development: A Strategy for Large Scale Action*. Washington, DC: World Bank.

This report provides a global framework for action. It was written to reinvigorate dialogue regarding what to do about malnutrition and a new global commitment to scaling up proven interventions for tackling malnutrition. It argues that higher incomes and better food security improve nutrition over the longer term, but that malnutrition is not simply the result of food insecurity. This is because many children in food-secure environments are underweight or stunted because of inappropriate infant feeding and care practices, poor access to health services, or poor sanitation.

World Bank. Forthcoming. *Education and School Feeding Programs*. Working Paper, Washington, DC, World Bank and Jukes, M.C.H., Drake, L.J. & Bundy, D.A.P. 2007. *School Health, Nutrition and Education for All: Leveling the Playing Field*. CABI Publications, Wallingford, UK, provide good summaries on the topic.

www.worldbank.org/safetynets

Gives access to summary information on many aspects of safety nets, in-depth resources on most kinds of safety net programs, all training courses and conferences organized by the HDNSP Safety Nets team in the last 5 years, and some helpful links. Extensive new materials will be added over the next 6 months.

www.worldbank.org/html/extdr/foodprices/

Provides a summary of overall World Bank action on the food price increase, links to regional papers, and a summary of country policies.

The Global Food Crisis Response Program (GFRP) provides a framework for the Bank to coordinate its response to the crisis with other multilateral organizations and donor agencies. The GFRP includes a facility encompassing several funding sources with a ceiling of US\$1.2 billion, to be disbursed under expedited processing rules. The program finances a mix of technical assistance, development policy, and investment operations, under four components: (i) food price policy and market stabilization; (ii) social protection actions to ensure food access and minimize the nutritional impact of the crisis on the poor and vulnerable; (iii) enhancing domestic food production and marketing response; and (iv) implementation support, communications, and monitoring and evaluation. The GFRP will include projects and programs that are prepared and approved during the 3-year period FY09–FY11.

The World Bank is also developing a proposal for an Energy Price Crisis Response, which would allow expedited access to trust funds, mostly financed by oil producers, to help countries affected by rising fuel prices fund safety net programs and energy sector investments that enhance sustainable energy access for the poor, efficiency of energy consumption and/or supply, and energy source diversification for risk reduction.

Acknowledgements

This note was drafted by Margaret Grosh, Carlo del Ninno, and Emil Daniel Tesliuc under the guidance of Ariel Fiszbein, Chief Economist of the Human Development Network and Robert Holzmann, Director of Social Protection. Don Bundy gave inputs on school health, Meera Shekhar on nutrition, and Masami Kojima on energy. The report drew heavily, especially in Section I, on input from Don Mitchell and a series of internal briefing notes, especially those prepared by Don Mitchell, Ana Revenga, and Hassan Zaman and on the GFRP framework document. Input with respect to country responses came from Theresa Jones for Chile; Trina Haque, Sunil Rajkumar, and Will Wiseman for Ethiopia; David Warren for Haiti; Vivi Alatas for Indonesia, Cornelia Tesliuc for Jamaica; and Alessandra Marini for Mexico. Helpful comments were provided by Harold Alderman, Jehan Arulpragasam, Robert Bacon, Judy Baker, Douglas Barnes, David Coady, Wendy Cunningham, John Hoddinott, Emmanuel Jimenez, Elizabeth King, Masami Kojima, Andreas Kopp, Ian Walker, Hassan Zaman, and Samuel Zimmerman. Manorama Rani provided assistance with the document layout. Photos were provided by Carlo del Ninno, Arthur Lovelace, Alessandra Marini, and Cornelia Tesliuc. Beth Rabinowitz edited and Tomm Sibert desk-topped the final document.

Disclaimer

The findings, interpretations, and conclusions expressed herein are those of the author(s) and do not necessarily reflect the views of the Board of Executive Directors of the World Bank or the governments they represent.

Table of Contents

Executive Summary	v
I. Rising Food and Fuel Prices and Their Consequences.....	1
II. The Overall Policy Response.....	5
III. Rapid Diagnostics to Identify the Human Development Response.....	6
IV. The Social Protection Response.....	11
V. Health and Education Responses.....	18
VI. Country Actions.....	21

Boxes

Box 1: Assessing Country Vulnerability to Food Price Increases	8
Box 2: Madagascar: Calculating the Distributional Effects of Energy Price Increases, 2005-2007.....	9
Box 3: Tools for Analysis of Social Protection.....	10
Box 4: Why Malnutrition Persists in Many Food-Secure Households	10
Box 5: Criteria Used to Judge Safety Net Policy.....	13
Box 6: Nutrition: What to Do When.....	19

Figures

Figure 1: Commodity Price Indices.....	1
Figure 2: Countries with High Initial Malnutrition.....	19
Figure 3: Types of Mitigating Policies Adopted by Selected Countries, July 2008.....	21
Figure 4: Results from Latin America and the Caribbean.....	32

Tables

Table 1: Share of Food and Fuel in the Consumption of the Poorest Quintile.....	3
Table 2: Economic Downturns and Health and Nutrition: Econometric Evidence	5

Annexes

Annex 1: Comparing Targeting Methods.....	25
Annex 2: Characteristics of Social Safety Net Interventions.....	27
Annex 3: Briefing Notes on Common Program Interventions.....	30
References	37

Rising food and fuel prices may negatively impact human development in four dimensions: by increasing poverty; worsening nutrition; reducing the utilization of education and health services; and depleting the productive assets of the poor. Disinvestment by the poor in their human and physical capital will have large and lasting effects, which are well documented and quantified in the development literature. Early childhood malnutrition results in poorer health, lower cognitive abilities, less learning, and lower lifetime earnings. Children withdrawn from school in times of hardship rarely return to the classroom, and families can have great difficulty rebuilding the assets upon which their livelihoods are based. Thus, losses today may be irreversible. The impacts of increased food and fuel prices can be ameliorated if governments can provide a positive policy response—in the Human Development sectors, primarily through direct income transfers targeted to the poor, by reinforcing basic nutrition and health services, and maintaining high-quality and accessible education services.

Social protection programs play a triple role in the response to rising food and fuel prices:

- They forestall to a degree the increases in poverty and inequality that the change would bring.
- They help households maintain access to food, energy, and essential services for health and education.
- When they are perceived as fair and compensatory, social protection programs can be important in maintaining social equilibrium and in avoiding less efficient tax, subsidy, trade, or production policies, some of which can even aggravate the problem.

Well designed and implemented safety nets are the first-best approach to addressing the poverty implications of price increases. Other approaches, such as reducing taxes or increasing subsidies, are often more costly and can have undesirable efficiency and fiscal impacts.

However, many countries do not have effective safety nets and have relied on alternative, less efficient policy instruments. The immediate challenge in these cases is therefore:

- to identify what exists in these countries in terms of targeted programs that could be used to protect the poor and to identify how their coverage, targeting, and effectiveness could be improved in the short term; and
- to set out a clear strategy for developing the safety net over the medium term.

Which programs to scale up in the short-run response will depend on a quick assessment of which programs are appropriate, are operating reasonably well, and have logistics and financing amenable to rapid expansion.

Often an adequate short-term response will require compromises on the quality of targeting and implementation, and will in general be less concerned with incentive compatibility and sustainability than long run safety nets.

The medium-term response is to work toward a sound safety net system. Countries may need to improve programs or to start new ones. They may need to develop systems for household targeting, for payments, or for monitoring and evaluation and use these for multiple programs.

Policy responses must be chosen based on country context, but there is a loose ranking of programs for the short-run response.

DIRECT TRANSFERS

- Targeted cash transfers of adequate coverage, generosity, and quality are the best option.
- Increasing the benefits for non-earnings linked social pensions, survivorship pensions, disability pensions, unemployment benefits, and the like can be helpful where they cover the poor.
- Food stamps have slightly higher administrative costs than cash, but can be politically popular. Similar stamps or vouchers for fuel or transport should also have these traits, but to date have been used only occasionally.
- Food distribution in-kind is appropriate where markets are functioning poorly, where foreign assistance is only available in-kind, or where strategic grain reserves need to be rotated. Elsewhere in-kind programs will have higher than necessary administrative costs per unit of value transferred but can be a vehicle for significant income transfer. Among them:
 - Take-home rations can be targeted at the household level and serve much like cash transfers; they also have lower administrative costs than on-site feeding.
 - School feeding programs generally can be targeted only at the school level and not at the household level; thus, if they have wide coverage, they will involve high errors of inclusion, but may improve children's concentration and therefore learning.
 - Distribution of fortified, calorically dense weaning food for children 6–24 months old, especially as

part of a nutrition education program, can be an important nutrition intervention.

- o On-site feeding through health centers is logistically complex and imposes high transaction costs on beneficiaries to come to the centers for meals. This type of program is usually best reserved for children who are severely or moderately malnourished.
- o Targeted market sales can be used for more general income transfers when other programs do not exist.
- Public works programs rarely achieve coverage sufficient to be the whole response to rising food and fuel prices. Where public works programs exist, increasing their benefit or coverage may help.
- Where Conditional Cash Transfer (CCT) programs already exist, increasing their benefit or coverage may be a key part of the response. However, establishing new CCTs may take too long and exclude the neediest in low-income countries or fragile states.
- Immediate across-the-board wage increases via public sector and minimum wages are not desirable. Both instruments represent a permanent increase in wages in response to a shock that may be temporary, thereby fueling inflation and fiscal expenditures over the long run. They fail to increase wages among the poor, who are concentrated in the private, informal sectors. The poor who are covered by these wages also lose as employers lay-off low-skilled workers to increase the wages of more productive workers.

INDIRECT TRANSFERS

- Fee waivers or vouchers for health and scholarships for education help households maintain access to services even if households become poorer.
- Lifeline pricing for networked utilities can be appropriate where the poor are connected to the network, have individual meters, volume differentiated tariffs are used, and the subsidized block of service is consonant with use by low-income households.
- General food price subsidies are often regressive, distortive, costly, and hard to eliminate, although sometimes adroit choice of commodities can result in transfers that are nearly neutral in incidence and inclusive of the poor. General fuel subsidies tend to be even more regressive, especially those on gasoline. Transport subsidies are more complex, also common, and often not well targeted.

In some, but not all, cases it will be appropriate to scale social protection interventions back down as food and fuel prices find their new long term level and households and wages adjust to it. Where the response to increased food and fuel prices brings about improvements in grossly insufficient or inefficient safety net programs, it may be highly desirable to leave these improvements in place in the medium and long run, and indeed to build on them. But where the response brings the coverage or benefit levels above prudent long run levels, then programs may need to be scaled down. Where less preferred policies or programs were used, these may need to be replaced with better ones.

Specific nutrition and health interventions are often needed to complement social protection programs.

These can be used to help households use their limited resources to most effectively nourish their children, and improve micronutrient intake directly. They should focus on the window of opportunity from just before conception to age 2. Comprehensive nutrition programs will include: (i) nutrition education and growth promotion; (ii) provision of targeted food supplements and micronutrients; and (iii) other primary health interventions that reduce the risk of malnutrition such as immunizations, oral rehydration therapies, and protection against malaria. Where full-fledged nutrition programs are not yet in place or to scale, the immediate response can move on one or more of three fronts: nutrition communications campaigns, micronutrient supplementation, or the fortification of staples.

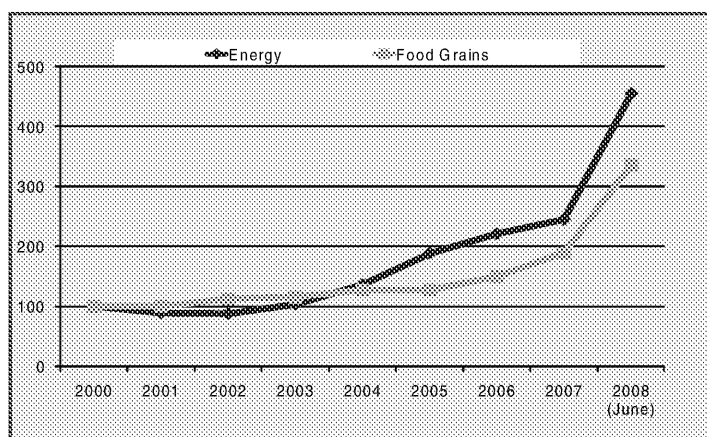
The education goals of keeping children in school and learning can be assisted in the face of growing poverty through income transfers and demand-side education interventions. These interventions may be even more important for secondary grades because both the explicit costs for textbooks, transportation to school, and exam fees and the implicit costs of foregone labor are higher for these grades. However, this poses something of a targeting dilemma in that children of the poorest households are least likely to be enrolled in upper secondary grades. For demand-side programs in secondary schools, targeting should be done at the level of the student or household. In lower primary programs, geographic targeting that selects schools in poor areas may suffice.

I. Rising Food and Fuel Prices and Their Consequences

COMMODITY PRICES AND CONSEQUENCES OUTSIDE HUMAN DEVELOPMENT¹

Food and fuel prices have increased dramatically in the past several years after remaining low for most of the previous two decades. Prices of food grains, which account for more than half of total calories in developing countries, increased 150 percent between January 2006 and June 2008, and about 40 percent of this increase has occurred since January 2008 alone (see Figure 1). Prices of food staples, such as wheat, doubled, rice almost tripled, and soybean oil rose by 186 percent since January 2006. Prices of petroleum and petroleum products, including nitrogenous fertilizer produced from natural gas, have also surged upward. The World Bank's index of energy prices more than tripled from the average level in 2000 and June 2008. Crude oil prices have increased from less than US\$20 per barrel in 2001 to more than US\$140 per barrel in July 2008, with prices more than doubling since January 2007 and reaching higher real levels than at any time in the past century.

Figure 1: Commodity Price Indices



Source: World Bank, DECDG. The index of food grain prices is an export value weighted nominal dollar index of major food grains, and the energy price index is an export value weighted index of crude oil, coal, and natural gas.

Food prices have risen due to a number of individual factors, whose combined effect has led to a price spiral. Underlying structural factors contributing to rising food grain prices include high energy and fertilizer prices, the continuing

1 This section is based on a series of briefing notes produced at the World Bank, especially the draft background paper for the June G7 ministers of finance meeting, the GFRP framework document, the April 7 note to the Development Committee, and the position paper for the Latin America region, designated in the references as World Bank 2008a–d.

depreciation of the U.S. dollar, sharply increased use of both cereals and vegetable oils in biofuel production, and declining global stocks of food grains due to changes to buffer stock policies in the United States, the European Union, and China. Back-to-back droughts in Australia and growing global demand for grains for food and animal feed have been modest contributors, and on their own would not have led to large price increases (Mitchell 2008). 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.²

The run-up in oil prices was driven initially by a demand-driven tightening of market balances, but more recently has been further fueled by a combination of supply concerns and financial factors. Market tightness is expected to persist because of the sluggish supply response. Projections indicate that although demand pressures will ease as global gross domestic product (GDP) growth slows, oil prices will drop only modestly over the next 2 years. Oil prices are also likely to remain volatile, due to a combination of low stocks, limited spare capacity, supply disruptions, and uncertainty over exploiting new reserves and the development of non-oil sources.

Fertilizer prices have increased more rapidly than food or fuel prices over the past several years, and as with the increases in food and fuel prices, a confluence of factors contributed to these price increases. These factors included low fertilizer prices during the 1990s, which led to underinvestment and closing of many plants, rapid demand increases in response to high agricultural commodity prices, increased production costs due to high energy prices, export restrictions by China, and a subsequent earthquake in Sichuan Province, China—a major producing area for nitrogen and phosphate fertilizers. Production capacity is now fully utilized and prices will remain high until new capacity can be developed or demand weakens. New capacity will be slow to develop, since it takes 5 to 7 years to develop a new phosphate or potash mine and 3 to 5 years to develop a new nitrogen fertilizer plant.

The increase in food prices is not expected to be a temporary phenomenon, but is likely to persist in the

2 The Commodity Futures Traders Commission reports that around 19 percent of outstanding rice contracts are held by noncommercial investors (e.g., companies that might be speculating as opposed to actually hedging against price moves).

medium term. Food crop prices are expected to remain high in 2008 and 2009 and then begin to decline as supply and demand respond to high prices; however, prices are likely to remain well above the 2004 levels through 2015 for most food crops according to World Bank estimates. Biofuels policies have been a major contributor to the increase in food prices, and a change in policies could lead to lower prices. Increased food price volatility is expected to continue for the presumable future, and there is further long run uncertainty due to climate change. Fertilizer prices are also expected to remain high for an extended period, and will depend on food and fuel prices as well as the expansion of capacity for production.

Oil prices are expected to ease gradually over the next 5 years, although there is a great deal of uncertainty reflected in the futures markets. Increased investment may yield some supply response, but underlying growth in demand as developing economies grow is expected.

The international price shocks of petroleum products have contributed to higher prices for energy products. Because most fuels are substitutable—although the time horizon for substitution varies—rising oil prices push prices of other fuels upward, and natural gas and coal prices have been rising in tandem in recent years. Because two-thirds of global electricity generation uses these fossil fuels, rising fuel prices affect its costs to varying degrees; this price effect has been particularly severe for power plants running on diesel and fuel oil.

Fuel price increases affect food markets. Fuels and electricity are used in food crop production and transport. Irrigation relies on diesel and electric pumps; fertilizers, on natural gas and coal. Inputs to agriculture as well as harvested food crops are usually transported to farms and back to markets by small goods vehicles, trucks, rail, and ships. Gasoline, diesel, marine diesel oil, and electricity are used in these modes of transport, and their price increases have a large effect on the final food prices paid by consumers.

Rising global food and fuel prices are contributing to increased inflation in many countries. The pass-through of rising global prices does not translate into an immediate and proportionate rise in overall domestic price levels, due to various factors such as a weakening dollar, domestic infrastructure, and price stabilization policies. While the extent of global price transmission varies, over the past year there have been significant surges in domestic food price

inflation in countries such as Sri Lanka (34 percent), Vietnam (26 percent), Chile (16 percent), and Egypt (13.5 percent). In many countries and regions, food price inflation is higher than aggregate inflation and contributing to underlying inflationary pressures. For example, in Europe and Central Asia overall inflation in 2007 averaged 10 percent, food inflation 15 percent, and bread and cereals inflation 23 percent (Alam and Vybornaia, 2008). This compares to 6 percent overall inflation and 6.4 percent food inflation in 2006. Median fuel price inflation is up from 6.7 to 9 percent at the end of March 2008 and with the combined effects, 18 countries have experienced accelerations in inflation of more than 5 percentage points (IMF, 2008).

For many countries, a rise in oil prices will significantly weaken the balance of payments. Thirty-eight of the 48 low-income countries with currency reserves below the benchmark level of 3 months of imports are net oil importers and will see their position weaken further. Adjustments will be hardest for economies that are particularly energy intensive, those that depend heavily on imported energy, and/or for the small island states or landlocked countries with higher than average transport costs. Current account deterioration has been especially marked in parts of sub-Saharan Africa, the Middle East, and North Africa and South Asia.

The impact of rising food prices on a country's balance of payments varies with its dependence on imported food and with its level of reserves. The extent of dependence on food imports varies significantly across regions of the world. The Middle East and sub-Saharan Africa regions import a high share of their food consumption needs (76 percent and 71 percent, respectively), followed by Europe and Central Asia (54 percent), East Asia (53 percent), South Asia (37 percent), and Latin America and the Caribbean (27 percent). Nearly all countries with the lowest capacity to import (measured by the value of food imports as a share of foreign exchange reserves) are in Africa. The International Monetary Fund (IMF) estimates that on average the balance of payments effects of food price increases alone are not large, but they can be sizeable when combined with the impact of fuel price rises. For example, the IMF estimates that the impact of higher food and fuel prices on the trade balances of countries in the West African Economic and Monetary Union will be between 1.5 and 3 percent of GDP in 2008.

THE CONSEQUENCES FOR POVERTY AND HUMAN DEVELOPMENT

The rising food and fuel prices may have a negative impact on human development in four dimensions: by (1) increasing poverty; (2) worsening nutrition; (3) reducing the utilization of education and health services; and (4) depleting the productive assets of the poor. Disinvestment by the poor in their human and physical capital may have large and lasting effects, which are well documented and quantified in the development literature. The impacts can be ameliorated if governments can provide a positive policy response—in the Human Development sectors—primarily through direct income transfers but also importantly through reinforcing basic nutrition and health services and maintaining high-quality and accessible education services.

1. As a result of the current increases in food prices, many of the 2.3 billion people living on less than US\$2 a day will become poorer and another 100 million will fall into poverty (Ivanic and Martin, 2008). The immediate impact of rising food prices on the number of poor and the depth of poverty in each country will depend on the consumption patterns of the poor, their economic activity (whether they are net consumers or net producers of those commodities whose prices are rising), their location, and the prices they face. In urban areas, the poor are almost all net consumers, and those on fixed incomes are especially vulnerable. In rural areas, the majority of the poor in most countries are net consumers of staple commodities, including grains. For example, 90 percent of Nicaraguan households, 84 percent of Guatemalan households, 89 percent of Honduran households, and 68 percent of Salvadoran households are net consumers of the basket of sensitive agricultural commodities and, thus, on net, can be expected to experience short-term declines in welfare as a result of expected price increases in basic food prices. (World Bank, 2008d). In Bangladesh, the 2005 Household Income and Expenditure Survey (HIES) data indicate that at least 70 percent of rural households are net consumers. Higher food prices will reduce the real incomes of these groups of poor over the short to medium term. While wages tend to adjust over time, empirical evidence shows that they typically do not mitigate the full impact of price increases or are slow in responding. In many contexts, the very poorest groups, namely, rural landless households and people in households with few able-bodied workers, will be among the most severely affected.

Estimating the effects of increases in fuel prices on poverty is difficult, but there is reason for concern. In typical

household budget surveys, the share of modern fuels in household budgets is usually a great deal lower than that of food, as shown in Table 1. This understates the importance of increased energy prices for (at least) three reasons:

- **Households consume energy indirectly in the other goods they consume, especially via the transportation of goods and people.** The indirect consumption of energy is typically on the same order of magnitude as the direct cash costs (Coady et al., 2006). In very poor countries, for the rural poor who consume little commercial energy, indirect consumption can be much larger than direct consumption.
- **Some of the uses of energy or transport have an impact on well-being disproportionate to the share of expense they represent in household budgets:** clean fuel for cooking or boiling water, transport to schools or health care, lighting for studying, and heating in cold climates are all critical inputs to human capital. Transport to work is critical to income generation.
- **Higher prices may cause households to move down the ladder of fuels, especially from other sources to biomass, with harmful consequences.** The household, usually women and children, will face longer hours collecting fuel. In rural Bangladesh, for example, households spend about 200 hours a year collecting biomass fuels. Valuing that time at the prevailing agricultural wage for the gatherer would triple the energy expenditure over what is calculated if cash costs only are measured (Barnes, Kumar and Openshaw, 2008). Increased biomass use will increase indoor air pollution – the smoke in homes using traditional biomass stoves results in pollution levels an order of magnitude more than the maximum considered safe in developing countries resulting in higher rates of respiratory diseases and increased child mortality. Collection of wood may contribute to deforestation in periurban areas and densely populated rural areas, an environmental cost more difficult to quantify, but acute in some regions and less problematic in others. (Barnes, Kumar and Openshaw, 2008).

Table 1: Share of food and fuel in the consumption of the poorest quintile

Country	Food	Fuel
Bolivia	43	3
Jordan	38	17
Mali	53	3
Sri Lanka	64	3

Sources: For fuel, Coady et al., 2006; for food, United States Department of Agriculture (USDA) food balance sheets.

Note: Fuel budget are derived from studies using comparable techniques relative to the 2004/5 period. Food budget shares are estimated, using 1996 data, for nine major consumption groups and eight food subgroups across 114 countries.

Inflation is disproportionately hurtful to the poor and often increases income inequality. The poor generally have a much harder time protecting their welfare in times of inflation. (See for example, Ferreira, Leite and Litchfield, 2007; Easterly and Fischer, 2001; Romer and Romer, 1999). The earnings in informal and low skilled jobs are typically not well indexed. Many financial assets useful for protecting oneself from inflation have barriers to entry and economies of scale that exclude the poor. Even physical asset manipulation such as storing food in a freezer or refrigerator will not be available to them (Neri, 1995).

2. Nutrition and health may suffer, especially among small children (under 24 months of age) and pregnant and lactating women, who are most susceptible to chronic malnutrition or who are already suffering malnutrition and ill health. The World Bank has recently highlighted chronic malnutrition as a central development challenge, especially for countries with a chronic malnutrition rate above 30 percent among children under 5. Many of the countries where the increase in food prices is hitting hardest are countries with high preexisting levels of malnutrition. Faced by higher food prices, families may be able to afford less food, may increase market work so that mothers have less time for the care and feeding (including breast-feeding) required for young children, be unable to afford water and soap needed for good hygiene, or cut back on use of complementary health care services due to their implicit and explicit costs.

There is clear evidence from past crises that children suffer long-term health consequences from short-term shocks. For example, Alderman, Hoddinott, and Kinsey (2006) trace a whole series of effects on Zimbabwean children who were 12–24 months old when affected by a drought. They show that stunted preschoolers had lower height during adolescence, delayed school enrollment, and reduced grade completion. The magnitudes of these impacts were quite large: the 1982–84 drought shock resulted in a loss of stature of 2.3 centimeters, 0.4 grades of schooling, and a school start delay of 3.7 months for this age group. Using estimates of the values for the returns to education and age/job experience in the Zimbabwean manufacturing sector,

the researchers calculated the shock impact as translating to a 7 percent loss in lifetime earnings for the affected children. See Table 2 for a summary of evidence from other countries. Safety net programs and long-term nutrition investments can help prevent such losses.

3. Schooling may decline as well, although countervailing effects are at work and the evidence is more mixed. Schooling imposes explicit and implicit costs on households so when households become poorer they may not be able to afford the costs and therefore withdraw their students from school. But the same economic situation that is causing the increased poverty sometimes decreases wages and thus the opportunity costs of children staying in school. Thus, the impact on schooling depends on the balance of these effects and will vary from setting to setting. Schady (2008) provides a comprehensive overview of the literature on covariate shocks and the impact on schooling. He summarizes the effects as follows: “In Latin America, sudden, systemic reductions in aggregate income (macroeconomic crises) have generally resulted in increases in school enrollment and attainment... In Africa, where consumption levels are much closer to subsistence levels and where credit constraints are much more likely to be binding, droughts have resulted in very sharp reductions in schooling as well as child nutrition levels... In India and Indonesia, the findings are somewhere “in between” those for Latin America and Africa” (pg. 21). Higher fuel prices will increase the costs of transportation for any children who ride buses to school. These are more likely to be secondary students, who already have more earning potential than primary students and are more at risk of drop out. Higher food prices do not reduce the opportunity cost of education so the increases in schooling in Latin American macrocrises may not be an accurate predictor of effects of schooling from rising food prices. Moreover, the food price increases are the most severe (and safety net alternatives the most limited) in some of the poor countries where past downturns have reduced enrollment. Thus, there is concern that schooling may decline as a consequence of increased food and fuel prices, at least in some countries, and policy responses to minimize this problem are in order.

Table 2: Economic Downturns and Health and Nutrition: Econometric Evidence

Variable	Shock	Effect	Data	Findings	Author
Infant Mortality Rate (IMR)	1988–1992 Peruvian economic crisis	+	Peru: DHS and LSMS	Increased IMR of 2.5 percentage points for children born during the crisis, which translated into 17,000 child deaths in excess.	Paxson and Schady (2005), World Bank Economic Review
Infant Mortality Rate	Indonesia's 1997/1998 financial crisis	+	IFLS	Increased infant mortality risks by about 3.2 percentage points both in rural and urban areas.	Rukunmulyait (2003)
Child Malnutrition	1990s crisis in Cameroon	+	DHS	Prevalence of malnutrition for children under 3 years increased from 16% to 23% between 1991 and 1998; it was higher for children of low socioeconomic status and those from rural areas.	Pongou, Salomon, and Ezzati (2005)
Infant Mortality Rate	GDP fluctuations	+	DHS and WB of 59 developing countries (1975–2004)	A one-unit decrease in log GDP is associated with an increase in mortality of between 18 and 44 infants per 1,000 children born, with female infant mortality being more sensitive than male.	Baird, Friedman, and Schady (2007), World Bank

Source: Lustig, 2008

4. Shocks may force poor households with low coping capacity to sell their productive assets. Families that have to disinvest in their livelihoods—eating their seed grain, selling their draft animals or the tools of their small enterprise, or defaulting on rent or mortgage payments and consequently losing their homes, farms, or workshops—will find it very difficult to rebuild their earning capacities. The effect will be all the more marked if there are inadequate credit markets³, and the assets required to rebuild livelihoods are relatively large or lumpy so that a family must make a big purchase before it can return to its full earnings potential (Carter and others, 2004; Fafchamps, Udry, and Czukas, 1998; Jalan and Ravallion, 2002; Lokshin and Ravallion, 2000). In the wake of Hurricane Mitch in Honduras, for example, Carter and others (2007) calculate that a loss of 10 percent of a poor household's assets would result in a rate of growth in household income over the following 2.5 years that is 18 percent lower than if the assets had not been lost; a similar loss of assets would lower the growth rate of richer households by only 9 percent.

II. The Overall Policy Response

The overall policy response to rising food and fuel prices should be multisectoral, with the specifics varying by

³ Adequate access to credit can help families avoid negative coping strategies, but the poor often lack access to credit or have access only on particularly onerous terms (for example, from moneylenders). Where credit is available, it can lead to large indebtedness, which can have repercussions on family welfare for years to come.

country. The full package will normally contain elements of at least the following components:

Price policy and market stabilization. Countries may reduce tariffs or value-added taxes on food or fuel, albeit at some fiscal cost; or go so far as to use price subsidies albeit with both significant fiscal cost and distortions to markets, and often highly regressive distributional impacts. Countries may seek to increase reserves or release them to stabilize markets, or even go so far as to impose export bans or taxes, though these policies are often inefficient.

Mitigating poverty and human capital impacts. Transfers in their various forms can provide households some support while they adjust to higher price levels, helping them to meet the rising cost of providing food and energy for their families and of obtaining sufficient schooling and health care. Nutrition interventions can help stem losses in nutritional status, especially for children from conception to age 2, thereby protecting long-term human capital.

Enhancing domestic food production and marketing response. New support for agricultural technology and its adoption, market access and diversification, land administration and management, irrigation, and rural infrastructure can help improve production in many countries and are especially proposed as part of the response in Africa. For many low-income countries, transport and logistics costs are a key component of food prices and are generally far higher than Organisation for Economic Co-operation and Development (OECD) benchmarks of around 9 percent. In Latin

America and the Caribbean, for example, they are estimated to be between 18 and 30 percent of product value. Thus, improvements in ports and road infrastructure as well as port management and customs clearance processes may be a helpful part of the response package.

Energy policy response. Policy responses to higher fuel prices include measures to reduce the economy's fuel intensity and diversifying away from higher-priced fuels. Promoting public transport, fiscal policies that encourage energy efficiency improvement and alternative fuels, and policies that do not reward energy-intensive industries can help lower fuel intensity. Energy efficiency improvement is important, but unless accompanied by measures that restrain demand, the rebound effect—lower effective cost of energy use inviting greater energy consumption—can offset some of the gains.

Macroeconomic management. Responses should be fiscally responsible. This implies three features of the response: (i) using much less expensive and controllable targeted interventions rather than universal price subsidies, (ii) protecting the budgets of core and effective health and education services, and (iii) carefully balancing external and domestic financing options.

The policy response in Bangladesh illustrates one policy combination of all these dimensions. In the face of a 45 percent increase in the price of rice over the course of 1 year, the government of Bangladesh's policy response has avoided major price and stock management manipulations. The government provides social protection via short-term assistance to vulnerable groups through scaling up of the existing Vulnerable Group Feeding (VGF) targeted to poor women and subsidized open market sales for 3 kilograms (kg) of rice per person for poor consumers in urban areas and small centers. For farmers, the government is giving the option of selling to the state at a fixed price of taka 28/kg and a subsidy, in the form of a cash transfer, to poor and marginal farmers, to mitigate higher costs of production—especially fuel for irrigation. It is financing this package with increased reliance on external support, including International Development Association (IDA) credits. (*Source:* South Asia note and communication with country team)

While recognizing the importance of other facets of the policy response, the remainder of this note focuses on policies in the Human Development sectors to mitigate the poverty and human capital impacts of rising food and fuel prices. The main policy instruments considered are social safety nets and nutrition interventions, as well as policies aimed at maintaining the utilization of education and health services.

III. Rapid Diagnostics To Identify the Human Development Response

Good policy must be based on country-specific diagnostics. Countries differ in their trade, production, and consumption patterns. Thus, the size and characteristics of the population groups affected by the increase in food and fuel prices will differ. At the same time, countries differ widely in their capacity to respond to the crisis, with some countries operating cost-effective safety net and nutrition programs that can be scaled up quickly, while others do not. Thus, what is needed, or feasible, will differ from place to place.

The first stage of the diagnosis will ascertain the extent of increase in food prices. Some countries have been affected much more than others. Rice is the main staple food in Liberia, accounting for 37 percent of the average value of food consumption and half of daily calorie intake. The cost of the food basket for a typical household rose by 25 percent in January alone. In contrast, in India, overall food prices rose by only around 6 percent between March 2007 and March 2008. This was due in part to the good production and in part to the ban on exports that allowed domestic prices to remain on average 30 percent lower than world market prices of cereals.

Available secondary data on average consumption patterns (the Food and Agriculture Organization (FAO) food balance sheet, for example) and country-specific household survey data should be used to identify the groups most likely to be affected by the increase in food prices and how it varies across the welfare spectrum, from rural to urban areas, among producers and non-producers, etc. The numbers vary widely from country to country, as illustrated in Box 1, but one would expect the impact of the price increases to be higher for countries with more reliance on imports and with less diverse diets. For households, the impact will be highest for those that allocate a large percentage of their budget on food and a main staple commodity, from which they derive a large percentage of their calories. The only people that are not going to be negatively affected by higher cereal prices are those surplus producers that sell most of their production. Small and marginal farmers will only be able to reduce their cost of access to food if the increase in the cost of inputs is smaller than the increased value of their marketed output. Nonetheless, there can be significant differences between groups. In Bangladesh, for example, the bottom quintile spends 53 percent of their budget on grains and 68 percent on food, while households in the top quintile spend 31

percent on cereals and 50 percent on food. (Calculated from BBS, Household Income and Expenditure Survey 2000 data.)

The diagnosis for fuel should consider the patterns of energy supply and pricing. What proportion of its energy does the country produce and from which sources? How dependent is it on imports? Is market pricing followed? If not, how large are universal subsidies? Countries with large energy subsidies will, as prices increase, face escalating fiscal costs and pressure to replace price subsidies with more targeted interventions that can provide the same protection for the poorer end of the welfare distribution at lower cost.

Next the energy diagnosis should look at use patterns at the household level, ideally characterizing the portfolio of sources (biomass, charcoal, coal, kerosene, liquid propane gas, gasoline, diesel, and electricity) by use (lighting, cooking, heating, transport) and looking at the room for substitution or cutbacks among these. How much energy do households use? How much is purchased commercially? What is the scope or implications of reducing use, of substituting fuels down the energy ladder, or of increasing the share of budget spent on fuel and transport? See Box 2 for an example of a simulation of the impact of observed price changes on household welfare in Madagascar.

The social protection diagnosis will examine the design, scope, and quality of existing programs to determine which programs are best placed to channel additional resources to those most in need of assistance in the short run and where improvements or new programs are needed in the medium term. Where possible, this analysis should use recent household-level data to assess the program's coverage, generosity, and targeting. To speed such analysis, The World Bank is developing specialized software routines for use by analysts, as described in Box 3. Although recent data are preferred, older data may still shed useful light on programs' performance, especially if their design and implementation have been relatively stable. If there are data on welfare but not on program participation, it may be possible to roughly simulate the incidence of the programs using eligibility rules (assuming perfect implementation), or the data can be used to simulate new potential programs using categorical, geographical, or other not so finely targeted methods. Where data are not available for such analysis, an assessment of key features of the programs' design and implementation, coupled with administrative data, and judged against 'best practice' can be used to draw inferences about the programs' likely outcomes.

The social protection rapid diagnostic should also identify strengths and weaknesses in the existing social

protection system as a whole. This should be based on a rapid desk review of existing documentation, including any available evaluation reports. The review should identify gaps in the system and should also identify inefficient subsidies for food, fuel, or energy that might be reformed or replaced as a way of improving the safety net without increasing its costs. The fiscal cost of existing programs should be reviewed. The result should be a recommended strategy for medium-term development of the social protection system, including the possible development of new programs. Guidelines developed for public expenditure reviews are helpful in this work (see Box 3).

The diagnosis of nutrition will look at nutritional status, causes of macro and micronutrient deficiencies and malnutrition, and the scope and effectiveness of programs to improve nutrition. It is important to understand the epidemiology and the causes of malnutrition in order to craft appropriate solutions. Where households are too poor to afford diets of sufficient quality and quantity, social protection responses can help. Where there is high malnutrition among food-secure households due to inadequate feeding and caring practices or high levels of febrile or parasitic diseases, nutrition and health interventions will be needed (see also Box 4). Social protection programs and Information, Education, Communication (IEC) programs can sometimes bolster the demand for these services.⁴ Where there is inadequate access to clean water and disposal of excreta, water and sanitation interventions will be required. Analysis should focus not just at the national level, but look for differences among key groups, as the balance of causes may be different among them. If this is the case, then the targeting (for example, by location or age) may differ among interventions.

The diagnosis will look at the demand for education and the scope and quality of demand-side interventions such as fee waivers and scholarships. Understanding the relationship between poverty and schooling will help predict whether or how large the impact on schooling of increased food prices may be, and whether the impact differs along the welfare spectrum and by groups (rural/urban, boys/girls, primary/ lower secondary/upper secondary). This will be helpful in crafting the scale and targeting of a response. In this vein, knowing how well current demand-side interventions work will also be important, for these programs the diagnosis is akin to that of the social protection interventions.

4 An inspiring example of a nutrition video to popularize the importance of growth monitoring was made in Peru, in the year before the food price increase. It is available for viewing at www.youtube.com/watch?v=tFxZ8YAcYoo.

Box 1: Assessing Country Vulnerability to Food Price Increases

A brief analysis of the basic structure of the food economy provides information on the expected impact of the increase in food prices on the average consumers. The table illustrates the necessary information for four countries and shows how different vulnerability can be.

- Bangladesh is a rice producing country that imports 14 percent of cereal consumption. Consumers spend 28 percent on cereals and derive over 80 percent of calories from them. A price increase in the world market has an impact on local prices and will have a sizable impact on food expenditure and calorie consumption.
- The prevalent cereal produced in Zambia is maize. Zambia imports 14 percent of cereals consumed. Households allocate 11 percent of their expenditure on cereal from which they derive 52 percent of calories, while 14 percent comes from starch (cassava). Poor consumers can diversify their consumption into cassava, but they are still very vulnerable because of their very low consumption of calories.
- In Honduras, maize is the main cereal and imports account for more than 70 percent of cereal consumption. Households derive almost half of their calorie consumption from cereals. Honduras is very vulnerable to an increase in the world market price for maize, although the impact on expenditure and calories is smaller than in Bangladesh.
- In Mexico, cereal production includes maize and other cereals, but it is not sufficient to meet the demand and imports are equal to the amount of cereal consumed. Thus, Mexico is still vulnerable to higher world prices, but this country is much better off than the other countries in the table, because households spend only 6 percent on cereals and the sources of calories are diversified in terms of the degree and distribution of expected impacts.

These averages do not take into account the differences in consumption patterns across the distribution of welfare because this type of information on consumption needs to come from a household survey. Ideally, the survey would be fairly recent, but since consumption patterns are fairly stable, especially in the absence of shocks, even data several years old may yield a qualitatively correct set of conclusions.

The poor population is most likely to allocate a larger percentage of their expenditure for food and caloric consumption than the average, and thus may be vulnerable even in countries where the averages do not look too alarming. In Mexico, the average share of cereals in household budgets is 5.8 percent, but for the poor beneficiaries of the Oportunidades program, it is 17 percent.

Food Economies of Four Countries, 2003

	Bangladesh	Zambia	Honduras	Mexico
Production				
Total cereals (thousand tons)	27,650	1,361	588	30,251
Shares of cereal production				
Wheat	5.5	9.9	0.2	9.1
Rice	94.3	0.6	1.5	0.4
Maize	0.0	85.3	89.4	65.0
Other cereals	0.2	4.2	8.9	25.5
Total cereals	100	100	100	100
Total cereal imports (mn tons)	3,987	237	631	18,310
Cereal consumption(mn tons)	27,010	1,675	874	18,006
Per capita (kgs/year)	184	155	126	174.04
Cereal imports/total consumption	14.8	14.1	72.1	102
Per capita calorie consumption				
Cereals (%)	82.2	62.3	47.7	45.1
Starchy roots (%)	1.9	14.3	10.0	1.1
Other vegetable products (%)	12.9	18.3	38.1	34.6
Animal products (%)	3.0	5.0	13.7	19.2
Total kcal person/day	2,193	1,885	2,373	3,171
Food budget share	56.1	60.8	n.a.	26.6
Cereal budget share	28.1	11.2	n.a.	5.8
Population (mns)	146.7	10.8	6.9	103.5

Sources: FAO Food Balance Sheet, faostat.fao.org/site/502/DesktopDefault.aspx?PageID=502 and ERS (Economic Research Services, Department of Agriculture, USA). International Food Consumption Patterns: www.ers.usda.gov/Data/InternationalFoodDemand/. n.a. means not available.

Box 2: Madagascar: Calculating the Distributional Effects of Energy Price Increases, 2005–2007

Higher energy prices imply real income losses due to higher prices for petroleum products *directly* consumed by households (e.g., gasoline, kerosene, diesel and liquefied petroleum gas), but also *indirect* losses caused by higher prices of other goods that use energy products as intermediate goods in the production process. Estimates of the total effect can be made by combining information from an input-output matrix with household budget data (Coady and Newhouse, 2005). For Madagascar, Amendola and Vecchi 2008 use such techniques with a 2001 input-output matrix and the 2005 *Enquete Aupres des Menages* to estimate the impact of the changes in energy prices observed between 2005 and 2007, assuming that the price changes are fully passed through from input to output.

The top panel of the table shows household budget shares for electricity, gasoline, diesel, and kerosene. Overall, petroleum products absorb, on average, 2.6 percent of the household budget. However, the consumption of modern energy products differs significantly across households according to their expenditure levels, with poorer households spending a higher share of their consumption on energy, and kerosene accounting for most of the energy expenditure for the poorest quintile and less than half of the energy expenditure for the richest quintile.⁵ The results of the modeling of real income losses in the middle panel of the table are that, on average, 2.5 percent of total household expenditures (3.2 percent for low-income households, 2.3 percent for households in the top expenditure quintile). Approximately 40 percent of real income losses are due to the indirect effect, mostly via higher food, textile, and transport prices. The overall burden of the change of energy prices is skewed to the upper end of the income distribution. The results suggest that while petroleum price subsidies may represent an appealing tool for protecting the poor, they imply sizable leakages in favor of rich households.

Per capita expenditure quintiles	Q1 (poorest)	Q2	Q3	Q4	Q5 (richest)	All
<i>Household Budget Shares (%)</i>						
Electricity	0.06	0.10	0.21	0.45	1.17	0.48
Gasoline	0.02	0.00	0.00	0.02	0.27	0.08
Diesel	0.19	0.10	0.08	0.07	0.08	0.10
Kerosene	3.18	2.31	1.96	1.64	1.04	1.89
All	3.46	2.51	2.25	2.19	2.56	2.55
<i>Mean consumption of petroleum products (ratio to bottom quintile)</i>						
	1.00	1.08	1.16	1.34	3.10	1.69
Direct Welfare Effect (DWE)	2.26	1.62	1.39	1.24	1.10	1.45
Indirect Welfare Effect (IWE)	0.90	0.90	0.90	0.96	1.17	1.00
Total Welfare Effect	3.16	2.52	2.29	2.20	2.27	2.45
IWE as % of total	28.48	35.71	39.30	43.64	51.54	40.57
<i>Share of the burden</i>						
Total Welfare Effect	9.3	12.3	14.7	18.9	44.8	100.0

Note: Budget shares are derived from the 2005 household budget survey based on commodity groupings that match the more aggregated input-output table sectoral breakdown available for the year 2001. Quintiles are based on the national distribution of per capita annual expenditures. The estimation of the total welfare effect is based on price increases *observed* between 2005 and 2007 (48.5 percent for gasoline, 60.5 percent for diesel, and 66.7 percent for kerosene). The change in the price of electricity is assumed to be one-third of the average change in oil prices (that is, 19.5 percent).

Source: Amendola and Vecchi, 2008

⁵ While household surveys may undervalue biofuels in calculating energy expenses, they have fewer problems collecting data on the sort of cash transactions used to purchase modern energy. Thus, the distributional analysis of these expenditures is relatively sound.

Box 3. Tools for Analysis of Social Protection

Guidance on Public Expenditure Analysis of Social Protection

The guidance note for public expenditure reviews in Human Development sectors supports analysis of the social protection sector. It provides a checklist of topics to consider akin to those covered in Box 5, notes on methods of analysis and references to comparators useful for benchmarking, and examples of good analysis culled from a large body of World Bank analytic work.

The toolkit is available online at www.worldbank.org/hdpers or on CD-ROM.

The full toolkit contains health and education chapters as well; these consider a wider range of issues than directly pertinent to responses to increased food and fuel prices.

A Toolkit for Calculating Indicators of Coverage, Generosity, and Incidence of Programs

ADePT SP is part of the suite of software toolkits freely available from the World Bank's research department that produce rapid diagnostics of poverty, labor market, gender, and social protection based on STATA/SPSS routines. The module creates about 15 standardized benefit incidence publication-ready tables and graphs based on household survey data.

Indicators generated by the toolkit include:

- the coverage of the population by quintiles/deciles with social protection programs
- the generosity of these programs (the share of different SP benefits in the consumption of beneficiary households)
- the distribution of beneficiaries and benefits across quintiles/deciles
- summary statistics for the progressiveness/regressiveness of SP transfers, such as the distributional characteristics, concentration coefficients
- simulated impact of the transfers on (reducing) inequality and poverty
- estimates of the level of program overlap at the household level, or the lack of coverage with such programs

A first version of the toolkit was used in April 2008 in analysis for Ukraine of options to the export ban. The toolkit is available free of charge for downloading at econ.worldbank.org/programs/poverty/adept.

Box 4: Why Malnutrition Persists in Many Food-Secure Households

- Pregnant and nursing women eat too few calories and too little protein, have untreated infections such as sexually transmitted diseases or schistosomiasis that lead to low birthweight, or do not get enough rest.
- Mothers have too little time to take care of their young children or themselves during pregnancy.
- Mothers of newborns discard colostrum, the first milk, which strengthens the child's immune system.
- Mothers often feed children under 6 months foods other than breast milk even though exclusive breast-feeding is the best source of nutrients and the best protection against many infectious and chronic diseases.
- Caregivers start introducing complementary solid foods too late.
- Caregivers feed children under 2 years of age too little food, or foods that are not energy dense.
- Although food is available, because of inappropriate household food allocation young children's needs are not met and their diets often do not contain enough of the right micronutrients or protein.
- Caregivers do not know how to feed children during and following diarrhea or fever.
- Caregivers' poor hygiene contaminates food with bacteria or parasites.

A final set of diagnostics will relate to finding fiscal space for policy responses and will look at three elements:

- *Extent of needs.* These will differ, as some countries are much more affected by rising food and fuel prices than others. For example, food price inflation in the Kyrgyz Republic has been 31.5 percent, (against overall inflation of 20.1 percent) but in Zambia, food price inflation has been 9.1 percent (against overall inflation of 9.5 percent). (See World Bank, 2008a, Annex 1.)
- *Availability of resources.* Oil and some other commodity producers may have windfall tax revenues they can use in

their responses and governments with good fiscal space and low debt may be able to borrow. Countries such as Indonesia, Mexico, and Tunisia had strong fiscal stance initially and do not face a terms of trade problem, so they will be well positioned. In contrast, others started with a reasonably good fiscal stance but suffered terms of trade shock (Burkina Faso, Ethiopia, Honduras) and/or political crises (Kenya, Pakistan). Some started with weak fiscal stance but have experienced favorable terms of trade movement (Mongolia, Zambia). Some had weak fiscal positions that have now been compounded by terms of trade shocks (Burundi, Eritrea, Grenada, Haiti, Jamaica, Nepal). (See World Bank, 2008c.)

- *Sources of finance.* The means of financing will affect the timing of response. Countries may be able to raise or rededicate domestic revenues or borrowing immediately. Those depending on bilateral or multilateral food aid may need to initiate an emergency appeal, a process which can take several months from initiation until resources are available to households on the ground.

IV. The Social Protection Response

Social protection programs play a triple role in the response to raising food and fuel prices:

- They forestall to a degree the increases in poverty and inequality that the change would bring.
- In so doing, they help households maintain their access to food, energy and essential services for health and education essential to the wellbeing and human capital of their children.
- When they are perceived as fair and compensatory, social protection programs can be important in maintaining social equilibrium and in avoiding less efficient tax, subsidy, trade, or production policies, some of which can even aggravate the problem.

Good safety net programs take time to develop, usually a minimum of 4 to 6 months to get a new program started from scratch, with a longer period to refine it.

Good intentions are not sufficient. Workable systems for enrolling beneficiaries, for payments, and for monitoring are key. Without good systems, resources will not be transferred, or they will be captured by the nonpoor or be diverted into corruption. This not only fails to help those facing hunger today, it can set back safety net policy for years to come.

Thus, the short-run response is to scale up existing programs. This can include programs at any level of government, and those run by non-governmental

organizations. Countries with sound and comprehensive initial safety net systems will be well placed to react to the food and fuel price increases by increasing the value and/or coverage of benefits. Countries with poor systems will have to scramble to start programs quickly and in the interim to either leave needs unmet, or use last choice methods such as price subsidies.

Short-run responses should try to avoid actions that will work against the medium- to long-run development of a sound(er) social protection system. Examples of pitfalls to avoid:

- In the absence of social protection programs that can be scaled up, many governments are resorting to general price subsidies (or reductions in taxes), which are usually distortive, regressive, and hard to remove. Wherever there are other feasible options, such general subsidies should be avoided; where they are used, it is good practice to announce and implement them as temporary measures.
- Similarly, if the medium- or long-run vision for social net systems involves consolidating or closing specific programs, scaling those up as part of a short-run response will work against long-run reforms.
- Countries should avoid setting up household targeting systems so quickly that the potential for targeting errors and political backlash is so high as to damage the prospects of developing a sound household targeting system over time. This requires a judgment call. If the timeframe for response is a few months, then there may be time to develop a basic system that can be subsequently refined. But when responses must be swifter, there is a risk of being forced to move so fast as to undermine future prospects for a household targeting system. In such cases, using other methods in the short run may be no less accurate and may preserve the prospect of developing household targeting systems as part of the medium- or long-run response.

The medium-term response is to work toward a sound safety net system. Many countries are finding their policy responses constrained to mediocre programs or undesirable policies because they do not have in place good safety net programs or a household targeting system. In such cases, in parallel with their short-run actions, they should begin work on sounder systems. Countries that took quick but inefficient action, such as reducing tariffs or value-added taxes or instituting or increasing the level of general food or fuel price subsidies, will want to work their way out of these altogether. Or they may want to change the mix of programs, for example, increasing the role of targeted cash transfers relative

to school feeding. Or having implemented ‘quick and dirty’ programs, they may need to work on various elements of implementation—targeting systems, accountability, monitoring and management, for example—especially for programs that will remain in place in the long run.

Crises can sometimes galvanize governments to make changes that would be politically very difficult in other times, when consensus around a change in priorities could be insufficient This may mean cutting some programs more than others, or shifting the balance of inputs used in programs. This occurred in Romania in 1997, a story told in Section VI. Even when change cannot be accomplished during the crisis itself, the awareness of the need for eventual reform can be heightened. For example, the seeds for Mexico’s PROGRESA/Oportunidades, perhaps the most evaluated social assistance program outside the United States and model for many other countries’ conditional cash transfer programs, were sown in the ‘Tequila crisis’ of 1995–1996 when the government found it had inadequate programs with which to respond. Similarly, the reforms that led to Ethiopia’s Productive Safety Net program were a reaction to the shortcomings of the emergency food relief following the droughts of 1999–2000 and 2002–03.

THE CHOICE OF PROGRAMS

There is a wide range of pertinent social protection instruments. The most obvious are targeted transfers to the poor—in cash, in-kind, or as fee waivers. Many countries also have social insurance programs that are either noncontributory or whose amount is not linked to earnings—social pensions, survivorship pensions, disability pensions, unemployment benefits, and the like, which also can be instruments useful in confronting rising food and fuel prices.

The mix of programs financed in the short-term response will depend on the result of a two-part diagnosis. The first question relates to which programs are ‘good’ or ‘acceptable’ according to the criteria listed in Box 5 and elaborated on in Annex 3. The second question relates to which programs can be quickly scaled up given administrative capacity and any specific issues with respect to the source of funding for their scale up.

Most of what constitutes good safety net policy in ‘normal’ times applies in the response to rising food and fuel prices. Safety net systems are usually woven of several individual programs that should complement each other as well as other public or social policies so that the whole is more than the sum of the parts. Each program should

be well designed and implemented and each has its pros and cons. (See Annex 2 for a summary of social safety net interventions.)

Policy responses must be chosen based on country context, but there is a loose ranking of programs for the short-run response.

DIRECT TRANSFERS

- **Targeted cash transfers of adequate coverage, generosity, and quality are the best option.** They are preferable to in-kind programs because they have lower administrative costs, are more amenable to payment systems that guard against diversion of benefits, and allow consumer sovereignty. However, where local food markets do not function and food is not available, in-kind programs or open-market sales are preferred, and this circumstance may occur more often in a food price crisis than in ‘normal’ times, especially in countries where food policies have made markets less responsive than usual.
- **Increasing the benefits for non-earnings-linked social pensions, survivorship pensions, disability pensions, unemployment benefits, and the like can be helpful where they cover the poor.** Even where the programs do not have poverty as an entry criteria, the recipients are often poorer than average, and those on fixed incomes will be greatly affected by food and fuel price inflation. Moreover, it is administratively simple to increase benefits for such programs.
- **“Near cash” instruments such as food stamps or vouchers for fuel or transport have slightly higher administrative costs than cash but can be politically popular.** They can be targeted with the same methods as cash and differ principally in the payment mechanism. Issuing stamps or vouchers and establishing a reclamation chain add an additional administrative requirement and cost over those required for a cash program. Food stamps have been used successfully in most of the small number of countries where they have been tried. A variant on these is targeted vouchers for agricultural inputs such as fertilizer or seeds. To date, there is less experience with fuel or transport ‘stamps’ or vouchers.
- **Food distribution in-kind is appropriate where markets are functioning poorly, where foreign assistance is only available in-kind, or where strategic grain reserves need to be rotated. Elsewhere, in-kind programs will have higher than necessary administrative costs per unit of value transferred but can be a vehicle for significant income transfer.** Such programs can take a number of forms, and recommendations differ accordingly:

Box 5: Criteria Used To Judge Safety Net Policy

In normal times, all of the following criteria are important. In the short-run response, compromises may be needed, and criteria such as good targeting, incentive compatibility, and cost-effectiveness are given less weight than usual. It is not that these criteria are undesirable or inappropriate to the present situation, but achieving them can require investment in systems that take significant lead time to build, are difficult to achieve on very large scales, or are for the poorest.

Good safety net systems and programs are:

Appropriate. The range of programs used and the balance between them and between safety net and other elements of public policy should respond to the particular needs of the country. Each program should be customized to achieve the best fit with the country's circumstances.

Adequate. The overall safety net system should cover the various groups in need of assistance: the chronically poor, the transient poor, those affected by reforms, and all the various subsets of these groups. Individual programs should provide full coverage and meaningful benefits to whichever subset of the population they are meant to assist.

Equitable. The social safety net should treat beneficiaries in a fair and equitable way. In particular, it should aim to provide the same benefits to individuals or households who are equal in all important respects, for example, are equally poor (horizontal equity) and may provide more generous benefits to the poorest beneficiaries (vertical equity).

Cost-effective. Cost-effective programs channel most program resources to their target group, that is, they have low inclusion errors. They also make the best use of the administrative resources required to implement the program in two ways. First, the safety net system as a whole should avoid fragmentation and the subsequent need to develop and revise many programs' administrative systems without realizing economies of scale. Second, each program should be run efficiently with the minimum resources required to achieve the impact desired, but with sufficient resources to carry out all program functions well enough to yield a sufficient impact.

Incentive compatible. Safety nets can change households' behavior for better or for worse. To keep the balance of changes positive, the role of safety nets should be kept to the minimum consistent with adequate support to the target group.

Sustainable. Prudent safety net systems are financially sustainable and are pursued in a manner that is balanced with other government expenditures. Individual programs should be both financially and politically sustainable to avoid program stop-start cycles, as these result in lost opportunities for efficient administration and the achievement of programs' promotive aspects. In low-income countries, programs started with donor support are gradually incorporated into the public sector.

Dynamic. A good safety net system will evolve over time. The appropriate balance of programs will change as the economy grows and changes, as other elements of policy develop, or when shocks occur. The management of specific programs should also evolve as problems are solved and new standards set.

Source: Grosh et al., 2008, pg. 2

- o Take-home rations can be targeted at the household level and serve much like cash transfers; they also have lower administrative costs than on-site feeding. If they exist or can be brought to scale with good targeting, they may be a sensible alternative or complement to cash programs.
- o School feeding programs can generally be targeted only at the school level and not at the household

level and thus, if they have wide coverage, will also have high errors of inclusion. They also have high administrative costs relative to the value transferred, and are limited in the value of the transfer. They have the potential to improve children's school attendance and learning, although evidence related to these impacts is only sparsely documented. Moreover, school feeding programs are in many

settings the largest or only direct transfer program in existence and thus a suitable instrument for quick response.

- o Distribution of fortified, calorically dense weaning food for children 6–24 months old, especially as part of a nutrition education program, can be an important nutrition intervention.
- o On-site feeding through health centers is logistically complex and imposes high transaction costs on beneficiaries to come to the centers for meals. It is usually best reserved for children who are severely or moderately malnourished.
- o Targeted market sales can be used for more general income transfers when other programs do not exist.
- **Establishing new CCTs may take too long and exclude the neediest where services are scarce and thus not be appropriate to the short-term response, especially in low-income countries or fragile states.** Conditional cash transfers are usually very appealing for their combination of social assistance and increased use of health and education services. However, the programs are more difficult to set up than simpler unconditional programs. Thus, unconditional cash transfers (UCTs) will be the predominant vehicle of short response. Moreover, the possible errors of exclusion of the poor who have no access to health and education services will be more of a problem in the poorest countries most affected by increased food and fuel prices, especially if the programs are limited to secondary grades.
- **Where CCT programs already exist, they can be part of the response.** Increasing the benefits of established CCTs is likely to be appropriate wherever there has been significant food or fuel price inflation, and expanding their coverage may be appropriate in the countries where CCT programs have been implemented, but constrained to too small a part of the overall safety nets.
- **Public works programs rarely achieve coverage sufficient to be the whole response to rising food and fuel prices.** Rising food and fuel prices are affecting the working poor and near-poor as well as the unemployed so the desired coverage may be extensive. To fruitfully employ so much labor may be quite difficult without long-term planning; yet, unless the work done yields economic benefits in its own right, public works are a much less efficient transfer instrument than cash transfers. However, where public works programs are already a part of the safety net, it may be useful to expand their coverage somewhat. It is certainly appropriate to adjust wages to facilitate access to food and energy, but always ensuring that the wage on the

public works program remains at or below the prevailing wage for low skilled labor, in order to ensure self-targeting.

INDIRECT TRANSFERS

- **Fee waivers or vouchers for health and scholarships for education are a possible instrument to help households maintain access to services even if the households become poorer.** The track record of fee waivers in health care is in general not very good, and the benefits are limited—in coverage to those who use the services, and in amount to the charge for the services, which is often well below its cost of production. The track record for scholarships is varied. A few programs have been evaluated rigorously and show good impacts. Many more programs have not been evaluated, and some of these lack the development of systems that are conducive to good impacts. Moreover, there is a tradeoff between wide coverage needed for a social protection response to food crisis (which dictates demand-side interventions for primary grades) and the impact on enrollment (which is always highest at the upper grades of secondary school, by which time many of the poor will have dropped out).
- **General food price subsidies are often regressive, distortive, costly, and hard to eliminate.** The virtues of price subsidies are that they can sometimes be applied quickly and reach the poor who purchase (rather than produce at home) the subsidized commodity, which may be a large share of the poor overall, and a higher share of the urban poor and near poor. Whether subsidies are close to neutral in their distribution or highly regressive depends on the commodity subsidized and patterns of consumption. As practiced, most food subsidy programs leave the government defending a set price with high upward risk for fiscal costs and political risks for price changes.
- **Lifeline pricing for networked utilities can be appropriate where the poor are connected to the network, have individual metering, use volume differentiated tariffs, and subsidize a small block of service consonant with electricity use of the poor, exceeded by the nonpoor.**
- **Supply-side subsidies to bus transport are ubiquitous, but generally have a poor track record on equity.** Moreover, pricing needs to reflect a complex mix of goals including financial factors such as adequate cost-recovery, efficient inter-modal pricing, efficient contracting, and environmental consequences so manipulation of fares in the short run is difficult.

Demand-side subsidies have more potential but there is less experience to date with these.

- **General fuel subsidies tend to be even more problematic than food subsidies.** Gasoline subsidies are almost always markedly regressive and should be avoided when possible. Kerosene use for cooking and lighting is often more neutral in distribution, with liquid propane gas in between. However, because kerosene and diesel are close substitutes in transport uses, maintaining wide price differences between them generally results in substantial leakages. For example, kerosene subsidized to assist the poor with lighting or cooking may be mixed with diesel for transport, which results in a very regressive distribution of benefits.
- **Immediate across-the-board wage increases via public sector and minimum wages are not desirable.** Both instruments represent a permanent increase in wages in response to a shock that may be temporary, thereby fueling inflation and fiscal expenditures over the long run. They fail to increase wages among the poor, who are concentrated in the private, informal sectors. The poor who are covered by these wages also lose as employers lay-off low-skilled workers to increase the wages of more productive workers.

TARGETING METHODS

Poverty targeting is appropriate because the poor are the most affected by the increase in the price of food. The poor spend proportionately more on food and cereals; thus, an increase in price of these commodities will have a larger impact on their already meager budget. In Bangladesh, for example, the bottom quintile spent 53 percent on grains and 68 percent on food compared to 31 percent spent on cereals and 50 percent on food, respectively, by the top quintile (Calculated from BBS, Household Income and Expenditure Survey 2000 data.) Even in Latin America with lower poverty and more diverse diets, the increase in the price of cereals may have a substantial impact on the budget of the poor. Take the example of Mexico. Even though the average amount of total expenditure allocated to food and cereals is 26.6 and 5.8 percent, respectively, the poor people that are beneficiaries of PROGRESA in rural areas allocate 72 percent (83 percent in urban areas) of their budget on food and 17 percent (same in urban areas) on cereals.

Factors governing the choice of targeting methods and their implementation in ‘normal times’ are still pertinent for responses to rising food and fuel prices. A few methods of targeting and types of programs go

hand-in-hand, for example, self-targeting and public works jobs. However, several different methods can often be used for a particular type of program, for instance, cash and in-kind transfers can be targeted by means tests, proxy means tests, nutritional status or risk factors, geographic area, demographic characteristic, and/or self-selection. For a single program to use a number of methods is common and usually yields better targeting than using a single method. Each option has its pros and cons (see Annex 1). Means tests and proxy means tests have the highest costs, but tend to produce the lowest errors of inclusion and are often good investments. Self-selection via a low wage rate and geographic targeting are also powerful and proven targeting tools.

Social safety net programs with open eligibility procedures, such as guaranteed last-resort cash transfers or employment programs, are the preferred response to the crisis. These programs allow applications at any time rather than capping them based on a quota or fiscal limit. From a social protection perspective, this is always desirable since there is a steady stream of households coming into existence or falling into poverty even in normal times. In difficult times with some of the poor becoming poorer and some nonpoor becoming poor, the flexibility to serve these households is at a greater premium than ever. Where countries have had open registrations systems heretofore, the response may be only ensuring adequate funding and an increase in staffing for registration systems. Where programs have had household targeting systems (either proxy means tests or means tests) but not open registration systems, the expansion may be more administratively demanding, but is still much easier than when there has not been a system, because the political decisions have been made and the technical work of designing forms, formulae, software, manuals, and the like are already done.

Some form of targeting is preferable to no targeting. Where there is not a household targeting system in place, a combination of geographic targeting, self-targeting, or demographic targeting can produce at least moderately good results. For example, school feeding programs targeted geographically to poor rural areas may have relatively low errors of inclusion. Open market operations for food sales can be geographically targeted to slum areas, with the limitation on quantity and provision of a course staple together with queues all inducing some degree of self-targeting. Fees for networked electricity can be differentiated by use level or neighborhood. Provision of fortified weaning foods that are culturally acceptable for only very young children is a good use of demographic targeting.

DEFINING THE SCALE AND GENEROSITY OF A PROGRAM

All safety nets face difficult choices about the scope and generosity of programs, decisions which are linked by budgets and the political economy. There is no clear-cut answer to either the question of how many people a program should serve nor to how large transfers should be. The answer for each program requires tradeoffs between budgetary, administrative, and political constraints, while maximizing its outcomes for beneficiaries. Needs-based safety net programs typically aim to cover the poorest, often the poorest 5, 10, or 20 percent of the population. In practice, a number of well regarded programs pay on the order of 15 to 25 percent of base household income, although probably many more less well known and less evaluated programs pay less.

The degree of expansion in coverage needed will depend on initial coverage as well as the increase in the number of poor expected. Although some near poor will slip into poverty as a result of the increase in food and fuel prices, in many countries this will be a smaller number of people than those who were already poor and who will become poorer. Thus, where safety nets have reached most of the poor prior to the increase in food and fuel prices, technically only a modest expansion in the coverage of safety nets will be needed and the main concern will be to provide increased benefits to those made poorer. But in the many countries with small and underfunded safety nets, a much larger increase in coverage may be in order—covering both those who needed but were not covered by safety nets before the price increases as well as those newly in need of assistance.

Temporary food and fuel crisis response programs tend to target much more widely than do safety nets in stable times. Because rising food and fuel prices affect everyone, the scale of political attention and mobilization is significant in many countries and demands a wider target group. Eventually prices may ease somewhat and the economy will certainly adjust and then the concern for fiscal sustainability will demand anew a narrower definition of eligibility, or a lower benefit.

To allow households to restore their purchasing power for food, increases in benefit levels will need to be larger than inflation. Food price inflation is higher than total inflation, and food shares for the poor can be quite high. For example, the managers of the Oportunidades program in Mexico calculate that allowing households to purchase the same food basket as they previously did would require raising

the benefit by twice the rate of inflation (which is consonant with the facts that the share of benefits is about a quarter of base household income, but the share of food in their expenditures is over half of household income).

Practical considerations also affect whether to increase benefits or coverage. It is quite simple to raise the level of benefits in most existing programs—usually it can be accomplished at the stroke of the pen and be implemented in the next payment cycle—a matter of days or a few weeks. This is the approach taken in Chile and Jamaica. Some programs will scale up the number of beneficiaries almost automatically—if the rosters are always open and applications are not rationed due to lack of a budget. The U.S. food stamp program, or Romanian minimum income guarantee, are examples. In these cases, it may be necessary only to ensure adequate budget and increase the hours or staffing of the eligibility processing offices, which may take just a few days or weeks. Or the same program design can be used with eligibility criteria that admit more of the population—such as when the threshold for a means or proxy means test is raised. This is being done in Jamaica, where the size of the coverage of the CCT program is being expanded by half. This will require a larger increase in the availability of eligibility intake systems. The most demanding scale up would involve expanding the area of operation of a program—for example from a small number of poorest districts to all rural districts or the like. This may take a bit more lead time, but still takes advantage of operating systems that are already established. This is the approach that El Salvador is taking, speeding up the planned geographic rollout of its young CCT program.

PAYMENT SYSTEMS

Payment systems are rarely the obstacle to setting up transfer programs. Cash payments may be made through different vehicles and means—currency, checks, in person, through banking systems, etc. The choice of appropriate delivery mechanisms depends on objectives, operational needs, administrative capabilities, and local infrastructure conditions. In the short run, countries will generally have to use whatever mechanisms are already established. Where more sophisticated channels are not available, a mobile payment team (caricatured as a ‘man with a gun and man with a briefcase full of cash’) can travel to temporary pay points that take advantage of whatever infrastructure exists—community centers, schools, clinics, places of worship, etc. Investments in administrative systems and equipment related to payments can help increase service standards, reduce corruption and leakage, and reduce costs in the long run.

One of the reasons to prefer cash to in-kind programs where markets work is that the logistics are easier and the nonbenefit costs are much lower. For food, transportation, storage, and spoilage can be significant costs. Fuel can be diverted quite easily from intended beneficiaries and uses. For programs where individuals require different variants on the good—for example when school uniforms or shoes need to fit properly, logistics can be very difficult.

MONITORING, EVALUATION, AND GOVERNANCE

Monitoring is as essential in crisis and short-term programs as in more permanent or stable ones, although the mix of components in the monitoring system may differ somewhat. A monitoring system is an essential management tool that regularly supplies information about how well a program is working so that program managers can take action to improve the program's implementation. Where existing programs have good monitoring, these systems may be sufficient. Where programs are new or changing rapidly, small field assessments, roving audits, quick small sample surveys, or information from sentinel sites may play a larger role than usual in providing information to managers.

Targeting assessments should be conducted. Reaching poor households with meaningful transfers is a necessary condition for achieving impact. The degree of success can be relatively easily assessed using quick household surveys. This can even be done within a few months of program initiation so that midcourse corrections can be made if needed.

Impact evaluation may be constrained. When speed is of the essence and full coverage sought quickly, there may not be time to perform baseline surveys or tolerance to leave groups uncovered to serve as controls. Thus, other, possibly less precise, methods will be needed if evaluation is attempted at all.

Good accountability and controls will be desirable, but mechanisms may need to be simplified and some tradeoffs with speed may be required. In an emergency response, the emphasis is on action and on problem solving. This may mean that some procedures normally employed for the sake of accountability are abridged. When feasible, alternate methods may be pursued to ensure that reasonable if not perfect standards of accountability prevail. For example, it is common in social assistance practice to separate the functions of collecting information from the client, determining eligibility, and determining benefits. To speed enrollments, and especially for simple programs, these tasks could be done all at once in a single contact between

client and program worker. To help counter any issue of inappropriate admission of unqualified participants, the beneficiary list could be made public. To speed procurement, rules may be simplified. To encourage reasonable outcomes, unit cost information can be tracked so that even with limited shopping, the agency's staff will have a sense of what a reasonable quote is.

EXIT STRATEGIES

In some cases, it will be appropriate to leave in place the crisis response mechanisms or to transform them into permanent safety nets. Safety nets should be part of long run social policy to mitigate poverty through redistribution of resources; to help households invest in their future and manage risks; and to help governments make sound policy decisions in macroeconomic, trade, labor and other policies. Where the response to increased prices brought about improvements in grossly insufficient or inefficient safety net programs, it may be highly desirable to leave these improvements in place in the medium and long run, and indeed to build on them toward an adequate and sustainable safety net. This will be valuable to the chronic poor and to those families facing idiosyncratic shocks; moreover, it is the best way for countries to be prepared for the next covariate shock.

In some cases, it will be appropriate to scale social protection interventions back down after the short-term response. Where the response brought the coverage or benefit levels above prudent long run levels, then programs may need to be scaled down. Where less preferred policies or programs were used, these may need to be replaced with better ones.

Scaling down short-run responses will be more viable when care has been taken at the outset.

- Whole programs, top-up benefits, or relaxed eligibility criteria may be announced as temporary and then discontinued on schedule. For example, Indonesia had a temporary one year unconditional cash transfer program in 2005–2006 to cushion the adjustment to higher fuel prices, and is planning a similar program again in response to a new reduction in subsidies. Chile's top-up benefits were announced as one time payments. Ecuador's top-up benefit is made available to those who benefit from the established CCT program, but with a different name and collection period to distinguish the top up from the base program.
- In programs that are poverty targeted, regular recertification (annually or biannually) will be helpful

in gradually reducing the number of beneficiaries, as the economy and households adjust to changes in food prices. In self-targeted programs, households should voluntarily withdraw as households' needs become less acute.

- Benefits set in nominal terms will gradually erode away, which may be a sufficient exit strategy for top-up benefits, though possibly rather slow. For stand alone benefits, the erosion of benefits with inflation will minimize popular concern about canceling a whole program, but bureaucratic interests may dictate its continuation and result in programs with benefits too small to substantially improve welfare and inefficiently high administrative costs as a portion of total costs.

FISCAL COSTS

Fiscal costs of a well-targeted safety net for the poorest need are not unduly high. Even such large and generous CCT programs as those in Mexico and Brazil are on the order of 0.5 percent of GDP. Spending on safety nets overall, including all sorts of programs for different purposes and target groups, has been on the order of 1 to 2 percent of GDP for a large share of developing countries in recent years. However, the costs of responses will differ according to the scope, generosity, and degree of targeting. For example, in Chile, where the response so far has been a very time-limited increase targeted transfers, the cost has been a mere .04 percent of GDP. In Ethiopia, the total additional costs of combined measures, to lift the value-added tax on food grains, to raise the wage on the cash-for-work program, and to distribute wheat to the urban poor at a subsidized price, are likely to exceed 1 percent of GDP. Egypt has seen the cost of its food subsidies alone increase in recent months by about half, to 2.5 percent of GDP and 7.5 percent of government expenditure.

In response to shocks such as the sudden change in food or fuel prices, a temporary increase in the size of safety nets is justified. The severe price spike is expected to last a year or two, after which prices may moderate somewhat. Moreover, households will adjust their patterns of consumption and production to new relative prices but need time to do so. Thus, it is important to both scale up assistance during this time period and to consider how to phase out the emergency response or transition to a more permanent safety net.

A permanent increase in the size of safety nets may also be justified, provided the necessary fiscal space can be created. Many countries around the world have

traditionally had inadequate safety nets. Some of these are now realizing that they have underinvested in these systems and will appropriately continue or transform into long run programs the actions they take with urgency now, leading to a permanent increase in their safety net expenditures. This will be justified if the safety nets are well designed and implemented. Moreover, food and fuel prices are expected to moderate, but not to fall to the historically low levels seen in the last decade. Thus, safety nets will appropriately play a larger role everywhere in coming years, and even countries that had broadly adequate safety nets heretofore may find that to cover needs equally well requires a somewhat larger safety net than they previously have had.

V. Health⁶ and Education Responses

Specific health and nutrition interventions are needed to complement social protection programs. As food prices rise, the poor, who are already more likely to be undernourished, are subject to further stresses. In most countries, underweight rates among the poorest quintile are double or more than those among the wealthiest (Gwatkin et al., 2007).

Nutrition and health interventions are especially needed in the countries that have preexistent high levels of chronic undernutrition, which often also are hard hit by the food crisis. Of the 33 countries that have experienced initial concerns about social unrest, 27 have long-standing, high levels of preexisting malnutrition among young children. As the crisis expands, other undernourished populations are likely to be affected. See Figure 2 for the list of countries with high initial malnutrition.

Nutrition interventions should focus on the window of opportunity—from just before a child's conception until about 2 years of age. Most malnutrition occurs during this time of critical growth and development. Most of the damage due to this early malnutrition is irreversible. Children who are malnourished early in life suffer permanent losses in cognitive function, educability, and future adult incomes, and human capital. Therefore, this early period provides a very special window of opportunity to act, and to preserve future human capital in developing economies.

As with the case of safety nets, what governments can do in a crisis will depend upon what program capacity they have in place before the crisis, and the specific mix of activities both in crisis and in stable times must fit the

6 The nutrition section draws on World Bank, 2006c.

needs and capacities of the country. Where preexisting nutrition programs are inadequate, the food price increases

may help to catalyze a response. Box 6 shows how such energies may be channeled.

Box 6: Nutrition: What to do when

Financial capacity is weak

- Vitamin and mineral supplementation (vitamin A, iodine, iron)
- Food fortification
- Immunization
- Oral rehydration therapy
- Deworming
- Community-Integration Management of Childhood Illnesses (IMCI), including nutrition
- Growth promotion, if it can be added to an existing outreach system

Managerial capacity is weak

- Immunization and oral rehydration therapy
- Vitamin A supplementation as an add-on to immunization
- Food fortification (provided there is a manageable number of food manufacturers)
- Growth promotion, if it can be added to an existing outreach system
- Leverage scarce government capacity by
 - o Contracting services out to NGOs, if available
 - o Using community organizations to deliver services

Commitment is weak

- Reduce risk by choosing just one or two interventions, in one or two government departments where champions can be found
- Start with interventions that are relatively cheap and easy to manage, such as vitamin A and iodine supplementation
- Pilot interventions in a small area, where speedy, commitment-boosting results can be assured without government spending too much money
- Invest in analysis and evidence-based advocacy to strengthen country commitment, rather than in donor-driven projects that will not be sustained without country ownership

Source: World Bank, 2006

Figure 2: Countries With High Initial Malnutrition

AFR		LAC	EAP	ECA
Angola	Sierra Leone	Ecuador	Cambodia	Kyrgyz Rep
Benin	Somalia	Guatemala	Kiribati	Albania
Botswana	South Africa	Nicaragua	Lao, PDR	Tajikistan
Central African Republic	Swaziland	St. Vincent & the Grenadines	Malaysia	Turkmeristan
Chad	Togo	Bolivia	Myanmar	Uzbekistan
Comoros	Uganda	Haiti	Papua New Guinea	
Congo, Dem Rep	Burkina Faso	Honduras	Philippines	MNA
Côte d'Ivoire	Burundi	Peru	Solomon Islands	Morocco
Gabon	Cameroon		Timor-Leste	Yemen, Rep
Ghana	Congo, Rep	SAR	Vanuatu	Djibouti
Guinea	Eritrea	Afghanistan	Vietnam	Iraq
Guinea-Bissau	Ethiopia	Bangladesh	Indonesia	
Liberia	Kenya	India	Mongolia	
Malawi	Lesotho	Maldives		
Mali	Madagascar	Nepal		
Mauritania	Mozambique	Pakistan		
Namibia	São Tomé & Príncipe	Sri Lanka		
Niger	Sudan	Bhutan		
Nigeria	Tanzania			
Rwanda	Zambia			
Senegal	Zimbabwe			

Source: *Repositioning Nutrition*, World Bank, 2006

Priority areas for support should be based on evidence of “what works” and the specific epidemiology of the country and thus its needs. The recent Lancet series on nutrition (Bhutta et al., 2008) highlights a list of nutrition-relevant interventions that can be scaled-up in different country contexts. Common priority areas for support will include:

- *Nutrition education and growth promotion* to improve nutritional practices by changing behaviors with respect to breast-feeding and complementary infant feeding, dietary quality, hygiene, and child care.
- *Provision of targeted food supplements and micronutrients*, including (i) food supplements for vulnerable pregnant and lactating women and children under 2 years, for recuperation of severely malnourished children, and for HIV/AIDS patients under treatment with antiretroviral drugs and (ii) micronutrients such as iron and folic acid supplements, Vitamin A, and interventions to address iodine and zinc deficiencies for high-risk populations.
- *Other primary health interventions that reduce the risk of malnutrition* such as immunizations, oral rehydration therapies, and protection against malaria.

The main constraints to scaling up nutrition programs often are institutional, albeit fiscal constraints persist.

If resources are focused on the narrow age window of opportunity, and furthermore concentrated on the poorest families, and the most efficacious interventions, total program costs may be relatively low. The target group may be on the order of 3 to 5 percent of the population (6 to 10 percent of the population will fall within the age window (WDI, 2007); and the focus may be on the poorest half of that). Unit costs are on the order of US\$20 per year for community-based growth monitoring and promotion with some targeted food supplementation and micronutrient interventions (World Bank 2006c, Table 12). Thus the fiscal requirement is not excessive, albeit many recent analyses show that global investments in nutrition are abysmally small in comparison with the needs, and are often poorly targeted and dominated by food aid (World Bank, 2006c, Bhutta et al., 2008). Delivery capacity can be scarce, relying either on the lowest level of the health care system, which often lacks coverage and quality in low-income countries, or on networks of community health workers, which require substantial care to establish, train, and foster in order to deliver high-quality services. Therefore, as countries poise to scale-up their investments in nutrition, governments are well advised to make substantive investments in institutional and managerial capacities, and to make efforts to strengthen the quality of these basic preventive services.

Where full-fledged nutrition programs are not yet in place or to scale, immediate response can move on one or more of three fronts: nutrition communications campaigns, micronutrient supplementation, or use of fortification of staples.

- **Communications campaigns in response to increased food prices could raise parental awareness about the importance of exclusive breast-feeding for their children until 6 months of age, adequate complementary foods for children 6–24 months, and growth monitoring.** These campaigns will help households derive the most nutrition protection from their constrained food expenditures.
- **Even in countries where administrative capacities are constrained, simple programs to provide vitamin and mineral supplements to affected populations can greatly improve their health and wellbeing, as well as reduce the risk of childhood deaths and improve cognition and school performance.** For example, among populations that are deficient, vitamin A supplements delivered to children only twice per year have the potential to reduce child mortality by as much as 23 percent.
- **Similarly, adding small amounts of vitamins and minerals to commonly consumed staple foods such as wheat or maize flour, rice, sugar, or oils is extremely cost-effective in reducing the negative impacts of these deficiencies.** The benefit-cost ratios for iron-fortification programs, for example, have been estimated at 176-200 (World Bank, 2006c), and these interventions are relatively easy to put in place. Where food aid is used, there will be a preference for distributing it in forms that are fortified (e.g., fortified flour rather than whole unfortified grain, or prepared biscuits for school snacks.) These interventions are very timely because as food prices rise, the poor will be able to consume a less diverse diet and derive fewer vitamins and minerals from vegetable and animal sources.

In education, the first concern is keeping children in school. The direct costs of schooling—tuition and fees, transport, school supplies, and uniforms can be quite substantial; a study of Bangladesh, Kenya, Nepal, Sri Lanka, Uganda, and Zambia undertaken by the United Kingdom’s Department for International Development found that education spending was second only to food expenditures (Department for International Development, 1999). School fees alone can range from 5 to 20 percent of total household consumption (World Bank, 2006a). Moreover, the opportunity cost of the child’s time for paid and unpaid labor must be taken into

account. When households are facing hunger, they may reduce these expenditures in favor of food purchases, as was discussed previously. Social protection and demand-side transfers are the appropriate measures to forestall this problem. Although malnutrition requires a ‘health’ intervention, keeping children in school does not necessarily require an ‘education’ intervention.

A second concern is keeping children attentive and able to learn well. Children who are hungry have more difficulty concentrating and performing complex tasks. World Food Programme (WFP) estimates from a survey done in 12 countries that 40 percent of pupils in long-standing school feeding programs and 63 percent in new school feeding programs do not consume food before coming to school. School lunch programs can help address short-term hunger and improve learning if the food is given early enough in the school day. Children who, at school age, lack certain nutrients in their diet (particularly iron and iodine), or who suffer from protein-energy malnutrition, hunger, parasitic infections, or who carry other diseases, have less participation in education and poorer education outcomes (Del Rosso, 1999). School health programs are also good vehicles to deliver micronutrient supplements and de-worming treatments to in-school children.

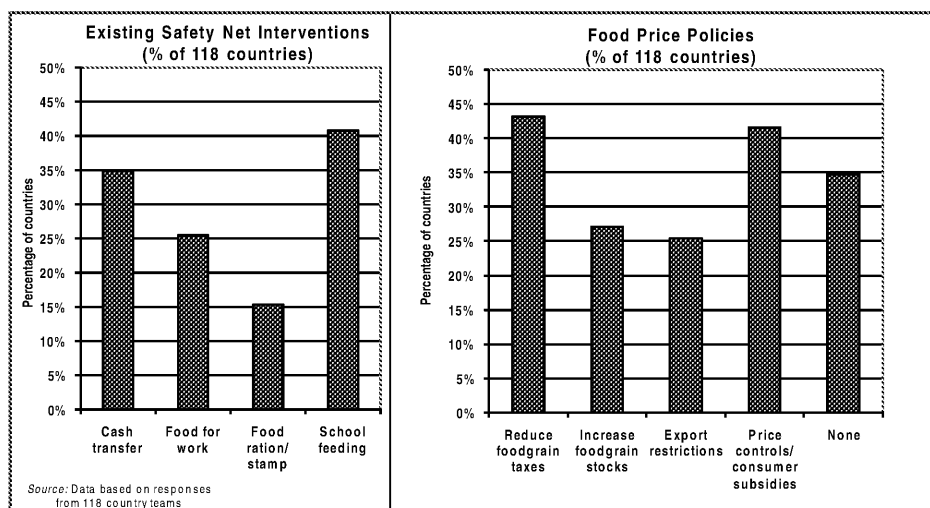
When available, safety nets have reduced the impact of economic shocks on health and education. For example, in response to the financial crisis of 1998, the Indonesian government put in place a system of targeted fee waivers for public health care and scholarships for poor schoolchildren. Both programs have been evaluated to show that service use fell less among recipient households than they would have in the absence of the programs (Cameron, 2002; Saadah, Pradhan, and Sparrow, 2001). Children benefiting from the

pilot cash transfer scheme in Kalomo district, Zambia, are eating better and are less underweight (Ministry of Community Development and Social Services and Government of Zambia, 2005). CCT programs targeted to the chronic poor have helped beneficiaries affected by shocks withstand them (see de Janvry and others 2006 for a review). In Nicaragua and Honduras, beneficiary households hit by the coffee crisis were able to maintain their children’s schooling and not increase child labor. In Nicaragua’s case, consumption did not fall as much as for nonbeneficiary families; in Honduras, adults were able to increase their labor. In Mexico, beneficiary children in households that were hit by shocks were able to maintain their school enrollments, in contrast to similarly affected nonbeneficiary families.

VI: Country Actions

A significant number of countries are mobilizing policy responses to rising food and fuel prices, with a broad range of responses, but tilted heavily to general subsidies or tax reductions rather than targeted safety nets. A poll of World Bank country economists in the second quarter of 2008 shows that the most common short-run responses to household food insecurity have been across-the-board price changes or market restrictions rather than more targeted safety nets (see Figure 3). A similar survey of IMF country desk officers shows that 33 countries have reduced taxes on fuel and 29 countries have increased subsidies. (IMF, 2008) These across-the-board measures are generally recognized as the least favorable responses—inefficient and distortive. Their predominance points to the need to build safety net capacity immediately so that countries using the across-the-board measures have a way to back out of them as soon as possible.

Figure 3: Types of Mitigating Policies Adopted by Selected Countries, July 2008



Source: Zaman and others, forthcoming

Chile's response illustrates a "first-best" response to rising food and fuel prices made possible by a good preexisting social protection system. Chile is an upper-middle-income country with per capita GDP of about US\$6,000 and low poverty. By February 2008, food price inflation had risen to 16 percent year-on-year, with total inflation of 8 percent. In response, the government moved swiftly, announcing a special one-time cash payment of Ch\$20,000 (about US\$45) to 1.4 million poor households on April 9, with immediate congressional approval and with the funds being received by households in May. The 1.4 million households included three groups: current participants in the Chile Solidario program, a CCT program intended to help the poorest 5 percent of the population combat various barriers to social exclusion (300,000 families); participants in the Subsidio Unitario Familiar, a family allowance for the poor (516,000 families); and families who receive a family allowance for those who are employed but whose monthly income is equal to or less than Ch\$250,000 (US\$555) per month (600,000 families). In all, the cash payment benefited 5.6 million people, the bottom 40 percent of the income distribution, at a total cost of US\$62 million. The government also increased the level of the winter heating allowance payment by about a third, for 700,000 elderly with low pensions.

Ethiopia was also able to respond quickly to rising food prices, but based only in part on its existing rural safety net. Food price inflation in April 2008 reached approximately 40 percent year-on-year, raising serious concerns about the impact on the poor. In response, the government took a three-pronged approach as follows, relying on assistance from donors and accelerated disbursements from World Bank credits to finance the responses:

- At the national level, the government suspended the value-added tax and turnover taxes on all cereals.
- In rural areas, the government is relying on its Productive Safety Net Program, a cash and food-for-work program and the mainstay of Ethiopia's safety net system. The program covers 7.3 million food-insecure people and is targeted geographically and to the most food-insecure households in the participating rural districts. The cash wage rate was increased by 33 percent in January 2008, raising the annual transfer to food-insecure households in rural areas to an average of US\$120 per year. In addition, donors are supporting the government by bringing in additional maize from outside the country to ensure the availability of grain for the food transfers made under the program.
- In urban areas, the government has started providing

subsidized wheat to households. The subsidy amounts to more than US\$75 per household per year in urban areas, and current estimates indicate that about 4.5 million people (900,000 households) are benefiting. This scheme, while operating exclusively in urban areas, is meant to stabilize wheat prices in both urban and rural areas.

Political pressures in Haiti dictated the use of a general rice subsidy in addition to scaling up existing social protection instruments as the response to rising food prices. By March 2008, year-on-year inflation had doubled to 16 percent, and food inflation had tripled to 20 percent. As the prices of basic food staples rose in early 2008, public protests grew large and violent. An attempt to storm the presidential palace in April 2008, thwarted by United Nations peacekeepers, led the Senate to vote the prime minister and his cabinet out of office. Prior to the riots, a multisectoral working group chaired by the prime minister and supported by the international community had been developing a strategy to deal with rising food prices, including, for the short-term, (i) generating employment through labor-intensive public works programs; (ii) providing agricultural inputs to revitalize production; and (iii) expanding food assistance programs, including feeding programs for schoolchildren, mothers, and infants.

The riots indicated a need for more immediate and visible action; thus, in April 2008 the government announced a temporary subsidy to reduce the price of rice. Analysis of the most recent available data (from 2001) shows that almost all Haitian households (86 percent) consume rice, that rice expenditure as a percentage of income is much higher among the poorest Haitians, and that the 76 percent of the population living on less than US\$2 a day consumes roughly 70 percent of the rice. Thus, the subsidy is close to distributionally neutral, that is, less sharply targeted than most good safety net programs, but less regressive than is usual for commodity subsidies. Moreover, errors of exclusion are lower than would be expected from the employment generation, agricultural input, and food assistance programs, as these often do not reach the poorest households in Haiti.

The government set up a working group to develop a plan for gradually moving back to market prices and initiated work with donors on complementary efforts to strengthen agricultural productivity and to improve the targeting and coverage of social protection instruments. The first step in relation to social protection is to design a household targeting system that will eventually underpin more streamlined programs.

Indonesia demonstrates how a short-term targeted unconditional cash transfer can compensate for a reduction in fuel price subsidies. In 2005 the country was spending about 5 percent of GDP on fuel subsidies. The government knew that it needed to raise fuel prices and that it needed to take compensatory action. It lowered fuel subsidies by US\$10 billion, re-dedicated a quarter of these funds to a one year cash transfer program, a quarter to targeted health and education programs, and lowered expenditures by the remaining half. The Bantuan Langsung Tunai (BLT) program was Indonesia's first cash transfer program and large—it reached about a third of households, giving a flat rate benefit of about 15 percent of the poverty line, more than enough to compensate the poor for higher fuel prices. It was organized quite fast—in only about two months—with surprisingly good results. Targeting was not perfect—64 percent of benefits accrued to the poorest 40 percent of households. This is respectable, though perhaps mediocre by international standards—but dramatically better than the preceding fuel price subsidies under which 70 percent of the direct benefits of the energy subsidies goes to the richest twenty percent of the population, and somewhat better than other targeted programs in Indonesia. Moreover, benefits were paid in full in 90-95 percent of cases, and where not paid in full, deductions were mostly where villages chose to share the benefits more broadly, in some cases discounts were used to pay for unfunded local administrative expenses for the program such as transportation or security. In the big picture the program was relatively successful and its weaknesses unsurprising given the haste with which it was organized, though the weaknesses in administration were much criticized in the press. Despite the relative success, the program was not popular amongst Parliament and amongst certain segments of the public and the media who perceived that cash transfers tended to create dependency and destroy social capital. After the experience with the BLT program the government started to test alternate targeting tools and pilot a conditional cash transfer program for a possible role in long run social policy. (Arulpragasam, 2006, and World Bank, 2006b).

In 2008 the government was again confronted with high fuel subsidy bills. With the rise in oil prices from about US\$70 per barrel in July 2007 to over US\$120 in late April 2008, the estimated budgetary cost of energy (fuel and electricity) subsidies rose dramatically. In the revised 2008 budget approved by the Parliament in mid-April, which assumed a price of US\$95 per barrel, the budgetary outlays on energy subsidies is projected to be Rupiah 163 trillion, roughly a fifth of the central government budget, and than an underestimate since oil prices rose still further. On May 24, 2008,

the Government announced the fuel price increase: prices for gasoline rose from Rp. 4500 per liter to Rp. 6000 per liter, for diesel from Rp. 4300 to Rp. 5500 per liter and for kerosene from Rp. 2000 to Rp. 2500 per liter. Right after the fuel price increase, the government re-introduced the BLT program to the same households as received it in 2005, at the same benefit level for initial plan of 7 months coverage until the end of 2008. The program remains unpopular among parliament and opinion-makers. Therefore, there is a high probability that the government will not get parliament approval for 2009 extension of the program. Once the program pilots and targeting experiments currently underway come to fruition, the government may have more program options, but in the urgency to act, reactivating the BLT was the easiest way to assure broad and moderately well targeted coverage.

Romania's experience a decade ago shows how a country can successfully navigate from a short-term response to a permanent and effective safety net. Until February 17, 1997, 70 percent of the bread produced was price controlled, with controls enforced from wheat production, distribution, and intermediate products (flour) to bread and other bakery products. At that time, the government liberalized wheat, flour, and bread prices despite considerable uncertainty about the level of inflation (including for bread) that would follow. The price of bread rose by 80 percentage points in March compared with February, against a backdrop of consumer inflation of 31 percent.

As bread is the major staple in the food basket of urban consumers, the government was concerned that a rise in the price of bread would hurt the poor and the middle class and that their opposition would undermine the reforms. To win support for the price liberalization and to avoid a costly policy reversal that might be necessitated by social unrest, the government offered temporary compensation to a population group substantially larger than the number of poor, over and above the existing, well-woven social safety net.

The government implemented the bread compensation program between April and September 1997, to facilitate the adjustment to the new relative price of bread for the poor and middle-class consumers. The introduction of temporary bread compensation was feasible because an effective social safety net was already in place. The poorest quintile of the population was already covered by survivors' pensions and a variety of social protection programs for the elderly, people with disabilities, and the unemployed and by the Guaranteed Minimum Income Program before the price liberalization. To

protect the purchasing power of the poor, the generosity of this safety net was maintained by indexing the cash benefits to overall inflation.

The bread compensation program provided a fixed subsidy of lei 13,500 (approximately US\$2) per month to all those earning less than lei 600,000 (US\$85) per month; all pensioners with pensions of less than lei 450,000 (US\$65) per month; and all those who were unemployed, disabled, or beneficiaries of the social assistance program of last resort (the Guaranteed Minimum Income Program). The eligibility threshold for employees and pensioners was almost twice as

high as the prevailing poverty line, and the target group was almost double the poverty headcount (slightly more than half the population, compared with a poverty headcount of 19.4 percent).

A simulation of the distributional impact of the bread compensation under the assumption of perfect implementation showed that it was weakly pro-poor and that a substantial share of the benefits went to middle-class households (Tesliuc, Pop, and Tesliuc, 2001). However, the bread compensation was more progressive than the former bread price controls and cost the government less.

Annex 1: Comparing Targeting Methods

1. Individual/household assessment			
Brief description	Advantages	Limitations	Appropriate circumstances
a) Means testing			
An official (usually a government employee) directly assesses, household by household or individual by individual, whether the applicant is eligible for the program. It has three main variants: those with third-party verification of income; those in which the applicant provides documents to verify income or related welfare indicators; and those in which a simple interview is used to collect information.	<ul style="list-style-type: none"> • In the best of cases, very accurate 	<ul style="list-style-type: none"> • Requires high levels of literacy and documentation of economic transactions, preferably of income • Administratively demanding where there are meaningful attempts at verification • Most likely to induce work disincentives 	<ul style="list-style-type: none"> • Where declared income is verifiable or some form of self-selection limits applications by non-target groups • Where administrative capacity is high • Where benefits to recipients are large enough to justify costs of administering means test
b) Proxy means tests			
A “score” for each household is calculated based on a small number of easily observable characteristics and a weight (ideally obtained from factor or regression analysis of household data). Eligibility is determined by comparing the score against a predetermined cutoff.	<ul style="list-style-type: none"> • Is verifiable, may allay concerns over politicization or randomness of benefit assignment • Uses readily observable household characteristics • Is less likely than means test to affect work effort 	<ul style="list-style-type: none"> • May seem mysterious or arbitrary to some • Requires large body of literate and probably computer-trained staff, moderate-to-high levels of information and technology • Inherent inaccuracies at household level, although good on average • Insensitive to quick changes in welfare, as in a crisis or in some transition countries 	<ul style="list-style-type: none"> • Reasonably high administrative capacity • Programs meant to address chronic poverty in stable situations • Where applicable to a large program or to several programs so as to maximize return for fixed overhead
c) Community targeting			
A community leader or group of community members whose principal functions in the community are not related to the transfer program decide(s) who in the community should receive benefits	<ul style="list-style-type: none"> • Takes advantage of local information on individual circumstances • Allows for local definition of need and welfare • Transfers costs of identifying beneficiaries from intervention to community (this can also be seen as a limitation) 	<ul style="list-style-type: none"> • Local actors have other incentives besides good targeting of the program • May lower authority or cohesion of local actors • May continue or exacerbate patterns of social exclusion • If local definitions of welfare are used, evaluation is more difficult and ambiguous 	<ul style="list-style-type: none"> • Where local communities are clearly defined and cohesive • For programs that propose to include a small portion of the population • Or temporary or low benefit programs that cannot support an administrative structure of their own

Annex 1: Comparing Targeting Methods (cont'd)

2. Categorical targeting			
Brief description	Advantages	Limitations	Appropriate circumstances
a) Geographical targeting			
Eligibility for benefits is determined, at least partly, by location of residence. This method uses existing information such as surveys of basic needs or poverty maps.	<ul style="list-style-type: none"> • Administratively simple • No labor disincentive • Unlikely to create stigma effects • Easy to combine with other methods 	<ul style="list-style-type: none"> • Depends critically on the accuracy of information • Performs poorly where poverty is not spatially concentrated • Can be politically controversial 	<ul style="list-style-type: none"> • Where considerable variations exist in living standards across regions • Where administrative capacity is sufficiently limited so as to preclude use of individual/household assessment • Where delivery of intervention will use a fixed site such as a school, clinic, or ration shop
b) Demographic targeting			
Eligibility is determined by age, gender, or some other demographic characteristic	<ul style="list-style-type: none"> • Administratively simple • Low stigma • Often politically popular 	<ul style="list-style-type: none"> • Inaccurate where demographic characteristics are poor correlates of poverty; current research suggests that observed correlations are sensitive to assumptions made about household scale economies and adult equivalences 	<ul style="list-style-type: none"> • Where registration of vital statistics or other demographic characteristics is extensive • Where a low-cost targeting method is required
3. Self-targeting			
<p>A program, good, or service that is open to all but designed in such a way that take-up for it will be much higher among the poor than the nonpoor. Most common types are:</p> <ul style="list-style-type: none"> • Workfare (use of low wages on public works schemes so that only those with a low opportunity cost of time due to low wages or limited hours of employment will request jobs); • Inferior Commodities (transfer of free or subsidized commodities with “inferior” characteristics, such as low quality wheat); • Location of point-of-sale (in areas where the poor are highly concentrated so that the nonpoor have higher private and social cost of travel). 	<ul style="list-style-type: none"> • Administrative costs of targeting likely to be low • Unlikely to induce labor disincentives 	<ul style="list-style-type: none"> • Imposes costs, sometimes a quite substantial cost on the recipient, which lowers the net value of the benefit • Stigma may be considerable • May be difficult to find a means of delivering a large benefit 	<ul style="list-style-type: none"> • Countries with very low administrative capacity • Settings where individuals are moving rapidly in and out of poverty • Where a wage or consumption patterns separates poor from nonpoor (e.g., consumption of inferior goods)

Source: Coady, Grosh, Hoddinott, 2004, Table 4.1. Additional information on methods and practices for each is available on the Targeting page at www.worldbank.org/safetynets.

Annex 2: Characteristics of Social Safety Net Interventions

Types of interventions (programs)	Social protection goals	Intended beneficiaries	Advantages	Disadvantages	Appropriate context	Implementation challenges
<i>Cash and near cash transfers</i>						
<ul style="list-style-type: none"> • Needs based • Food stamps • Noncontributory pensions • Family allowances 	<ul style="list-style-type: none"> • Mitigating poverty and promoting equity • Managing shocks • Facilitating reforms 	<ul style="list-style-type: none"> • Chronically poor working families • Those not expected to work: children, the elderly, the disabled • Those needing temporary assistance 	<ul style="list-style-type: none"> • Have lower administrative costs than many other programs • Do not distort prices • Transfers can directly meet critical household needs • Benefits can be differentiated by level of need, household size or composition, etc. 	<ul style="list-style-type: none"> • Targeting methods can be information intensive • Transfers are fungible, therefore subject to unintended household uses 	<ul style="list-style-type: none"> • When essential commodities are available • When consumers can purchase food in the market 	<ul style="list-style-type: none"> • Defining clear objectives and benefit levels • Reaching the intended beneficiaries • Distributing benefits reliably and efficiently
<i>In-kind food transfers and other food-based programs</i>						
<ul style="list-style-type: none"> • Quantity rations and in-kind transfers • Supplemental feeding and nutrition • School feeding • Emergency food distribution 	<ul style="list-style-type: none"> • Mitigating poverty and promoting equity • Managing shocks • Investing in human capital and nutrition • Facilitating reforms 	<ul style="list-style-type: none"> • Chronically poor people who cannot afford to buy the food they need to improve their nutritional status • Those not expected to work: the elderly; the disabled; children in school; and malnourished, pregnant and lactating mothers • Those needing temporary relief, refugees, the displaced 	<ul style="list-style-type: none"> • Can be effective in alleviating hunger • Can increase school attendance by poor children 	<ul style="list-style-type: none"> • Storage and transport of food adds a large element to administrative costs • Beneficiary group is limited • Substantial errors of inclusion may occur depending on the targeting method • Often biased to urban populations • On-site feeding adds to administrative costs for programs and transaction costs for participants 	<ul style="list-style-type: none"> • When food aid is available but cash assistance is not or when the government needs to rotate strategic food grain stocks • When prices are too high because of a lack of or inefficient markets • When programs do not have a negative impact on markets • When nutrition interventions are needed to protect food-insecure people 	<ul style="list-style-type: none"> • Organizing efficient transport, storage, and distribution of food • Selecting commodities • Reaching needy mothers and children

Annex 2: Characteristics of Social Safety Net Interventions (cont'd)

Types of interventions (programs)	Social protection goals	Intended beneficiaries	Advantages	Disadvantages	Appropriate context	Implementation challenges
<i>General price subsidies</i>						
<ul style="list-style-type: none"> • Price support for food • Subsidized sales of food • Subsidies for energy 	<ul style="list-style-type: none"> • Mitigating poverty and promoting equity 	<ul style="list-style-type: none"> • Chronically poor and transient poor families both working and not working 	<ul style="list-style-type: none"> • Potentially low administrative costs depending on the delivery mechanism • Can be implemented or expanded quickly after the onset of a crisis if appropriate marketing structures exist 	<ul style="list-style-type: none"> • High errors of inclusion to the nonpoor depending on commodity consumption patterns • Often biased to urban populations • Distort commodity prices and use • Expensive and difficult to remove once established because of pressures by interest groups 	<ul style="list-style-type: none"> • When prices of essential commodities are too high • When used in conjunction with a defined time period 	<ul style="list-style-type: none"> • Targeting poor populations using inferior commodities • Maintaining a reasonable budget
<i>Public works</i>						
<ul style="list-style-type: none"> • Usually labor-intensive infrastructure development projects 	<ul style="list-style-type: none"> • Mitigating poverty and promoting equity • Managing shocks 	<ul style="list-style-type: none"> • Chronically poor unemployed at the margins of the labor market • Transient poor, short-term unemployed, and seasonal workers 	<ul style="list-style-type: none"> • Needed infrastructure is created or maintained • Self-targeting can be effective if the wage rate is low enough • Additional risk management benefits can accrue if the program is set up with an employment guarantee • Politically popular because labor disincentives can be avoided and beneficiaries can maintain the “dignity of work” 	<ul style="list-style-type: none"> • Administratively demanding • Trade-off between infrastructure development and poverty alleviation objectives • The ratio of net transfers to total costs is low because of the share of nonwage inputs and because of foregone earnings 	<ul style="list-style-type: none"> • When unemployment is high after the collapse of the labor market in case of a crisis or disaster • When seasonal unemployment is high • When addressing individual unemployment in the absence of unemployment insurance 	<ul style="list-style-type: none"> • Reaching the poorest households by self-targeting, for example, by setting the correct wage rate - Building useful infrastructure at efficient cost using as many people as possible • Keeping beneficiaries’ transaction costs low • Avoiding leakages of funds

Annex 2: Characteristics of Social Safety Net Interventions (cont'd)

Types of interventions (programs)	Social protection goals	Intended beneficiaries	Advantages	Disadvantages	Appropriate context	Implementation challenges
<i>Conditional cash transfers</i>						
<ul style="list-style-type: none"> Targeted transfers conditional on school attendance or preventative health care 	<ul style="list-style-type: none"> Mitigating poverty and promoting equity Investing in human capital and nutrition Facilitating reforms 	<ul style="list-style-type: none"> Chronically poor and vulnerable poor families with low level of human capital, especially children and mothers 	<ul style="list-style-type: none"> Supports incomes of the poor Can improve school attendance and/or health care use 	<ul style="list-style-type: none"> Effectiveness influenced by existing education and health infrastructure Administratively demanding because of the need for sophisticated targeting and for monitoring compliance 	<ul style="list-style-type: none"> When clear human capital targets are to be achieved When health and education services are available When the administrative constraints are not too big 	<ul style="list-style-type: none"> Disbursement (same as cash) Having a clear role within social policy Selecting conditions Verifying compliance with conditions
<i>Fee waivers, exemptions, and scholarships</i>						
<ul style="list-style-type: none"> Health fees School fees Scholarships 	<ul style="list-style-type: none"> Mitigating poverty and promoting equity Investing in human capital and nutrition Facilitating reform 	<ul style="list-style-type: none"> Chronically poor and vulnerable poor families with low level of human capital who cannot afford the cost of health and education Poor students that would otherwise drop out of school 	<ul style="list-style-type: none"> May promote human capital development 	<ul style="list-style-type: none"> Administratively complex and to be managed directly by health or education facilities Effectiveness influenced by the existing education and health infrastructure 	<ul style="list-style-type: none"> When social services are provided for a fee and may exclude the poor When health and education services are available When providers have access to alternative sources of revenue 	<ul style="list-style-type: none"> Defining the criteria for granting waivers Having good information systems in place Ensuring good implementation by providers and administrators Having funds available

Source: Grosh et al., 2008, Table 7.4

Annex 3: Briefing Notes on Common Program Interventions

CASH TRANSFERS⁷

Unconditional poverty targeted cash transfers are a mainstay of safety net programs and in many ways provide the standard against which other programs are judged. They come in several forms. Most have some sort of poverty targeting criteria—with households being selected via means tests, proxy means tests, or community members, although some child allowances and some social pensions are targeted by age only.

Cash transfers are appropriate only where markets are functioning well. If markets are not functioning or badly integrated, then injecting cash into a location can result in local inflation—raising the prices for all, and conveying much less than the intended benefit to the program participants. This cautionary note is most relevant in times of disaster and/or in very remote areas when it can be of critical importance; in most times and places it is not a binding constraint.

Targeted cash transfer programs have several key advantages:

- Cash transfers distort markets and incentives less than other programs.
- They give households the greatest sovereignty over their resources and empower them to spend resources on what the household believes it needs most.
- They have lower administrative costs than most other targeted programs.
- They can convey quite substantial benefits if needed, and can be differentiated by the household's poverty, size, or composition.
- In many cases, payments can be made through banking or postal banking systems, which reduce the possibilities for funds being diverted from registered participants.

The requirements to make a cash transfer program are the minimal requirements for any transfer program.

They should:

- Be effectively targeted.
- Have reliable and accurate payment mechanisms.
- Pay an amount far enough above the recipient's transaction costs to raise welfare, but not so much as to induce serious disincentives to work or to create major issues of fairness between recipients and nonrecipients.

⁷ For more on cash transfers, see Grosh et al., 2008.

- Be well managed, with good monitoring of program operations and substantial disclosures of information with respect to processes and outputs.

CONDITIONAL TRANSFER PROGRAMS⁸

Some of the excitement about these programs is due to the inherent value of conditioning transfers, but probably a great deal is due to practices that are neither unique to or inherent in conditional programs. Some of the early programs, now well established and evaluated and in many cases emulated by new programs, set excellent standards of program implementation. They chose rigorous and effective targeting methods, brought unusual zeal to program management, accountability and transparency, and implemented credible evaluation systems.

In some cases, it may be desirable to condition transfers on households using preventive health care for their children and/or sending them to school. Such conditions can be thought of as a way to get a bit of extra benefit from the social assistance budget, ensuring that it produces the maximum possible protection of human capital. Although not yet conclusive, the preponderance of theory and evidence suggests that this leveraging can be significant, especially for education, and especially for grades and for groups where enrollments were initially low. Where conditioning is feasible without undue losses of participation, it may thus be desirable. In many countries, conditions also seem to be a key ingredient in building support for transfer programs across the political spectrum and thus important to their adequacy and sustainability.

For countries that have CCT programs in place, using them as part of the response to rising food prices is natural. The preferred response to the increase in food prices is to increase the benefit and/or to expand the coverage of existing well functioning programs, and already established CCT programs would usually be included.

It may be difficult for the very low-income countries and fragile states most affected by the food and fuel price increases to start CCTs, at least as part of their short-run response. For CCT programs to work, the poor households targeted for social assistance must have access to reasonably effective schools and clinics. Where access to these is limited, CCT programs exclude a portion, sometimes a significant portion, of the poorest. This

⁸ For more on conditional cash transfers, see World Bank forthcoming, *Conditional Cash Transfers for Attacking Present and Future Poverty*, Washington, DC.

introduces a conundrum—those who already have access to services might be induced to use them somewhat more than otherwise, but those without access to adequate health and education would be denied access to social assistance and the implied supplement to their food budgets as well. Moreover, the imposition of conditions requires programs to build an administrative system to inform participants of the requirements, to monitor their use of services, and to reduce payments when conditions are not met. In a situation where swift response is necessary, building these systems may impose undesirable delays. Where CCT programs do not exist, it may be appropriate to start with unconditional programs and to think of converting them to conditional programs once adequate systems can be built.

For a conditional cash transfer program to be effective, it must meet the same minimal requirements as those for other programs in terms of targeting, payment mechanisms, generosity, and management. In addition the program must:

- Be linked to accessible and effective health and education services.
- Develop systems to monitor household compliance with conditionalities.

FOOD STAMP PROGRAMS AND OTHER NEAR CASH TRANSFER PROGRAMS⁹

Food stamps are near cash instruments and share many of the same benefits as cash transfers, with a few additional considerations.

The advantages of food stamps over cash are somewhat intangible.

- The very name of food stamp, and the fact that they can, at least nominally, be designated for specific food commodities can be politically attractive to a government trying to respond (and to be seen to respond) to an issue of food prices. The well documented food stamp programs in Sri Lanka and Jamaica were initiated as part of a transition away from general food price subsidies and were eventually replaced with cash transfer programs once the tie to food subsidies had receded in the public's minds. Similar advantages apply to vouchers for agricultural inputs, such as used in Romania as part of reforms there.
- In the U.S. and Sri Lanka, researchers found that households bought a higher share of food than they would have been expected to with equivalent cash income. This contradicts the economic theory that

households reallocate the implicit income transfer and so is often interpreted as meaning either that food stamps are more controlled by women with greater concern over food budgets than men and/or that the educational efforts that accompany the programs are effective in changing household preferences. Conditional cash transfers have in most cases been explicitly paid to the mother in the household and often been accompanied with messages about the importance of good diets and nutrition and have been similarly observed to be spent disproportionately on food, which lends credence to these interpretations.

Food stamps do impose some extra administrative burden that cash transfers do not. Where food stamps are issued as separate checks or quasi-currency, they have to be printed, and with most of the features and costs of printing currency. These steps can add a percentage point or two of administrative costs. Food stamp programs also require a reclamation chain through which retailers receive reimbursement from the government for stamps accepted. Where marketing chains permit, electronic benefit transfers (EBT) may eliminate the extra costs of issuing stamps and facilitate the reclamation chain as well.

Near cash programs should have benefit levels that are 'infra-marginal' to the good they are earmarked for.

This means that they should be for a value equal or lower to the expected expenditures on the nominal good. When the stamps (vouchers or EBT cards) are worth more than a household wants to spend on the good it is for, households may resell the instrument, usually at a steep discount. This means that the real value transferred is less than program designers intended, and that much of the benefit accrues to the buyers of the instruments, who are usually not poor. Since food expenditures are a large share of the budgets of the poor, food stamps can transfer significant value without running into this problem. Since fuel and transport expenditures are a lower share of budgets, near cash transfers for those items will have to be smaller to avoid this problem.

For a food stamp program to be effective, it must meet the same minimal requirements as for other programs in terms of targeting, payment mechanisms, generosity, and management. In addition, the program must:

- Operate its reclamation chain nearly flawlessly, because any instance of difficulty in reimbursement can cause retailers to refuse to accept food stamps and thereby strip them of their value.
- It should not attempt to rigidly enforce the purchase of only specific commodities with the food stamps. If

⁹ For more on food stamps, see Casteñeda, 1998.

the households are needy enough, they will have a high propensity to consume food and this is enough to have a general impact on welfare. To enforce a rigid tie to specific items is administratively too costly.

- Programs may be accompanied by social marketing messages on the importance of an adequate diet.

FOOD FOR EDUCATION AND SCHOOL FEEDING¹⁰

School feeding programs are principally income support instruments with the potential for impacts on education.

They provide an implicit transfer to households of the value of the food distributed, with the range varying significantly with in-school snacks at the low end and large monthly take-home rations at the upper end.

School feeding programs are widespread. School feeding programs exist in all high income countries, are only exceptionally absent from middle income countries, and are present, typically with WFP support, in 71 of 108 low/lower middle income countries. Existing programs provide a potential point of entry to the community: they are politically popular; they exist in many countries; and where there is no good cash transfer program, they can be a starting point for rapid response. Conversely, disruption of existing programs has almost immediate negative social consequences, especially for girls, removing children from the school environment and enhancing vulnerability.

Take-home ration programs can rank quite high in the choice of income support instruments. Take-home rations function like CCTs, and may be preferred to cash where food aid is available and food is particularly valued due to high food insecurity. Some have demonstrated good impacts on poverty and education enrollment/attendance, especially for girls. They will have the highest impacts where:

- They target not only geographically but to the neediest families in schools.
- They give a sufficiently high ration to provide meaningful support to families (could be on the order of 10 to 25 percent of the base income of poor households).
- The logistic burden on schools is minimized.
- The programs meet good practice standards of management, monitoring, and evaluation.

In-school meals and snacks require more inputs but may have educational and social benefits. Providing food during the school day can increase attendance and

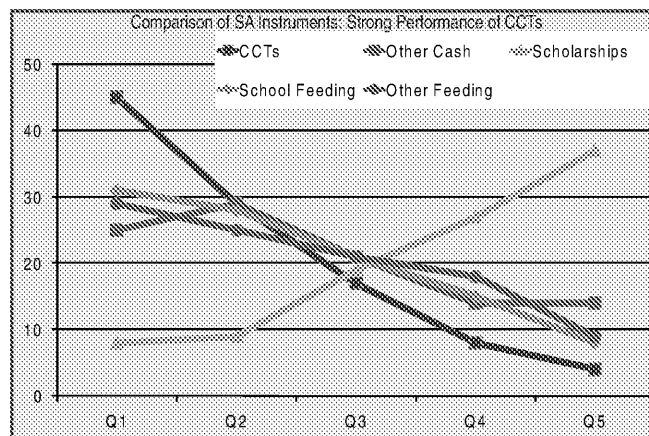
10 For more on school feeding, see World Bank forthcoming, *Education and School Feeding Programs*; Jukes, Drake and Bundy, 2007; and Grosh et al., 2008.

contributes to social cohesion by keeping children in school, particularly where schools are far from home. By reducing hunger, these programs can also enhance cognition and learning, increasing the return on the education investment, though documentation of this effect is not widespread. The nutritional and cognitive benefits of these interventions are improved at marginal cost by combining them with micronutrient supplementation/fortification and de-worming treatments delivered in schools.

School feeding programs may not be as cost-effective as other income support instruments, particularly for low-income countries where school feeding programs often have similar per capita costs to basic education programs, but less so for middle income countries because the proportionate cost declines with increasing GDP. The key reasons are:

- Reducing per capita costs by targeting food is challenging (see Figure 4) and may be both politically and socially sensitive. But targeting has been successful in several countries: some have managed to provide the same lunches to all children using differential cost recovery while minimizing stigma (e.g., Chile, Jamaica), while others have successfully reduced costs and enhanced effectiveness by geographically targeting vulnerable regions (e.g., Madagascar, Panama). However, even these successful examples have higher targeting errors than comparative cash income support programs.

Figure 4. Results from Latin America and the Caribbean



Source: Lindert, Skoufias and Shapiro, 2006, Figure 11

- Administrative costs are relatively high—food must be procured, transported, stored, and prepared. Median administrative costs for cash transfers are 9 percent but 21 percent for all food programs and 30 percent for in-school meal programs (see Grosh et al., 2008). Selection of a locally appropriate approach is critical. In some countries, one approach is used in urban settings and a different one in rural areas.

- There can be opportunity costs to the education sector of committing budget and staff time. In some countries, this is successfully minimized by outsourcing or by community-led processes.

School feeding programs are diverse. The most cost-effective programs have the following features:

- Respond to local circumstances and build on existing practices.
- Time the serving of in-school meals so that children are well fed and attentive in class.
- Handle logistics in a way that minimizes the diversion from teaching and learning.
- Provide food that has low cost per calorie or gram of protein.
- Where feasible and relevant, serve fortified foods or provide micronutrient supplements and de-worming treatments.

TARGETED MARKET OPERATIONS

A few countries (Bangladesh, Niger, Ethiopia) provide subsidized sales of staple commodities for a short period of time, in small quantities in a few urban locations. They can be run with little dedicated infrastructure, indeed; where there is none, sales can take place from the back of the truck itself. Ad hoc subsidized targeted market operations have a few advantages:

- They are very quick to set up, if the countries maintain and operate buffer stocks and have food aid available.
- If operated properly, they have a fixed duration.
- They are politically very appealing, because they provide some price relief to the most vocal urban consumers.

To be effective targeted market operations have to be:

- Flexible, easy to set up and take down.
- Geographically targeted to poor communities in urban areas.
- The amount of rations for each purchase has to be kept small so it is affordable for poor people and deters richer people from participating in the program.

FEE WAIVERS OR VOUCHERS FOR ESSENTIAL SERVICES¹¹

Where there are fees for essential services such as health, education, and heating, systems to waive the fees for the poor will facilitate their access to the services.

11 For a summary, see Grosh et al., 2008; for health vouchers, Bitran and Giedion, 2003 and Newbrander, Collins, and Gilson, 2000; for scholarships, see World Bank forthcoming; for utility services, see Katsura and Romanik, 2002 and Komives et al., 2004, Lovei et al., 2000; for energy, see Lampietti, 2006.

Waivers come with a variety of labels—waivers, exemptions, discounts, scholarships, vouchers, etc. In most cases, the benefit occurs as a reduction in a fee, although in some cases it can be administered as a payment to the household of the amount that they are then required to pay to the service provider.

Fee waivers or vouchers for heating may be an essential part of the response to high fuel prices; health and education fee waiver programs may be a useful adjunct to responses to both high food and high fuel prices.

Program performance in such programs has been quite varied, but most successful where:

- The program's availability and rules are well known to the poor so that when they decide whether or not to use a service they have an accurate understanding of how much it would cost them.
- Some serious effort is put into targeting. Where the country has a reasonably good household targeting system for social assistance, fee waiving programs can piggyback on it.
- The service provider is reimbursed for the revenue lost because of the waiver or exemption.

PUBLIC WORKS¹²

Public works programs rarely achieve coverage sufficient to be the whole response to rising food and fuel prices.

Rising food and fuel prices are affecting the working poor and near poor as well as the unemployed so the desired coverage may be extensive. Often it is on the order of the poorest 20 or 40 percent. In contrast, only a tiny number of public works programs have employed more than 10 percent of the population and most are much, much smaller. To fruitfully employ so much labor may be quite difficult without long-term planning; yet, unless the work done yields economic benefits in its own right, public works are a much less efficient transfer instrument than cash transfers.

Where public works programs exist, they should certainly be part of the safety nets response strategy. It is certainly appropriate to adjust wages to facilitate access to food and energy, but always ensuring that the wage on the public works program remains at or below the prevailing wage for low skilled labor, in order to ensure self-targeting. These programs also may be expanded to allow more of the poor and new poor to benefit, or to allow more days of work per worker to provide a larger boost to income.

12 For more, see Grosh et al., 2008 and Subbarao, 2003.

Good public works programs have the following characteristics:

- They set the wage low enough to be self-targeting, no more than the prevailing wage for unskilled labor, ideally a bit below that.
- They have high labor content, while allowing for necessary materials, tools, and skilled labor.
- The labor is used on high return activities, with the planning of these works integrated into local and/or sectoral development plans.
- The work is organized in a way that displaces workers' other income-generating activities as little as possible.

GENERAL FOOD PRICE SUBSIDIES¹³

General food price subsidies are the least desirable of the options for helping households afford a food basket.

There are four main disadvantages:

- They not well targeted to the poor. Most subsidies are markedly regressive, even the better ones are close to neutral in their distribution, a progressive food subsidy is rare and then usually limited in value.
- The programs are expensive because they are universal; moreover, they are usually administered as defending a set price, but the government has little influence over market prices. Thus, fiscal costs can balloon when international prices rise.
- They can distort markets for trade and production of food in ways that contribute to the overall problem.
- Some foods, if subsidized heavily, can be diverted to animal feed or export.
- Popular general subsidies are difficult to reform and remove. Poor urban populations have often shown their discontent with reforms and with reduced price subsidies by rioting.

They do have three important advantages:

- They may be able to reach many or all of the poor, so errors of exclusion may be low.
- They do not require an explicit targeting mechanism.
- They may be easier to administer and faster to implement than income transfers.

Although less preferred, they are being used in a large number of countries that did not have preexisting safety nets that could be scaled up. Over 40 percent of the 188 countries sampled by The World Bank have recently reduced import duties and value-added tax in the wake of rising food

13 For more on food subsidies, see Alderman, 2002 and Grosh et al., 2008.

inflation. More than 40 percent have some form of consumer subsidies for staples.

The most effective food price subsidies have the following traits:

- They target goods that are consumed more by the poor than by the nonpoor. Ideally, this would be true in absolute terms (e.g., the poor consume more calories from the staple than the nonpoor), although in practice such consumption patterns may not prevail for easily subsidized commodities and so is only true in relative terms (the poor spend a higher share of their [lower] consumption of the food). This means that the subsidies should be confined to basic staples, usually cereals, and not to luxury items such as meat, milk, coffee, etc. Among staples they may target coarser varieties (e.g., broken rice, yellow rather than white maize, coarser flour, etc.).
- They are financed explicitly by government and not imposed in the form of indirect taxes on producers or traders.

'LIFE-LINE' TARIFFS FOR ELECTRICITY OR NATURAL GAS NETWORKS¹⁴

The premise of lifeline tariffs is that household energy use is highly correlated with income and thus a degree of self-targeting is possible. Richer households will use electricity rather than other fuels for lighting, will have more appliances of all sorts, and may use significant electricity for air conditioning. Moreover, where billing systems are already in place, the administrative requirements of these subsidies are trivial compared to setting up new direct income transfer programs.

Lifeline tariffs require individual metering. Without individual meters, households cannot document that their electricity use was low. In the electricity sector, many households have individual meters (many more than in the water sector, for example) but metering is not universal. Because there is often an installation fee for a meter, poorer households are less likely to have meters than nonpoor households. In Guatemala for instance, of households with electricity, only 62 percent had meters. A quarter of those in the poorest quintile had no meter, but only 10 percent of those in the richest quintile.

Lifeline pricing can have high errors of exclusion. For natural gas, the rural poor—who are likely to make up the

14 This section is based on Komives et al., 2005 and Lampietti, Banerjee and Branczik, 2007.

majority of the poor in low-income countries—are likely to be excluded in all countries. For electricity, many of the rural poor and some of the urban poor in low- and lower-middle-income countries are likely to be excluded. In Eastern Europe and Central Asia and in urban areas of middle- and upper-middle-income countries, where access to networks is much higher, this will be a smaller problem.

Volume differentiated tariffs are preferred to rising block tariffs and fixed charges. Volume differentiated tariffs charge a lower price per unit for households whose total consumption is below a certain threshold and thus confine the subsidy to low volume users. Rising block tariffs charge less for the first block of energy consumed, say 50 kilowatt-hours per month, and more for subsequent usage and thus subsidize all users. Fixed charges or minimum consumption rules can have a dramatic effect on the prices paid by low volume consumers and from an equity point of view are undesirable.

Lifeline pricing will be most effective when:

- The poor are connected to the network.
- There is individual metering.
- Volume differentiated rather than rising block tariffs are used.
- The subsidized block is consonant with the electricity use of the poorest.

BUS SUBSIDIES¹⁵

Fuel prices have a significant impact on the cost of transportation, and public transportation is viewed as something as a merit good and economically important in allowing workers to get to work and in some places getting children to school. Thus, subsidies to public transportation are a politically salient issue when fuel prices increase.

Supply-side subsidies to bus transport are ubiquitous, but generally have a poor track record on equity. Moreover, pricing needs to reflect a complex mix of factors such as adequate cost-recovery, efficient inter-modal pricing, and efficient contracting so manipulation of fares in the short run is difficult. In parastatals, subsidies may in the end benefit the labor or management of bus contracts. In the UK, for example, it was estimated that over one-half of subsidies aimed at lower fares or improving service quality either 'leaked' into such benefits or lowered service efficiency (World Bank, 2002).

¹⁵ This section is drawn from: World Bank 2002, Estupiñán et al., 2007, and Ganno et al., 2000.

Supply-side subsidies may be more poverty oriented:

- If there are multiple qualities of service, some self-targeting may be achieved if 'premium' service (with less crowding, express service for long distances or air conditioning) is unsubsidized and the basic service subsidized.
- If poverty is concentrated in some areas, and contracting procedures facilitate it, routes serving poor areas could be more heavily subsidized than other routes in exchange for lower fares.
- Where contracting structures and supervisory arrangements provide adequate financing, incentives, and enforcement.

Demand-side subsidies have more potential but most examples to date are not very successful. Demand-side subsidies tend to have three problems. First, they are usually categorically based, given reduced or free fares to all passengers in a 'category' and these categories are only partly related to poverty. Common categories subsidized include the elderly, school children, and civil servants of various types. The elderly may be a bit poorer than average (though not necessarily since in developing countries most live in multi-generation households), but the other groups are not as likely to be. Second, demand-side bus subsidies are rarely explicitly financed—bus companies are not reimbursed for foregone revenue. Cross-subsidization between paying and non-paying customers is rarely complete and this results in cash starvation for the enterprise as a whole and deterioration of quality and eventually quantity of services. Third, in such a scenario bus operators have an incentive to underserve the target groups, for example, by not allowing non-paying passengers to board when buses are full—which can vitiate the subsidy policy as well as yield the socially troubling scene of children left long on the side of crowded roads.

More successful demand-side subsidies would need to include:

- A means of compensating bus operators for the fares foregone;
- A means targeting the fare reductions in some progressive manner, whether through adroit choice of categorical, geographic, and/or self-selection methods or through means or proxy-means testing.

There appears to be room for more experimentation with methods that combine these features.

Because fuel may have a lower share in the budget of the poor than of the nonpoor and there is no quality differentiation, the distribution of the direct benefits from subsidies to petroleum products is often hugely regressive. For example, a study in Indonesia (World Bank, 2006b) found that before the 2005 price increase, the benefits of the fuel subsidies accruing to the poorest 10 percent of the population were less than one-fifth of those accruing to the richest 10 percent of the population. Coady and others (2006) show that the share of the total direct benefits to be derived from fuel subsidies for the poorest 40 percent of households ranges from 15.3 percent in Bolivia to 25.1 percent in Sri Lanka. The indirect benefits of fuel subsidies are often as large as the direct ones, and may be less regressive because fuel is used in the transport or production of all goods, although in differing intensities.

Differentiated subsidies among liquid fuels are problematic. Kerosene is more used by the poor than liquid propane gas than gasoline and so it is sometimes more heavily subsidized. But kerosene is a nearly perfect substitute for diesel, and if there is a large price differential between the two products, kerosene becomes a convenient, cheaper alternative fuel source for users of diesel. As a result, diversion of low-price kerosene to the diesel sector is widespread in countries with large price differences between the two fuels. Kerosene is retailed by a large number of outlets, not only filling stations, and for this reason is among the least easy petroleum

products to monitor at the point of final sale. Simple, low-cost schemes for distinguishing commercially sold kerosene from diesel, for example using color dyes, have not been successful in discouraging this type of fuel adulteration in developing countries.¹⁶

Targeted, two-tiered pricing is also problematic. In this variant, some households are given a ration card that entitles the purchase of a specified quantity of fuel at a subsidized price. This requires a complex apparatus. The selection of eligible households poses the same need for a targeting system as more direct cash transfers. Then there is the need for defining which shops will sell the rations. In several prominent cases, these are state-owned and thus impose a whole other set of logistics and costs. Such schemes inherently involve incentives for shop-owners to divert fuel from subsidized sales to full price sales and result in significant leakages. In the India Public Distribution System, for example, such leakages are much higher for kerosene than for food products, indeed up to 50 percent by quantity for kerosene (Gangopadhyay, Ramaswami, and Wadhwa, 2005, World Bank, 2003). Moreover, two-tiered pricing has all too often led to fuel shortages at the lower price with the result that those for whom the lower price is intended often cannot find the fuel for purchase. Perhaps a better option, and one with somewhat simpler administrative requirements, would be a 'fuel-stamp,' akin to a food stamp, for the purchase of a given value of fuel at commercial prices and from commercial outlets.

16 In the U.S., heating oil is taxed less than other fuels and was once used extensively by truck drivers. A color dye was introduced in response and fuel checked regularly at truck weigh stations, stopping the diversion of heating oil to the automotive diesel sector. This degree of monitoring is less common in developing countries.

References

- Alam, Asad, Sanjay Kathuria, and Olga Vybornaia. 2008. "Rising Food Grains and Energy Prices in ECA: Some Economic and Poverty Implications, and Policy Responses" (mimeo).
- Alderman, H., J. Hoddinott, and B. Kinsey. 2006. "Long Term Consequences of Early Childhood Malnutrition." *Oxford Economic Papers* Vol. 58(3): 450–474.
- Alderman, Harold. 2002. "Subsidies as a Social Safety Net: Effectiveness and Challenges." Social Protection Discussion Paper 0224. Washington, DC: World Bank.
- Arulpragasam, Jehan. 2006a. "An East Asian Case: Indonesia's CCT Pilot." PowerPoint presentation, Poverty Reduction and Economic Management Network Learning Week, Washington, DC: World Bank, April 23, 2006.
- Baird, Sarah, Norbert Schady, and Jed Friedman. 2007. "Infant mortality over the business cycle in the developing world." Policy Research Working Paper Series 4346. Washington, DC: World Bank.
- Bitran, Ricardo, and Ursula Giedion. 2003. "Waivers and Exemptions for Health Services in Developing Countries." Social Protection Discussion Paper 0308. Washington, DC: World Bank.
- Bhutta, Zulfiqar A., Tahmeed Ahmed, Robert E. Black, Simon Cousens, Kathryn Dewey, Elsa Giugliani, Batool A Haider, Betty Kirkwood, Saul S. Morris, HPS Sachdev, and Meera Shekar, for the Maternal and Child Undernutrition Study Group - 2. 2008. "What Works? Interventions for Maternal and Child Undernutrition and Survival." *The Lancet* 371 (9610): 417–440.
- Cameron, Lisa. 2002. *Did Social Safety Net Scholarships Reduce Drop-Out Rates during the Indonesian Economic Crisis?* Policy Research Working Paper 2800. Washington, DC: World Bank.
- Carter, Michael R., Peter D. Little, Trevodaj Morgues, and Workneh Negatu. 2004. "Shocks, Sensitivity and Resilience: Tracking the Economic Impacts of Environmental Disaster on Assets Ethiopia and Honduras." BASIS Research Program on Poverty, Inequality and Development, Wisconsin.
- . 2007. "Poverty Traps and Natural Disasters in Honduras and Ethiopia." *World Development* 35(5): 835–56.
- Castañeda, Tarsicio. 1998. *The Design, Implementation and Impact of Food Stamp Programs In Developing Countries*. Washington, DC: World Bank.
- Coady, David, Moataz El-Said, Robert Gillingham, Kangni Kpodar, Paulo Medas, and David Newhouse. 2006. "The Magnitude and Distribution of Fuel Subsidies: Evidence from Bolivia, Ghana, Jordan, Mali, and Sri Lanka." IMF Working Paper SP/06/247. Washington, DC: International Monetary Fund.
- de Janvry, Alain, Elisabeth Sadoulet, Pantelis Solomon, and Renos Vakis. 2006. "Uninsured Risk and Asset Protection: Can Conditional Cash Transfer Programs Serve as Safety Nets?". Social Protection Discussion Paper 0604, Washington, DC: World Bank.
- Del Rosso Joy Miller. 1999. *School Feeding Programs: Improving Effectiveness and Increasing the Benefit to Education*. Oxford, UK Partnership for Child Development.
- DFID (Department for International Development). 1999. *Learning Opportunities for All: A Policy Framework for Education*. London: DFID.
- Easterly, W. and S. Fischer. 2001. Inflation and the Poor. *Journal of Money, Credit and Banking* 33(2), pp. 160–178.
- Estupiñán, Nicolás, Andrés Gómez-Lobo, Ramón Muñoz-Raskin, and Tomás Serebrisky. 2007. "Affordability and Subsidies in Public Urban Transport: What Do We Mean, What Can Be Done?" Policy Research Working Paper 4440. Washington, DC: World Bank.
- Fafchamps, Marcel, Christopher Udry, and Katherine Czukas. 1998. "Drought and Saving in West Africa: Are Livestock a Buffer Stock?" *Journal of Development Economics*, Elsevier, Vol. 55(2), pp. 273–305, April.

- Ferreira, Francico, Phillippe Leite, and Julie Litchfield. 2007. "The Rise and Fall of Brazilian Inequality: 1981–2004," *Macroeconomic Dynamics* 21:55, pp. 1–32.
- Gangopadhyay, Shubhashis, Bharat Ramaswami, and Wilima Wadhwa. 2005. "Reducing Subsidies on Household Fuels in India: How Will It Affect the Poor?" *Energy Policy*, Vol. 33, pp. 2326–2336.
- Gannon, Colin, Kenneth Gwilliam, Zhi Liu, and Christina Malmberg-Calvo. 2000. "Transport' A Sourcebook for Poverty Reduction Strategies," Volume 2, pp. 323–369. Washington, DC: World Bank.
- Grosh, Margaret, Carlo del Ninno, Emil Tesliuc and Azedine Ouerghi with the assistance of Annamaria Milazzo and Christine Weigand. 2008. *For Protection and Promotion: The Design and Implementation of Effective Safety Nets*. Washington, DC: World Bank.
- Gwatkin, Davidson, Shea Rutstein, Kiersten Johnson, Eldaw Suliman, Adam Wagstaff, and Agbessi Amouzou. 2007. "Social-Economic Differences in Health, Nutrition and Population within Developing Countries: An Overview." Country Reports on HNP and Poverty. Washington, DC: World Bank.
- Ivanic, Maros, and Will Martin. 2008. "Implications of Higher Global Food Prices for Poverty in Low-Income Countries." Policy Research Working Paper 4594. Washington, DC: World Bank.
- Jalan, Jyotsna, and Martin Ravallion. 2002. "Household Income Dynamics in Rural China." Discussion Paper No. 2002/10. United Nations University, World Institute for Development Economics Research.
- Jukes, M.C.H., L.J. Drake, D.A.P Bundy. 2007. *School Health, Nutrition and Education for All: Leveling the Playing Field*. CABI publications, Wallingford, UK.
- Katsura, Harold, and Clare T. Romanik. 2002. "Ensuring Access to Essential Services: Demand-Side Housing Subsidies." Social Protection Discussion Paper Series No. 0232. Washington, DC: World Bank.
- Komives, Kristin, Vivien Foster, Jonathan Halpern, and Quentin Wodon. 2005. *Water, Electricity, and the Poor. Who Benefits from Utility Subsidies?* Washington, DC: World Bank.
- Lampietti, Julian, Sudeshna Ghosh Banerjee, and Amelia Branczik. 2007. *People and Power: Electricity Sector Reforms and the Poor in Europe and Central Asia*. Washington, DC: World Bank.
- Lampietti, Julian. 2004. "Power's Promise: Electricity Reforms in Eastern Europe and Central Asia." Working Paper 40. Washington, DC: World Bank.
- Lindert, Kathy, Emmanuel Skoufias, and Joseph Shapiro. 2006. "Redistributing Income to the Poor and the Rich: Public Transfers in Latin America and the Caribbean." Social Protection Discussion Paper 605. Washington, DC: World Bank.
- Lokshin, M., and M. Ravallion. 2000. "Welfare Impacts of Russia's 1998 Financial Crisis and the Response of the Public Safety Net." *Economics of Transition*. 8(2): 269–295.
- Lovei, L., E. Gurenko, M. Haney, P. O'Keefe, and M. Shkaratan. 2000. "Scorecard for Subsidies: How Utility Subsidies Perform in Transition Economies." *Public Policy Journal* No. 218
- Lustig, Nora. 2008. "Impact of an Economic Slowdown on Human Development in LAC Challenges and Opportunities." Presentation at the World Bank, May 19, 2008.
- MCDSS (Ministry of Community Development and Social Services) and GTZ 2005 "Pilot Social Cash Transfer Scheme: First Monitoring Report" Government of Zambia, Lusaka.
- Mitchell, Donald. 2008. "A Note on Rising Foods." Policy Research Working Paper 4682, July 2008, Washington, DC: World Bank.
- Neri, M. 1995. "Sobre a mensuração dos salários reais em alta inflação." *Pesquisa e Planejamento Econômico* 25(3), 497–525.
- Newbrander, W., D. Collins, and L. Gilson. 2000. *Ensuring equal access for health services – user fee systems and the poor*. Boston, MA: Management Sciences for Health.

- Paxson, Christina, and Norbert Schady. 2005. "Child Health and Economic Crisis in Peru." *The World Bank Economic Review* 19(2): 203-224.
- Pongou R., J.A. Salomon, and M. Ezzati. 2005. "Economic Crisis and Declining Child Nutrition in Cameroon During the 1990s: The Mediating Role of Household Effects." Working Paper Series, Vol. 15(2), Harvard Center for Population and Development Studies.
- Romer, C.D. and D.H. Romer. 1999. "Monetary Policy and the Well-Being of the Poor." *Federal Reserve Bank of Kansas City Economic Review*, First Quarter, 21–49.
- Rukumnuaykit, P. 2003. "Economic Crises and Demographic Outcomes: Evidence from Indonesia." Ph.D. dissertation, Department of Economics, Michigan State University.
- Saddah, Fadia, Menno Pradhan, and Robert Sparrow. 2001. *The Effectiveness of the Health Card as an Instrument to Ensure Access to Medical Care for the Poor During the Crisis*. World Bank Country Office, Jakarta.
- Schady, Norbert. 2008. "The Impact of Economic Contractions on Human Capital: Evidence from LAC and the World." Presentation at the World Bank, May 19 2008. Washington, DC: World Bank.
- Subbarao, Kalanidhi. 2003. "Systemic Shocks and Social Protection: The Role and Effectiveness of Public Works." Social Protection Discussion Paper 0302. Washington, DC: World Bank.
- World Bank. 2002. *Cities on the Move: A World Bank Urban Transport Strategy Review*. Washington, DC: World Bank.
- World Bank. 2003. "India – Access of the Poor to Clean Household Fuels." ESMAP Report 263/03, July.
- World Bank. 2006a. "Implementing Free Primary Education: Achievements and Challenges." Draft report. Washington, DC: World Bank, Education Department.
- World Bank. 2006b. *Making the New Indonesia Work for the Poor*. Report 37349-ID. Washington, DC: World Bank.
- World Bank. 2006c. *Repositioning Nutrition as Central to Development: A Strategy for Large Scale Action*. Washington, DC: World Bank.
- World Bank. 2008a. "Addressing the Food Crisis: The Need for Rapid and Coordinated Action." Background Paper for the G7 Ministers of Finance Meeting. Washington, DC: World Bank.
- World Bank. 2008b. "Global Food Crisis Response Program." Washington, DC: World Bank.
- World Bank. 2008c. "Rising Food Prices: Policy Options and World Bank Response." Background note for the Development Committee. Washington, DC: World Bank.
- World Bank. 2008d. "Rising Global Food Prices: The World Bank's Latin America and Caribbean Region Position Paper." Washington, DC: World Bank.
- World Bank. Forthcominga. *Conditional Cash Transfers for Attacking Present and Future Poverty*. Washington, DC: World Bank.
- World Bank. Forthcomingb. *Education and School Feeding Programs*: World Bank Working Paper No. XXX: Washington, DC: World Bank.
- Zaman, H., C. Delgado, D. Mitchell, and A. Revenga. Forthcoming. "Rising Food Prices: Are There Right Policy Choices?" Development Outreach. Washington, DC: World Bank.

Rising food and fuel prices may negatively impact human development in four dimensions: by increasing poverty; worsening nutrition; reducing the utilization of education and health services; and depleting the productive assets of the poor. Disinvestment by the poor in their human and physical capital will have large and lasting effects, which are well documented and quantified in the development literature. Early childhood malnutrition results in poorer health, lower cognitive abilities, less learning, and lower lifetime earnings. Children withdrawn from school in times of hardship rarely return to the classroom and families can have great difficulty rebuilding the assets upon which their livelihoods are based. Thus, losses today may be irreversible.

The impacts of increased food and fuel prices can be ameliorated if governments can provide a positive policy response—in the Human Development sectors, primarily through direct income transfers targeted to the poor, by reinforcing basic nutrition and health services, and maintaining high-quality and accessible education services. This paper summarizes in concise form guidance for programming these responses.

August 2008