

The Role of Social Safety Nets and Food Programs

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1. Introduction

In an egalitarian agrarian society, the level of agricultural productivity would completely determine the extent of food security experienced by people. However, in the highly inequalitarian less developed countries today, the poor depend on government safety nets for their food security. A flawed design of safety net can seriously jeopardize their wellbeing. In this paper, we take a close look at safety nets in several Asian countries designed with food security of the vulnerable sections in mind. Our objective is to see if lessons can be drawn from the strengths and weaknesses of the programs in different countries that would be beneficial to all.

The set of countries that we look at are: Bangladesh, India, Indonesia and Philippines. These are some of the most populous countries in Asia. There is some commonality as well as many differences in the types of safety nets tried in these countries involving both in-kind and cash transfers. We will try to explore the different types of inefficiencies associated with different safety net programs such as targeting errors and fraud. Targeting errors refer to errors of excluding those that should be included and including those who should not. We will examine such outcomes with an eye to draw some lessons for improving the design of safety nets.

One thing to keep in mind is that it is poverty that causes food insecurity for the poor. Any income transfer to the poor would help alleviate food insecurity. We should therefore not restrict our attention only to the programs involving transfer of food. Conditional as well as unconditional cash transfer programs work toward the same end. The other side of the coin is that to the extent that a beneficiary of an in-kind (subsidized food) transfer can shift her expenditure to other items, she can make the same choices as under an equivalent cash transfer. The key difference between the two systems that would be of interest may be in examining which system involves less corruption, waste and leakage.

In Section 2, we will give a brief account of the main safety net programs tried in each country starting with Bangladesh. In Sections 3 and 4, we will examine the inefficiencies of these programs – first, the targeting errors and then the extent of fraud and excess costs. In Section 5, we will discuss the impact of these programs on the food consumption of the intended beneficiaries. Section 6 will discuss the reservations the critiques have about cash transfers and the last section will have the concluding comments.

2. Country Experiences

Bangladesh

Like India, Bangladesh, at independence, inherited a food rationing system from the colonial government. The system involves obtaining supplies through domestic procurement and imports and distributing it to consumers in rationed quantities and at subsidized prices. Unlike India, however, Bangladesh has moved away considerably from this kind of safety net.

Till the early 1990s, one segment of distribution was reserved for government employees and to the armed forces. Among the programs meant for the general population, the most important was Palli rationing that distributed supplies to rural consumers (Ahmed, 1992).

Starting in the early 1990s, Bangladesh has shifted food supplies from the subsidized sales channels to food transfers that are tied to specific programs that target particular categories of households (Ahmed, et.al, 2010). Palli rationing and the distribution to government employees have disappeared. Subsidised sale to the armed forces is now the biggest component. Open market sales meant to stabilize prices is the other component.

Nearly half of the food transfers now occur as in-kind wage payments in public works programs (Food-for-Work and Test Relief). As the work to be done is manual labour, these programs are expected to be self-targeting.

Other important transfer programs are the Vulnerable Group Development and the Vulnerable Group Feeding program. The Vulnerable Group Development program is targeted to poor woman and provides a monthly food ration for two years. This is part of a package of which the other components are training on income-generating activities, information on social, health and nutrition issues and instruction in basic literacy and numeracy. The Vulnerable Group Feeding program is a relief program to help the poor during natural disasters. Bangladesh used to have a Food for Education program under which households received monthly foodgrain rations if they sent their children to primary schools. However, this has been replaced by a cash-based Primary Education Stipend program. Bangladesh also has a school feeding program that distributes micronutrient-fortified energy biscuits to primary school children.

In the period 2001/02-2005/06, the government distributed 1.4 million tons of rice of which the bulk of nearly 1 million tons were distributed through transfer programs discussed above. In 2009, the country distributed 2 million tons as against a production of 32 million tons. Thus, the country barely distributes about 6% of its output. In contrast, in India, the government procures and distributes about a third of the output. Bangladesh's portfolio of safety net program (including subsidized sales and other transfer programs) covered about 27% of the population against a head-count ratio of poverty of 40%. Even with perfect targeting 32% of the officially poor would be excluded from safety net programs. Yet even such a modest level of spending amounted to 2.8% of GDP. Clearly, resources are a major constraint to the expansion of safety nets in Bangladesh.

Bangladesh has used cash transfers either in conjunction with food transfers or by itself in some of its programs. An instance of the former is the Vulnerable Group Development program. On the other hand, the Rural Maintenance Program provides only cash transfers in the form of wages to women participating in training for income-generating activities.

India

In India, the central and state governments together run a marketing channel (called the Public Distribution System or PDS) solely devoted to the distribution of the subsidized foodgrain. At the retail level, this involves a network of "Fair Price Shops" (FPS) which sell subsidized grain to consumers. Subsidized grain is not accessible elsewhere. The FPS is usually run by private agents who receive a fixed percentage as commission for their efforts. The FPS is often restricted to sell only subsidized grain. The Central government is responsible for procurement, storage, transportation and bulk allocation of foodgrains to different states. The state

government is responsible for transporting and distributing the grain within its boundaries through the network of FPS.

Grain sales occur at a fixed price called the 'issue' price that is typically lower than the market price. Two conditions govern the sale of subsidized grain. First, the buyer of grain must possess a 'ration card'. Second, grain purchases are subject to a quota. The public distribution system is supported by a procurement operation that procures and funnels supplies to the PDS. Through the Food Corporation of India (FCI), the government procures grain at the 'procurement' price and then stores and transports it to the various consuming locations.

The food subsidy arises from government procurement and distribution of two commodities: wheat and rice. In the 1970s, the food subsidy averaged about 0.45% of GDP. It rose to 0.54% in the 1980s and was at about the same level (0.52%) in the 1990s. In the 2000s (upto 2007/08), the food subsidy has averaged 0.8% of GDP and about 7.5% of tax revenues of the Central government. It should be noted that there are some states of the Indian Union that offer food subsidies beyond the parameters of the Central government scheme. The additional expenditure is borne by those states and not included in the food subsidy numbers.

Since 1997, food subsidies are targeted. Subsidies depend on whether the household is classified as above poverty line (APL), below poverty line (BPL) or poorest of the poor (POP) identified by the Antayodaya Anna Yojana program. The list of BPL beneficiaries is prepared through a separate BPL census. In the latest census of 2002, households received scores based on 13 criteria. The BPL households were identified as those who fell below a cut-off score (which was decided by the respective state governments). If the total of BPL identified households exceeds that which is estimated by the Central government, the subsidy on the excess households has to be borne by the State government.

In recent years, India's food policy and its institutions have been repeatedly challenged. The stunning growth of the economy in the 2000s has not been accompanied by commensurate improvement in indicators of poverty and nutrition. Politically, such dissatisfaction has taken the form of a promise of a 'right to food' by the United Progressive Alliance (UPA) that returned to power in India's general elections of 2009. This campaign promise has now seen the introduction of a National Food Security Bill in the Parliament. The run-up to this bill has been contentious as the government advisors, media and the independent experts debated alternatives that can effectively deliver the right to food.

Besides the in-kind food subsidy, India also has a cash transfer program in the form of public works (NREGA). This program is limited to rural areas. It is not targeted; however, a rural household is limited to 100 days of employment. The employment offered is manual labour in various sorts of construction projects such as roads, water ponds, small dams and watershed projects. The program size is about 0.05% of GDP. Cash payments are made through post-offices or banks. A much smaller cash transfer program is the old age pension scheme where individuals above the age of 65 and belonging to BPL households receive Rs. 200 per month.

Indonesia

Indonesia's Raskin program provides subsidized rice to households. The state agency Bulog purchases rice from farmers and delivers it to regional distribution points. Each identified household is eligible to receive a maximum of 14 kg per month at Rp 1600 per kg. The subsidy

is equivalent to about 11% of household expenditure and it amounts to 30-40% of household rice consumption (between 35-45 kg of rice).

In 2010, Raskin supplied 3 million tons to 17.5 million households as against a production of 35 million tons and imports of 3 million tons. Thus, Indonesia subsidy program accounts for about 8% of supply.

The rice subsidy program is one of many social assistance and safety net programs. Besides Raskin, the other two prominent safety net programs have been BLT (an unconditional cash transfer program) and Jamkesmas involving free provision of in and out-patient care to households at hospitals and primary health centres. The BLT program is not ongoing. It is pressed into operation for limited durations to compensate poor households for cuts in fuel subsidies. There have been two rounds of such transfers.

BLT was first introduced for one year starting October 2005 to enable households to cope with fuel price increases (cuts in fuel subsidies). It covered 19 million households and identified households in every part of the country received Rp 100,000 per month in quarterly installments through the post office network. Following another round of fuel price increases, the program was relaunched in 2008 for a period of 9 months with once again monthly benefit of Rp. 100,000.

There are several smaller programs such as cash transfers to public school students from poor households, and cash transfers to the elderly, the disabled and to youth. Indonesia's expenditure on targeted. Among the smaller programs is a conditional cash transfer program - the PKH which is a pilot project providing cash transfers conditional on locally provided health and education services. Cash transfers range from Rp 600,000 to Rp 2.2 million per year depending on the number of qualifying dependents. The transfers are delivered 4 times a year. Conditionalities are a mother's attendance at pre and post-natal checkups, a professionally-attended birth, new born and toddler weightings and health checks and attendance records of school aged children. In 2011, PKH reached 800,000 "extremely poor" households in 25 out of 33 provinces and 118 out of 497 districts.

According to the World Bank report, Indonesia's expenditures on household based social assistance programs (described above) was about 2.6% of all public expenditure in 2010. This is about 0.5% of GDP. In years when BLT was offered, this proportion was higher (upto 1% of GDP). Developing country average is between 1 to 2% of GDP (depending on definition of SA)

In 2010, BLT was not offered and Raskin was the biggest social assistance program accounting for about 53% of such spending (followed by Jamkesmas). In years it was offered, BLT was sizeable - accounting for 60% of social assistance expenditure in 2005 and 40% in 2008. Spending on conditional cash transfer (CCT - PKH) is small - it is about 4% of social assistance expenditure. All of these are Central programs. Local government spending on social assistance is mainly towards salaries to support these national programs.

The official target population for the largest programs – Raskin, Jamkesmas and BLT - are households with a per capita consumption below around Rp 250,000 per month. This represented 12.1 million households or 21% of all households in 2010. The target population represents more than just the officially defined 'poor' as only 12.5% of households lived below the poverty line of Rp 233,700 per person per month (\$1.19 per day in PPP).

Philippines

Philippines has a long history of government-run social safety net and food programs, partly to reduce the impact of high commodity prices on the poor. Food accounts for close to 40% of the CPI basket and food inflation raises the vulnerability of the poor. Sluggish economic growth in the Philippines over the last decade has been accompanied by stubbornly unwavering poverty. New estimates based on official poverty data show that after a discernible fall in poverty incidence from 33.4% in 1991 to 24.9% in 2003, there was a jump to 26.4% in 2006. Since then poverty has remained at 26.5% as seen from 2009 data.¹

The social protection programs of the government can be classified into three categories: (1) contributory social insurance programs; (2) non-contributory social welfare programs and social safety nets programs, and (3) active labor market programs (Manasan 2009). Our focus is on the second category that covers non-contributory transfer programs aimed at helping the poor and vulnerable cope with poverty and income and expenditure shocks. This includes food subsidy programs, feeding programs, cash and in-kind transfers, workfare programs, micro-finance programs, and livelihood/self-employment programs.

In 2009, the Philippines' social protection system comprised of over 60 programs, implemented by more than 20 agencies. When the food, fuel and financial crisis struck, NFA's rice price subsidy program, by far the largest food program in the country, accounted for over 70% of the total social protection budget. This shows the government's emphasis on food as a major means of survival.

The main food subsidy program in the country began with the establishment of the National Food Authority (NFA) in 1981. While, initially, the agency's mandate included the sale of grains and non-grain commodities at subsidized prices, rice is now the major focus of the food subsidy program. Rice is a commodity with prime economic and political importance. Rice accounts for 8.9% of the CPI basket, 23% of agriculture's gross valued added and over 2% of GDP. As a staple food, rice accounts for almost 50% of the average calorie intake of the population and over 30% of food expenditures of poor Filipino households.

Rice is also a politically important commodity as it involves various stakeholders pursuing their own interests in the different stages of production, processing, distribution, and consumption. The political sensitivity of rice stems not only from the fact that changes in its price affect the welfare of producers and consumers but also because there is a sense of national pride attached to the achievement of self-sufficiency in rice production (Tolentino, 2002). Given all of these factors, rice has been at the center of agricultural policies. The rice subsidy policy is, therefore, a component of a larger national food security agenda which has the objective of self-sufficiency in rice and corn. Today, the NFA is given the task of ensuring food security of the country and stability of rice price.

Yet, in practice, the self-sufficiency objective has eroded and the country became a regular and growing rice importer starting in the mid-1990s. From 0.3 million metric ton (mmt) in 1995, imports ballooned to 2.4 mmt in 2010 before declining to 0.71 mmt in 2011. The imports in turn have created a disincentive for farmers who find it difficult to compete with heavily subsidized imported rice. Among the ASEAN-5, only the Philippines has experienced chronic agricultural trade deficit although it belongs to the top 10 producers of milled rice.

¹ The government's massive investment in social services in recent years may show improved poverty estimates based on the latest round of Family Income and Expenditure Survey.

The NFA rice subsidy program is, in principle, universal. However, the geographic distribution of NFA rice is not sensitive to poverty incidence. It is distributed more in NCR which has the lowest poverty incidence among the regions (Manasan, 2009). The country has launched smaller programs to target deprived groups. The Tindahan Natin Program (TNP) uses geographical targeting to channel supplies. The locations of the stores are determined based on the Food Insecurity and Vulnerability Information Mapping System (FIVIMS). Another targeting initiative was to entitle only low income households in the Metro Manila region to the cheaper NFA rice. This initiative came about as a response to the unusual global spike in rice prices in 2008. The country also has school feeding programs. The Food for School program provides 1 kilo of rice to students for each day that they are present in school. The beneficiary households are those with Grade 1 children in public elementary schools or with children studying in accredited day-care centers. There are also breakfast feeding programs in select schools for children in grades 1 and 2.

The *Pantawid Pamilyang Pilipino* Program (4Ps) is the country's key CCT program. Beginning in 2007 with a pilot of 6,000 households, its coverage was rapidly expanded to 666,000 households to address the food, fuel and financial crisis in 2008-2009 and to 1 million households by 2010. Designated as the core component of the country's social protection system to reduce poverty to 16.6% by 2015, the CCT program is being further scaled up and was targeted to reach 2.3 million households by the end of 2011.

The program grants P300 per child (maximum of 3 children) per month during the school year provided that the children attending day care centers and those aged 6-14 years old attending elementary or high schools attend at least 85% of the time. The annual amount of transfer given to households is P3000 per year to those with one child up to P9000 per year for those with 3 children. Parents receive their allowance through ATM machines of the Land Bank of the Philippines.

The CCT program's success is perhaps reflected in the fact that net enrollment rates in kindergarten, elementary and secondary levels have all increased from 2009 to 2011. To finance the continuation of this program, some 7.5% of the total increment in the national government expenditure program in 2012 went to social security, labor/ employment and other social welfare services. In particular, the budget of the Department of Social Welfare and Development (DSWD) was increased by 44%. A large part of this increase was earmarked to the CCT program (formerly known as the 4Ps), whose allocation increased by 86% over its 2011 level to fund an expansion in the number of beneficiary families from 2.3 million by the end of 2011 to 3 million by 2012.

3. Targeting Performance and Environment

Most countries intend their programs to reach the poor. In this sense, they would like their programs to be targeted. However, in practice, programs are subject to both inclusion and exclusion error.

In Indonesia, 71% of the bottom three deciles received Raskin benefits while it was 45% for the cash transfer program BLT. Thus exclusion error was lower for Raskin; however inclusion error is highest for Raskin as well. About 70% of beneficiaries were non-target. Inclusion error in BLT was less than 60%. The targeting errors of Raskin is not just because of errors in design. Even when households are correctly identified, the task of distributing rice is left to local communities. These villages and communities distribute the rice as they see fit, often sharing

equally among all or nearly all households. This could be seen as the power of local elites in bending the targeting rules to their advantage; on the other hand, it could also be that local communities believe targeting to be divisive and therefore prefer equal sharing.

The NFA distribution of subsidized rice in the Philippines is not targeted. Thus, we would expect that it would have a high inclusion error and a low exclusion error. Data, however, shows that while inclusion error is indeed high, so is the exclusion error. In the Philippines, the inclusion error of the NFA rice distribution program was 65% in 2009. Despite the program not being targeted, the exclusion error was 52%.² The inclusion errors were particularly high in the urban areas (81%); correspondingly their exclusion error was also lower (44%). The reason seems to be that the allocation of rice under the program is biased against the poorer regions of the country.

In India, the inclusion error was 70% in 2004/05. Inclusion errors are higher in rural areas. The proportion of poor who used the food subsidy system was low – only about 30%. Thus the exclusion error was 70%. There was no difference between urban and rural areas. Some of the exclusion happened because of targeting error where some of the poor were deemed to be non-poor and therefore rendered ineligible to receive subsidies. Only about 40% of the population that were poor (according to the official poverty line) were correctly identified as poor and eligible to receive subsidies (Jha and Ramaswami (2012)). Some of the exclusion happened because even when some of the eligible poor households chose not to participate in the program. This was true for nearly 40% of those who were poor and eligible. Thus the factors other than eligibility are also barriers to participation. The distance to the authorised retail outlet, the timings of this retail source and the quality and quantity of grain have all been factors that deter participation.

Bangladesh's Palli rationing program was targeted to low income households in rural areas. While no national statistics are available on targeting errors, a survey by Ahmed (1992) of 8 villages in 1991 showed that 21% of subsidized rice leaked to households that did not meet the targeting criteria. The same study quotes interviews to document inclusion and exclusion errors but presents no estimates. Ahmed et. al (2010) claims that the heavy leakage to the nonpoor in the Palli rationing scheme was one of the reasons why the program was abolished and the emphasis of safety nets shifted to food transfer programs tied to public works, education and women. Yet these safety net programs are also characterized by high errors of inclusion and exclusion (Shawkat Ali et.al, 2003).

The country experiences are striking in revealing the lack of success of targeting efforts. Is this because of poor design? Could more information and a better data base resolve this problem? The application of a better methodology can surely help. However, it may also be that the task of targeting in poor countries is intrinsically difficult.

First, the definition of the target group in poor countries is a difficult task. This is because of the large mass of the population which is bunched just above the poverty line. In 2004/05, the proportion of population below the poverty line was 27.5% in India. In the same year, the proportion below twice the poverty line was nearly 80%. Similarly, in Indonesia, while only 12.5% of households lived below the poverty line, 24% lived below 1.2 times the poverty line, 38% lived below 1.5 times the poverty line and 60% below twice the poverty line.

² These figures constitute an improvement in exclusion error since 2006 when it was 75%. However, the inclusion errors have increased from 48% in 2006.

As the poverty lines measure at best basic levels of subsistence, it is not clear at all whether a person just above the poverty line should be deemed not worthy of support when a person just below it receives support. These dilemmas may be less acute in more affluent countries (including Latin America) where the poor are small minorities. An additional problem is that households may drift in and out of poverty status. In Indonesia, research has documented high rates of entry into and exit from poverty. According to the World Bank, the poorest 40% have at least a 10% probability of falling below the poverty line in the following year. In the end, fiscal sustainability often dictates the size of the subsidy and the coverage.

Perhaps even more problematic is the identification of the target group. Even if the target group is defined (perhaps according to an income threshold), implementing it through means testing as done in the rich countries is impossible. Much of developing country employment is characterized by the absence of formal contracts, salary records and tax payments. Therefore, the identification of poverty status depends on proxy indicators of land ownership, habitation, type of housing and social characteristics. Since it cannot be expected that these would perfectly correlated with poverty status defined by the official poverty line, proxy means testing would always be subject to error.³ The other method employed in targeting is to use community assessments of who is poor to leverage local information. This, of course, makes targeting vulnerable to elite capture.

The Indian case is an illustration of the difficulties of targeting. Of all the households who received subsidized food eligibility cards, 68% in rural areas and 52% in urban areas are not poor. This suggests that inclusion errors are serious in the distribution of subsidy eligibility cards. However, only 30% of rural households and 22% of urban households with subsidy eligibility cards are those with per capita consumption expenditures above 1.5 times the poverty line. Therefore, many of the non-poor with subsidy eligibility are those with per capita expenditures just above the poverty line.

The problem with targeting in India is not so much that grossly ineligible households have been counted in but that many deserving households have been left out.

The neglect of exclusion error can sometimes lead to misleading assessments of targeting. From a meta-survey of targeted programs, Coady, Grosh and Hoddinot (2004) conclude that with all its errors, a proxy based means testing offers significant improvements in targeting. However, this conclusion is entirely based on looking at the share of the poor in the total subsidy as a measure of targeting performance. Such a measure is inversely correlated with the inclusion error. However, as it does not take into account exclusion errors, a program with sizeable exclusion errors could still do well with regard to the share measure of targeting.

4. Fraud and Excess Costs in Food Subsidy Programs

The leakage of subsidies to non-target groups is by, no means, the sole or even the dominant reason why the target group does not receive the entire subsidy expenditure incurred by the government.

³ Jalan and Murgai (2006) show that the proxy indicators used in India to arrive at a census of poor households in 2002 were unable to differentiate between extremely poor and not so poor households. Enlarging the set of proxy indicators to include other household characteristics did not help much possibly because of the bunching of households around the poverty line.

In his review of the Bangladesh rural distribution of subsidized food (Palli rationing), Ahmed (1992) noticed that rice does not reach the targeted group either because of claims from non-targeted consumer households or because of claims from other stakeholders in the distribution chain. As rice in the open market is priced higher than in the government distribution channel, gains can be realized by illegally transferring the grain meant for target group households to market sales. In the Ahmed study, such transfers accounted for 80% of the leakage of rice (defined as the difference between the target group's household entitlement and its rice receipts). The remainder leakage occurred because of distribution to non-target households.

The difference between rice distribution and household purchase is sizeable in other countries too. In Indonesia, household purchases were only one-half of rice procurement in 2008. It was even worse in 2009 when the ratio dropped to one-third. Further even for the diminished quantity of purchases, the price paid by households is approximately 60% higher than the officially stipulated prices. In India and in the Philippines, more than 50% of subsidized grain supplies was lost to illegal diversions in the mid-2000s. A more recent estimate for India puts the leakage at 41% for India.

Jha and Ramaswami (2012) consider an additional source of leakage: that of excess costs by state agencies relative to the private sector. These excess costs may arise partly because of government mandate because of which it may higher prices for grain (relative to the private sector) or pay higher wages to its employees and partly because of inefficiency. Incentives to control the latter are absent when the government's reimbursement to the state agency occurs on a cost plus mark-up basis. A simple way to measure such costs is to compare the costs of the state agencies with a suitable market price.

Jha and Ramaswami showed that around the mid-2000s, income transfer to all households (including the poor) accounted for only about 30% of subsidy expenditure in India and for 34% of subsidy expenditure in the Philippines. The remainder and the bulk of subsidy expenditures were lost to illegal arbitrage and excess costs.

There could be several policy responses to these large losses in subsidy expenditure. One sort of response is to invest in better policing of the distribution chain. Computerization of the supply network and movement of grain could help. Reforms of this sort have been tried in a few states within India. Such policies require sustained political and bureaucratic commitment to the supervision of the supply chain and it is not clear that this is replicable by other states. Another option is to insist on reliable authentication of retail transactions with the use of smart cards and/or biometric identification. Such authentication would make it difficult to divert grain from genuine beneficiaries. A third sort of response, like that of Bangladesh, is to move away from food subsidies and invest instead in other programs directed towards categories such as women and children. Finally, a fourth policy response, like in Indonesia and the Philippines, can be to move away from in-kind transfers and to begin programs of cash transfers.

5. Effects of Subsidy on Food Consumption

A common objection to cash transfers is that it does not explicitly privilege the goal of increasing food consumption of the poor. The economics case for cash transfer is that it allows people to make their spending decisions themselves. However, this is exactly what bothers the opponents of cash transfers. To them, it is not self-evident that individual decisions are made wisely. The goal of food subsidy is to increase food intake and improve nutrition. This is furthered only by the supply of food and not cash which can be dissipated in various ways.

Paternalistic arguments are particularly appealing when cash transfers are received by men who use it for their self-interest rather than that of their families. The argument is that "men will use the cash for alcohol and cigarettes". There is anecdotal evidence that some money from cash transfers is diverted to undesirables such as alcohol. One of the problems in coming up with empirical evidence regarding this phenomenon is that it is very unlikely that, in surveys, people will report alcohol purchases from cash transfers. However there have been certain studies that have tried to get indirect evidence. In Somalia, for example, a post-transfer monitoring team conducted interviews with qaat (a kind of drug) traders to see if there had been any increase in sales following the cash distribution. The team found that: "there were no reports at the household level of cash use for qaat purchase. Focus group and key informant interviews showed that although there did appear to be a short-lived increase in business for qaat dealers, this reflected the circulation of cash among the business community rather than a usage among drought-affected vulnerable pastoralists" (Narbeth 2004).

The overwhelming evidence has been that cash transfer programs work and recipients do spend the cash received on necessary goods (Harvey, 2005). Most recently, Cunha (2010)) used a randomized controlled trial in rural Mexico to compare the benefits of in-kind transfers with those of cash transfers and found that in-kind transfers did not result in better outcomes than cash transfers though they entailed 20% more administrative costs. Cunha concludes:

"Importantly, households do not indulge in the consumption of vices when handed cash. Furthermore, there is little evidence that the in-kind food transfer induced more food to be consumed than did an equal-valued cash transfer. This result is partly explained by the fact that the in-kind transfer was infra-marginal in terms of total food. However, the in-kind basket contained 10 individual items, and these transfers indeed altered the types of food consumed for some households. While this distorting effect of in-kind transfers must be a motivation for paternalism, households receiving cash consumed different, but equally nutritious foods. Finally, there were few differences in child nutritional intakes, and no differences in child height, weight, sickness, or anemia prevalence. While other justifications for in-kind transfers may certainly apply, there is minimal evidence supporting the paternalistic one in this context".

Cunha's findings point to the fact that different ways of directly transferring food subsidy (in-kind of cash) have one thing in common – the subsidy transferred ends up becoming fungible. This contests the assumption of paternalistic arguments that in-kind transfers make people consume more food than they would with an equivalent value of cash transfer.

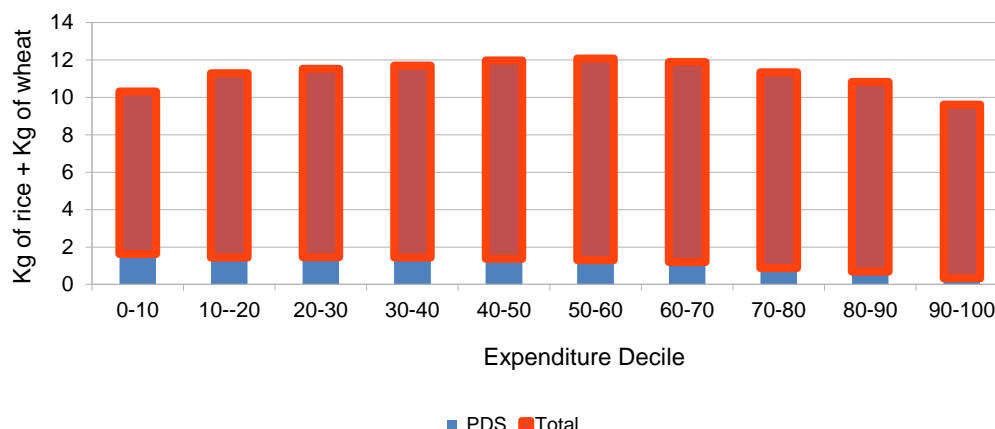
In economic theory, the paternalistic assumption is valid only if (a) the in-kind transfer cannot be re-sold and (b) the transfer (i.e., the provision of food) is larger than what the household would voluntarily consume in its absence. If either of these is violated, the in-kind transfer is equivalent to a cash transfer in terms of impacts on consumption choices. The first condition is obvious: without it, the in-kind transfer would be freely transacted and would be equivalent to a cash transfer.

To see the force of the second condition, consider Figure 1. It shows for India the monthly per capital consumption of rice and wheat for different expenditure deciles of the population. In this figure, 0-10 is the bottom most decile of the population when ranked by expenditure. The average consumption of rice and wheat for every person in this decile is little about 10 kg per month of which the PDS supplied a little less 2 kg. Similar interpretation attaches to the other bars. It is clear that the second condition is violated.⁴ Even if the subsidy transfer were to

⁴ That is to say that if the subsidy was discontinued, per capita grain consumption will not drop below 2 kg per month

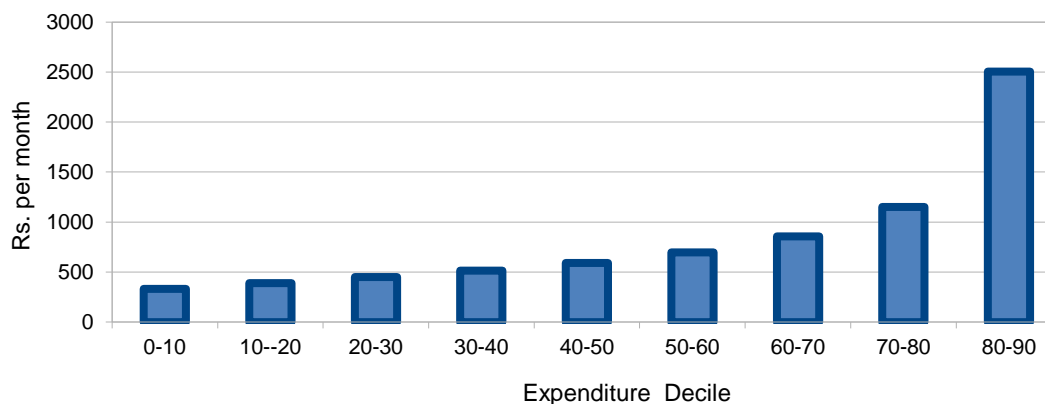
increase 7 kg per person (as proposed in the food security act), it would still fall short of what households purchase anyway. So even though it is an in-kind transfer, households save the money that would have been used to buy food to purchase other commodities. The point is not that in-kind transfers will not increase food intake but that the impact may well be no different from that of a cash transfer.

Figure 1: Per capita grain consumption,PDS and total, 2004/05



In fact, it is likely that whatever be the form of subsidy, the effect on grain purchases will be small. Figure 2 shows the average total consumption expenditure per person within each of these deciles. From both these figures, it is clear that despite wide differences in total consumption expenditure, the amounts of wheat and rice purchases do not differ that much between the rich and the poor. As the poor become better off, the major impact of their expenditures will be not on grain intake but on other foods and other commodities.

Figure 2: Per capita consumption expenditure by Expenditure decile, 2004/05



An example of the fungibility of food subsidies comes from the work of Jensen and Miller (2011). In two regions of China, they offered subsidies on the purchases of the basic staple (rice in Hunan and wheat flour in Gansu) to randomly selected poor households for a period of 5 months. Households were given vouchers that could be redeemed at local grain shops. Households were not permitted to resell the vouchers or the goods purchased with the vouchers. They found no evidence that subsidies increased the consumption of the subsidized staple. What happened was that households altered their consumption patterns to improve the taste of their diets. In Hunan, in response to the rice subsidy, poor households moved away from the basic diet of rice, bean curd and cabbage (and spinach) in favor of fish. In Gansu, where wheat was subsidized, households did not increase the consumption of wheat but added more edible oil to their diet. The point that even desperately poor people might pass up on buying cheap calories from staples in favor of tastier food and other spending such as on festivals and celebrations is emphasized by Banerjee and Duflo (2011).

The fungibility of transfers means that it is exceedingly difficult for the society to make sure that the poor utilize the aid they receive for the intended purpose of nutrition. For example, if they are sold food at subsidized prices, it is quite possible that they spend the savings thus incurred on whatever gives them greatest pleasure. This need not be frivolous expenditure. Every household has its own priorities and if a particular household decides to buy a cell phone instead of improving their food basket, it may very well be that they feel a stronger need for that phone than for more calories. In short, there is a limit to the control that a society can exercise over individual lives (Banerjee & Duflo, 2007, 2011).

The implication is that both in-kind transfers and cash transfers are essentially means of income support. When that is the case, the task of policy is to find the best mechanism for income support. Paternalism goals are irrelevant because they cannot be achieved anyway.

Between the extremes of in-kind transfers through government procurement and direct cash transfers are other intermediate models. A well known model is the food stamps system of the United States. Here, beneficiaries are given stamps or coupons of fixed monetary value which are then redeemed in stores.⁵ The stamps can be redeemed for only permitted foods. The resale of stamps and their use as general currency is prohibited. The supposed virtue of such 'restricted' cash transfer systems is the paternalism goal of boosting food consumption. However, if such effects are negligible or absent, then the appeal of hybrid models is not clear. Compared to a cash transfer system, a food stamp/coupon model is more demanding. The additional requirements are systems of redemption at stores and the reimbursement of stamps by the government. In addition, it would also be necessary to audit and enforce the legitimate use of stamps.

6. Issues with Cash transfer programs

Poor countries have to deal with three major issues regarding cash transfers. First, is it even feasible? Is there an infrastructure for cash payments? Second, would it be subject to fraud? How can systems be designed to minimise the possibility of theft. Third, should cash transfers be conditional?

A cash transfer system is constructed on two pillars: a payments system to distribute the cash and an authentication system to verify that the transaction is with the intended beneficiary.

⁵ Paper stamps have now been replaced by debit cards.

Conventional payment systems are brick and mortar banks and post offices. By definition, such infrastructure is not well developed in the poor remote areas of low income countries. This has been a barrier to the use of cash transfers.

Computerization of financial systems and the use of internet and mobile devices have broken through this impasse. Africa leads the world in the use of mobile phones to transfer cash. It has allowed urban migrants to remit money to their families still living in urban areas. Effectively, any retailer is potentially a point for banking transaction.

In the Philippines, the principal method in the payment of CCT grants is to pay it directly to bank accounts of beneficiary households (in the Land Bank of the Philippines) which are then accessed through cash cards or ATM cards. In cases where this is not feasible, cash grants are provided via over-the counter transactions from the nearest Landbank branch or offsite payment centre of this bank. Other important channels are rural banks, the post office and Globe Telecom Remittance Centers.

In India, the cash payments in the public works program are directly credited to post office accounts of the beneficiaries. Post offices have the advantage of reach even in the remote areas. However, they lag in the adoption of automated payment systems and therefore payments often get delayed. The other alternative which has also been explored are payments via bank accounts. Bank payment systems are faster; however distance to banks is a deterrent. Portable ATMs is a way to provide “last-mile” connectivity. A deeper issue is whether such services can be provided at a reasonable cost.

Another objection to cash transfers on practical grounds is that food prices fluctuate and a commitment to the poor in terms of a certain quantity of food per person cannot be maintained very easily. In principle, cash transfers can be indexed. It is, of course, expensive to adjust the subsidy amount too frequently, and the cost of not adjusting it frequently enough will be borne by the poor⁶. The Indonesian education stipend program is not indexed and this erodes its real value over time.

The issue of fraud has to be addressed by an authentication system that verifies that the transaction is with the intended beneficiary. Authentication systems require verification of the identity of the beneficiary. In a digital system, this can be done through a user supplied numeric code or password. More secure systems rely on biometric identification. India has a nation-wide project to store biometric data about its residents. In applications to the delivery of public services, it can be used by the service provider to verify the identity of the recipient. This does require biometric scanners. However, they are easily built into the portable internet enabled devices used for recording transactions.

While reliable authentication systems would prevent outright theft, it is not clear *a priori* that they would prevent tips and other sorts of unofficial deductions from the payments due to beneficiaries. In the Indian public works programs, it is acknowledged that “small” deductions are the norm. Deductions are also the norm in Indonesia. 50% of those who received unconditional transfers (BLT) in its second phase reported some deduction (as against only 10% in the first phase of BLT in 2005). Similarly, the median deduction may have increased to nearly half the disbursement in 2009 as against only 10% in the first disbursement in 2005. These deductions go to the payment intermediaries such as post office agents. The issue of

⁶ Of course, the shortfall this month can be added to the amount sent to the consumer next month. In addition, the market prices can go down as frequently as they go up and so over a long time it can be a wash.

corruption does not figure in the Latin American literature on CCTs possibly because of good payment systems and also higher levels of awareness among the beneficiaries.

Conditional cash transfers have been widely used in many Latin American countries. Here cash transfers are conditional on attendance in schools and health clinics. Program benefits are designed to contribute to long-term human capital development and to immediate poverty relief. These benefits are in effect like negative user fees that was paid instead of charged to program participants who attended schools or visited clinics. Evaluation studies suggest that the majority of program benefits accrued to poor families, and that the program made significant contribution to health, nutrition, education, and poverty outcomes. As expected, a major implementation challenge has been the identification of target beneficiaries. Another challenge has been in assuring timely payment of benefits. Other issues involved the complexity of keeping the list of eligible households up to date; and monitoring the effectiveness and integrity of the procedures used to identify and pay beneficiaries.

Is conditionality necessary? Conditionality can be a useful targeting mechanism as in the case of food for work programs where food subsidy is conditional on the person working at the public works program or the school feeding programs where food subsidy is conditional on the child attending school. The work requirement acts as a self targeting mechanism. However, this creates a bias against certain segments of the population especially those families with elderly and children who are not physically capable of working but nevertheless poor.⁷ In the CCTs seen in Latin America, the conditionality is of a different form – relating to the use of social programs of education and health. The applicability of these conditions in the Asian context has to be judged with reference to the availability of such infrastructure.

7. Summary of findings and concluding observations

Sustained rise in food prices and their volatility has brought to the fore the need for strong food-based and other social safety nets to protect the poor who are the most vulnerable and the least prepared to respond to food crises and other economic shocks. In this paper, we examine the design and performance of safety net programs such as cash and in-kind transfers, nutrition programs and public works programs in Bangladesh, India, Indonesia and the Philippines with a view to discerning common design elements for success.

The largest food-subsidy programs in Bangladesh, India (Public Distribution System), and Indonesia (Raskin program) are targeted with fixed quotas for beneficiaries who include different categories of the poor, ultra poor and other vulnerable classes. The subsidized sale of rice by the National Food Authority (NFA) in the Philippines is universal and, following the global food crisis, it accounted for over 70% of total social protection expenditure in 2009. Through their second largest avenue for food-based support, Bangladesh and India also transfer food via public works programs as payment in kind. All the four countries run other food and cash transfer programs as well, which are targeted at poor households or poor regions, women, and school children, among others.

While India's food program secures its food supplies largely through domestic purchases from farmers, the Philippines mainly relies on imports, and Bangladesh and Indonesia use a

⁷ Food for work programs are also likely to be more costly to implement than a cash transfer because it requires managements and other resources to create productive work.

combination of the two. Bangladesh distributes about 6% of its rice output, India procures a third of its rice and wheat production, Indonesia's rice distribution accounts for about 8% of its total supply from production and imports, and Philippines procures just about 1% of its output whereas its imports amount to between 10-15% of rice production. All the countries except Indonesia also indulge in open market sales to stabilize prices. The spending on these safety nets is close to 3% of GDP in Bangladesh, about 1.5% in India and barely 1% in Indonesia and the Philippines; small in relation to both developing and industrial economies (e.g., 19% in the EU and 9% in the US).

Whether targeted or not, most governments aim to reach the benefits of safety nets to the poor. Their performance can be viewed in terms of people covered, food provided and income support passed on through subsidy. Only between 45-70% of the poor access various programs in India, Indonesia, and the Philippines whereas as many as 65-70% of beneficiaries are from non-target groups. (Corresponding figures are not available for Bangladesh.) Considering the accrual of program benefits, barely 30-35% of subsidy expenditure in India and the Philippines reaches poor and non-poor households combined. In Bangladesh's Palli subsidy program of the 1990s to supply subsidized rice to rural poor, which has since been abolished, over a fifth of the rice leaked to non-target groups. In Indonesia, while beneficiary households paid 60% more than the stipulated subsidized price, only half the procured rice reached them in 2008, which declined to just a third in 2009 as the food crisis hit. In India and the Philippines, close to half the rice allocated for subsidized distribution found its way out of the system.

The across the board failure of targeting in the four countries prompts an examination of the underlying factors. The reasons vary across countries. Rice from the Raskin program in Indonesia is equally distributed among all households by local authorities who are given the charge of distribution, thus bringing in an element of leakage by design and providing an avenue for elite capture. The occurrence of targeting errors in India's PDS can be traced to the problems of correctly identifying the poor and barriers to their participation such as distance to the outlets selling subsidized grains, lack of credit, low quality and unavailability of grains and the opportunity cost of queuing. More than half the poor in the Philippines could not avail of the benefits of the NFA rice subsidy despite the program having universal coverage. This could be attributed to uneven allocation of rice with a bias against poorer regions and unwritten quotas employed in practice.

Large informal sector employment in these countries means that household incomes are unstable so that people at the border of the poverty line keep shifting in and out of poverty. In the absence of data on household incomes, non-income indicators are often used to identify the poor and minimize the inclusion and exclusion errors. However, errors of estimation due to the concentration of poor and high-poverty risk households around the poverty line create a major problem in identifying the poor. Selecting easily-identifiable target groups such as children and women; providing inferior goods and demanding manual labor are some of the approaches to get around the problem. Use of biometric identification and smart cards could also reduce fraud and improve the reach of program benefits to the target population.

Even if the food subsidy program could minimize the leakage to non-target groups and rated as successful in targeting, it does not ensure that the entire subsidy will accrue to the targeted population. This could happen due to illegal diversions and inefficiencies in the operation of the program manifesting in the form of excess costs of public agencies in comparison with the private sector and leading to economic waste. The problem of diversion could be addressed by computerizing the supply chain to track grain supplies. Inefficiencies in program implementation could be reduced by switching from in-kind to cash transfers, which do not entail administrative and other costs of physical handling.

There is scant evidence that higher food subsidies result in higher food consumption or better indicators of nutrition and health. This could be because the quantity of subsidized staple food is often smaller than the household's current consumption. Also, examples from Asia and elsewhere show that in-kind transfer is fungible meaning that the recipients could trade it for other goods or other types of food for more variety, better taste or higher nutrition. Such observations imply that cash transfers might be more efficient than in-kind transfers for supporting the poor. Implementation of the former would require development of payment infrastructure such as banks or post offices, especially in rural, remote and inaccessible areas. Use of modern technology such as computerized financial systems, internet and mobile telephony too have proved successful for making cash transfers in developing countries. Tying cash transfers to conditions such as attendance in schools and health centers have been shown to develop human capital and higher potential for growth in the long term.

Limited fiscal space, which was eroded by fiscal stimulus packages after the global crisis, necessitates streamlining the food-based programs or replacing them with those that are likely to perform better. Such moves have been made in the past by Bangladesh, which replaced its weakly performing Palli rice program with targeted food transfers to the military, the poor, women and children, and food-for-work programs. Likewise, the Philippines is cutting down NFA rice subsidy and based on positive results from its pilot program, rapidly enlarging its CCT program – piloted in 2007 with 6000 households – as the key safety net for the poor. The budgetary allocation for CCT, which is expected to cover 3 million households by the end of 2012, was almost doubled in 2012 over 2011.

The mix of tools to be used in any specific country would depend upon its economic, political, cultural and social backgrounds on the one hand and its administrative and fiscal capabilities to provide safety net programs on the other.