2020 FOCUS BRIEF on the World's Poor and Hungry People

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THE CHANGING PROFILE OF POVERTY IN THE WORLD

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Assessing the world's progress against poverty calls for frequent and careful measurements, using household surveys and price data. Fortunately, the task of measuring poverty is becoming easier, and the results are probably getting more accurate over time. The best data for assessing progress against poverty come from surveys of the living standards of nationally representative samples of households. In the past 25 years there has been enormous progress in designing, implementing, and processing such surveys for developing countries, thanks in large part to the efforts of national statistics agencies throughout the world and the support of the donor community and international development agencies. These data provide key information about global and regional progress in alleviating poverty. Moreover, new data on poverty in rural versus urban areas offer empirical evidence on how rapidly poverty is urbanizing in the developing world (see Box 1).

Some Signs of Progress in Reducing Global Poverty

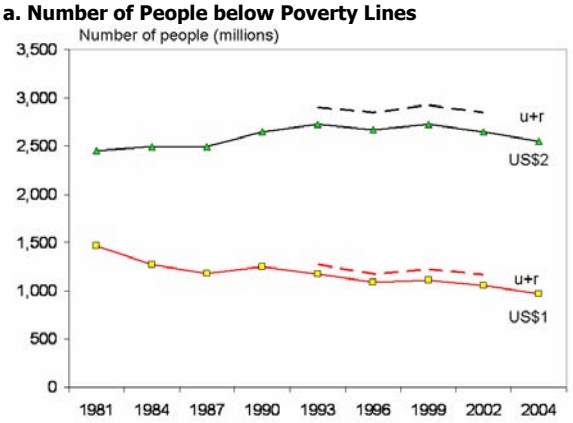
In absolute terms, the number of people in the developing world living on less than US$1 a day fell from slightly less than 1.5 billion in 1981 to 970 million in 2004, which marks the first time the poverty count has gone below 1 billion (Figure 1a). The choice of poverty line, however, matters. The number living on less than US$2 a day actually rose by about 100 million over this period, to 2.5 billion in 2004.

As a share of the population, global US$1-a-day poverty fell from 40 percent in 1981 to 18 percent in 2004, and US$2-a-day poverty fell from 67 percent in 1981 to 48 percent in 2004 (Figure 1b). For both poverty lines, the trend of poverty reduction is about 0.8 percentage points per year over 1981–2004. This rate exceeds the rate of poverty reduction of 0.6 percentage points per year that would be required to halve the 1990 US$1-a-day poverty rate by 2015—the first of the Millennium Development Goals (MDG1). So, in the aggregate, the world is on track to achieve MDG1.

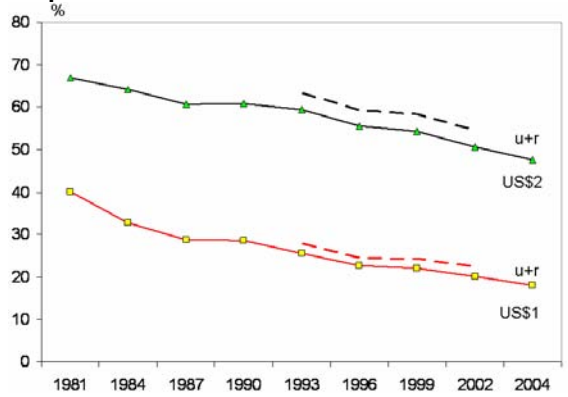
But there is no reason for complacency. These results point to three important implications. First, even achieving MDG1 will leave a great many very poor people. Poverty reduction over 1981–2004 resulted in a yearly decrease of about 17 million people living on less than US$1 a day. At this rate of decline, by 2015, even though the 1990 poverty rate will have been halved, more than 800 million people will still live on less than US$1 a day. Even factoring in the prospects for more rapid growth in some developing countries, there will still be more than 700 million people living on less than US$1 a day in 2015.

Figure 1—Poverty Measures over Time, 1981–2004

a. Number of People below Poverty Lines



b. Population Share



Source: S. Chen and M. Ravallion, "Absolute Poverty Measures for the Developing World, 1981–2004," Policy Research Working Paper 4211 (Washington, DC: World Bank, 2007).
Note: The series labeled "u+r" incorporates the urban–rural poverty line differential.

Second, progress has been slower in reducing US$2-a-day poverty. The number of people living below the US$2 line actually rose over most of the period 1981–2004, falling briefly in the mid-1990s and since the end of the 1990s. A linear projection forward to 2015 results in about 2.8 billion people living on less than US$2 a day (and about 2 billion living on between US$1 and US$2). The population share for this line would be about 40 percent in 2015, well short of the 30 percent figure needed to halve the 1990 index. One should be wary of such

linear projections. There are signs that the number of people living on less than US$2 a day has been falling since about 2000, but it is too early to call this trend a sustained reversal.

Box 1—Measuring Poverty

For the poverty data given in this brief, household survey data were used to estimate a time series of measures of absolute poverty for the developing world, and for individual regions, at roughly three-year intervals from 1981 to 2004. The data come from more than 500 household surveys spanning 100 countries.

The World Bank's "global" poverty measures have been based mainly on an international poverty line of about US$1 a day—or more precisely, US$1.08 a day and US$32.74 a month at 1993 purchasing power parity (PPP). This conservative definition of "poverty" is anchored to the poverty lines typical of low-income countries. A line set at US$2 a day (actually, US$2.15) is often used and is more representative of what "poverty" means in middle-income countries. These international poverty lines were converted to local currencies using the World Bank's PPP exchange rates and updated over time using the best available consumer price index. The poverty lines were then applied to data on household consumption or income per person from the available household survey data to determine how many people in each country fall below the US$1 and US$2 lines.

A key issue is how to deal with the fact that the cost of living is generally higher in urban areas than in rural areas, owing mainly to higher food and housing costs. This difference is particularly important for comparing the prevalence of rural and urban poverty, and any assessment of the urbanization of poverty that ignored these cost of living differences would not be credible.

Existing PPP exchange rates used to convert the international poverty lines into local currencies do not distinguish rural from urban areas, so this information was drawn from the World Bank's country-specific poverty assessments (PAs), which have now been completed for most developing countries. These PAs, which describe the extent of poverty and its causes in each country, are the best available source of information on urban–rural differentials for setting international poverty lines. The US$1 line was taken to be the rural poverty line. Data on the cost of living differences facing poor people were estimated from the World Bank PAs to obtain an urban poverty line for each country corresponding to its PPP-adjusted US$1-a-day rural line. Thus, the first decomposition of the international US$1-a-day poverty counts by urban and rural areas is now available.

It is clear, however, that projected success in achieving MDG1 depends critically on where the poverty line is drawn. The relatively slow progress in reducing US$2-a-day poverty reflects, of course, the rising numbers of people living between US$1 and US$2. That is not too surprising—those escaping extreme poverty will not rapidly enter the global middle class. Yet the number of people living on more than US$2 a day has expanded even more rapidly. The annual population growth rates for the three groups—those living on less than US$1 a day, between US$1 and US$2, and more than US$2—are –1.4 percent, 1.9 percent, and 3.5 percent, respectively.

Third, China naturally carries the largest weight in these calculations. The trend rates of decline in the population shares are roughly halved when one focuses on the developing world outside China. Excluding China, if the trend rate of decline over 1981–2004 in the population share for US$1-a-day poverty continues until 2015, then the index will fall to 16 percent—more than half of its 1990 value. Similarly, when China is excluded, the number of people living on less than US$1 a day is fairly static with no clear trend. Moreover, there is a trend increase in the number of people living on less than US$2 a day in the developing world outside China over 1981–2004, though the number has been static since 1999. The aggregate pattern of population growth rates across the three "income" groups—less than US$1, between US$1 and US$2, and more than US$2—changes radically when China is excluded. In that case, annual growth rates are 0.1 percent, 2.4 percent and 2.5 percent, respectively.

Mixed Regional Results in Reducing Poverty

The geographic profile of poverty in the world is changing, owing to the striking differences in the evolution of the poverty measures across regions (Figure 2). The number of poor people fell sharply in East Asia (as measured by both poverty lines). Both the number and proportion of poor people generally rose in Eastern Europe and Central Asia until 2000, after which there was a marked decline. In Latin America the number of poor generally rose, with some reduction after 2000, but percentages fell. The Middle East and North Africa showed a declining trend in the number of people under the US$1 line. In South Asia the percentage of poor people fell, but the number of poor living on less than US$1 a day was fairly static, and the number living on less than US$2 a day rose.

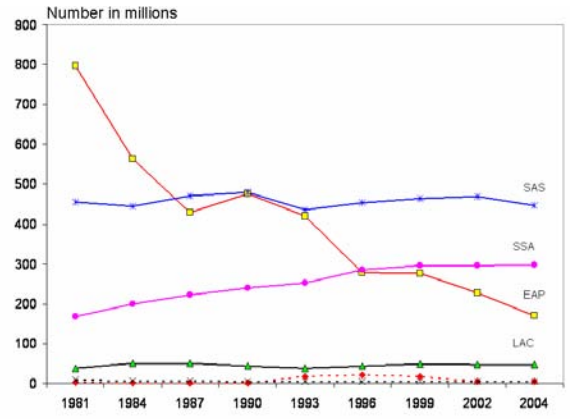
Poverty counts rose in Sub-Saharan Africa (SSA) for both poverty lines, although with encouraging signs of a reduction in the percentage below both lines after 2000, in keeping with other regions. The rate of decline of US$1-a-day poverty in SSA was about 1 percentage point a year from 1999 to 2004. Using the US$2 line, SSA still shows progress since the 1990s, although the rate of decline in the incidence of poverty lags behind the developing world as a whole.

The regional composition of poverty has thus changed dramatically. The decline in poverty between 1981 and 1984 was largely due to China, so this discussion will focus on the period 1984–2004. In 1984 the region with the highest share of the world's US$1-a-day poor was East Asia, with 44 percent of the total. One-third of the world's poor were in China. By 2004 East Asia's share had fallen to 17 percent (13 percent for China). This drop was made up largely by the rise in the share of the poor in South Asia (from 35 percent in 1984 to 46 percent in 2004) and, most strikingly, Sub-Saharan Africa, whose share of the number of people living on less

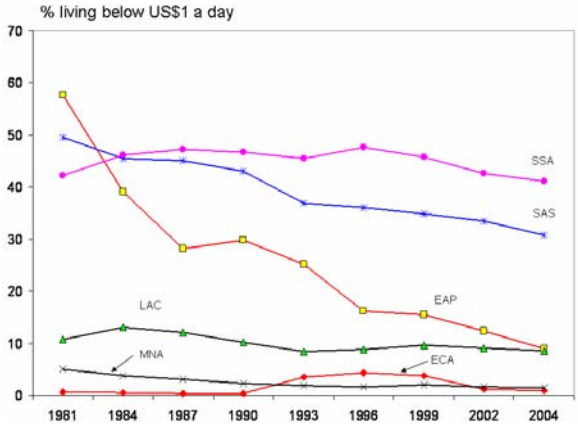
than US$1 a day rose from 16 percent in 1984 to 31 percent 20 years later. Projecting these numbers forward to 2015, SSA's share of the US$1-a-day poor will be almost 45 percent, higher than any other region.

Figure 2—Poverty Measures by Region, 1981–2004

a. Number of People Living on Less Than US$1 a Day



b. Population Share



Source: Same as Figure 1.
Notes: LAC indicates Latin America and the Caribbean; ECA, Eastern Europe and Central Asia; SSA, Sub-Saharan Africa; SAS, South Asia; MNA, Middle East and North Africa; and EAP, East Asia and Pacific.

New Light Shed on Urban and Rural Poverty

The urban–rural profile of poverty in the world is also changing. There is a widespread perception that poverty is urbanizing rapidly in the developing world; indeed some observers believe that poverty is now mainly an urban problem, although, as we will see, this view is exaggerated.

The new data on the urbanization of poverty can be used to test three widely heard claims: (1) the incidence of absolute poverty tends to be lower in urban areas, (2) the urban share of the poor is rising over time, and (3) the poor are urbanizing faster than the population as a whole.

Claim 1: Urban Poverty Rates Are Lower

About three-quarters of the developing world's poor still live in rural areas, even allowing for the higher cost of living facing the poor in urban areas. The US$1-a-day rural poverty rate of 30 percent in 2002 is more than double the urban rate (Table 1). Similarly, although 70 percent of the rural population lives on less than US$2 a day, the proportion in urban areas is less than half that figure.

Changes in poverty differ markedly between urban and rural areas. The rural poverty rate fell much more than the urban rate. From 1993 to 2002, the number of US$1-a-day poor fell by 106 million—the net effect of a decline of 153 million in the number of rural poor and an increase of 47 million in the number of urban poor. The lack of a trend in the urban poverty rate implies that the main proximate causes of the overall decline in the poverty rate are urban population growth and falling poverty incidence within rural areas. Of the 5.5 percentage point decline in the aggregate US$1-a-day poverty rate between 1993 and 2002, 4.2 percentage points are attributed to lower rural poverty, 0.3 percentage points to lower urban poverty, and 1.0 percentage point to urbanization. In other words, three-quarters of the aggregate poverty reduction is attributable to falling poverty in rural areas, and one-fifth is attributable to urbanization.

Claim 2: Poverty Is Becoming More Urban

The share of the US$1-a-day poor living in urban areas rose from 19 percent to 24 percent over 1993–2002 (whereas the urban share of the population as a whole rose from 38 percent to 42 percent over the same period). Even so, it will be many decades before a majority of the developing world's poor live in urban areas. If poverty urbanizes in the future consistently with how it has urbanized in the past, less than 41 percent of the poor will live in urban areas by 2030 (even though the United Nations predicts that the urban population share of the developing world will reach 60 percent by then). Using the US$2-a-day poverty line gives a slightly higher share of the poor living in urban areas, but this share has been rising at a slower pace than has the US$1-a-day line. Since the late 1990s, the urbanization of poverty has decelerated. Claim 2 looks shaky for the US$2-a-day poverty line.

Claim 3: The Poor Are Urbanizing Faster

The ratio of urban poverty incidence to total poverty incidence has also risen with urbanization, implying that the poor have been urbanizing slightly faster (in proportionate terms) than the population as a whole. The urban share of the US$1-a-day poor rose at about 0.6 percentage points a year over 1993–2002.

By contrast, the population as a whole urbanized at a rate of about 0.5 percentage points a year over the same period. The urban share of the poor under the US$2-a-day line has been rising at a slower pace than that under the US$1 a day line. With the higher poverty line, the share of the poor in urban areas is rising at about 0.3 percentage points a year, suggesting that the data do not support claim 3 for the US$2-a-day line.

Table 1—Urban and Rural Poverty Measures, 1993 and 2002

		Number of Poor in Millions			Percent Below Poverty Line			Urban Share of the Poor
Poverty Line	Year	Urban	Rural	Total	Urban	Rural	Total	(%)
US$1 a day	1993	235.5	1,036.4	1,272.0	13.5	36.6	27.8	18.5
	2002	282.5	882.8	1,165.3	12.8	29.3	22.3	24.2
US$2 a day	1993	683.2	2,214.7	2,897.8	39.1	78.2	63.3	23.6
	2002	745.9	2,097.3	2,843.2	33.7	69.7	54.4	26.2

Source: M. Ravallion, S. Chen, and P. Sangraula, "New Evidence on the Urbanization of Global Poverty," Policy Research Working Paper 4199 (Washington, DC: World Bank, 2007).

Conclusion

The data presented here show that the world is on track to meet MDG1. Even so, roughly 700–800 million poor people will remain mired in extreme poverty in 2015 if current trends continue.

The profile of global poverty is changing, both regionally and between urban and rural areas. The dramatic fall in poverty numbers in East Asia has come with much slower progress in South Asia and especially Sub-Saharan Africa, which is clearly not going to achieve MDG1. Meeting that goal would require a dramatic increase in Africa's rate of progress against poverty.

Poverty is also becoming more urban. Indeed, the poor are urbanizing faster than the population as a whole. Even so, about three-quarters of the developing world's poor live in rural areas. Looking forward, the recent pace of urbanization and current forecasts for urban population growth imply that a majority of the world's poor will still live in rural areas for many decades to come.

Changes in the urban–rural profile of poverty show marked regional differences. Latin America has the most urbanized poverty problem, whereas East Asia has the least. And there has been a ruralization of poverty in Eastern Europe and Central Asia. In marked contrast to other regions, Africa's urbanization process has not been associated with falling overall poverty.

To some observers, the urbanization of the developing world's population is the unwelcome forbearer of new poverty problems, with urban slums blossoming in congested cities. Others see urbanization as a positive force for development, as the economy gradually shifts out of agriculture to more remunerative activities.

There is no denying that new urban problems can emerge in poor and rapidly urbanizing countries. The experiences of countries over time, however, are generally consistent with the view that a rising share of the population living in urban areas plays a positive role in overall poverty reduction, largely through the higher economic growth associated with more rapid urbanization.

For Further Reading: S. Chen and M. Ravallion, "How Have the World's Poorest Fared Since the Early 1980s?" *World Bank Research Observer* (Vol. 19, No. 2, 2004).

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CHARACTERISTICS AND CAUSES OF SEVERE POVERTY AND HUNGER

Akhter U. Ahmed, Ruth Vargas Hill, Lisa C. Smith, and Tim Frankenberger

Understanding the characteristics of the world's poorest and hungry, and the reasons why their deprivation persists, is important when designing policies to meet their needs and improve their welfare. This brief contributes to this understanding by analyzing household data and reviewing empirical research in 20 countries: Burundi, Ethiopia, Ghana, Kenya, Malawi, Mozambique, Rwanda, Senegal, Zambia, Bangladesh, India, Pakistan, Sri Lanka, Laos, Timor-Leste, Vietnam, Tajikistan, Peru, Guatemala, and Nicaragua. The characteristics considered here are limited to those that can be compared across countries, at least to some extent.

The findings indicate that the poorest often live in remote rural areas; are more likely to be ethnic minorities; and have less education, fewer assets, and less access to markets. Remoteness, exclusion, and lack of education are especially likely to characterize those living on less than 50 cents a day. Location, unexpected and unfortunate events, and the dynamics of poverty traps and exclusion all have a role to play in explaining deprivation.

Measuring Severe Poverty and Hunger

Many cross-country poverty studies measure poverty using the criterion of those living on less than US$1 a day—the threshold defined by the international community as constituting extreme poverty. In addition to comparing those living above and below the dollar-a-day line, this brief disaggregates those living below the line into three groups to more easily examine and compare their characteristics:

- Subjacent poor: those living on more than US$0.75 but less than US$1 a day
- Medial poor: those living on more than US$0.50 but less than US$0.75 a day
- Ultra poor: those living on less than US$0.50 a day

Similarly, in terms of hunger, those consuming over and under 2,200 calories a day—the average energy requirement for adults undertaking light activity—were compared, and those consuming fewer than 2,200 calories were disaggregated into three groups to more easily examine and compare their characteristics:

- Subjacent hungry: those consuming more than 1,800 but fewer than 2,200 kilocalories (kcal) a day
- Medial hungry: those consuming more than 1,600 but fewer than 1,800 kcal a day
- Ultra hungry: those consuming less than 1,600 kcal a day

In the 20 countries considered in this analysis, poverty and hunger fall along a spectrum from dire to relatively low incidences. The highest incidences of ultra poverty and hunger are found in Sub-Saharan Africa, but deprivation is also high in South Asia, Nicaragua, and Timor-Leste. Analysis suggests that, by and large, those living on less than US$1 a day also consume fewer than 2,200 calories and that a high correlation exists between living in ultra poverty and living in ultra hunger.

Characteristics of the Poorest and Hungry

Spending on Food, Fuel, Housing, and Health Care

Across income groups and regions, expenditures on food represent the highest share of household budgets. In general, poorer households and those in rural areas spend a relatively higher proportion of the family budget on food than others, but the differences are not large. Expenditures on fuel represent the second-highest share in Bangladesh, India, and Pakistan, while housing costs represent the second-highest share in Tajikistan and in all three sample countries in Latin America.

No clear pattern between health care expenditure and poverty emerges across these countries. This is a potentially worrisome finding since poverty assessments for these countries have repeatedly found that ill health is more prevalent among poor people. For example, in Bangladesh, serious illness, accidents, or death occurred in 43–48 percent of poor households compared with 29 percent of households classified as nonpoor. In Vietnam, long-term illness was repeatedly mentioned in the

participatory poverty assessment as being a defining characteristic of poor families. And in Guatemala, the prevalence of diarrhea among children is higher among those in the poorer quintiles. The finding that poorer households spend no more on health suggests that the poorest spend less on health care per need than do wealthier households.

Remoteness

Despite an increasing proportion of poor in urban areas, the incidence of dollar-a-day poverty is higher in the rural areas of all the study countries for which poverty data are available. The same pattern of rural disadvantage is found below the dollar-a-day line, but there is a tendency toward greater rural–urban differences as poverty deepens. The incidence of subjacent poverty is 2.4 times higher in rural areas than in urban areas, the incidence of medial poverty is 2.65 times higher, and the incidence of ultra poverty is 4 times higher. The poorest and most food-insecure households are located furthest from roads, markets, schools, and health services. In Nicaragua, for example, the incidence of extreme poverty is 20 percent higher in the central rural region, where people travel twice as long to reach the closest health care service and primary school. In Zambia poor people are more likely to be located more than 20 kilometers from the nearest market than are those who are not poor, and in Laos poverty is lower in villages with roads than in those without.

In addition to being an indicator of wealth, an electricity connection also indicates, to a certain extent, the "connectedness" of households to roads, markets, and communications infrastructure, and the resulting income-earning opportunities and public services. Consistently across countries, poor households have considerably less access to electricity than those living above $1 a day. Those living well below $1 a day in ultra poverty are even less likely to be connected; on average, they are four times less likely to be connected than households living above the dollar-a-day line. In rural areas of Sub-Saharan Africa, the proportion of ultra poor households with electricity connections is almost zero.

Education

Education has been shown to have significant positive impacts on agricultural productivity, employment, access to credit, use of government services, adult and child health, and education outcomes. Looking below the dollar-a-day poverty line reveals that uneducated women and men are much more likely to experience ultra poverty than subjacent poverty. In nearly all the study countries, the proportion of adult males without schooling is almost double or more among the ultra poor compared with the nonpoor, and in Vietnam and Nicaragua, adult males living in ultra poverty are three times more likely to be unschooled than those living above $1 day. In Bangladesh, nearly all women in ultra-poor households are uneducated (92 percent) compared with less than half of the women in households living on more than $1 a day (49 percent). The data overwhelmingly show that the poorest are the least educated.

Quality primary education can provide children from poor families with the tools to move out of poverty. In all study countries, however, the evidence is the same: children from poorer families are less likely to go to school. In India, 48 percent of children living in ultra poverty attend school compared with 81 percent of children living on more than $1 a day—a 33-percentage-point gap. In Vietnam the gap is 30 percentage points, and in Ghana and Burundi it is 28 and 24 percentage points, respectively. In some countries, enrollment rates remain alarmingly low although poverty rates have declined; despite Pakistan's success in achieving a poverty rate of 11 percent, 65 percent of the country's children living on less than $1 a day still do not attend school. Without education, the future of children living in ultra poverty will be a distressing echo of their current experience.

Landlessness in Rural Areas

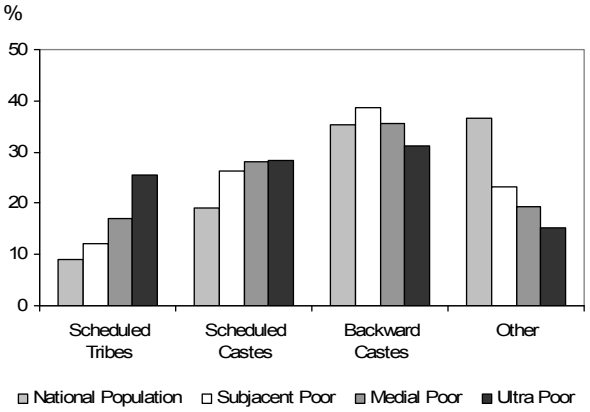
The ownership or control of productive assets is an important indicator of livelihood, because assets generate income. In all parts of Asia, the poorest are landless. Rates of landlessness are higher among those living on less than $1 a day, and the incidence of landlessness increases for those living in ultra poverty. For example, nearly 80 percent of the ultra poor in rural Bangladesh do not own land. In Sub-Saharan Africa, however, little difference was found between the incidence of landlessness among the poorer and less poor households, and in some cases the reverse was true. This corresponds to the findings of other studies that in Sub-Saharan Africa, the poorest often own some land (but too little) and lack access to other key assets and markets. In Latin America, although the incidence of landlessness is high, it was actually found to be higher among those living above $1 a day than among those living below $1 a day. This suggests that in Latin America, the poorest are more likely to be self-employed cultivators than are the nonpoor, perhaps because they lack employment opportunities in nonagricultural sectors.

Excluded Groups

In each of the 20 countries considered in this study, some groups—not the majority—have consistently higher prevalences of poverty and hunger. Individuals in groups excluded from regional progress against poverty remain among the poorest in Asia. In Laos, for example, the prevalence of poverty is more than twice as high

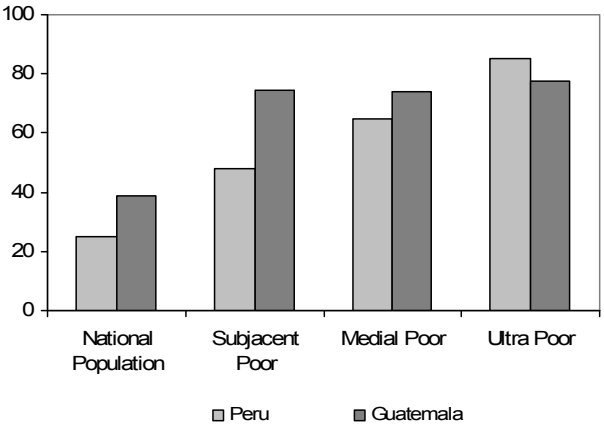
among the minority Mon-Khmer as among the majority Lao, and in Vietnam the incidence is more than six times higher among ethnic minorities than among the Kinh and Chinese. In India, disadvantaged castes and tribes (referred to as Scheduled Castes and Tribes) are overrepresented among the ranks of the poor, particularly among those living in ultra poverty (see Figure 1). This overrepresentation is more evident for Scheduled Tribes than for Scheduled Castes.

Figure 1—India: Proportion of Scheduled Castes and Scheduled Tribes in the National Population Living in Subjacent, Medial, and Ultra Poverty



Source: Calculated by authors using National Sample Survey, 55th Round Socio-Economic Survey (National Sample Survey Organization, India).
Note: Backward castes are defined as those whose ritual rank and occupational status are above Scheduled Castes and Scheduled Tribes but who remain socially and economically depressed.

Figure 2—Guatemala and Peru: Proportion of Indigenous in National Population Living in Subjacent, Medial, and Ultra Poverty



Source: Calculated by authors using Encovi 2000, Instituto Nacional de Estadistica-Guatemala and Peru Living Standards Measurement Survey 1994, Encuesta Nacional de Hogares Sobre Medicion de Vida, Peru.

In Latin America, indigenous groups are overrepresented among the poor, and increasingly so further below the dollar-a-day poverty line (see Figure 2 for the poverty rates of indigenous peoples in Peru and Guatemala). In Peru, the incidence of poverty is twice as high for indigenous groups as for non-indigenous groups. In Guatemala, stunting is more than twice as prevalent among indigenous children as it is among non-indigenous children.

In Sub-Saharan Africa, access to land and other resources depends on membership in groups of common descent, which results in outsiders having difficulty accessing resources and securing stable livelihoods. This is true in Senegal, where refugees from Mauritania and displaced people from the Casamance are most likely to remain in poverty. The genocide in Rwanda also evidenced the importance of ethnicity in determining access to resources.

Women

Some weak evidence supports the hypothesis that female-headed households are overrepresented among the ultra poor, but, in general, large differences are not found. Examining only the differences between male- and female-headed households hides the reality that, within households headed by men, the welfare of women and girls may be lower than that of their male family members. While empirical evidence on this is limited, a previous IFPRI study found that at the individual level, women were poorer than men in 6 of the 10 countries considered, but significantly so in only 3 of those countries. Some studies in South Asia have shown that, within households, women take in significantly less food and sometimes less high-quality, food such as meat and eggs.

The Role of Poverty Traps and Exclusion in Explaining These Findings

The characteristics highlighted in this brief are both important and measurable in a way that allows comparison across countries and settings. The available data indicate that the poorest are those from excluded groups, those living in remote areas with little education and few assets, and—in Asia—the landless. But why do these characteristics prevail among the poorest, and why do those in ultra poverty become and stay poor? In the past few years, much has been learned about the causes of persistent poverty and hunger. The following paragraphs summarize findings from some of these studies, particularly studies on the 20 countries considered in this brief.

The location of a household—its country and location within the country—has a large impact on potential household welfare. The disparity in the incidences of poverty and hunger across countries attests to the importance of locational characteristics in determining poverty and hunger. Against the backdrop of institutions,

technology, and infrastructure, causes of persistent poverty and hunger also operate at the individual or group level. Two themes underlie many of these explanations: poverty traps and exclusion.

The inability of poor households to invest in assets and in educating their children, the constrained access to credit for those with few assets, and the lack of productive labor for the hungry are all indicative of the presence of a trap in which poverty begets poverty and hunger begets hunger. The coincidence of severe and persistent poverty and hunger (see the brief in this series by Ahmed, Hill, and Weismann) is also consistent with the presence of a poverty trap. While some studies find little evidence of poverty begetting poverty, a number of studies at the individual and household level provide clear evidence that poverty and hunger put into play mechanisms that cause their persistence, suggesting that, for some, poverty does entrap. In these cases, poverty and hunger inherited at birth, or resulting from unfortunate and unexpected events in the lifetime of an individual (very often health shocks), can persist for many years.

Additionally, the systematic exclusion of certain individuals from access to resources and markets increases the propensity of ethnic minorities, Scheduled Castes and Tribes, women, and those with ill health and disabilities to be poor. This tendency of certain groups to be excluded from institutions and markets that would allow them to improve their welfare changes only slowly over time and gives rise to persistent poverty and hunger.

Conclusion

Understanding who the poorest and hungry are is crucial for the effective design of interventions to improve their welfare. Without context-specific and timely information, it is difficult to design programs that fit their needs. It is thus important to broaden the collection of and access to accurate data on the poorest and hungry.

The evidence presented in this brief suggests that effective interventions to reach those living on less than 50 cents a day should be targeted to remote households, traditionally excluded from resources and markets, and should take into account both low levels of education and—in Asia—landlessness. This study suggests that interventions to insure the poor against health shocks, address the exclusion of groups, prevent child malnutrition, and enable investments—particularly in education—for those with few assets are essential to helping the poorest move out of poverty.

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2020 VISION
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THE POOREST AND HUNGRY
Looking Below the Line

Akhter U. Ahmed, Ruth Vargas Hill, and Doris M. Wiesmann

Today, there are about 1 billion extremely poor people in the developing world who subsist on less than $1 a day. Of those, half a billion live on less than 75 cents a day and 162 million live on less than 50 cents. The most unfortunate consequence of widespread poverty is that more than 800 million people cannot afford to meet their minimum calorie requirements. Chronically underfed and largely without assets other than their own labor power, they remain highly vulnerable to the crushing blows of illness and natural or human-made calamities. These extreme poor are a group that hovers on the outer limits of human survival.

Substantial progress in reducing poverty has been made since 1990, suggesting that the first of the Millennium Development Goals (MDGs)—to halve the proportion of people living in extreme poverty and hunger—will be met at the global level. If it is, who will be likely to move out of poverty and hunger and who will remain left behind? This brief addresses this question by developing a better understanding of where the world's poorest and hungry live and by examining whether business as usual will result in improvements in their welfare. The analysis suggests it will not.

Looking Below the Dollar-a-Day Line: Subjacent, Medial, and Ultra Poverty

While the MDGs characterize the extremely poor as those living on less than $1 a day, here they are disaggregated into three groups according to their location below the dollar-a-day poverty line: subjacent poor (living on between 75 cents and $1 a day), medial poor (living on between 50 cents and 75 cents a day), and ultra poor (living on less than 50 cents a day). Of the 969 million people living on less than $1 a day in 2004, half were living in subjacent poverty, one-third in medial poverty, and about one-sixth (162 million) in ultra poverty. Disaggregating dollar-a-day poverty into these groups provides a simple way of looking below the dollar-a-day line to see where those in each group live and how each group has fared over time.

Where Do the Subjacent, Medial, and Ultra Poor Live?

While South Asia accounts for most of the developing world's subjacent and medial poor, Sub-Saharan Africa is home to a staggering three-quarters of all ultra poor (Figure 1). The severity of poverty in Sub-Saharan Africa becomes clear by looking at rates of subjacent, medial, and ultra poverty (Figure 2). In the developing world as a whole, and in all regions excluding Sub-Saharan Africa, subjacent-poverty rates from 1990 to 2004 were higher than medial and ultra-poverty rates, but in Sub-Saharan Africa, many more people were living in ultra poverty than in subjacent and medial poverty.

Progress in Reducing Subjacent, Medial, and Ultra Poverty

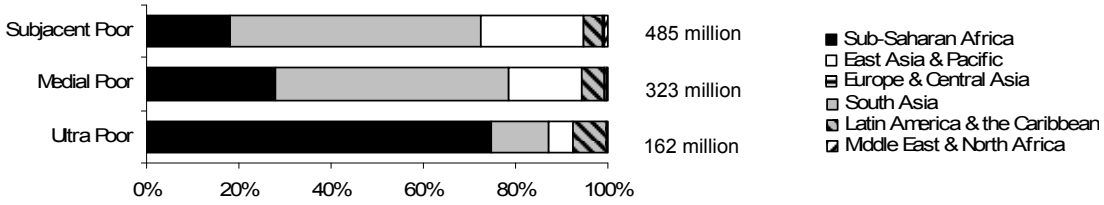
While remarkable progress against poverty and hunger has been achieved in some regions, progress has been slow in areas where poverty and hunger are severe. In 1990, South Asia and East Asia and the Pacific were each home to about 40 percent of the world's subjacent poor, 40 percent of the world's medial poor, and a quarter of the world's ultra poor. However, since then, East Asia and the Pacific experienced a substantial reduction in the proportion and number of people living in all three types of poverty. In contrast, South Asia experienced an increase in the number of people in subjacent poverty and a significant but smaller reduction in the number of medial and ultra poor (Figure 3). Since 1990, the number of poor in each group in Sub-Saharan Africa has increased, particularly among the ultra poor. The limited progress in reducing poverty in this region indicates that business as usual will not lead to improvements in well-being in a timely manner for a large share of the world's absolute poorest. Indeed, the continued prevalence and severity of poverty in Sub-Saharan Africa is one of the major ethical challenges of today.

The severity of poverty and the limited progress in reducing it indicate that the poorest in Sub-Saharan Africa may be trapped in poverty; in fact, micro-level evidence of poverty traps has been found for a number of countries in the region (such as Kenya, Madagascar, South Africa, and Côte d'Ivoire). In addition to these regional differences, globally and within regions, progress against poverty has been slower for people living well below the dollar-a-day line. Figure 2 shows that the proportion of people living in ultra poverty has fallen more slowly than the proportion of those living in subjacent and medial poverty, and further analysis indicates that, indeed, the incidence of ultra poverty fell less than it would have had all incomes grown equally.

While panel data are needed to really determine whether those in ultra poverty have fared better or worse than those closer to the line, national poverty data can provide some indication. Calculations indicate the amount that subjacent, medial, and ultra poverty

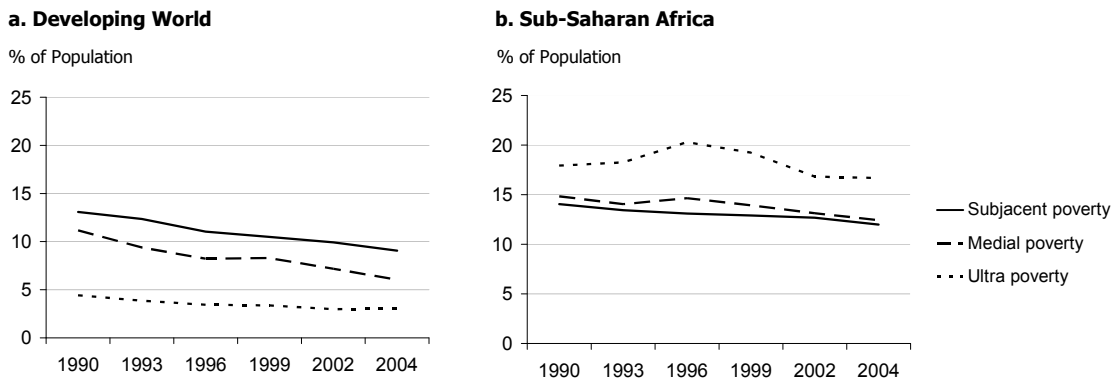
would have been reduced (or increased in some cases) had poverty reduction come from everyone's income growing by the same amount, with the underlying income distribution remaining unchanged. This "equal growth" poverty reduction scenario is then compared with the actual amount of poverty reduction (see Figure 4, in which the "equal growth" poverty reduction scenario is shown as a white bar next to the actual change in each poverty rate). However, there are differences in the experiences of the ultra poor across regions, as Figure 4 indicates for East Asia and the Pacific and Sub-Saharan Africa. In East Asia and the Pacific, growth benefited all groups nearly equally, while in Sub-Saharan Africa, those in ultra poverty are being substantially left behind what little progress toward reducing poverty is occurring in the region. The slow contraction in ultra-poverty rates in Sub-Saharan Africa suggests the majority of those living in ultra poverty will continue to do so in this region into the future.

Figure 1—Where the Poor Live in the Developing World, 2004



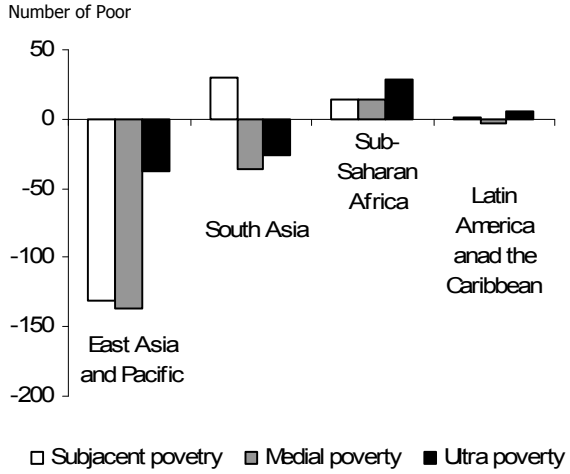
Source: Devised by authors using data from the World Bank's PovcalNet <http://iresearch.worldbank.org/PovcalNet/jsp/index.jsp>.

Figure 2—Trends in Subjacent-, Medial-, and Ultra-Poverty Rates, 1990–2004



Source**:** Devised by authors using data from the World Bank's PovcalNet <http://iresearch.worldbank.org/PovcalNet/jsp/index.jsp>.

Figure 3—Regional Changes in Number of Poor, 1990–2004



Source: Devised by authors using data from the World Bank's PovcalNet <http://iresearch.worldbank.org/PovcalNet/jsp/index.jsp>.

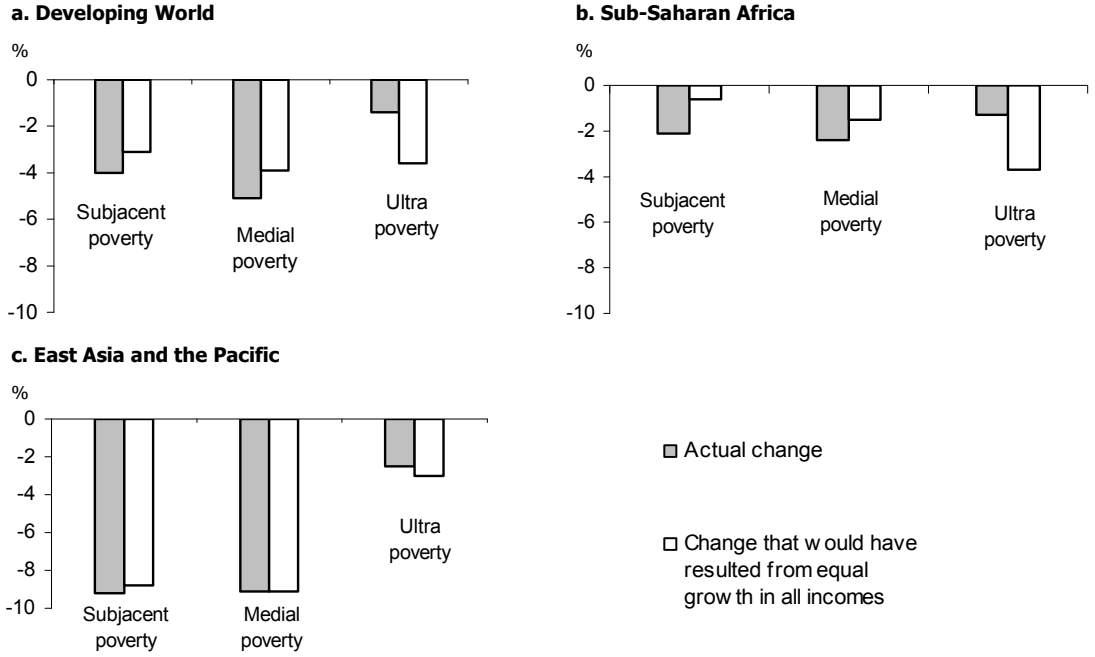
According to mainstream theories of economic growth, the convergence hypothesis implies that gains should come most quickly to those living in ultra poverty. However, if poverty traps exist, those in ultra poverty may be so poor that optimal behavioral choices cause them to move out of poverty much more slowly than those who are less poor. Results indicate that the incidence of poverty among those living just below the dollar-a-day poverty line fell more than it would have had all incomes grown equally, whereas the incidence of ultra poverty fell less. This finding suggests the well-being of those just below US$1 a day improved more than the well-being of those well below the line in ultra poverty. It points to a theory of poverty traps holding true for those in ultra poverty.

Location of Global Hunger

Progress in meeting the hunger MDG is examined using the Global Hunger Index (GHI), designed to capture three dimensions of hunger: insufficient food availability, shortfalls in the nutritional status of

children, and child mortality. Accordingly, the GHI includes the following three equally weighted indicators: the proportion of people who are food-energy deficient as estimated by the Food and Agriculture Organization of the United Nations, the prevalence of underweight in children under the age of five as compiled by the World Health Organization, and the under-five mortality rate as reported by the United Nations Children's Fund. The GHI ranks countries on a 100-point scale, with 0 being the best score (no hunger) and 100 being the worst, though neither of these extremes is found in practice. In general, a value greater than 10 indicates a serious problem, a value greater than 20 is alarming, and one exceeding 30 is extremely alarming. According to the GHI, the hot spots of hunger are in Sub-Saharan Africa and South Asia. Sub-Saharan Africa had a GHI score of about 25 in 2003, closely followed by South Asia (see Figure 5), despite the fact that poverty is about 10 percentage points lower in South Asia.

Figure 4—Percentage Point Change in Poverty, 1990–2004



Sources: Devised by authors using data from the World Bank's PovcalNet <http://iresearch.worldbank.org/PovcalNet/jsp/index.jsp>; Gini coefficients for the developing world are from B. Milanovic, "True World Income Distribution, 1988 and 1993: First Calculations Based on Household Surveys Alone," *Economic Journal* (Vol. 122, January 2002); Gini coefficients for Sub-Saharan Africa and East Asia and the Pacific are from T. Besley and R. Burgess, "Halving Global Poverty," *Journal of Economic Perspectives* (Vol. 17, No. 3, 2003).

Trends in Global Hunger

Ideally, an index should be used to summarize, not replace, its component measures, so both the GHI and its components are examined to determine how the prevalence of hunger has changed over time. In Sub-Saharan Africa, overall progress from 1992 to 2003 was relatively small compared with other regions (Figure 5). The proportion of people who were food-energy deficient fell by about four percentage points, but underweight in children and in the under-five mortality rate improved very little.

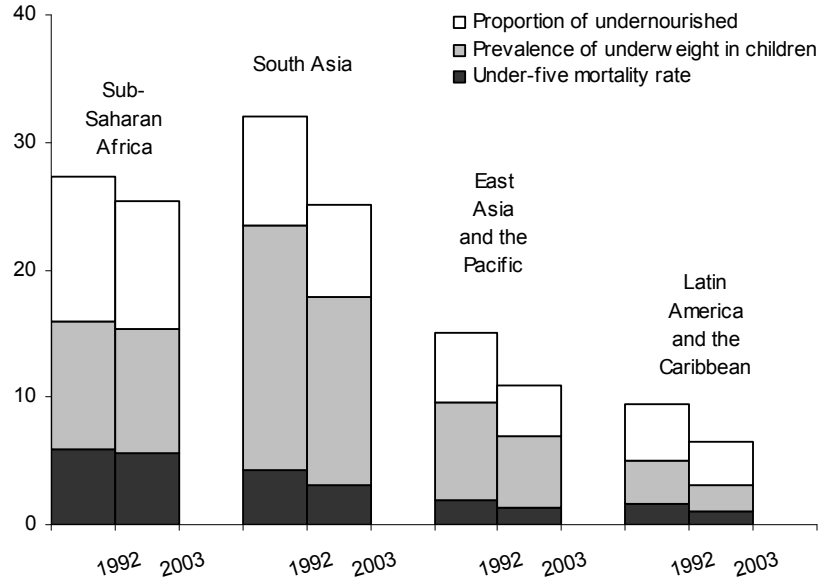
The high proportion of ultra-poor people in Sub-Saharan Africa, in addition to the high burden of diseases such as malaria and AIDS in Sub-Saharan Africa, most likely contributes to the comparatively high child mortality rates found in this region. Food shortages, the high extent of ultra poverty, and a high prevalence of life-threatening infectious diseases are major problems that have to be tackled in Sub-Saharan Africa. South Asia made large strides in combating hunger in the 1990s.

In 1992, South Asia's GHI score was five points higher than Sub-Saharan Africa's, but by 2003, South Asia's regional score had caught up with Sub-Saharan Africa's. Despite the remarkable improvement in child nutritional status in South Asia, however, the region still has the highest prevalence of underweight in children in the world.

Starting from a much lower GHI score of about 15, East Asia and the Pacific experienced a reduction of only four points in the GHI from 1992 to 2003. However, the lower level of the GHI at the outset suggests that in the early 1990s, the share of the population already able to meet the most basic food and nutritional needs was larger in this region than in Sub-Saharan Africa and South Asia.

In Latin America and the Caribbean, there was sustained progress up to 2003, though not at a great pace: the GHI declined by about three points. A look at the composition of the GHI reveals that the proportion of people who were food-energy deficient exceeded the prevalence of underweight in children and the under-five mortality rate.

Figure 5—Regional Trends in the Global Hunger Index and Its Components, 1992 and 2003



Source: Devised by authors based on D. Wiesmann, *A Global Hunger Index: Measurement Concept, Ranking of Countries, and Trends,* Food Consumption and Nutrition Division Discussion Paper No. 212 (Washington, DC: International Food Policy Research Institute, 2006).

Conclusion

The persistence of severe deprivation suggests that business as usual will take too long to improve the welfare of the world's most deprived. This finding motivates a focus on policies and programs that are particularly effective at improving the welfare of the world's poorest and hungry. The nature of these interventions is taken up by other briefs in this series.

For Further Reading: C. Barrett, M. Carter, and P. Little, "Understanding and Reducing Persistent Poverty in Africa: Introduction to a Special Issue," *Journal of Development Studies* (Vol. 42, No. 2, 2006); S. Chen and M. Ravallion, *Absolute Poverty Measures for the Developing World, 1981–2004*, Policy Research Working Paper 4211 (Washington, DC: World Bank, 2007); M. Ravallion, "Growth, Inequality and Poverty: Looking Beyond Averages," *World Development* (Vol. 29, No. 11, 2001).

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MAPPING WHERE THE POOR LIVE

Todd Benson, Michael Epprecht, and Nicholas Minot

A key consideration in planning action to assist poor and hungry households is simply to have a good understanding of where they live and the characteristics of those locations. For the past 10 years, poverty researchers at the World Bank, IFPRI, and other organizations have worked with local analysts to produced detailed poverty maps for more than 30 countries. Such maps provide estimates of the incidence and severity of poverty for relatively small areas—such as at the subdistrict and even community levels—and enable the user to better understand the spatial distribution of the poor and to investigate the relationship between poverty and other geographic factors. Knowledge of where the poor and hungry live and of the manner in which those locations are connected (or not) to other locations can provide key insights for action to address poverty and hunger. In this brief, the poverty maps developed for Vietnam, Malawi, and Mozambique are used to demonstrate how a better understanding of the spatial distribution of the poor and hungry deepens awareness of how they live and provides a fuller appreciation of the challenges they face in seeking to live healthy and active lives and to realize their full human potential.

Policymakers and researchers are interested in the spatial distribution of poverty for several reasons. First, poverty maps synthesize a large amount of information on the spatial distribution of poverty in a format that is easy for the nontechnical reader to understand. Broad national or regional poverty measures may hide stark differences in welfare levels within a country or region. Detailed poverty maps provide a clearer picture of how poverty levels vary across a country. In time, as more countries develop a series of comparable small-area poverty maps for different years, an examination of trends in poverty at the local level will provide a better understanding of where poverty reduction strategies have and have not proven successful, prompting modifications so that the strategies can be made more effective.

Second, knowledge of these patterns facilitates the targeting of programs designed, at least in part, to reduce poverty. Many countries use some form of geographic targeting for government programs that provide the poor with services such as credit, food aid, input distribution, health care, and education. The efficiency and cost-effectiveness of many of these programs is enhanced by targeting them to areas where more of the poor reside.

Third, the patterns of a country's distribution of poverty (as seen in the maps) provide a starting point for investigating the geographic factors associated with poverty, such as access to markets or other public services, climate, or topography. When examining a detailed poverty map, most map readers immediately ask why poverty levels are high in some areas and low in others. A range of analytical techniques have been used with poverty maps to investigate the spatial determinants of poverty. A better understanding of the geographic factors associated with poverty will allow for the development of poverty reduction strategies that focus on modifying those factors, thereby enabling households living in poor areas to improve their standard of living.

How Are Poverty Maps Generated?

Until recently, maps of the incidence of poverty were generated from household survey data, but this approach usually generates poverty rate estimates for a limited number of provinces or states. About 10 years ago, researchers developed a method to produce much more detailed poverty maps by combining census and household survey data (see Box 1). This new approach generates estimates of poverty and inequality for hundreds or even thousands of administrative units within a country, allowing for the creation of high-resolution maps of poverty and inequality. It is important to note that poverty mapping analysis generally does not involve the collection of new data. Rather, it makes use of existing survey and census data, the latter being an often underexploited source of information on spatial patterns in a country.

As an example of the results of such an analysis, Figure 1 shows a map of the incidence of poverty from the poverty mapping exercise for Malawi. This map was based on analyses of the 1997–98 Integrated Household Survey (IHS) and the 1998 Population and Housing Census. The initial poverty analysis of the IHS alone permitted poverty measures to be calculated for only the 28 districts and four urban centers of the country. In contrast, this map provides poverty information for approximately 360 subdistrict administrative units. Considerable heterogeneity in poverty levels within districts can be seen.

Box 1—Methods for Constructing a Poverty Map

The most common way that poverty is measured for policy and monitoring purposes is by comparing the value of per capita expenditure (including cash expenditure for consumption, the value of food produced for own consumption, and the value of owner-occupied housing) against a poverty line. Various poverty measures for a population can be computed based on the distribution of consumption in that population relative to the poverty line, the most common of which is the incidence of poverty, also called the headcount ratio. Traditionally, information to determine the distribution of consumption has come from household income and expenditure surveys. These national surveys generally have sample sizes of 2,000 to 6,000 households, which typically allow estimates of poverty for just 5 to 15 regions within a country.

The only household information that is regularly collected in most countries that would allow for much finer estimates of local conditions comes from the population and housing census, usually conducted every decade. However, census questionnaires are generally limited to household characteristics and rarely include the questions on income or expenditure that would be necessary to examine poverty directly.

The new approach involves two steps. First, household survey data are used to econometrically estimate the relationship between per capita expenditure and household characteristics such as age and sex composition, educational attainment, occupation, housing characteristics, and asset ownership. Second, census data on those same household characteristics are inserted into the regression equation to generate estimates of per capita expenditure for each household in the census. The estimates for each household are unreliable, but when aggregated over several thousand households, they yield relatively precise estimates of various measures of poverty and inequality. These estimates are then mapped using geographic information systems software. An important feature of this method is that standard errors for the poverty and inequality measures are also computed, enabling users to have some idea of how accurate the estimates are.

The World Bank has developed a software program called PovMap to automate much of the analysis, reducing the time and technical skills needed to carry out this type of study. PovMap requires that the user identify the household characteristics to be used to predict expenditure, specify the names of key files and variables, and choose among a number of analysis options. The output consists of estimates of poverty and inequality for each geographic unit, as well the standard errors for each (see http://iresearch.worldbank.org/PovMap).

Another example can be seen in Figure 2, which shows poverty maps for Vietnam. This analysis, based on the 1997–98 Vietnam Living Standards Survey and the 1999 Population and Housing Census, shows that the incidence of poverty is highest in the remote areas of the northeast and northwest regions, the upland areas of the north central coast, and the northern part of the central highlands. Poverty rates are intermediate in the Red River and Mekong River deltas. The lowest poverty rates are found in the principal cities of Hanoi and Ho Chi Minh City, in other urban areas, and in the southeast region. However, an analysis of the density of poverty, as seen in the map at right in Figure 2, shows that most of the rural poor live in the lowland deltas. In the deltas, the incidence of poverty is relatively low but the absolute number of poor people is high due to the high population density.

Using Poverty Maps for Policy and Program Design

This section presents several examples from Vietnam, Malawi, and Mozambique of how poverty maps have provided new insights to guide poverty reduction strategies. Such maps provide a better understanding of the relative significance of spatial factors in accounting for the distribution of poverty in a country and how those factors might modify approaches taken to reduce poverty.

Many antipoverty programs are geographically targeted in Vietnam. However, by showing the difference between areas where the prevalence of poverty is high and areas where the density of poverty is high, the two maps in Figure 2 highlight a key element to be considered in the targeting of such programs. Programs that concentrate exclusively on areas with high poverty rates will not reach the majority of the poor, since the majority live in areas in which there are also many nonpoor households.

These findings are not unique to Vietnam. In almost every case where it has been examined, the incidence of poverty is highest in areas with low population density, implying that, in many countries, the majority of the poor do not live in the poorest areas.

The poverty mapping analysis for Mozambique highlights the limitations of geographic targeting of poverty reduction programs in that country. The authors of the study, Simler and Nhate, note that while there is much to recommend geographic targeting—it is less costly to administer than household- or individual-level targeting and it allows programs to be tailored to the specific conditions of an area—it is not sufficient in itself for targeting for poverty reduction purposes in Mozambique. The "poor areas" of the country contain significant numbers of nonpoor. An analysis of the consumption inequality measures from the Mozambique poverty map showed that of the total inequality in the country, about 85 percent occurs within districts; differences between districts account for only about one-sixth of the total variance in per capita consumption. Because the most local administrative unit in the country—the administrative post—is so heterogeneous in terms of household welfare, with poor and nonpoor living in close proximity, it is unlikely that there will be significant efficiency gains realized from targeting poverty reduction programs exclusively by administrative post. This finding that much of the income inequality in developing countries exists within small administrative units such as villages and towns is common across poverty mapping studies. This suggests that in many countries, programs that treat all households or individuals within an area equally in terms of their

welfare level will likely result in large targeting errors by providing benefits to many nonpoor or by failing to provide benefits to the poor who live in less poor administrative posts.

Poverty maps have also been used to investigate the geographic factors associated with poverty in several countries. In rural Malawi, spatial regression models were used to estimate the incidence of poverty for about 3,000 small, spatially defined populations as a function of about two dozen independent variables. The results indicated that the poverty rate is positively related to the dependency ratio and is an indicator for matrilineal inheritance patterns, and is negatively related to the average maximum educational attainment in households, crop diversity, and nonfarm employment.

Similarly, the district-level poverty map for Vietnam was used to explore the importance of topography, soil type, land cover, climate, and access to urban areas in explaining rural poverty (Figure 3). Average slope (or variation in elevation) was more important than elevation per se. Poor soils (rocky, salty, sandy, or acid sulfate soils) were positively associated with poverty. And distance to small towns of 10,000 inhabitants was more closely related to poverty than was distance to medium-sized towns (100,000 inhabitants) and distance to cities (1 million inhabitants). This highlights the important role of local infrastructure—such as local markets, health care facilities, and schools—in poverty reduction.

An additional analysis using commune-level poverty rates for Vietnam highlighted the importance of sociocultural differences, such as language barriers or other cultural distinctions. The results provide strong evidence that remoteness is a considerably weaker determinant of poverty than is the ethnicity of a household. Language barriers, for instance, might prevent an ethnic minority family from completing the paperwork required to obtain credit or from purchasing appropriate drugs at a pharmacy, even if the travel time to a bank branch or a pharmacy is minimal. The broad spatial patterns of poverty are largely due to the spatial distribution of the ethnic minority populations, and to a much lesser extent to spatial patterns in terms of physical accessibility or other overtly spatial factors. These results suggest that development policies aimed at balancing welfare levels across subpopulations require an increased emphasis on the targeting of specific population segments within an area.

Finally, poverty maps have also been shown to be valuable for prioritizing the allocation of resources across local government units. The maps provide governments and their development partners with necessary information to ensure that those areas that most need resources receive the highest priority. One way in which this was done for Mozambique was to calculate the aggregate poverty gap between current conditions and a hypothetical state in which poverty is eliminated. The size of the aggregate increase in income perfectly targeted to the poor that would be necessary so that each person currently below the poverty line exactly reaches the poverty line was calculated. This increase could come from economic growth, a transfer program, or some other means. In 1996–97, the national poverty gap for Mozambique totaled US$2.3 million per day. The share of the total poverty gap that can be attributed to each of the 424 administrative posts of the country is presented in the map in Figure 4.

Future Directions in Poverty Mapping

Poverty mapping methods are being extended in several ways. First, studies in Cambodia and Tanzania have estimated the probability of child stunting or child wasting (instead of per capita expenditure), leading to the creation of high-resolution maps of the incidence of child malnutrition. Preliminary results suggest that these maps are less accurate than poverty maps because it is more difficult to "predict" malnutrition using household characteristics, but they merit further attention.

Second, studies in Malawi, Vietnam, and elsewhere have used "geographically weighted regression" with poverty estimates for small areas to examine whether the relationship between measures of poverty and the demographic, social, economic, or agroecological characteristics of those locales may vary across a country. Preliminary results indicate that such relationships do vary significantly from one area to another. One implication of this finding is that programs that address the causes of poverty need to be tailored to local conditions rather than being uniform across the country.

Third, a study of Tanzania applied a variation of the poverty mapping method to examine trends in poverty over time by applying the prediction equation to household characteristics in four comparable surveys carried out from 1999 to 2003. Although this approach avoids some problems in measuring changes in poverty by comparing household budget surveys (mainly, the problem of adjusting values for inflation), it does assume that the relationship does not change over time, an assumption that requires further testing.

Conclusion

An important objective of poverty mapping analyses is to promote well-informed debate on poverty and welfare inequalities in a country and what should be done about them, based on reliable data and objective and transparent analyses. Poverty maps provide a considerably more detailed understanding of the distribution of poverty in a country than was previously available for many countries. In spite of their many strengths, however, it is also important to be aware of their limitations. Several are listed here.

- As with the results of all quantitative analyses, poverty maps are subject to errors, such as arise from poor quality in the underlying data, from poor choices in the selection of model components, or in computations. Moreover, the

analyses required to create poverty maps require more than a basic understanding of econometric techniques. While this is a capacity problem, it also poses a problem for using the maps in policy processes and program design, since decisionmakers are unable to confidently use the poverty map estimates of poverty because they often are not clear on how they were derived.

- Since poverty maps typically are dependent upon national censuses, which generally are conducted only once a decade, poverty maps provide a static understanding of the spatial distribution of poverty. Poverty maps are not very useful for understanding short-term poverty dynamics within a country.
- Particularly when using consumption- and expenditure-based household welfare measures, it is difficult to create international poverty maps. The surveys of each country or the manner in which poverty rates are computed from household income and expenditure surveys renders it very difficult to develop fully compatible data sets that encompass several countries from which to develop poverty maps.

Poverty maps can provide important new insights on the spatial distribution of welfare, poverty, and inequality within a country at quite a high level of detail. Moreover, these measures are presented in an objective manner that includes information on the potential range of error in the estimates. However, a broader perspective on their use should be adopted. Given their limitations, it is best to use poverty mapping results for policy formulation and program design alongside a range of other information on poverty and welfare. Doing so both provides a fuller understanding of poverty in its multiple dimensions— going beyond the consumption- and expenditure-based definition used in the maps—and serves to triangulate the accuracy of the poverty mapping results.

For Further Reading: Center for International Earth Science Information Network (CIESIN), *Where the Poor Are: An Atlas of Poverty* (New York: Columbia University, 2006) <http://sedac.ciesin.org/povmap>; C. Elbers, J. O. Lanjouw, and P. Lanjouw, *Micro-Level Estimation of Welfare*, Policy Research Working Paper WPS 2911 (Washington, DC: World Bank, 2002); N. Minot., B. Baulch, and M. Epprecht, *Poverty and Inequality in Vietnam: Spatial Patterns and Geographic Determinants*, IFPRI Research Report No. 148 (Washington, DC: IFPRI, 2006); T. Benson, J. Chamberlin, and I. Rhinehart, "An Investigation of the Spatial Determinants of the Local Prevalence of Poverty in Rural Malawi," *Food Policy* (Vol. 30, 2005); and K. R. Simler and V. Nhate, *Poverty, Inequality, and Geographic Targeting: Evidence from Small-Area Estimates in Mozambique*, Food Consumption and Nutrition Discussion Paper No. 192 (Washington, DC: IFPRI, 2005).

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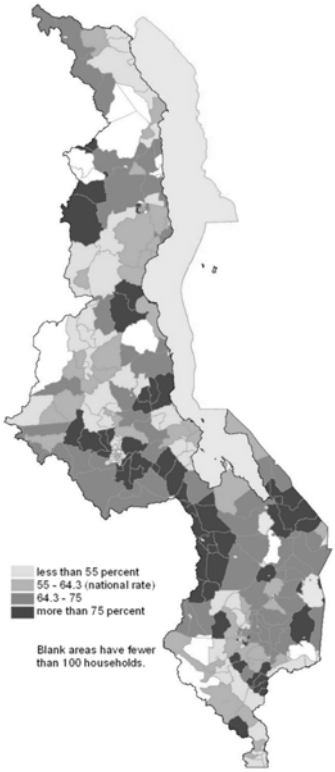
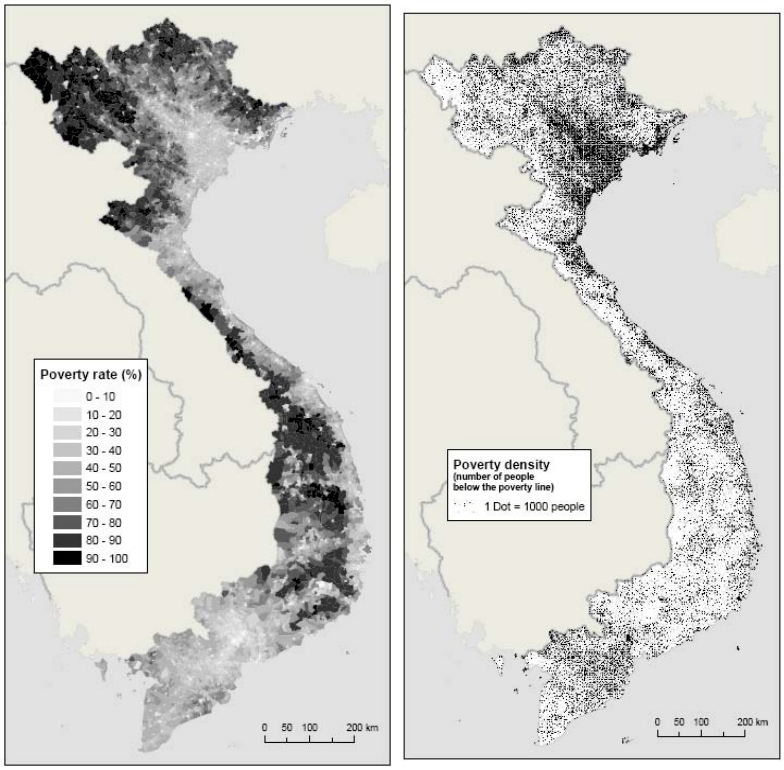
Figure 1—Malawi: Poverty Headcount at Traditional Authority Level, 1997–98



Source: T. Benson with J. Kaphuka, S. Kanyanda, and R. Chinula. 2002. *Malawi: An Atlas of Social Statistics.* Washington, DC, and Zomba, Malawi: IFPRI and National Statistical Office.
Note: Color versions of the figures in this brief can be accessed at <http://www.ifpri.org/2020chinaconference/pdf/beijingbrief_bensonmaps.pdf>.

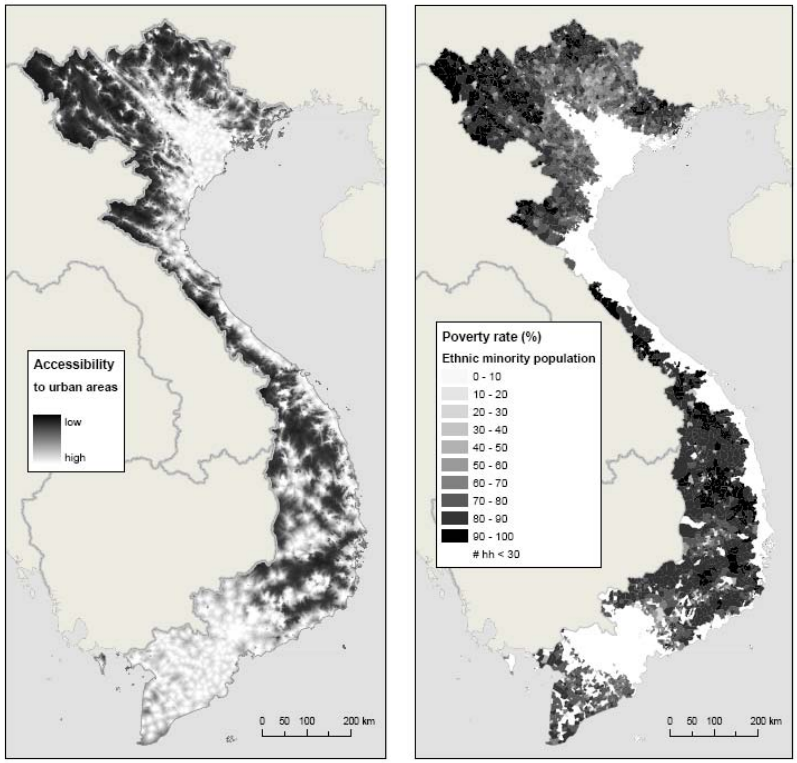
Figure 2—Vietnam: Poverty Headcount at Commune Level and Density of Poverty, 1999



Source: M. Epprecht and A. Heinimann, eds. 2004. *Socioeconomic Atlas of Vietnam: A Depiction of the 1999 Population and Housing Census*. Berne: Swiss National Centre of Competence in Research (NCCR) North-South, University of Berne.
Note: Color versions of the figures in this brief can be accessed at <http://www.ifpri.org/2020chinaconference/pdf/beijingbrief_bensonmaps.pdf>.

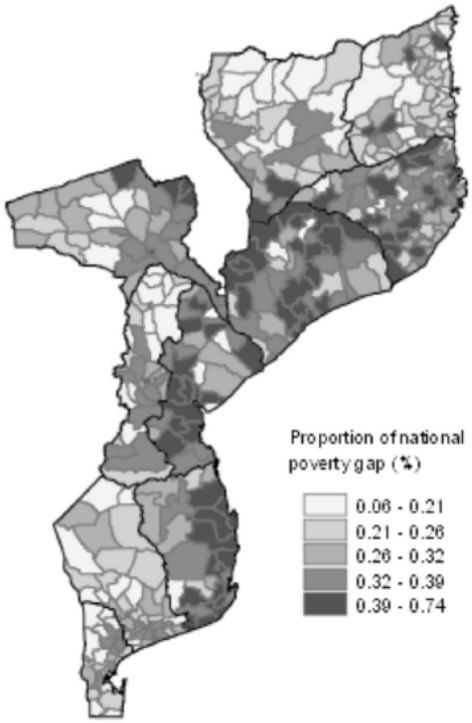
Figure insert

Figure 3—Vietnam: Accessibility to Urban Areas and Poverty Headcount of Ethnic Minorities at Commune Level, 1999



Source: M. Epprecht and A. Heinimann, eds. 2004. *Socioeconomic Atlas of Vietnam: A Depiction of the 1999 Population and Housing Census*. Berne: Swiss National Centre of Competence in Research (NCCR) North-South, University of Berne.
Note: Color versions of the figures in this brief can be accessed at <http://www.ifpri.org/2020chinaconference/pdf/beijingbrief_bensonmaps.pdf>.

Figure 4—Mozambique: Percentage of Total Poverty Gap by Administrative Post, 1996–97 ($2.3 million/day)



Source: K. R. Simler and V. Nhate. 2005. *Poverty, Inequality, and Geographic Targeting: Evidence from Small-Area Estimates in Mozambique*. Food Consumption and Nutrition Discussion Paper No. 192, Washington, DC: IFPRI.
Note: Color versions of the figures in this brief can be accessed at <http://www.ifpri.org/2020chinaconference/pdf/beijingbrief_bensonmaps.pdf>.

Figure insert

2020 FOCUS BRIEF on the World's Poor and Hungry People

October 2007

CHILD MALNUTRITION IN INDIA AND CHINA

Peter Svedberg

In the early 1990s, India and China were home to more than half the preschool children in the developing world who were malnourished, as measured by being stunted or underweight. Since then, child malnutrition has declined in both countries but from different levels and at different paces. Notable differences also exist in the concentration of child malnutrition along the state/province, rural/urban, and female/male divides. This brief highlights the main differences in levels and trends for these dimensions, and considers the most likely explanations for the observed differences. Both countries can hopefully learn from each other's experiences and thereby be able to design and implement more efficient policies for further alleviation of malnutrition.

Levels and Trends in Child Malnutrition

The earliest survey year for which child malnutrition in India and China can be compared, after some adjustment of the data, is 1992 (see Box 1). In India the incidence of stunting among children aged 0–3 years was then notably higher than in China (47 versus 32 percent), and underweight was three times more prevalent (52 and 17 percent, respectively).

In India, the share of underweight children declined by a few percentage points between the two early surveys but remained virtually unchanged from 1998/99 to 2005/06. Child stunting, in contrast, was almost flat between 1992/93 and 1998/99 but declined by 8 percentage points between 1998/99 and 2005/06. The different development for underweight and stunting has yet to be analyzed and explained (Figure 1).

In China, the decline in child underweight and stunting between the 1992 and 2002 surveys was quite dramatic—a reduction of about half. This means that China reached its Millennium Development Goal (MDG) by 2002, more than a decade ahead of the target year 2015. If present trends prevail in India, the MDG will be missed by a substantial margin.

For India, nationally representative estimates of malnutrition in adult women (mothers) allow intertemporal comparison. The share of mothers with a body mass index (BMI)

Box 1—National Surveys, Data Comparability, and Statistical Caveats

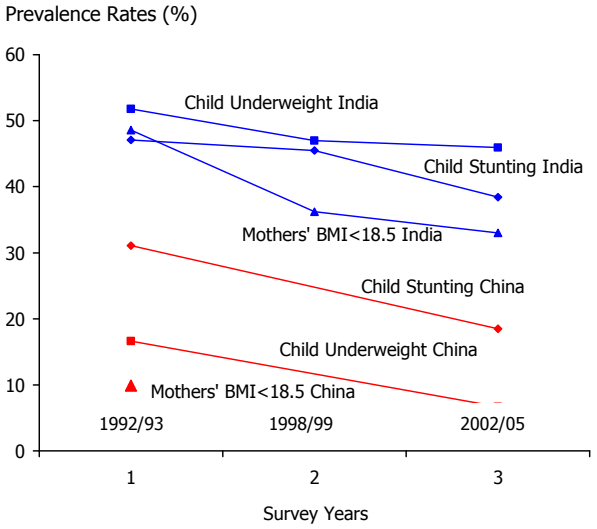
In both India and China, only three national surveys of child stunting and underweight have been carried out. For each country, numerous smaller surveys cover selected states and provinces, or rural or urban children only. These surveys are not sufficiently representative to allow intercountry or intertemporal comparison. The three national family health surveys (NFHS) from India are, with a few minor adjustments in the first survey (1992/93), internally comparable. In China, national surveys were undertaken in 1982, 1992, and 2002. The first is not comparable with the two later surveys, however, because the children covered were not chosen at random (mainly the 20 percent of children attending kindergartens, where they enjoyed supplementary feeding and health care).

The direct comparability of the surveys from 1992 is compromised because the Indian survey covers 0- to 4-year-olds, while the Chinese survey covers 0- to 5-year-olds. To accomplish comparability between the two countries and also over time, all estimates of stunting and underweight were recalculated to include 0- to 3-year-olds only, the age group covered in the Indian surveys from 1998/99 and 2005/06. Another correctable incomparability is that the available estimates from the 2002 Chinese survey were derived based on recent (2006) revisions of what the World Health Organization defines as child stunting and underweight. These new norms produce somewhat higher rates of prevalence for stunting and lower rates for underweight than the earlier norms, so the data have been recalculated in accordance with the earlier standards.

In addition, the estimated gender differences reported for India are ambiguous. This may seem puzzling considering the strong son preference revealed by the boy/girl ratio at birth of 1.11 in 2001, mainly as a consequence of sex-selective abortions. However, if the least-desired female infants tend to die before or closely after birth, this may artificially reduce the incidence of stunted and underweight female children. In China, the one-child-only policy probably tends to leave some female children unregistered in rural areas, and the same applies to temporary migrants' children in urban areas. Neither of these possible biases has been accounted for in the respective national surveys.

of less than 18.5 declined notably between the first two surveys, but only by a minuscule 3.2 percentage points between 1998/99 and 2005/06, from 36.2 to 33.0 percent. For China, no estimate of mothers' BMI status from the 2002 survey has yet been published. In the 1992 survey, 9.9 percent of adult women in China were underweight, about one-fifth of the prevalence rate in India around that time.

Figure 1—Child Stunting and Underweight, and Mothers with Low Body Mass Indexes in China and India, 1992/93 to 2002/05



Source: Calculated by author from national surveys.

Intracountry Differences

The prevalence of child underweight has declined uninterruptedly in 7 of the 15 largest Indian states since 1992/93, while it increased in the other 8 states between two of the survey years. In 6 of these states, the increase took place between the two most recent surveys (Figure 2). There are no comparable estimates of changes in child underweight (or stunting) by province in China.

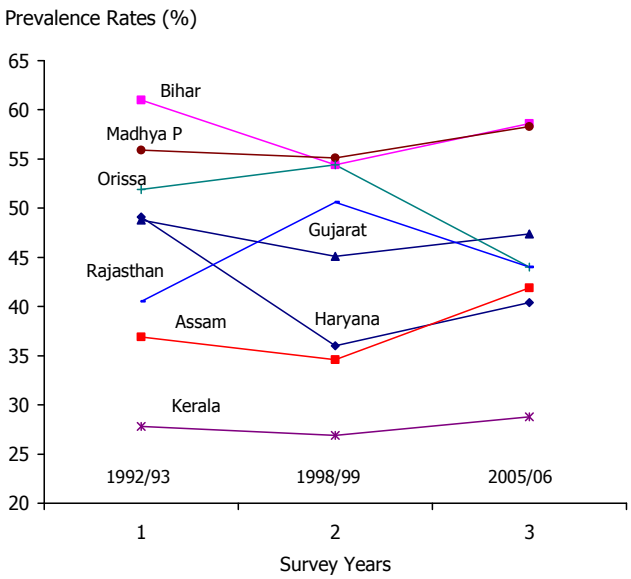
In 2005/06, the prevalence of child stunting and underweight in India was about twice as high in some of the landlocked states in the north as in the coastal states in the south. A large but not nationally representative Chinese survey from 2000 shows the prevalence of stunting and underweight to be highest in the inland provinces in the west.

Rural–Urban Differences

The ratio of the prevalence of child stunting in rural and urban areas in India went up from 1.21 in 1992/93 to 1.36 in 1998/99, but declined marginally by 2005/06. The equivalent ratio for underweight increased uninterruptedly from 1992/93 to 2005/06, although the change was not drastic by any means.

In China, the concentration of child malnutrition to rural areas is much higher than in India. The 1992 national survey shows the rural–urban prevalence ratio to be above 3.00 for both stunting and underweight. According to preliminary reporting from the 2002 survey by the World Health Organization (WHO), the ratios have declined somewhat.

Figure 2—Child Underweight in Eight Large Indian States Where It Increased in a Subperiod between 1992/93 and 2005/06



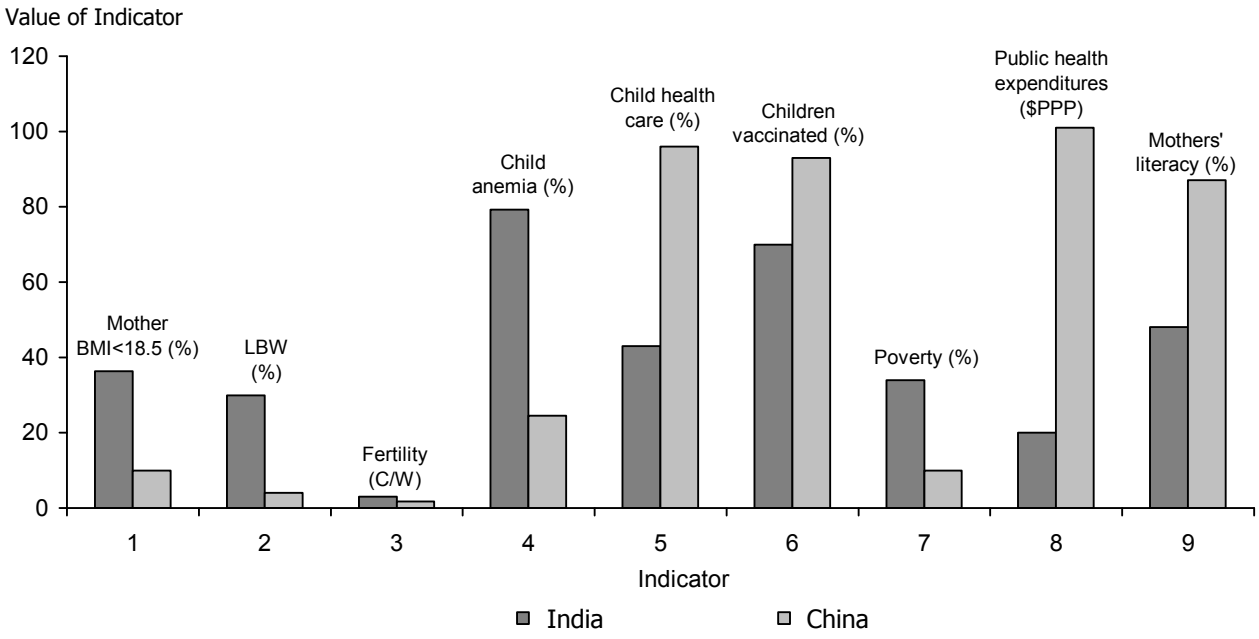
Source: Calculated by author from national surveys.

Gender Disparities

Some subnational studies of gender differences in anthropometric status have found female children in India to be at a disadvantage, some have found no gender difference, and a few have found male children to be more frequently stunted or underweight. Although the evidence to date is mixed, a strong perception that young girls are nutritionally worse off than boys lingers.

The three national Indian nutrition surveys also show mixed results. The first survey, from 1992/93, reports no significant gender difference in either stunting or underweight. The 1998/99 survey, based on WHO norms for estimating stunting and underweight in children in place at that time, shows female children to be at a highly significant disadvantage in both measures. However, when the newly revised WHO norms are applied, no gender difference is found in the prevalence of stunting in 1998/99, while boys are at a significant disadvantage in terms of underweight. WHO raised the norms for stunting more for boys than for girls, which helps to explain this reversal, but other statistical problems also make interpretation difficult (see Box 1). The 2005/06 Indian survey

Figure 3—Selected Proximal and Underlying Determinants of Child Malnutrition in India and China, 2004 or Nearest Year



Source: Calculated by author from national surveys and WHO World Health Statistics 2007.
Note: BMI indicates body mass index; LBW, low birth weight; C/W, number of children per woman; and PPP, purchasing power parity.

results published so far do not include estimates by sex.

In China, the prevalence of stunting and underweight in 1992 was slightly higher for boys than for girls, but the difference is not statistically significant. In 2002, with the revised WHO norms, boys were at a statistically significant disadvantage in terms of stunting, while there was no difference in underweight.

Can the India–China Differences be Explained?

The two most striking differences between India and China are the much higher prevalence of child stunting and underweight and the slower rates of decline in India. One way of exploring the causes is to compare factors that have been demonstrated to affect child malnutrition in the empirical literature at large.

In macro-level studies based on cross-country or cross-state observations, per capita real income (poverty) and indicators of female (mothers') status usually have the highest explanatory power. Most micro-level studies in the epidemiological tradition find mothers' nutritional status, low birth weight (LBW), feeding practices, fertility, and access to professional health care to be the main determinants of child malnutrition (Figure 3).

The first proximal determinant, mothers' own nutritional status as measured by the share of women with a BMI of less than 18.5, is widely acknowledged as the chief reason behind LBW (the second indicator). LBW, in turn, is the most powerful predictor of child malnutrition in infancy and early childhood. On these two indicators alone, India scores extremely poorly in comparison with China.

A high fertility rate implies that the average household has many children, which reduces the resources and time a mother has to care for each child. High fertility also goes hand in hand with shorter birth spacing and mothers being very young at first birth, which further compromises their ability to provide good care. The fertility rate—number of children per woman—is almost twice as high in India (3) than it is in China (1.7).

Child feeding practices, reflecting both long-standing traditions and economic constraints, also differ between India and China. Child anemia, a marker of micronutrient deficiencies in lactating mothers' breast milk and in the weaning food fed to infants and young children, is three times higher in India than in China. This may help explain why the prevalence of child stunting is so much higher in India than in China (Figure 1).

Frequent illness among children is another well-documented cause of malnutrition. Children may fall ill often because they are not fully vaccinated or not provided with adequate health care. In China, almost all children receive

professional health care and are fully vaccinated. In India, less than half receive qualified health care and 30 percent are not vaccinated (Figure 3).

Pronounced gaps also exist between India and China when it comes to underlying causes of child malnutrition (indicators 7–9 in Figure 3). The prevalence of poverty, as estimated by the World Bank, is three times higher in India than in China. Poverty is the chief determinant of the proportion of households that can afford an adequate diet and health care. Private, out-of-pocket health expenditures account for the bulk of total expenditures on health care in both India (75 percent) and China (64 percent), but government health expenditures per capita are five times higher in China, according to WHO estimates. Finally, maternal literacy, which has been found to improve all the proximal determinants of child malnutrition presented in Figure 3, is almost twice as high in China as it is in India.

Conclusions

All indicators consulted show India trailing China by far when it comes to factors conducive to alleviating child malnutrition. It is hence not surprising that the prevalence of child malnutrition is much higher in India than in China and that progress has been slower in India. This is not to say, however, that the most important variable explaining the difference has been identified. That question will require further detailed research to resolve.

The fact that the prevalence of underweight and stunting in China has declined rapidly since the early 1990s does not mean that child malnutrition is on the way to being eliminated. One-fifth of children in rural areas are still stunted, indicating diets that are of low quality and micronutrient-deficient, and inadequate health care. That underweight is now almost absent in China suggests that calorie insufficiency is no longer a problem there. The problem is rather the opposite: increased prevalence of child overweight, another manifestation of malnutrition. According to the new WHO norms, 12.5 percent of all children in China are overweight or obese (above two standard deviations from the median norms)—about 40 percent of children have a weight for age above the "normal" (above one standard deviation). Child malnutrition is hence still a concern in China, although with different connotations than in the past.

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2020 FOCUS BRIEF on the World's Poor and Hungry People

October 2007

POVERTY AND THE GLOBALIZATION OF THE FOOD AND AGRICULTURE SYSTEM

Joachim von Braun and Tewodaj Mengistu

Supporters of globalization argue that the process offers opportunities for poor people in developing countries to improve their livelihoods and grow out of poverty, whereas skeptics claim that globalization poses new risks to the well-being of poor people. The globalization of the food and agriculture system is at the center of this debate, because so many of the poor depend on agriculture as an income source and because the poor spend a large share of their resources on food. Assessments of the relationship between globalization and poverty vary dramatically, ranging from catastrophic to rosy, owing to the different scales at which assessments were made, different temporal perspectives, and different views on how well markets and other institutions (like democracy, transparency, and participation) function for poor people.

In fact, however, as globalization occurs, poverty may or may not decline, and the two phenomena may or may not be linked. After all, many other changes have occurred simultaneously with globalization, such as improved governance in some countries, the start of new conflicts and wars and the end of old ones, the broadening of civil societies' reach and level of organization, improved infrastructure, and the transformation of domestic retail markets, and these changes may also affect poverty.

The Globalization of the Agrifood System

The globalization of the agrifood system can be broadly defined as the integration of the production and processing of agriculture and food items across national borders, through markets, standardizations, regulations, and technologies. The globalization of the agrifood system increases when

- internationally traded foods increase as a proportion of production;
- traded agricultural inputs and transborder investments expand across countries;
- the science, knowledge, and information contents of the agrifood system cross borders;
- standardization and related regulatory institutions—corporate organizations such as multinational companies or public organizations such as the World Trade Organization (WTO)—increasingly reach across borders;
- consumers' tastes, and the firms and structures attending to them, show growing similarities across countries and regions; and
- the health and environmental externalities of agrifood systems have transnational or global impacts.

Given the diversity of the processes involved, the globalization of the agrifood system is not easily quantifiable and cannot be aggregated into one index number. Moreover, these processes do not always occur concurrently or even lead in the same direction, making them even more difficult to quantify.

Poverty Trends during Globalization

In discussing the effects of globalization on poverty and food security, it is important to keep sight of the reality of poverty that lies behind the statistics—it is a problem that affects people of different ages, genders, and ethnic origins, in different regions, and in city slums and rural areas. Furthermore, poverty is not a static phenomenon. Populations affected by poverty are in a state of flux in many countries. One portion of the population may free itself from poverty, while others are newly affected or threatened by it.

Nevertheless, a first step in understanding the effects of globalization on the poor is to look at the trends for poverty since the 1980s, the period during which globalization has accelerated. A mixed picture emerges when different sources of data and concepts are used. Indeed, in the aggregate for all developing countries, the number of people living on less than US$2 a day from 1981 to 2002 actually increased by about 164 million people. The number of people living on less than US$1 a day, however, has fallen by approximately 467 million people. These

aggregate numbers also mask large regional and cross-country disparities; although the number of poor people in East Asia and the Pacific and in South Asia has declined substantially, it has increased in Sub-Saharan Africa and in Europe and Central Asia. Furthermore, China has seen large decreases in the number of poor.

The Effects of the Globalization of the Agrifood System on the Poor

In general, poverty is influenced by globalization but is seldom mainly caused by it. The extent and distribution of world poverty stem from a lack of access to resources and opportunities. Also, dependencies, corruption and other governance failures, and poor people's lack of rights in the face of traditional local power structures, as well as the lack of education and health care, are all key factors explaining poverty and hunger. But an analysis of the links between globalization and poverty must take the dynamics and volatility of globalization processes into account. Given that the majority of the poor live in rural areas and depend on labor or earn their living as small farmers, the effects of globalization on employment and small-farm competitiveness are central to determining its impact on poverty.

One risk of globalization for poor people lies in the increased volatility of market and nonmarket institutions and the potentially reduced public and private security for individuals and groups affected by crises and unforeseen events. Although these risks are real, they must be compared with the risks in nonmarket situations, such as the substantial risks poor people face in traditional subsistence agriculture, where bad weather or crop pests pose livelihood-threatening risks, or the risks of closed economies with heavy state involvement in markets, which may result in forgone growth opportunities.

Although the term "globalization of the agrifood system" describes a general tendency toward integrated markets, it includes various processes that may or may not go in the same direction. Therefore, to evaluate the effects of the globalization of the agrifood system on the poor, it is necessary to trace the poverty effects for different components of the globalization process. The four major components considered here are (1) market integration through trade liberalization, (2) increased investment through capital flows (foreign direct investment), (3) increased access to information and innovation across borders, and (4) the adoption of global social policies. The latter is also part of globalism but is often overlooked in the globalization debates.

Agricultural Trade Liberalization

Cross-country estimates of the effects of agricultural trade liberalization on the poor are highly varied. One reason for the divergent results is that the studies use different experiments and data, along with models that have different behavioral parameters and theoretical features. Additionally, because these types of studies use national estimates, they mask the heterogeneity of the impact of trade liberalization on different types of households. In general, the evidence shows that trade liberalization in agriculture will allow many developing countries to exploit their comparative advantages and to actively participate in world trade. And, despite some of the divergent findings, the overall result is that the majority of poor households will gain from trade reform, although some will lose. But the evidence also shows that the effect of trade openness on poor households' income is not large and that results vary across countries and household types. This finding suggests that in addition to taking a global view, researchers should adopt a case-specific approach when considering trade liberalization.

Globalization of Investment and Capital Flows

A central feature of globalization is the expansion of transborder capital investments in the form of foreign direct investment (FDI). FDI can affect poverty levels through four channels: employment, human capital formation, knowledge spillovers, and increased government revenue. If FDI flows into labor-intensive sectors, it can generate employment for unskilled workers, which would increase their incomes and thus reduce poverty. If FDI is capital intensive or knowledge intensive, however, it may favor skilled labor over unskilled labor, which may translate into increased poverty or at least increased inequality. In the medium to long run, FDI inflows may induce growth within the economy through backward and forward linkages (that is, they may "crowd in" new investments) and through knowledge spillovers. Furthermore, increased FDI could translate into government revenue, as the foreign firms pay corporate taxes. In the long run, if FDI crowds in new investments, it would lead to an increase in the tax base. The additional revenue could then be used to make pro-poor public investments (in, for instance, infrastructure and provision of public services), which would translate into poverty reduction.

The location and sectoral patterns of FDI also play a role in determining pro-poor outcomes.

Does FDI go mainly to special zones or urban areas, for example? Is it directed toward food and agriculture and related processing industries? Although FDI in agriculture and food has been rather limited, FDI concentration in urban areas fosters rural–urban migration, which in turn can indirectly affect the rural poor through, for instance, an increase in the receipt of remittances. Moreover, if FDI leads to rapid expansion of food retail industries and if market innovations reach small and poor farmers, it can have a significant wage rate effect for the rural poor, but this outcome is context specific.

The little empirical evidence that exists on the direct effects of FDI on poverty levels shows that rates of remuneration for well-trained workers are rising, but the effects of allocating FDI to low-wage locations remain inconclusive for salaries and employment levels. The consequences of globalization for poor people's employment opportunities depend on labor productivity, policies (including education policies), and legal arrangements. Policymakers can and actually do facilitate pro-poor FDI by making institutional arrangements that foster private-sector growth and by improving human capital (like health and education) to attract FDI that offers poor people more employment opportunities and improved wages.

Globalization of Information and Innovation

Another central aspect of globalization is the rapid expansion of global information flows, springing from increased access to information and communication technologies (ICTs). Information flows relevant to poor people's productivity and well-being are important determinants of their decisions and livelihood choices. It is important for developing countries to have information systems that deliver knowledge on adaptable innovations and research findings to their national agricultural research systems and to establish information systems that can contribute to the formation of markets and prices.

Access to ICTs in rural areas can be a source of significant welfare gains for poor people. For instance, a study comparing welfare gains from the use of telephone calls compared with alternative means of communication (such as mail) in Bangladesh and Peru found estimated gains on the order of US$0.11 and US$1.62, respectively.

Nevertheless, ICTs are not automatically pro-poor. For the potential poverty reduction benefits of ICTs to be realized, many prerequisites need to be put in place: deregulation, effective competition among service providers, free movement and adoption of technologies, targeted and competitive subsidies to reduce the access gap, and institutional arrangements to increase the use of ICTs in the provision of public goods. Therefore, on top of investing in telecommunications infrastructure, governments should establish appropriate regulations extending ICTs into rural areas.

Global Social Policies

One problem for hungry people is time. They cannot wait for long-term solutions, such as the economic progress that globalization offers. Overcoming poverty through economic growth alone would require decades, even with a high growth rate. To bridge the time issue and to cope with emergencies, social policy is called for.

The world does not have anything that could be called a "global social policy," but elements of globalization of social policy exist in the promising but slow efforts to establish social and economic rights, like the human right to food, at a global level. Another element is global emergency aid and its coordination mechanisms, as well as the more ad hoc but coordinated responses to disasters. Moreover, initiatives against exploitative child labor policies, such as a recent initiative on child labor in agriculture, are also relevant here. One study shows that by far the largest proportion of child labor in the poorest countries in Africa is found in economic areas that have been the least touched by globalization, such as agricultural subsistence production and domestic service. Global health policy initiatives, such as the program on Disease Control Priorities in Developing Countries and the Global Fund to Fight AIDS, TB, and Malaria, are also significant innovations with the aim of fighting disease at a global scale.

More relevant than top-down, global social policy is the influence of globalization in the spread of national social policy innovations across countries. The spread of Mexico's former Programa de Educación, Salud, y Alimentación (Progresa, now Oportunidades), with its focus on building human capital in poor households through conditional cash transfers, is an important example. Other countries have adapted this program for their own use.

In sum, considerable innovations in social policy have sprung up over the past two decades along with economic globalization and have made contributions to balance risks for the poor; these policies have started to reach into rural areas in recent years. Although they may have helped to reduce the relative proportions of poor and hungry, they did not substantially reduce the absolute numbers of these population groups in many countries.

Conclusions

Poverty and hunger have not decreased to an extent that could be considered satisfactory given the increased resources generated by the growth effects of globalization. Globalization offers opportunities for growth, but that growth alone is not a guarantee that poverty reduction will occur. And hunger—a central aspect of absolute poverty—has been reduced very little at best during the recent decades of globalization.

Still, globalization offers opportunities for poor people by giving them direct or indirect access to previously unavailable markets, capital and resulting employment, knowledge, and social protection and transfers. Yet national policy in response to the opportunities and risks of globalization has been of mixed effectiveness. Many countries have not shown a capacity to transform globalization opportunities into poverty reduction. To improve their chances of exploiting the opportunities of globalization for poor people, developing countries should be working toward improving their terms of trade, overcoming domestic institutional constraints, improving governance, and valuing the growth opportunities in rural areas by investing in infrastructure, rural education, and agricultural innovation.

There is no global consensus on how to take advantage of the increased economic opportunities that globalization offers in order to achieve the goal of reduced poverty and hunger. Such a consensus cannot be obtained from a top-down process. It must be pursued through broad and often conflict-laden discourses that increasingly include the political influence of poor and food-insecure people themselves.

For Further Reading: A. Bouët, *What Can the Poor Expect from Trade Liberalization? Opening the "Black Box" of Trade Modeling,* IFPRI Markets, Trade, and Institutions Division Discussion Paper No. 93 (Washington, DC: IFPRI, 2006); R. Kanbur, "Economic Policy, Distribution, and Poverty: The Nature of Disagreements," *World Development* (Vol. 29, No. 6, 2001); M. Torero and J. von Braun, "Impacts of ICT on Low-Income Households," in *Information and Communication Technologies for Development and Poverty Reduction*, ed. M. Torero and J. von Braun (Baltimore: Johns Hopkins University Press, 2006); World Bank, PovcalNet (Washington, DC, 2006), <http://iresearch.worldbank.org/PovcalNet/jsp/index.jsp>.

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POVERTY TRAPS
Exploring the Complexity of Causation

Partha Dasgupta

Describing and explaining are two very different engagements, and yet development experts routinely write as though to describe were to explain. If this were not the case, it would be hard to understand why they have found it necessary to repeatedly describe the lives of the world's poorest over the past 30 years. Consider the following sentence constructed from numerous writings—for example, by Banerjee and Duflo, Narayan, the United Nations Development Programme, and the World Bank (see the "For Further Reading" for details)—wherein poverty is defined as a state of affairs where someone has access to very little income:

> In the world of the poor, people don't enjoy food security, don't own many assets, are stunted and wasted, don't live long, can't read or write, don't have access to easy credit, are unable to save much, aren't empowered, can't insure themselves well against crop failure or household calamity, don't have control over their own lives, don't trade with the rest of the world, live in unhealthy surroundings, suffer from "incapabilities," and are poorly governed.

Let's call the above passage *Description*. Although no one would have ever doubted its validity, it offers little guidance for action. It doesn't say what is a cause and what is an effect; it doesn't distinguish between proximate and deep causes; it doesn't say what is a variable and what is a parameter in the environment in which the poor reside; and it doesn't say whether those that are variables can be interpreted in samples to "move" together over time (time-series data) or across parameter values at a given time (cross-sectional data). Above all, the passage doesn't help to identify the pathways that lead to the state of affairs where *Description* holds. And, yet, an enormous literature has drawn on *Description* to arrive directly at policy prescriptions. It seems that even the Millennium Development Goals and the United Nations' plans for meeting them reflect this methodological stance.

Despite its length, *Description* omits at least two items: the sentence should have continued on to say that the poor suffer from a deteriorating natural resource base and high birth rates. These points are kept out of *Description* because neither reproductive behavior nor the local natural resource base has been of much interest to contemporary development experts, an issue that will be discussed later in this brief.

Multiple Causations of Poverty

Theoretical considerations and empirical evidence show that the persistence of poverty in a world of economic progress elsewhere should be traced to socioeconomic, metabolic, and ecological processes involving positive feedback. In mathematically simple systems, the positive feedback may be a reflection of fixed costs. For example, maintenance costs in human metabolic processes are substantial, as are overhead costs in running a household in a world where water cannot be obtained from turning on a tap, where energy is not available at the flick of a switch, and where cooking is a vertically integrated activity, meaning that all the ingredients are in their rawest form. In more complicated systems, positive feedback is a feature of complementarities among the drivers of the processes in question. For example, primary education, nutritional intake, and health care are complementary inputs in child development. Remove one input, and the child does not develop much. The shadow value of a service is negligible if its complements are unavailable. For example, when a child is undernourished, the value of education to her is low, because an under-nourished child is unable to imbibe much knowledge and skills. Of course, fixed costs themselves could be manifestations of complementarities among the drivers of the systems in question, the point being that if you peer into the microfoundations of a process, you may discover that complementarities among the various drivers give rise to those fixed costs.

One implication of positive feedback is that, in the world of the poor, each item in *Description* reinforces the others, implying that the productivity of labor effort, ideas, manufactured capital, and land and natural resources are all very low and remain low. The lives of poor people are filled with problems each day. In contrast, the rich suffer from no such deprivation. People in the rich world face what today are called challenges. An implication of the positive feedback alluded to here is that in the world of the rich, the productivity of labor effort, ideas, manufactured capital, and land and natural resources is all very high and continually increasing. Success in meeting each challenge reinforces the prospects of success in meeting further challenges. Since the aim of this brief is to stimulate discussion, the theory and empirics of

poverty traps are not reproduced here. Instead, extrapolating the logic of positive feedback, the discussion shows how some people can get trapped in poverty, while others—not dissimilar to them—are able to escape and prosper. The brief thus follows two parallel expository routes: an informal account and formal modeling approaches presented in Boxes 1 through 3 at the end of the brief.

Even though *Description* suggests the phenomenon of multiple causation, the temptation to seek monocausal explanations for the twin presence of poverty and wealth in our world is so powerful that even development experts have not always been able to overcome it. But the presence of mutual causation (namely, several variables influencing one another over time) has implications for interpreting data. The phenomenon is displayed in a simple deterministic model (Box 1). The model contains several economic variables that influence one another over time. In fact, of course, people's lives involve and feed into many processes. One process, creating metabolic pathways, works at the level of the individual. Those pathways are based on physiological links connecting (a) undernourishment and a person's vulnerability to infectious diseases, (b) nutritional status and work capacity among adults, and (c) nutritional status and physical and mental development among children. The ways those pathways can harbor poverty traps is sketched in the section "Nutrition, Health, and Human Productivity," below, and modeled in Box 2.

A second category of processes, operating at a spatially localized level, is site specific. It involves a combination of ecological and socioeconomic pathways, giving rise to reproductive and environmental externalities. In contrast to modern macroeconomic growth models, these processes are influenced by the local ecology. The theory based on them acknowledges that the economic options open to a poor community in, say, the African savanna are different from those available to people in the Gangetic Plain of India. Although policies and institutions shape the forces people face, the local ecology shapes them too. Among ecological and socioeconomic pathways, some involve positive feedback between poverty, population growth, and degradation of the local natural resource base. However, neither poverty, nor population growth, nor environmental degradation is the prior cause of the others: over time each influences, and is in turn influenced by, the others. The two broad categories of positive feedback are able to coexist in a society because nutritional status doesn't much affect fecundity, or so it has been found, except under conditions of extreme nutritional stress. (During the 1974 famine in Bangladesh, deaths in excess of those that would have occurred under previous nutritional conditions numbered about 1.5 million. The stock was replenished within a year. Of course, undernourishment can still affect sexual reproduction through its implications for the frequency of stillbirths, age at menarche, failure to ovulate, maternal and infant mortality, and the frequency of sexual intercourse.) The interface of poverty, fertility, and the local natural resource base is accounted for in the section "Household Labor Needs and the Local Commons: The Population–Poverty–Resource Nexus," below, and in Box 3.

In speaking of an economy, this is casting a wide net. The economy could be a person, or it could be a household, a village, a district, a province, a nation, or even the whole world. Note, however, that a village could be in the grip of a poverty trap even if the country is not. It is frequently argued that, in such a situation, outside aid is needed if the villagers are to lift themselves out of the mire. (Of course, what form that aid should take is something that can only be identified when the positive feedback mechanism is well understood. *Description* alone doesn't tell us what should be done.) But the context matters. It could be that what is needed more than aid is the creation of (rational) trust among people and (rational) confidence in the external world to honor agreements.

Those who are caught in poverty traps do not necessarily spiral down further. For most, there is little room below to fall into; many are already undernourished and susceptible to diseases. Modern nutrition science has shown that relatively low mortality rates can coexist with a high incidence of undernutrition and morbidity. To be sure, many die owing to causes directly traceable to their poverty. But large numbers continue to live under nutritional and environmental stresses. Moreover, people tend not to accept adverse circumstances lying down. So it is reasonable to assume that they try their best to improve their lot. There are, to be sure, situations where human responses to stress lead to successful outcomes. However, as this brief is about poverty traps, the idea is to identify conditions under which the coping mechanisms people adopt are not enough to lift them out of the mire. For example, one study shows that in the face of population pressure in Bangladesh, small landholders have periodically adopted new ways of doing things so as to intensify agricultural production. This, however, has resulted in only an imperceptible improvement in the standard of living, and a worsening of the ownership of land probably due to the prevalence of distress sales of land. Other researchers have observed that location per se, and not merely the local ecology, can matter. They note, for example, that to be landlocked and surrounded by poor neighbors reduces a country's economic options that much more.

The externalities associated with people's coping strategies can amount to significant differences between private and social returns to various economic activities. Thus, where reproductive behavior is "pro-natalist," the private returns to having large numbers of children are high, in contrast to the social returns. Similarly, where communities degrade their natural resource base, the collective endeavors to maintain the base are unable to withstand the pressure of private malfeasance. And so on.

Box 1—The Idea of Mutual Causation

Mutual causation is at the center of *Description.* In order to formalize mutual causation and to show how cross-sectional data on poverty should be interpreted, consider a system that can be described at any moment of time t by three (scalar) variables $X(t)$, $Y(t)$, and $Z(t)$. We call X, Y, and Z the state variables of the system. A system with three state variables was chosen because the discussion focuses on the possible links between poverty, population size, and the state of the natural resource base.

Imagine that the process driving the system can be described by a triplet of deterministic differential equations:

$$dX(t)/dt = E(X(t),Y(t),Z(t),q), \quad (1)$$

$$dY(t)/dt = F(X(t),Y(t),Z(t),q), \text{ and} \quad (2)$$

$$dZ(t)/dt = G(X(t),Y(t),Z(t),q), \quad (3)$$

where q is a (scalar) parameter and where E, F, and G are continuous functions of X, Y and Z. For simplicity of exposition, assume that X, Y, Z, and q are all observable. Notice first that the causal connection between X, Y, and Z is mutual: equations (1)–(3) say that, over time, each state variable influences the others. Time series of X, Y, and Z enable the econometrician to estimate E, F, and G. Data, however, are frequently cross-sectional (for example, cross household, cross village, cross district, and cross country). It is customary to interpret such data by first assuming that each observation in the sample represents a stationary point of equations (1)–(3). A stationary point is a triplet of numbers $(\underline{X}, \underline{Y}, \underline{Z})$ for which,

$$E(\underline{X},\underline{Y},\underline{Z},q) = 0, \quad (4)$$

$$F(\underline{X},\underline{Y},\underline{Z},q) = 0, \text{ and} \quad (5)$$

$$G(\underline{X},\underline{Y},\underline{Z},q) = 0. \quad (6)$$

But $\underline{X}$, $\underline{Y}$, and $\underline{Z}$ are functions of q. Write them as $\underline{X}(q)$, $\underline{Y}(q)$, and $\underline{Z}(q)$. If the process defined by equations (1)–(3) has positive feedback, equations (4)–(6) can have multiple solutions for the *same* value of q. So, one possible scenario is that every observation in the data set (say, of size N) is associated with the same value of q but with a different stationary point (see Box 2).

But q is observable. So now suppose that each observation in the data set has a distinct value of q. If N were very large, the sample values of q could be approximated by an interval of numbers. We could plot $\underline{X}(q)$, $\underline{Y}(q)$, and $\underline{Z}(q)$. We would discover that they "move together." We would then say that they are correlated. *Description* involves this form of reasoning.

It may be that $\underline{X}(q)$, $\underline{Y}(q)$, and $\underline{Z}(q)$ do not look like continuous functions. Values of q at which the functions jump are called *bifurcations*. Their presence would point to nonlinearities in the system defined by equations (1)–(3). These equations offer a timeless economic model with microfoundations that can be interpreted in terms of the stationary point (4)–(6).

Nutrition, Health, and Human Productivity

The energy required to maintain each human life is substantial: 60–75 percent of the energy intake of someone in nutrition balance goes toward maintenance, the remaining 40–25 percent is spent on "discretionary" activities (work and leisure activities). Maintenance requirements are like fixed costs. They lead to positive feedback and reflect a nonlinearity inherent in human metabolic pathways. The fixed costs can also be a reason for unequal food distribution within poor households. To illustrate, suppose that in order to balance nutrition, a person requires on average 2,500 kilocalories (kcal) of energy intake each day. A poor household of four, having access to, say, 5,500 kcal per day, would be at serious risk of extinction if food were distributed equally among members. Of course, an unequal distribution would place those receiving well below 2,500 kcal at a terrible risk, but it would offer the household a chance to survive. A rich household, in contrast, has no such dilemma: it can practice equality with impunity. This is an example of how the presence of fixed costs can make poverty a source of inequality.

Why can't the market mechanism be relied on to eliminate undernutrition? The reason is the large energy maintenance requirement for human functioning. It places the undernourished at a severe disadvantage in their ability to obtain food: the quality of work they are able to offer is inadequate for obtaining the food they require, if they are to improve their nutritional status. Notice the circularity in the argument, which is a telling sign that the causation is mutual. Over time undernourishment can be both a cause and consequence of someone falling into a poverty trap. Because undernourishment displays hysteresis (that is, the scars cannot be wiped out), such poverty can be dynastic: once a household falls into a poverty trap, it can prove especially hard for descendents to emerge out of it. It can be shown that assetless people are especially at risk of falling into a poverty trap if the economy is not especially rich and if the distribution of assets is highly unequal. If the distribution of nonhuman assets were made less unequal in the economy, the market for labor would function better. Of course, the key issue is access to nutrition and health care, not so much the

distribution of assets. If safety nets are in place, they provide that access when all else fails.

Much international attention has been given to saving lives in times of crises in poor countries. This is as it should be. International agencies have also paid attention to keeping children alive in normal times through public health measures, such as family planning counseling, immunization, and oral rehydration. This too is as it should be. That many poor countries fail to do either is not evidence that these problems are especially hard to solve. In fact, they are among the easier social problems: they can be fielded even though no major modification is made to the prevailing economic system. Much the harder problem, in intellectual design, political commitment, and administration, is to ensure that those who remain alive are healthy. It is also a problem whose solution brings no easily visible benefit. But the persistence of large-scale undernourishment, caused by inadequate diet and lack of sanitation and potable water, is a sure sign of economic backwardness. For example, the stunting of both cognitive and motor capacity is a prime hidden cost of energy deficiency and anemia among children and, at one step removed, among mothers. It affects learning and skill formation and thereby future productivity. The price is paid in later years, but it is paid.

Box 2—Nutrition-Based Poverty Trap

To illustrate positive feedback, consider the following stylized example:

Denote time by t. The present is $t = 0$. Consider a person whose health (that is, nutritional status) at t is denoted by a scalar index $H(t)$. Let $W(H(t))$ be the flow of well-being enjoyed by the person. Naturally, one would suppose that $dW/dH > 0$. Now let $J(H,q)$ denote a person's income, where q is, as in Box 1, a (scalar) parameter that reflects the person's environment (q is a scalar index of what is a vector of parameters). Assume that the curve J shifts vertically upward with increasing values of q.

What might q reflect? It could reflect (1) factors that are exogenous to the economy, such as rainfall, and factors that are exogenous to the person but are endogenous to the economy, such as the following: (2) the effectiveness of property rights, (3) the extent to which government and communities have effective support programs in place, (4) the degree to which markets are open to the person, and (5) the person's nonlabor assets (including education). To these, add (6) the extent to which the person has reasons to *trust* others, which may be the most important of all.

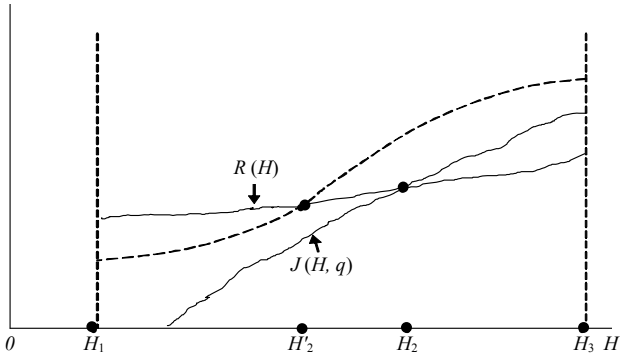
Let $R(H)$ denote the person's nutrition requirement (expressed in units of income). $J(H,q)$ and $R(H)$ are taken to be continuous functions of H. Now imagine that a person's health status, viewed as a stock, obeys the deterministic differential equation,

$$dH(t)/dt = J(H(t),q) - R(H(t)), H_3 > H(t) > H_1, \qquad (7)$$

and if, for any t', $H(t') = H_1$ (resp., H_3), then $H(t) = H_1$ (resp., H_3) for all $t > t'$. ($H = H_1$ and $H = H_3$ are called "absorbing barriers." The constant that preserves dimensionality in equation (7) has been implicitly set equal to unity.

In equation (7), H is the state variable and q is a parameter. In Figure 1, $J(H,q)$ and $R(H)$ have been drawn so that they intersect once, at H_2. (Maintenance costs are reflected in the fact that $R > 0$ even when $H = H_1$.) Equation (7) possesses three stationary points (or *equilibria*): H_1, H_2, and H_3. Of these, H_2 is unstable, while H_1 and H_3 are stable. Notice also that a person whose initial nutritional status, $H(0)$, is slightly in excess of H_2 enjoys growth in well-being, while someone with $H(0)$ slightly less than H_2 is trapped in a deteriorating situation. In short, there are people in the neighborhood of H_2 who are similar but who face widely differing fortunes. Poverty traps give rise to *horizontal inequity*.

Figure 1—Nutrition-Based Poverty Trap



Source: Devised by author.

Suppose q decreases slightly, say, because of deteriorations in any of the six factors listed earlier. In that case the income schedule $J(H,q)$ would experience a slight vertical drop. H_2 would move slightly to the right, meaning that some people who were not facing a poverty trap would now do so. Such people are said to be vulnerable to shocks in q. Suppose instead that q were to increase. The income schedule $J(H,q)$ would rise vertically (as in the broken curve), leading H_2 to move to H_2'. Fewer people would now be prey to the poverty trap. Moreover, if q were to rise sufficiently high, $J(H,q)$ would not intersect $R(H)$. In that case H_3 would become the unique stationary point of the system. Interpretations (2)–(6) for q come into play now. They identify the various pathways by which poverty traps can be and, in some countries have been, eliminated.

Household Labor Needs and the Local Commons: The Population–Poverty–Resource Nexus

Among poor households in rural communities much labor is needed even for simple tasks. Moreover, many households lack access to the sources of domestic energy available to households in advanced industrial countries. Nor do they have water on tap. In semi-arid and arid regions, water supply is often not even close at hand, nor is fuelwood nearby when the forests recede. This means that the relative prices of alternative sources of energy and water faced by rural households in poor countries are quite different from those faced by households elsewhere. In addition to cultivating crops, caring for livestock, cooking food, and producing simple marketable products, household members may have to spend several hours a day fetching water and collecting fodder and wood. These complementary activities have to be undertaken on a daily basis if households are to survive. They imply that poor people face large fixed costs in running their households—though econometricians studying rural households rarely model fixed costs (Box 3). Labor productivity is low because manufactured capital and environmental resources are both scarce. From an early age (as early as six years), children in poor households in the poorest countries mind their siblings and domestic animals, fetch water, and collect fuelwood, dung (in the Indian subcontinent), and fodder. Mostly, they do not go to school. Not only are educational facilities in the typical rural school woefully inadequate, but also parents need their children's labor. Children aged 10–15 years have been routinely observed to work at least as many hours as adult males.

The need for many hands can in principle lead to a destructive situation where parents don't have to pay the full price of rearing their children but share such costs with their community. Since time immemorial, rural assets such as village ponds and water holes, threshing grounds, grazing fields, swidden fallows, and local forests and woodlands have typically been owned communally. As a proportion of total assets, the presence of such assets ranges widely across ecological zones. In India the local commons are most prevalent in arid regions, mountain regions, and unirrigated areas; they are least prevalent in humid regions and river valleys. The rationale for this is the human desire to reduce risks. Community ownership and control enable households in semi-arid regions to pool their risks. An almost immediate empirical corollary is that income inequalities are less where common-property resources are more prominent. Aggregate income is a different matter though, and the arid and mountain regions and unirrigated areas are the poorest. As would be expected, dependence on common-property resources even within dry regions would appear to decline with increasing wealth across households.

Box 3—The Village Commons and Household Size

That increases in population put additional pressure on the local natural resource base is, no doubt, a banality; instead consider the reverse influence: the effect of a deterioration of the local natural resource base on desired household size. Villagers free-riding on the commons can impoverish households in such a way as to create an additional need for household labor. This in turn translates into demand for more surviving children, if having more children were the cheapest means of obtaining that additional labor. Of course, this is only one possibility. Another is that the recession of the commons impoverishes households in such a way that, at the margin, children become too costly, with the result that the number of surviving children declines. This box offers a formal account of both possibilities. The model enables us to identify parametric conditions under which the various outcomes would be expected to occur. The noncooperative village (that is, one where villagers free-ride on one another) is then compared with a cooperative one (that is, one where they collectively find ways to avoid free-riding). The model is timeless. Adjustments over time can then be analyzed in terms of comparative statics.

The Single Household

Consider an agriculture-based village economy consisting of N identical households. N is taken to be sufficiently large that the representative household's size does not affect the economy. The model is deterministic. Household size is assumed to be a continuous variable, which is a way of acknowledging that realized household size is not a deterministic function of the size the household sets for itself as a target. Let n be the size of a household. Members contribute to production, but they also consume from household earnings. Inputs and outputs are aggregated, and it is assumed that household production possibilities are such that *net income* per household member, $y(n)$, has the quadratic form

$$y(n) = -a + bn - cn^2,$$
where $a, b, c > 0$, and $b^2 > 4ac$. (8)

The quadratic form enables certain crucial features of a subsistence economy to be captured in a simple way, thereby permitting conclusions to be easily drawn. For example, equation (8) presumes that there are fixed costs in running a household, which is altogether realistic: in order to survive, a household must complete so many chores on a daily basis (cleaning, farming, animal care, fetching water, collecting fuelwood, cooking raw ingredients, and so forth) that single-member households are not feasible. Equation (8) also presumes that when the household is large, the costs of adding numbers begin to overtake the additional income that is generated. This too is clearly correct. It follows from equation (8) that $y(n) = 0$ at

$$n^* = [b - (b^2 - 4ac)^{1/2}]/2c, \text{ and} \quad (9a)$$

Box 3—Continued

$$n^{**} = [b + (b^2 - 4ac)^{1/2}]/2c. \quad (9b)$$

Note that n^* is the *fixed cost* of maintaining a household, while n^{**} is the environment's *carrying capacity*. It is assumed that the household chooses its size so as to maximize net income per head. Let n denote the value of n at which $y(n)$ attains its maximum, and let y denote the maximum. Then

$$\underline{n} = b/2c \text{ and} \quad (10a)$$

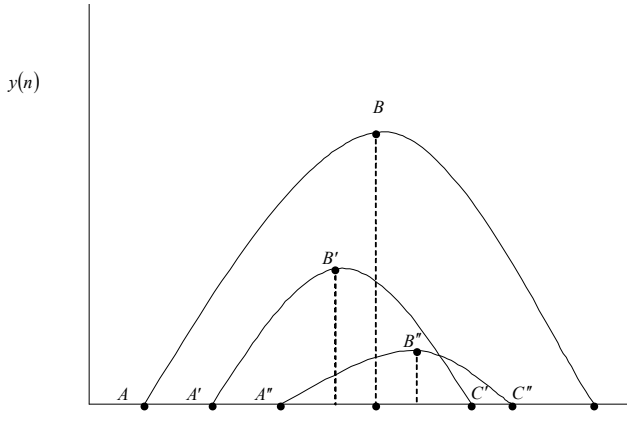
$$\underline{y} = -a + b^2/4c. \quad (10b)$$

In Figure 2, $y(n)$ is depicted as the curve ABC, where B is the point $(b/2c, -a + b^2/4c)$.

Imagine now that the household faces an increase in resource scarcity, which can be interpreted in terms of receding forests and vanishing waterholes. The index of resource scarcity could then be the average distance from the village to the resource base. So, an increase in resource scarcity would mean, among other things, an increase in n^*. But it would typically mean more. For example, equations (9a,b) tell us that the household would face an increase in resource scarcity if a, c, and a/c were to increase and b were to decline in such a way that n^{**} declines. Note too that, in this case, both n and y would decline in equations (10a,b). The resulting $y(n)$ is depicted as the curve $A'B'C'$ in Figure 2. The increase in resource scarcity shifts the curve ABC to $A'B'C'$.

Consider instead the case where a, b, and c each increase, but in such a way that n^* and $\underline{n}$ increase, while n^{**} and $\underline{y}$ decline. This is the kind of situation in which a household finds that its best strategy against local resource degradation is to increase its size, even though that will make it poorer. The resulting $y(n)$ is depicted as the curve $A''B''C''$ in Figure 2. In short, the increase in resource scarcity shifts the curve ABC to $A''B''C''$.

Figure 2—Household Income per Head as Function of Household Size



Source: Devised by author.

Social Equilibrium

Now to construct an equilibrium of the village economy. The state of the local natural resource base is taken to be a function of the village population, written as M, and a, b, and c in equation (8) are assumed to be functions of M: a = $a(M)$, $b = b(M)$, and c = c(M). A symmetrical equilibrium of the village economy is characterized by $M = N\underline{n}$. That is, n and y are the solutions of

$$n = b(N\underline{n})/2c(N\underline{n}) \text{ and} \quad (11a)$$

$$y = -a(N\underline{n}) + [b(N\underline{n})]^2/4c(N\underline{n}). \quad (11b)$$

It is assumed that a solution exists and that $n > 1$.

The Optimum Village

Consider next an optimizing village community. It would choose n so as to maximize

$$y(n) = -a(Nn) + b(Nn)n - c(Nn)n^2. \quad (12)$$

(It is assumed, without justification, that the optimum is symmetric in households.) Let n^{***} be the optimum household size. Then n^{***} is the solution of

$$[b(Nn) - 2nc(Nn)] - N[a'(Nn) - nb'(Nn) + n^2c'(Nn)] = 0. \quad (13)$$

A comparison of equations (11a) and (13) tells us that $n^{***} < \underline{n}$ if

$$-a'(N\underline{n}) + n[b'(N\underline{n}) - \underline{n}c(N\underline{n})] < 0. \quad (14)$$

That is, if (14) holds, the village is overpopulated in social equilibrium. An alternative way of thinking about the matter would be to say that an institutional reform that reduces the "freedom of access" to the commons would lower fertility. Now (14) certainly holds if

$$a', c' > 0 \text{ and } b' < 0 \text{ at } n = \underline{n}. \quad (15)$$

But (14) holds also if

$$a', b', c' > 0, \text{ and } [-a' + (bb'/2c) - (b^2c'/4c^2)] < 0 \text{ at } n = \underline{n}. \quad (16)$$

The Effect of Increased Resource Scarcity

Let us study the implications for equilibrium household size and the standard of living consequent upon small exogenous shifts in the functions $a(M)$, $b(M)$, and $c(M)$. It is assumed that prior to the shifts, inequality (14) holds. The perturbations are taken to be sufficiently small so that (14) continues to hold in the new equilibrium. Consider first the case where the perturbation consists of small upward shifts in $a(M)$ and $c(M)$ and a small downward shift in $b(M)$. Notice that if (15) holds, both $\underline{n}$ and $\underline{y}$ would be marginally smaller as a consequence of the perturbation. Intuitively this is what one would expect: a small increase in resource scarcity results in poorer, but smaller, households. Now consider the case where (16) holds. Suppose the perturbation consists of small upward shifts in each of the functions $a(M)$, $b(M)$, and $c(M)$. The relative magnitudes of the shifts can be set so that the small increase in resource scarcity results in poorer, but larger, households; that is, $\underline{y}$ declines marginally but $\underline{n}$ increases marginally. This is the timeless counterpart of the positive feedback mechanism between population size, poverty, and degradation of the natural resource base. Such a feedback, while by no means an inevitable fact of rural life, is a possibility. The experiences of Sub-Saharan Africa and the northern Indian subcontinent in recent decades are not inconsistent with it.

In recent years, social norms that once regulated local resources have changed. The very process of economic development, as exemplified by urbanization and mobility, can erode traditional methods of control. Social norms are endangered also by civil strife and by the usurpation of resources by landowners or the state. For example, resource-allocation rules practiced at the local level have frequently been overturned by central fiat. A number of states in the Sahel imposed rules that in effect destroyed community management practices in the forests. Villages ceased to have authority to enforce sanctions against those who violated locally instituted rules of use. State authority turned the local commons into free-access resources. As social norms degrade, whatever the cause, parents pass some of the costs of children on to the community by overexploiting the commons. This is an instance of a demographic free-rider problem.

The perception of an increase in the net benefits of having children induces households to have too many. This is predicted by the standard theory of the imperfectly managed commons. It is also true that when households are further impoverished owing to the erosion of the commons, the net cost of children increases (of course, household size continues to remain above what is desirable from the collective viewpoint). A study in Nepal, for example, found that increasing environmental scarcity lowered the demand for children, implying that the households in question perceived resource scarcity as increasing the cost of raising children. Apparently, increasing firewood and water scarcity in the villages in the sample didn't have a strong enough effect on the relative productivity of child labor to induce higher demand for children, given the effects that work in the opposite direction. Environmental scarcity there acted as a check on population growth.

However, theoretical considerations suggest that, in certain circumstances, increased resource scarcity induces further population growth. This statement is qualified because the theory has often been misunderstood to be saying that the negative link between (local) resource availability and fertility is unconditional. Bearing and raising children involve costs, but in some circumstances those costs are outweighed by the benefits of further procreation.

As the community's natural resources are depleted, households find themselves needing more "hands." No doubt additional hands could be obtained if the adults worked even harder, but in many cultures it would not do for the men to gather fuelwood and fetch water for household use. No doubt, too, additional hands could be obtained if children at school were withdrawn and put to work. But, as we have seen, the children mostly don't go to school anyway. In short, when all other sources of additional labor become too costly, more children are produced, thus further damaging the local resource base and, in turn, providing the household with an incentive to enlarge even more. This does not necessarily mean that the fertility rate will increase. If the infant mortality rate were to decline, there would be no need for more births in order for a household to acquire more hands. However, along this pathway, poverty, household size, and environmental degradation could reinforce one another. By the time some countervailing set of factors diminishes the benefits of having further children, many lives may have experienced a worsening of poverty (Box 3). A statistical analysis of evidence from villages in South Africa has found a positive link between fertility increase and environmental degradation, while a weak positive link has been found in the Sindh region in Pakistan. Over time the feedback would be expected to have political effects, as manifested by battles for scarce resources, for example, among competing ethnic groups. The latter connection deserves greater investigation than it has elicited so far.

To be sure, families with greater access to resources would be in a position to limit their size and propel themselves into still higher income levels. Admittedly, too, people from the poorest of backgrounds have been known to improve their circumstances. Nevertheless, positive feedbacks are at work that pull households away from one another. Such forces enable extreme poverty to persist despite growth in the well-being of the rest of society. (For a formal account of the process by means of a timeless model, see Box 2.)

Morals

Poverty traps are a reality. They are symptomatic of essential nonlinearities in metabolic, environmental, and socioeconomic processes. Although poverty traps have no single source, they possess a common structure. A lack of discussion on the pathways leading to poverty traps has been a factor behind many policy failures. Since the purpose here is to stimulate discussion, not to draw policy conclusions, the following observations about poverty alleviation are purposely broad:

1. *Poverty alleviation policies should be site specific.* It is easy enough to say, "One size does not fit all"; it is a lot harder to pin down how the "sizes" should be designed. In some contexts, preventing local institutions from collapsing may be the right object of policy design; in others, the provision of classrooms allied to school meals may be the right immediate investment.
2. *Complementarities matter.* Offering hungry children classrooms (even teachers!) does not help much in creating human capital.

3. *Be aware of mutual causation.* The common belief that unequal distribution of assets is a source of poverty among the unfortunate should be augmented by the recognition that poverty itself can be a cause of inequality.
4. *Be aware of unintended consequences.* Improving market conditions in the neighborhood of villages (surely a good thing) can lead to deterioration of village institutions, which in turn can lead to deterioration in the circumstances of the poorest.
5. *The local natural resource base matters.* National accounts do not include an economy's natural resource base. Policies built on economic models that do not contain natural capital are particularly dangerous because they can harm precisely those who are the objects of concern.

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ECONOMIC GROWTH AND POVERTY REDUCTION

Do Poor Countries Need to Worry about Inequality?

Martin Ravallion

There is a seemingly widespread view that inequality should not be a concern in countries striving to fight absolute poverty. Although inequality may well be high or rising in some developing countries, this increase is seen as the unavoidable by-product of the economic growth needed to reduce poverty. The message for policy is that poor countries—including their poor—need not worry too much about inequality.

Does the evidence from country experience support this view? This brief first looks at the relationship between economic growth on the one hand and poverty and inequality on the other. It then examines how inequality influences the relationship between growth and poverty and distinguishes between different types of inequality. Finally, some thoughts are offered on appropriate policies.

Growth Is Not Necessarily Inequitable in Poor Countries

The classic argument for believing that inequality will rise, more or less inevitably, as poor economies grow is the Kuznets hypothesis (KH), based on pioneering research by Simon Kuznets in the 1950s. This hypothesis states that inequality increases during the early stages of growth in a developing country but begins to fall after some point.

Writing in the 1950s, Kuznets had very little survey data for developing countries to draw on. Since then, there has been a huge expansion in the collection of nationally representative household surveys for developing countries. These data suggest that most growing developing countries have not seen the trend increase in inequality predicted by the KH. Indeed, very few developing economies have seen a trend increase (or decrease) in overall inequality. Granted, many countries have experienced periods of rising inequality, but they have generally been followed by periods of falling inequality and have only rarely been sustained. (Box 1 examines one exception—China—although even there the reality is more complicated than implied by the KH.)

To re-examine the relationship between growth and changes in inequality, this brief relies on 290 observations of the change between two successive household surveys for a given country, with more than one observation for most countries (data are drawn from the World Bank's PovcalNet and *World Development Indicators*). About 80 countries are represented, spanning the period from about 1980 to the early 2000s.

Box 1—China: Concerns about Rising Inequality

China is often cited as an example of an aggregate growth-equity trade-off. Probably no other country has had the steep rise in both mean income *and* income inequality that China has seen since the early 1980s. The evidence shows, however, that periods of more rapid growth did not bring more rapid increases in inequality. Indeed, the periods of falling inequality (1981–85 and 1995–98) had the highest growth in average household income. And the provinces that started the reform period with relatively high inequality had both lower subsequent growth *and* less sharing by the poor in the gains from that growth.

Although some of the policy reforms and institutional changes in China's economic transition simultaneously increased inequality and reduced poverty (such as allowing greater returns to schooling by opening labor markets, and restoring incentives to work by introducing the Household Responsibility System), other economic and political forces have been at work to generate less benign inequalities. These forces include geographic poverty traps (whereby prospects of escaping poverty depend causally on where one lives) and emerging inequalities in opportunities for enhancing human capital, obtaining credit and insurance, protecting one's rights under the law, and influencing public affairs. These "bad inequalities"—rooted in market failures, coordination failures, and governance failures—limit peoples' opportunities to take action that will help them escape poverty.

It will be harder for China to maintain its past rate of progress against poverty without addressing the problem of rising inequality. If recent history is any guide to the future, the historically high levels of inequality found in many provinces today are likely to inhibit future prospects of poverty reduction. Other factors point to the same conclusion. It appears that aggregate economic growth in China is increasingly coming from sources that bring more limited gains to the poorest. The "low-lying fruit" of efficiency-enhancing pro-poor reforms may be becoming scarce. Inequality is continuing to rise, and poverty measures are becoming more responsive to rising inequality.

At the outset of China's current transition period to a market economy, levels of poverty were so high that inequality was not an important concern. That situation has changed.

Taking this period as a whole, there is little or no correlation between changes in inequality and rates of economic growth. Comparing the changes in a measure of inequality, the Gini index, with changes in average real income shows that among growing economies, inequality increased about as often as it fell. That is also true of contracting economies.

If one focuses solely on the period since the early 1990s, there are signs that a positive correlation is emerging between rising inequality and economic growth. It appears that the recent growth processes seen in many reforming economies have put upward pressure on inequality. There are exceptions, however, in that growth since the early 1990s has accompanied falling inequality in some countries. Nor is the overall positive correlation in the data after 1990 robust to corrections for measurement errors. As a generalization across country experiences, it still appears that growth tends to be roughly distribution-neutral on average.

One should be cautious about the policy interpretation of this finding. The lack of a robust correlation between changes in inequality and growth does not imply that policymakers aiming to fight poverty in any given country can safely focus on growth alone. Putting measurement problems to one side, this empirical finding merely reveals that, on average, there was little effective redistribution in favor of the poor. It does not say that redistribution rarely happens, or that distribution is unimportant to the outcomes for poor people from economic growth, or that social protection policies are unnecessary.

Growth Tends to Be Less Pro-Poor in Poor and Unequal Countries

Given that growth tends to be distribution-neutral on average, it is not surprising that many empirical studies have found that measures of absolute poverty tend to fall with growth. The same rate of growth, however, can bring very different rates of poverty reduction. In trying to understand why this is so, it should first be noted that the rate of poverty reduction is the growth rate times the growth elasticity of poverty reduction, or the "growth elasticity" (GE) for short—that is, the proportionate change in the measure of poverty that results from a given rate. A large negative GE reveals that even a modest growth rate can bring rapid poverty reduction. For the US$1-a-day poverty rate, the average GE is about –2, meaning that a growth rate of, say, 5 percent in mean household income per capita will reduce the share of the population living below the poverty line by 10 percent a year (in proportionate terms).

High initial inequality makes poverty less responsive to growth. This is intuitive; given that growth tends to be distribution-neutral on average, the higher the initial inequality, the less the poor will share in the gains from growth. Unless there is sufficient change in distribution, people who have a larger initial share of the pie will tend to gain a larger share in the pie's expansion.

Indeed, among the highest-inequality countries, poverty incidence tends to be quite unresponsive to economic growth. Consider a country with a 2 percent rate of growth and a headcount poverty rate of 40 percent. In a low-inequality country with a Gini index of 0.30, the poverty rate will fall by about 6 percent a year and be halved in 11 years, on average. By contrast, in a high-inequality country with a Gini index of 0.60, growing at the same rate and with the same initial poverty rate, it will take about 35 years to halve the poverty rate. Because poverty responds more slowly to growth in high-inequality countries, these countries need unusually high growth rates to achieve rapid poverty reduction.

Poverty incidence also tends also to be less responsive to growth in poor countries. The combined effect of high poverty *and* high inequality greatly attenuates the growth elasticity of poverty reduction. Recall that the average GE for developing countries is about –2. Among those countries with both high inequality (a Gini index over, say, 0.45) *and* a high incidence of poverty (a US$1-a-day headcount index over, say, 25 percent), the median elasticity falls to about –1, implying that twice the rate of growth will be needed to achieve the same rate of poverty reduction. Contrast this with the set of developing countries fortunate to have both low inequality (a Gini index less than 0.35) and low poverty (a headcount index less than 10 percent). For this group the median elasticity is an impressive –3.4, and even modest growth can result in quite rapid poverty reduction.

How Inequality Changes over Time Also Matters

The empirical finding that growth is roughly distribution-neutral on average is consistent with the fact that during growth spells, inequality increases in roughly half the cases. Whether inequality increases or not can make a big difference to the rate of poverty reduction. Among growing economies, the median rate of decline in the US$1-a-day headcount index is only about 1 percent a year for those countries for which growth came with rising inequality. By contrast, poverty declined about 10 percent a year among countries that combined growth with falling inequality. Either way, poverty tends to fall, but at very different rates.

Consider the growth process in Brazil (a high-inequality country) in the 1980s. If Brazil's growth had been distribution-neutral, it would have experienced a 4.5 percentage point decline in the headcount index of poverty. In fact, there was no change over the decade; distributional shifts working against the poor exactly offset the gains from growth. Conversely, even when initial inequality is high and the initial share held by the poor is low, their gains from growth can be sizable if that growth is accompanied by sufficient pro-poor redistribution. Falling inequality in Brazil beginning in the mid-1990s allowed a faster rate of poverty reduction than the level implied by growth alone.

What factors underlie the changes in distribution, as they affect poverty? A great many country-specific factors are involved, including shocks to agricultural incomes, changes in the trade regime, shifts in relative prices, tax reforms, welfare policy reforms, and demographic changes. Generalizations across country experiences are never easy, but one factor that is likely to matter in many developing countries is the geographic and sectoral pattern of growth. The greater availability of nationally representative household surveys has revealed marked and persistent concentrations of poor people in specific regions and sectors, even in countries with high growth. The extent to which growth favors the rural sector is often key to its impact on poverty, given that three-quarters of the poor in the developing world live in rural areas. The importance of agricultural growth to poverty reduction has been particularly striking in China, where relatively equitable access to agricultural land in rural areas has meant that poverty is very responsive to agricultural growth. Growth in aggregate farm output has had about four times greater impact on aggregate poverty in China than has growth in the manufacturing or services sectors. In other countries, however, including Brazil and India, the services sector has proved to be an important source of poverty-reducing growth.

There Are Both Good and Bad Inequalities

High initial inequality can also impede future growth and hence poverty reduction. Credit and risk market failures are one way this can happen. The credit-constrained poor tend to have high marginal products from investment given their low initial capital endowments, but they are unable to exploit opportunities for investment. High inequality can also foster social conflict and macroeconomic instability and impede efficiency-promoting reforms that require cooperation and trust. High inequality is thus a double blow to prospects for reducing poverty: it entails less growth, and it means that the growth is less pro-poor.

However, it is not particularly useful to talk about "inequality" as a homogenous concept in this context. To contribute to policy, one needs to focus on the specific dimensions of inequality that create or preserve unequal opportunities for participating in the gains from economic growth. There are both good and bad inequalities.

Good inequalities are those that reflect and reinforce the market-based incentives that are needed to foster innovation, entrepreneurship, and growth. For example, a control regime may keep inequality low by compressing the labor-market returns to schooling or the returns to other forms of investment. Reforms in such a regime can increase inequality in a way that facilitates more rapid poverty reduction by allowing poor people to take up new economic opportunities.

Bad inequalities, however, not only generate higher poverty now, but also impede future growth and poverty reduction. Social exclusion, discrimination, restrictions on migration, constraints on human development, lack of access to finance and insurance, corruption, and uneven influence over public actions are all sources of inequality that limit the prospects for economic advancement among certain segments of the population, thereby perpetuating poverty in the future.

Recent research has pointed to the importance of certain geographic inequalities. Living in a well-endowed area will sometimes mean that a poor household can eventually escape poverty, whereas an otherwise identical household living in a poor area experiences stagnation or even absolute decline. Such geographic poverty traps are one reason why some poor areas have often seen lower-than-average growth and hence stay poor.

Bad inequality also stems from disparities in human resource development. By increasing the returns to schooling, freeing up labor markets increases the incentives for work and skill acquisition. People with relatively little schooling, few assets, or little access to credit, however, are less able to respond to these incentives. The disadvantages they face in these other areas mean that they are less well positioned to take advantage of the opportunities unleashed by market-oriented reforms.

For example, although India has relatively low overall inequality of consumption, it has high inequality in human resource development and access to markets. These inequalities have interacted powerfully with the sectoral and geographic pattern of economic growth to influence India's progress against poverty, which was disappointing in recent times, particularly given the country's relatively high aggregate growth rates.

Policies Need to Reduce Bad Inequalities While Promoting Growth

Accepting that poverty reduction is the overall goal, policies that reduce inequality at the cost of lower long-term living standards for poor people should clearly be avoided. Reducing inequality by adding further distortions to an economy will have ambiguous effects on growth and poverty reduction. It should not be presumed, however, that all redistributive policies will result in such a trade-off. The potential for win–win policies stems from the fact that there are bad inequalities, which come at a cost to overall growth *and* entail that the poor share less in the opportunities unleashed by growth.

More rapid poverty reduction requires more growth, a more pro-poor pattern of growth, and success in reducing the antecedent inequalities that limit poor people's economic opportunities. What types of policies are needed? Some examples of the types of policies that can promote poverty reduction by reducing the bad inequalities follow:

- *Increase agricultural productivity.* Higher agricultural productivity promotes growth in other sectors, including services, and higher farm productivity can be expected to reduce overall inequality and poverty within a typical developing

economy (where food producers tend to be poor and poor consumers have high budget shares devoted to food). Achieving higher farm yields in rain-fed, drought-prone settings will require both more research on appropriate farm technologies (including technologies appropriate to labor-abundant settings) and policy reforms and public investments to help assure successful adoption of those technologies.

- *Address geographic poverty traps.* Spatial concentrations of extreme poverty remain, even in the more rapidly growing developing economies. A recurrent issue is striking the right balance between investing in poor areas and reducing the cost of out-migration from those areas. Does it make more sense to move jobs to people, or people to jobs? There is fertile ground here for future research. The right sorts of investments in poor areas (such as in education and managing risks) are also necessary conditions for successful out-migration to begin. Rural infrastructure development can also play a decisive role. For example, research has revealed the importance of rural roads to achieving more pro-poor growth processes in poor lagging areas of rural China. Some research has also suggested important complementarities between human and physical infrastructure investments.
- *Make markets and governments work better for the poor.* Policies can also focus on correcting the underlying market and governmental failures that create high costs of inequality, such as by restricting the accumulation of physical and human assets by poor people. A wide range of policies are potentially important, including sound public investments in rural infrastructure to support market development, better policies for delivering high-quality health and education services to poor people, and policies that allow key product and factor markets (for land, labor, and credit) to work better from the point of view of poor people. In rural economies, security of access to land through tenancy reform and titling programs will often be important. Better instruments for credit and insurance can also help, both in smoothing consumption and in underpinning otherwise risky growth-promoting strategies. Affirmative action policies can help open opportunities for the poor. Removing biases against the poor in taxation, spending, and regulatory policies (including policies on migration) can also play an important role in certain settings. Again taking an example from China, reducing the government's taxation of farmers through its underpriced food grain procurement quotas has been a powerful instrument against poverty. The right combination of interventions will naturally depend on country and regional circumstances.

The challenge for policy is to combine growth-promoting policies with the right policies for assuring that the poor can participate fully in the opportunities unleashed and so contribute to that growth. If a country gets the combination of policies right, then both growth and poverty reduction will be rapid. Get it wrong, and both will be stalled.

For Further Reading: World Bank, *World Development Report: Equity and Development* (New York: Oxford University Press, 2006).

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DETERMINANTS OF PRO-POOR GROWTH

Stephan Klasen

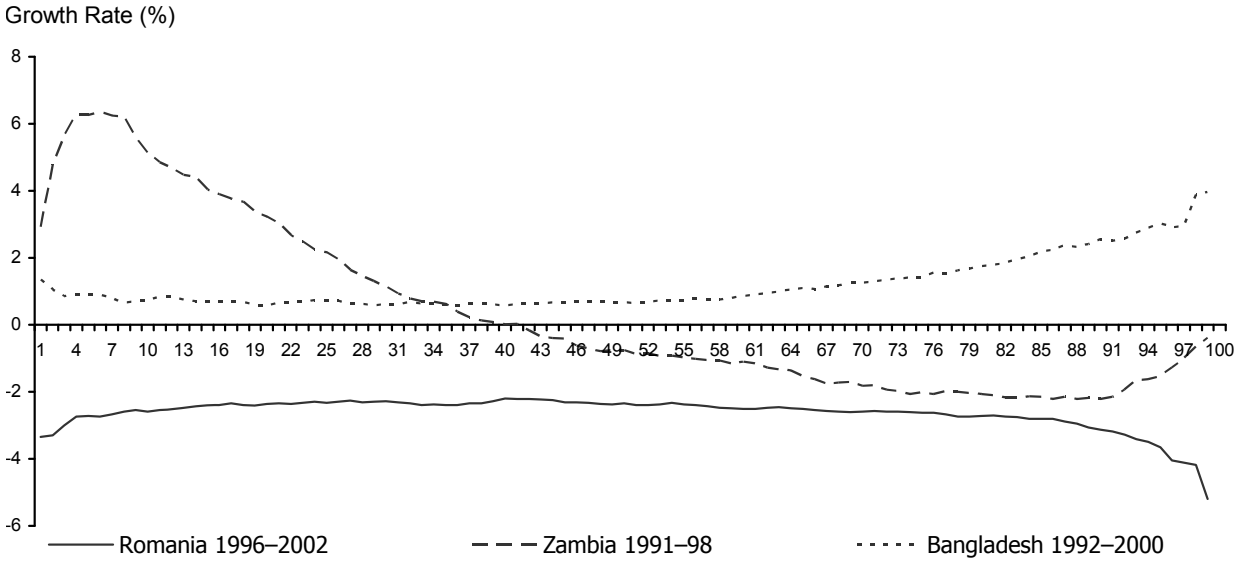
With 2015 only eight years away, it is becoming clear that many countries in the developing world will not be able to meet the first Millennium Development Goal (MDG1) of halving absolute poverty. In fact, many countries in Sub-Saharan Africa and several in Asia and Latin America are seriously off track for meeting that goal. In a large number of cases, this is related to poor growth performance that has made it difficult to reduce absolute poverty. In addition, in most of these countries, the growth they have been experiencing has had little impact on poverty. Moreover, rising inequality in many developing countries is further mitigating the impact of growth on poverty. Even in countries that are projected to meet MDG1 as a result of high growth (like China and India), rising inequality has sharply reduced the poverty impact of that growth, so that poverty is falling at unacceptably low rates. Given this situation, it is clearly insufficient to simply focus research and policy on the determinants of overall economic growth. Instead, it is critical to examine the determinants of pro-poor growth—that is, growth that has a particularly large impact on reducing poverty. This policy brief summarizes what is currently known about the definition, measurement, and determinants of such pro-poor growth, primarily drawing on results from a recently completed multidonor research program called Operationalizing Pro-Poor Growth, which was coordinated by the World Bank.

Defining and Measuring Pro-Poor Growth

There is a vibrant debate on different ways to conceptualize pro-poor growth. For some observers, growth is pro-poor if it leads to any reduction in poverty; for others, it is pro-poor only if it leads to a disproportionate increase in the incomes of the poor—that is, if it is associated with declining inequality. Although each of these views has merits, from a policy perspective, it is particularly useful to define *pro-poor growth* as growth that maximizes the income gains of the poor and thus accelerates progress toward meeting MDG1. Achieving high overall income growth can be one important way of achieving high income growth for the poor, but only if the poor are able to share in this growth. But even in such situations, the income growth of the poor will be higher if that growth is accompanied by pro-poor distributional change—in other words, a reduction in inequality. Such reductions in inequality immediately raise the incomes of the poor, and they have also been found to permanently increase the poverty impact of future growth and to help promote overall income growth in many circumstances. Thus, not only high and broad-based growth, but also pro-poor distributional change can be a powerful driver of pro-poor growth.

The growth incidence curve proposed by Ravallion and Chen is a particularly useful tool for tracking progress on pro-poor growth. They plot the growth rates of percentiles of the income distribution, which are lined up on the x-axis from poorest to richest. Figure 1 gives three examples—Bangladesh, Romania, and Zambia—from the Operationalizing Pro-Poor Growth case studies. Growth incidence curves (GICs) that are upward sloping suggest that the rich have benefited more from growth, as is the case for Bangladesh from 1992 to 2000. Downward-sloping GICs suggest that the poor have benefited disproportionately from growth, as is the case for Zambia from 1991 to 1998. In Romania (1996–2002), all groups suffered declining incomes, but the rich more so than the poor. One way to summarize the information contained in the GIC is the rate of pro-poor growth proposed by Ravallion and Chen, which is simply the average of the growth rates for the percentiles below the poverty line (or graphically, the area under the GIC up until the poverty line in the first period). In the three examples shown, the difference between growth and pro-poor growth becomes apparent. In Bangladesh, overall annual per capita growth was 1.8 percent, but the anti-poor nature of that growth meant that the rate of pro-poor growth was only 0.7 percent. Conversely, in Zambia, overall per capita growth was negative (–1 percent), but pro-poor distributional change meant that the rate of pro-poor growth, at 1.1 percent, was actually higher than in Bangladesh.

Figure 1—Selected Growth Incidence Curves



Determinants of Pro-Poor Growth

As the discussion so far has suggested, high rates of pro-poor growth can be achieved by generating high overall growth from which the poor benefit, by achieving pro-poor distributional change, or both. There is a large amount of literature examining the determinants of overall economic growth. The World Bank Growth Commission is currently distilling the most important policy messages from this literature. This brief focuses instead on the determinants of the distributional pattern of economic growth—that is, the difference between growth and pro-poor growth. Many of the determinants of pro-poor growth depend on country conditions, just as they do for growth. Thus, it is not easy to generalize policy messages that apply to all settings. Instead, pro-poor growth analysis should be seen as a toolbox for studying the country-specific determinants of growth and distributional change and for deriving country-specific policy conclusions. One important outcome of the Operationalizing Pro-Poor Growth project has been the development and application of such an analytical toolbox.

Nonetheless, the cross-country analyses and country studies have generated some important policy messages that appear to be relevant beyond the specific country context. At the most general level, pro-poor growth will require growth that is focused on sectors where poor people are active (or could become active), on regions where poor people live (or could move to), and using production factors that poor people possess. In most poor developing countries, meeting these requirements will typically call for growth that includes the agricultural sector, that reaches rural areas and remote regions, and that is labor intensive. To the extent that poor people are able to diversify into nonfarm sectors or move to more dynamic regions, and to the extent that doing so would demonstrably enhance their incomes, the development of such sectors and regions could also support pro-poor growth, although the benefits are likely to be smaller and more indirect and occur with a time lag. Finally, pro-poor growth could be achieved through ex post pro-poor redistribution of the benefits from growth through the tax and transfer system. Although this approach is possible in principle and is a significant factor affecting pro-poor growth in developed countries, the ability of the tax and transfer systems in developing countries to achieve such ex post redistribution is much more limited and cannot generally be relied on to produce pro-poor outcomes.

From these general principles, several more-specific determinants of pro-poor growth have been derived, which are discussed below.

Improved Productivity in the Food Crop Sector

Productivity improvements in agriculture are a key determinant of pro-poor growth, particularly in countries where the poor are predominantly rural. Such productivity improvements require research and extension into better seeds and inputs, improved rural infrastructure, and improved access to credit. Although investments in cash crops can play a significant role in promoting pro-poor growth in some settings, productivity improvements in food crops are a more powerful driver of pro-poor growth, as the examples of China (particularly between 1978 and 1985) and Indonesia show. Conversely, the experience of China since the mid-1980s demonstrates that even very high growth can lead to little further poverty reduction when that growth largely bypasses the agricultural sector. Similarly, the failure to achieve sustainable pro-poor growth in many African countries is closely related to the inability to generate lasting productivity improvements in the food crop sector.

Reduced Regional Inequality

Improving the growth potential of lagging and remote regions is a second critical ingredient of a pro-poor growth agenda. Much of the observed increase in inequality in developing countries is due to rising regional inequality. Brazil, China, Ghana, India, and Vietnam are good examples in this regard. Such rising regional inequality increasingly undermines the ability of growth to have an impact on poverty. As a result, great attention must be placed on promoting growth in lagging regions. Among the policies to be pursued with greater vigor are infrastructure policies favoring lagging regions, targeted public investment programs and support for private investments there, support for migration and remittances, pro-poor fiscal decentralization measures that increase local public resources in poor regions, and specific safety nets such as conditional cash transfer programs focused on lagging regions. Ensuring success in this area is going to be one of the greatest challenges for pro-poor growth policies.

Improved Asset Base for the Poor

Improving the asset base of the poor is another critical element in promoting pro-poor growth. In many countries, the most important asset base is the human capital of the poor. Developing countries have made considerable progress in expanding educational opportunities, but the poor are still lagging behind in terms of access to high-quality schooling, particularly beyond the primary level. Improving school quality and increasing the enrollment and retention of the poor can play important roles here. The positive educational impacts of conditional cash transfer programs are particularly relevant and worth emulating as ways to improve the educational opportunities of the poor and to reduce income inequality. It is also important to monitor the distributional pattern of educational achievements and investments more carefully than has been done to date. One way to do this is to generate growth incidence curves for education to examine the distributional impact of schooling investments.

In countries where the poor in rural areas are landless or near landless, improving the asset base of the poor will also require greater access to land. Here speedy and effective land reform must be on the pro-poor growth agenda. Although market-based land reforms that support the poor in purchasing land on a willing buyer–willing seller basis can be part of a land reform strategy in countries such as Colombia or South Africa, this approach is usually insufficient to effect large-scale land redistribution where it is urgently required. In these cases, progressive land taxation might be an important tool to increase the available land for sale, and partly confiscatory land reform might be required, as was the case in many East Asian countries in the 1940s and 1950s.

Reduced Gender Inequality

In many countries, promoting pro-poor growth has an important gender dimension. Particularly in South Asia and Sub-Saharan Africa, pro-poor growth is undermined by high gender inequality in education, access to resources at the farm level, and nonfarm employment. There is overwhelming evidence now that these inequalities not only hurt the females affected, but also reduce overall economic growth and thus poverty reduction. Conversely, investing in female education and employment has enabled countries to draw on their entire pool of talent for production and growth (rather than restricting the pool to males). It has also had indirect benefits for economic growth by, for instance, lowering fertility and population growth rates and improving the health and education of the next generation. The East Asian countries, for example, invested heavily in female education in the 1950s and 1960s and are now reaping the benefits in terms of female-intensive, export-oriented growth strategies and a rapid demographic transition with drastically lowered dependency rates. The examples of Bangladesh, Botswana, and Tunisia in the 1990s show that such progress is also possible in South Asian and African settings. Interestingly, the impact of improved gender equity on pro-poor growth is related more to improving overall economic growth than to achieving pro-poor distributional change.

Reduced Inequality for Disadvantaged Groups

In some country contexts, promoting pro-poor growth will have to focus on other particularly disadvantaged groups. Often these groups are indigenous populations in Latin America, lower caste and tribal groups in South Asia, and ethnic minorities in East and Southeast Asia. Many of these groups suffer from multiple disadvantages, including a poor asset base, a remote location, a history of poverty, and ongoing discrimination. A pro-poor policy agenda in these countries will require an end to discrimination in education, labor, and credit markets and targeted initiatives to promote education and access to resources for these disadvantaged groups. Here the example of Malaysia's policies of affirmative action has demonstrated the capacity to reduce historic inequalities without compromising high economic growth.

Political Commitment to Pro-Poor Policies

The promotion of pro-poor policies depends to a significant extent on political economy issues. The case studies on pro-poor growth reveal that a strong commitment of the political leadership to equity and poverty reduction is critical to implementing a consistent pro-poor policy agenda. Indonesia is a good example of how strong government commitment to poverty reduction and rural development over several decades was critical for the success of its pro-poor growth policies. Although

an open society with a tradition of public debates can do much to promote a pro-poor agenda, as has been the case in India (which recently introduced a national employment guarantee scheme, for example), the mere presence of regular elections does not necessarily ensure a pro-poor policy focus.

A Strong State

Finally, the research program on pro-poor growth showed that a strong state is needed to implement a pro-poor policy agenda. Although economic reforms and liberalization can play an important role in improving the incentives of the poor, these changes are usually insufficient in the face of market imperfections, poor infrastructure, poor endowments, and little access to productive inputs and credit. In these contexts, the improved border or capital city prices will not be transmitted to the farm gate, or farmers will lack the capital and technology to react to these improved opportunities. A strong state can effectively implement proactive policies to improve the productivity of the poor and increase their access to markets and productive inputs and credit. Thus a policy agenda for pro-poor growth must consider policies that were frowned on and dropped in the reform era of the 1980s and 1990s, such as state support for exporters, input subsidies, directed credit, regional and industrial policies, price regulation of goods produced or consumed by the poor, land reform, and redistributive taxation. Many of the East and Southeast Asian success stories of pro-poor growth (including early reform-era China, as well as Indonesia, Korea, and Malaysia) used some or all of these measures to successfully promote growth and improve its distributional pattern. To be sure, in many other countries, similar policies were poorly implemented, were fiscally unsustainable, created new distortions, or were captured by narrow interest groups. A pro-poor growth agenda suggests that it is critical to learn from the successes and failures of such past interventionist policies and redesign future policies and their institutional setups accordingly.

Concluding Remarks

Economic growth in developing countries has recently accelerated across the board. Not only have high-growth economies such as China, India, and Vietnam been able to maintain their spectacular growth performance, but also growth has picked up in many parts of Africa, Latin America, and across Asia. From a pro-poor growth perspective, these generally positive trends carry two risks. First, much of the improvement in economic performance, particularly in Africa and parts of Latin America, are closely related to a boom in commodity prices that may be short lived or may lead to distortions in the economies and political systems of these countries. If and when the current commodity boom comes to an end, these distortions threaten to undermine the long-term growth potential of these countries. Second, in many countries, the high growth of the past 10 to 15 years has been accompanied by rising inequality, which slows the poverty impact of that growth. The pro-poor growth research has shown that this rise in inequality was not inevitable. In fact, a focus on the pro-poor policy agenda outlined here could ensure that growth is shared broadly among the population or, ideally, is accompanied by pro-poor distributional change. The experiences of Indonesia, Korea, Malaysia, and Taiwan also show that growth with equity is possible over long periods.

For Further Reading: T. Besley and L. Cord, eds., *Delivering on the Promise of Pro-Poor Growth* (London: Palgrave Macmillan, 2006); M. Grimm, S. Klasen, and A. McKay, eds., *Determinants of Pro-Poor Growth: Analytical Issues and Findings from Country Cases* (London: Palgrave Macmillan, 2007); S. Klasen, "In Search of the Holy Grail: How to Achieve Pro-Poor Growth?" in *Toward Pro Poor Policies*, B. Tungodden, N. Stern, and I. Kolstad, eds. (New York: Oxford University Press, 2004); S. Klasen, "Gender and Pro-Poor Growth," in *Pro-Poor Growth: Policies and Evidence*, L. Menkhoff, ed. (Berlin: Duncker and Humblot, 2006); S. Klasen, "Economic Growth and Poverty Reduction," *World Development* (forthcoming); Organisation for Economic Co-operation and Development, *Promoting Pro-Poor Growth* (Paris, 2006); M. Ravallion and S. Chen, "Measuring Pro-Poor Growth," *Economics Letters* (Vol. 78, No. 1, 2003).

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GLOBAL MACROECONOMIC DEVELOPMENT

The Implications for Poverty

Eugenio Díaz-Bonilla

This brief presents an overview of global macroeconomic developments over time and some of their implications for poverty trends in developing countries. It concludes with comments on possible macroeconomic policies to create an environment for sustainable poverty reduction in developing countries.

Growth, Prices, Capital Flows, and Their Impact on Poverty

Growth

High and stable growth is important for poverty alleviation. Although world economic growth declined in every decade from the 1960s through the 1990s, it has picked up somewhat in the 2000s. In particular, world gross domestic product (GDP) per capita grew during 2000–05, mainly because population growth has declined and the performance of per capita GDP in developing countries has strengthened, reaching its highest point in the past half century.

Growth stability is also central for improving poverty trends. Overall, the global economy has gone through four cycles of strong deceleration: 1974–75, 1980–83, 1991–93, and 2001–02. In each of these episodes, the number of developing countries in recession increased significantly; in some cases more than 50 percent of the countries were affected—55 percent in 1982 and 53 percent in 1992. Looking at the averages for each decade, volatility and the number of countries in recession increased during the 1980s and declined in the following decades, reaching their lowest values in the 2000s (Table 1). In general, the numbers indicate that, in the current decade, developing countries have enjoyed relatively high growth with low volatility, which should help with poverty alleviation efforts. It is uncertain how much longer the current benign conditions can be sustained.

Inflation and Interest Rates

Interest rates and inflation have important implications for growth and poverty alleviation. For instance, episodes of hyperinflation, such as occurred in several countries of Latin America and the Caribbean (LAC) in the 1980s and 1990s, were accompanied by sharp increases in poverty. But lower inflation tends to alleviate poverty because the poor have nominal incomes that adjust slowly to change, and they do not have access to financial instruments that protect them from price increases. In recent decades, the world economy has gone through cycles of rising and falling inflation, with parallel cycles of nominal and real interest rates. Recent low trends should have contributed to alleviating poverty. Since mid-2003, however, nominal and real short-term interest rates have begun to increase, signaling a tightening of monetary policy that may preface a slowdown in global GDP in 2008–09 that could negatively affect poverty levels.

Table 1—World Macroeconomic Indicators

Indicator	1960s	1970s	1980s	1990s	2000s
World					
GDP Growth (% per year)	5.4	4	3	2.7	3
GDP per Capita Growth (% per year)	3.4	2.1	1.3	1.2	1.7
Trade Growth (% per year)	7.6	6.4	4.7	6.2	6.7
Trade as a Share of GDP (%)	24.5	32.2	37.6	41.3	48.6
Developing Countries					
Total Growth (% per year)	4.9	5.3	3.4	3.4	5.2
Per Capita Growth (% per year)	2.7	3.1	1.4	1.8	3.9
Share in Recession (%)	28.5	29	40.6	35.8	18.9
Capital Inflows (% GDP)	n.a.	1.25	1.06	1.44	1.11
Consumption Volatility	0.91	0.78	1.03	0.80	0.64
Inflation (% per year)[a]					
Industrialized Countries	4.9	8.7	6.2	2.8	2
Developing Countries	4.9	16.2	36.7	36.1	5.8
Interest Rates (%)					
Nominal[b]	6	8.4	10.6	5.5	3.2
Real[c]	1	–0.3	4.1	2.7	1.1

Sources: World Bank, *World Development Indicators* (Washington, DC, various years); International Monetary Fund, IFS (Washington, DC, various years).
Notes: Growth is aggregated at market exchange rates. Consumption volatility data represent a median of five-year rolling average of standard deviation/average growth for developing countries. For the 1960s, data cover various years. For the 2000s, data on GDP, trade growth, interest rates, and inflation are for 2000–05.
[a]Consumption index.
[b]LIBOR dollar deposits six months.
[c]Using industrialized-country inflation rates.

Commodity Prices

Many of the poorest developing countries and several of the middle-income ones depend on exports of a relatively small number of commodities. Therefore, price developments in these products tend to have a large impact on production, incomes, employment, fiscal accounts, and poverty in those

Table 2—Commodity Real Price Indexes (2000 = 100)

Commodity	1960s	1970s	1980s	1990s	2000–05	2005–07
Food	206.9	220.0	143.9	106.1	102.2	104.7
Agricultural Raw Materials	111.1	110.9	85.1	94.4	94.0	91.6
Beverages	292.2	297.9	190.8	113.0	95.3	105.8
Oil	23.6	60.8	103.8	57.3	106.3	158.8
Metals	138.6	134.6	113.5	91.5	103.6	186.4

Sources: See Table 1.
Note: Values are deflated by the export unit value of industrialized countries.

countries. World commodity prices have experienced important changes in real terms over these decades (Table 2).

During the 1960s and 1970s prices of agricultural products (particularly food and beverages) were high in real terms. Oil prices jumped significantly during the mid- to late 1970s. In the early 1980s the world macroeconomic environment changed markedly, leading to a sharp decline in world growth. Nominal and real prices of many commodities declined, and during the 1990s real prices of many commodities were about half the levels of the 1960s and 1970s or less. Real prices of commodities remained on a lower plateau for much of the 1990s. Depressed world prices of food and agricultural products during the 1980s and 1990s—in part also related to agricultural protectionism and subsidies in industrialized countries—appear to have discouraged investments in the rural sector of many developing countries, with negative consequences for the poor, who mostly reside there. Low food prices seem to have also pushed several developing countries into a more extreme specialization in tropical products, increasing their external vulnerability and transforming many of them into net food importers that came to depend on subsidized food from abroad.

Once the world resumed growth after the deceleration in the early 2000s, some commodities, particularly metals and oil, began to climb again, and in 2005–07 actually surpassed the peaks achieved in the 1970s (in real terms). The current situation for agricultural commodities is different, however, in the sense that real prices for those products have stayed well below the higher levels of the 1960s and 1970s.

Capital Flows and Debt

Capital flows to developing countries have gone through two cycles (see Box 1). The first peaked in the early 1980s at more than 2 percent of the combined GDP for developing countries; it then declined during the debt crisis of the 1980s to a minimum of 0.6 percent of GDP in 1986. The second cycle began in the early 1990s; peaked in 1995 at about 2 percent; and dropped again during the sequence of developing-country crises of the late 1990s and early 2000s, reaching a low of 0.8 percent of GDP in 2002. In the early 2000s, capital flows began to increase again. It remains to be seen how the latest cycle of capital flows will play out over the rest of this decade.

The behavior of capital flows has several implications for the economy, for tradable sectors (like agriculture), and for the poor. Capital inflows usually affect growth and investment positively, but overvaluation of the domestic currency can hurt tradable sectors. Capital flows can experience sudden reversals, which may lead to depreciation of the domestic currency, banking and fiscal crises (when domestic private and public debt in dollars is widespread), and sharp declines in growth. Therefore, ebbs and flows of capital to developing countries have been associated with booms and busts in those countries.

During the upswing, the impact on the poor will depend on their position in the economy and the nature of the growth process generated by those capital inflows. In principle, the urban poor and those working in nontradable sectors would benefit more than the rural poor during periods of growth associated with continued inflows of capital. However, if growth is sustained, benefits accrue to all the poor, albeit to different degrees. When changes in financial markets lead to sudden outflows of capital and growth collapses, the welfare of the urban poor and those working in nontradable sectors tends to suffer the most.

Macroeconomic Policies for Poverty Reduction

Growth cycles and volatility in developing countries since the 1960s have been greatly influenced by policies in industrialized countries that determine global macroeconomic conditions, such as interest rates, capital flows, and commodity prices. The main global macroeconomic issue today is whether an adjustment will be made in the U.S. current account (which has reached the unprecedented level of about 2 percent of world GDP), with a corresponding correction in the surplus countries, and what form it will take. A cooperative adjustment maintaining world growth would require an expansion of domestic demand among Asian countries (particularly China and Japan), oil producers, and a variety of developing countries, along with appreciation of their exchange rates. The European Union is more advanced in the adjustment process, through its expanding demand and appreciation of the Euro. On the other side of the rebalancing equation, both households and the government in the United States would have to increase domestic savings (reducing domestic demand), while the real exchange rate also depreciates.

Box 1—Growth, Capital Flows, and Poverty Trends: Global Experience from the 1960s to the 2000s

The 1960s and 1970s

The 1960s and 1970s were years of high growth, moderate inflation, low (and even negative) real interest rates, accelerated expansion of trade, and high real prices of commodities. The economic buoyancy of those years was based on expansionary macroeconomic policies in many countries and stable exchange rates coupled with the expansion and liberalization of trade at the international level. LAC and Sub-Saharan Africa (SSA) were the two fastest growing regions during the 1960s, and they continued to grow strongly during the 1970s, although East Asia's growth began to overtake all developing regions at this time. For the period since the 1960s to the early 1980s, the World Bank, in its 1990 *World Development Report,* considered that there had been "considerable progress in reducing the incidence of poverty, a more modest reduction in the number of poor, and achievement of somewhat better living standards for those who remained in poverty" (p. 40).

The 1980s

In the case of many developing countries, high commodity prices during the 1970s allowed them to borrow against what was considered to be ample export revenues, setting the stage for the debt crises of the 1980s. The breakdown of the Bretton Woods system of fixed but adjustable exchange rates and the oil shocks of the second half of the 1970s drastically changed world macroeconomic conditions. Countries that had borrowed against expectations of high commodity prices, mainly in LAC and Africa, entered a period of debt distress and economic crises that increased poverty. Asian countries—which were gradually specializing in manufacturing goods, becoming importers of primary products and, over time, becoming the main recipients of capital flows—were less affected and eventually benefited from the decline in prices of commodities. Poverty trends went hand in hand with the overall economic growth performance of the different developing regions. Poverty dropped significantly in East Asia and South Asia (regions that were clearly outperforming other developing countries in growth rates), but increased in LAC and SSA.

The 1990s

The American recession at the end of the 1980s, coupled with low real interest rates in industrialized countries, sent capital flowing back to developing countries in the first half of the 1990s, with Asia becoming now a more prominent destination. However, U.S. monetary policies initiated a period of tightening in the second half of the 1990s, and capital flows to developing countries stopped and reversed once interest rates and the dollar value began to increase in the second half of the 1990s. A second wave of developing-country debt crises erupted first in Mexico in 1995, then in several countries of East Asia in 1997, Russia in 1998, Brazil in 1999, and Argentina in 2001. The sudden emergence of financial crises and the subsequent disruption of the economies of many Asian and South American countries had both direct and indirect effects on the poor. For the countries affected, the financial crises had clear negative impacts on poverty: the median value of the percentage of poor people living on less than US$1 per day increased from 5.2 percent before the crises to 7.3 percent after them, and the percentage of people living on less than US$2 per day jumped from 23 to almost 28 percent.

The 2000s

Global growth has been strong since the early 2000s, pushing up real prices of commodities such as metals and energy. In the 2000s, capital has been flowing from developing countries toward industrialized countries (excluding Japan), mainly to the United States, where the large current account deficit—and its sustainability—remains an important concern for the performance of the global economy. While high commodity prices of the 1970s prompted many developing countries to borrow against that collateral, in the 2000s these countries have been improving their fiscal and external accounts, reducing their debts, and increasing the availability of savings for the rest of the world. Also, East Asian countries decreased investments and turned to positive current accounts, adding to world excess net savings. So far, strong growth and lower inflation and volatility have translated into a decline of poverty (as a percentage of the population) in all developing regions. However, uncertainties remain due to imbalances in the world economy and doubts about the sustainability of growth patterns in the main engines of current growth, particularly the United States.

The potential for a disorderly and traumatic adjustment is also present: a strong recession in the United States could accomplish the rebalancing through internal adjustment, as happened in the early 1980s and early 1990s. Or the adjustment could be forced by external factors if investors and financiers of the U.S. current account deficit were to significantly reduce their demand for dollar-denominated assets. In the benign scenario, the demand in the rest of the world expands, and the dollar depreciates slowly, whereas, in the traumatic scenario, U.S. demand drops far more precipitously, and the dollar requires a further depreciation against those currencies now floating more freely against it (like the Euro).

Either way, growth in the rest of the world will be negatively affected, increasing poverty in developing countries. In general, such downturns have been associated with recessions and economic crises in many developing countries. At the global level, it seems clear that there are no international institutions that can enforce a cooperative solution to the current imbalances. Discussions at the International Monetary Fund (IMF) have focused on the possibility of strengthening economic policy surveillance that encourages cooperation. Yet the IMF currently does not have the instruments or the governance system to design and implement such an outcome. The same applies to other multilateral bodies, such as an expanded G-7 or the Financial

G-20. In any case, developing countries should prepare for a turn in the world business cycle in the relatively near future, as happened with the global slowdowns in the early 1980s, 1990s, and 2000s.

All these macroeconomic uncertainties and challenges short, medium, and long term raise the question of what developing countries should do. At the macroeconomic level, it is important to try to smooth the business cycle and to avoid economic crises, if developing countries want to reduce poverty and hunger. To that effect, developing countries should (1) strengthen the fiscal positions of their public sectors, thus reducing public-sector debt ratios, using additional resources from high commodity prices counter-cyclically, and creating fiscal space to establish safety nets for the poor and vulnerable; (2) avoid rigid and appreciated real exchange rates that may lead to trade imbalances and excessive accumulation of external debt; and (3) maintain a reasonable level of reserves in the central banks as a precaution against possible global turbulences that could lead to declines in growth and commodity prices, possibly stopping capital flows to developing countries. In general, many developing countries seem to have been following these policies more closely than in the cycles that ended in debt crises in the 1980s and 1990s.

It should be noted that, on the one hand, an economic slowdown would also reduce demand for energy, alleviating the currently tight markets for those products. On the other hand, a continuation of strong world growth would most likely lead to further increases in energy prices, which could trigger a future slowdown directly, or indirectly, through policy reactions in key countries aimed at lowering inflation. This will also have negative implications for poverty in developing countries. It should be remembered that oil prices were about US$20 per barrel in 2001—the beginning of the current growth cycle—but prices reached more than US$80 per barrel in the second half of 2007. As in the 1970s, the current period of relatively high growth, mostly fueled by middle-income countries, may end up generating an additional price shock to energy products, with negative impacts for welfare and poverty in many developing countries.

Even without accelerated growth, potential imbalances loom in world energy markets in the coming years, and, in the longer term, the implications of energy consumption for climate change may carry significant and troubling consequences for many developing countries. The complex issues linking energy use, economic development, poverty alleviation, and climate change are also affected by a significant market-coordination failure of global proportions, which—like the shorter term macro-imbalances—lacks a widely accepted international mechanism for resolution. Therefore, in the longer term, the prospects for economic development and poverty and hunger alleviation in developing countries are directly tied to the fair resolution of another imbalance beyond the scope of this brief: how to make sure that the world's population has adequate access to sustainable energy resources.

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THE MACROECONOMIC FOUNDATIONS OF INCLUSIVE MIDDLE-CLASS GROWTH

Nancy Birdsall

Growth that is shared—so-called inclusive growth—is now widely embraced as the central economic goal for developing countries. But definitions and empirical characterizations of inclusive growth vary widely. In this brief, inclusive growth is defined as growth that builds a middle class. Macroeconomic policies can shape the environment and incentives for inclusive growth in three important areas: fiscal discipline, the more rule-based the better; a "fair" fiscal policy with respect to revenues and expenditures; and a business-friendly exchange rate. Although these policies are not underlying causes of growth, they are conducive to growth. The analysis here relies heavily on the experiences of the mostly middle-income countries in Latin America.

From Pro-Poor Growth to Inclusive "Middle-Class" Growth

In the past several decades, pro-poor growth emerged as a gentle counterpoint to a singular concern with growth alone (measured in terms of increases in per capita income), while implicitly recognizing that growth, if not always sufficient for poverty reduction, is almost certainly necessary. Inclusive growth includes and extends pro-poor growth, on the grounds that growth that is good for the large majority of people in developing countries is more likely to be economically and politically sustainable. Sustained growth matters because many low- and middle-income countries that have had long growth episodes—of 8 to 10 years—have subsequently suffered prolonged growth collapses before achieving real gains in human development and general well-being.

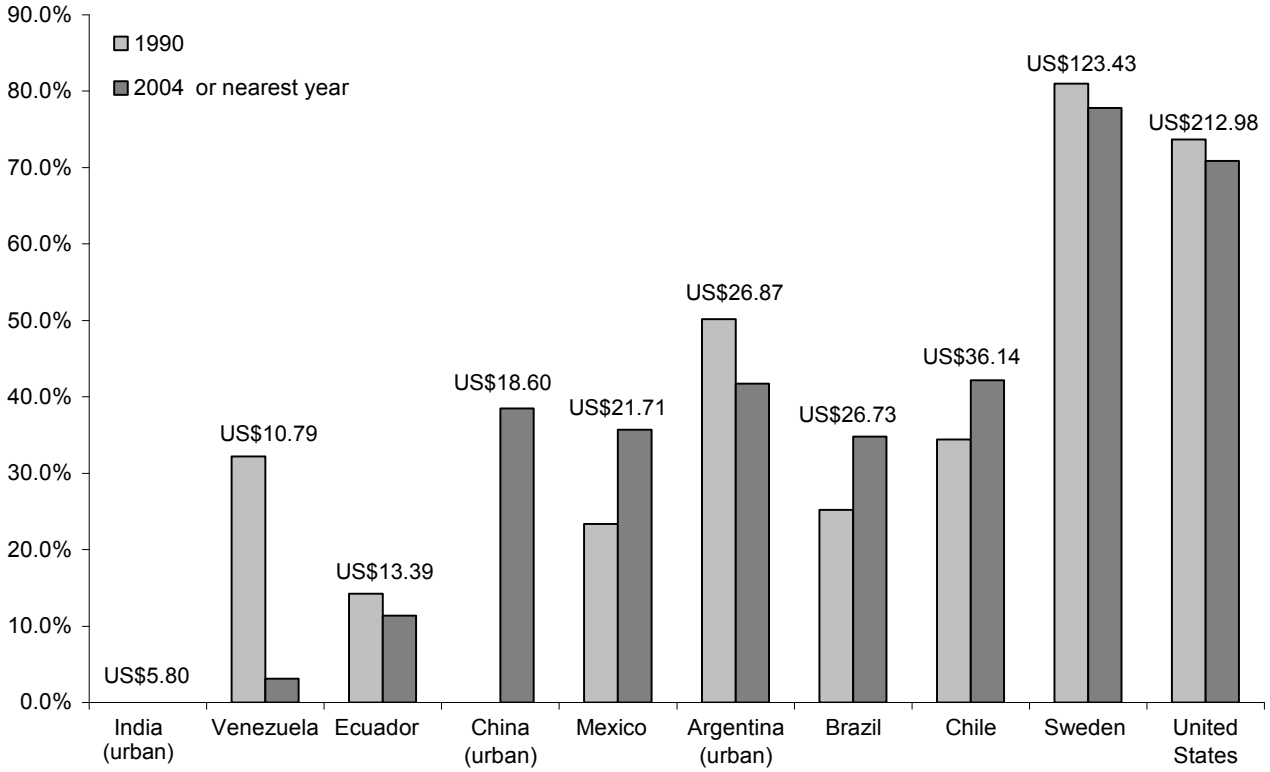
Is there a meaningful distinction between macroeconomic policies conducive to pro-poor growth and those conducive to inclusive growth? Sound fiscal and monetary policies that are pro-poor are also likely to be good for the middle class, but whether that commonality extends to medium-term tax, expenditure, and transfer policies is less obvious. In the case of macroeconomic shocks, middle-class small business owners or semi-skilled workers may face greater relative losses of permanent income than poor subsistence farmers.

In the end, the possible tensions or trade-offs between strictly pro-poor and more inclusive "middle-class" growth policies cannot be generalized. They must be assessed policy by policy in each country and are likely to change over time as circumstances change. Policymakers in developing countries (and their international supporters and advisers) should more systematically consider weighted welfare outcomes when selecting and fine-tuning macroeconomic policies, rather than relying solely on unweighted growth outcomes or overly weighted poverty outcomes. Where there are no trade-offs, all the better. The medium-term benefits of good macroeconomic policy for building a middle class argue all the more for what are sometimes painful macroeconomic decisions in the short run.

Defining the Middle Class

Inclusive growth implies an increase in both the proportion of *people* in the middle class (implying that some people exit poverty) and the proportion of *total income they command* (implying gains at the "expense" of either the initially poor or the initially rich). The middle class is here defined as including people at or above the equivalent of US$10 a day in 2005 and at or below the 90th percentile of the income distribution in their own country. This definition implies some absolute and global threshold below which people are too poor to be middle class in any society, and some relative and local threshold above which people are, at least in their own society, "rich." With this definition of middle class, an increase in that group's size and economic power is likely to signal that the underlying growth is based on wealth creation and productivity gains in private activities and is thus self-sustaining and transformative as opposed to being driven largely by exploitation of natural resources, remittances, or infusions of external aid. Figure 1 shows the economic

Figure 1—Proportion of Income Held by the Middle Class, Selected Countries, 1990 and 2004 (%)



Source: Calculated by author using data from the World Bank's PovcalNet <http://iresearch.worldbank.org/PovcalNet/jsp/index.jsp>.
Notes: Countries are shown in order of increasing average annual income per capita. The middle class is defined as individuals with at least US$10 a day in each year (US$7.20 in 1993 purchasing power parity, or PPP, terms), who are at or below the 90th decile of the income distribution in their own country. Dollar values for each country indicate 2004 daily per capita income at the 90th decile of the income distribution.

command of the middle class, so defined, for selected countries in 1990 and 2004. There is no obvious association between the change in the size of the middle class and change in the Gini coefficient over that period. Middle-class growth is associated with a rising Gini coefficient in China and a declining one in Brazil and India. The same is true for other measures of inequality (not shown).

Latin America has for decades been the region with the highest inequality in the world. Latin America also has a history—until about 1990 in most countries—of high inflation, high public debt, volatile monetary policy, and, in part because of inflation, overvalued exchange rates. But in the past few years Brazil and Mexico have experienced substantial declines in poverty (using the US$2 a day poverty line), notable declines in income inequality (measured by the Gini coefficient), and a doubling of the proportion of people and of income in the middle class (Figure 1). This sharply contrasts with middle-class growth reversals in Argentina, Ecuador, and Venezuela. One reason may be that the latter countries have hewed less closely than Brazil and Mexico to standard International Monetary Fund/World Bank macroeconomic policies. Ecuador and Venezuela, with their dependence on oil exports, may have been more vulnerable to currency appreciation, which tends to be unfriendly to increasing employment and small business development. Middle-class growth in Brazil and Mexico, where macroeconomic policies have markedly improved in the past decade, suggests that eventually—with a long lag—better macroeconomic policy (combined with a benign external environment and a commodity boom) can contribute to inclusive growth.

In the Background: Open Economies and Volatile Global Markets

The discussion here assumes that developing countries will continue the trend of the past two decades of maintaining or increasing their openness (though more cautiously with respect to capital) in an effort to fully exploit the potential benefits of integration into the global economy. But because more open economies are more vulnerable to global financial and other shocks, and because the integration process produces losers (at least in the short run) as well as winners, maintaining good macroeconomic policy in an open economy can be politically difficult. The challenge is even more complicated where the middle class is relatively small and has little

command over total income (and where it is heavily made up of households dependent on state and state-protected sectors). It is, for example, the secure middle class in mature market economies that is most likely to support policies that favor openness, maintain price stability, and help ensure a competitive exchange rate. In contrast, the poor and near-poor (living on less than US$10 a day) are at more risk of losing out with integration because they generally lack sufficient education or financial assets to exploit global good times and are vulnerable in global bad times. They also have sufficient political voice to generate self-defeating populist pressures or, in immature democracies, to support short-term patronage arrangements that betray their long-term economic interests.

The Missing Middle Class in Low-Income Countries

Countries with purchasing power parity income of less than US$1,500 or so per capita have virtually no middle class by the definition used here because daily income per capita at the 90th percentile is below US$10. That is the case for India (shown in the figure) and most countries of Sub-Saharan Africa. Many such countries are highly dependent on aid, which can account for as much as 40 percent of all government spending. The discussion of macroeconomic policies in the next section does apply to them, but the trade-offs may in some cases be more difficult. Heavy aid inflows can, for example, complicate efforts to limit real exchange rate appreciation that could undermine expansion of small business. Donors as well as country policymakers should ensure that aid flows include adequate support for key investments in power, ports, roads, and other infrastructure. By reducing costs, these investments can help avoid pressure on the exchange rate, allowing for expansion of small business and increasing competitiveness in manufacturing, agro-industry, and services for export.

Three Macroeconomic Policies That Matter for Inclusive Growth

Fiscal Discipline—the More Rule-Based the Better

Developing countries, especially those with a bad history of inflation and poor debt management, need to accumulate a credible record of good fiscal management if they are to ensure growth that is inclusive. Most emerging markets and low-income countries have dramatically improved their macroeconomic management since the early 1990s. They are accumulating "good" history. To lock in good history now requires institutionalizing a budget process that is transparent and rule-based, thereby ensuring that habits and citizens' expectations, as well as legislation and regulatory systems, support fiscal policy conducive to inclusive growth. Examples of good rules are legal ceilings on indebtedness relative to gross domestic product (GDP); a truly independent source of published estimates of revenue and expenditure; rules to lock in additional fiscal effort during booms; and for natural resource–rich countries, fiscal contingency funds that set aside unexpected revenue. Countries where the middle class is large and growing are more likely to have the political support for adherence to such rules, in what could be a virtuous cycle of inclusive growth and good rule-based fiscal policy.

With the exception of Chile, most countries in Latin America have run fiscal deficits for years and still do (Table 1). Past fiscal laxity meant governments either printed money, fueling inflation, or issued large amounts of debt, driving interest rates to onerous levels. The resulting inflation hurt poor people because of their limited capacity to protect their earnings, for example, through indexed savings. High interest rates also undermined the growth of a middle class by limiting the expansion of creditworthy small firms (which generally have no alternative to the local market for their financing needs) and thus of private investment and of jobs for the unskilled and semi-skilled.

Table 1—Fiscal Deficits of Selected Countries, 1995, 2000, and 2003 (% of GDP)

Country	1995	2000	2003
Argentina	1.15	2.28	0.13
Bolivia	2.32	3.33	7.40
Brazil	6.09[a]	Not available	Not available
Chile	–2.58	–0.14	Not available
Colombia	2.30	6.72	4.91
Ecuador	1.01	–0.30	1.36
Guatemala	0.48	1.96	1.95
Mexico	0.53	1.25	1.30
Nicaragua	0.31	3.85	2.92
Peru	1.11	1.84	1.91
Venezuela	3.61	1.65	Not available

Source: International Monetary Fund, International Financial Statistics CD-ROM (Washington, DC, 2007).
Notes: Negative values indicate budget surpluses.
[a]This value is for 1994.

Fiscal indiscipline is no longer the rule in Latin America. Average inflation fell from close to 600 percent in 1990 to just over 7 percent between 2000 and 2006. But past high borrowing means that debt service is still high. This debt must be financed, reducing the scope for new public expenditures (Table 2). In 2003 Brazil was

spending 10 percent of its GDP on interest on its public debt. To the extent the debt stock must be rolled over (which depends on the extent to which overall spending can be reduced to pay off debt), public borrowing will keep interest rates higher than otherwise, crowding out private investment and job creation. Real interest rates were very high in Latin America in the 1990s, reaching more than 10 percent on average for most countries, compared with 6 percent on average in Southeast Asia and about 5.6 percent in the United States. Since 2001 interest rates have fallen against a backdrop of fairly low inflation in most Latin American countries, but they remain well above those in other regions. Of course some public debt (to finance small deficits) is reasonable, especially when economic growth ensures that the ratio of debt to GDP does not continually rise above a safe range. But emerging market economies with a history of inflation and volatility (including some outside of Latin America such as the Philippines, Thailand, and Turkey) should probably meet a tougher standard of net public debt to GDP than the standard for developed countries—the IMF suggests no more than 30 percent for emerging markets.

Table 2—Total Debt Service and Total Debt Stock for Selected Countries, 1990 and 2005

	Total Debt Service (% of Exports of Goods, Services, and Income)		Total Debt Service (% of Revenue, Excluding Grants)		Total Debt Stock (% of GDP)	
Country	**1990**	**2005**	**1990**	**2005**	**1990**	**2005**
Argentina	37	21	64[a]	46[b]	44	62
Brazil	22	45	8	27[c]	26	23
Mexico	21	17	28	68	40	21
Peru	11	26	14	40	76	36
Malaysia	13	6	37	39[d]	35	39
Indonesia	33	25	46	43[e]	61	48
Thailand	17	15	54[f]	53	33	29

Source: World Bank, World Development Indicators and Global Development Finance (Washington, DC, 2007).
Notes: "Exports" refers to exports of goods, services, income, and workers' remittances; "total debt stock" refers to external and domestic debt.
[a]Data are for 2003.
[b]Data are for 2004.
[c]Data are for 1998.
[d]Data are for 2003.
[e]Data are for 2004.
[f]Data are for 2003.

History hurts in another way. Given high existing debt, Latin American and other developing-country governments determined to avoid new bouts of inflation have had to maintain tight fiscal policies in the past decade in several cases even in the presence of primary surpluses as high as 4 and 5 percent of GDP—that is, fiscal surpluses net of interest payments (Table 3). This situation has reduced the fiscal space for public investment in roads, schools, health care, police training, and so on—services on which the poor rely heavily. In an unhappy combination, past high public borrowing in Latin America may be contributing to the crowding out of private investment while high primary surpluses to finance debt service on current and past borrowing may be reducing public investment compared with countries in East Asia (Table 4).

Table 3—Primary Surpluses in Selected High-Debt Emerging-Market Countries

Country	Year with Highest Primary Surplus since 1990 (% of GDP)	Primary Surplus in 2002 (% of GDP)
Argentina	1.5 (1993)	0.9
Brazil	3.9 (2002)	3.9
Bulgaria	9.2 (1996)	1.5
Costa Rica	2.9 (1993)	–0.3
Ecuador	7.1 (1990)	4.5
Egypt[a]	Not available	2.6
India	–1.2 (1997)	–3.7
Indonesia	3.8 (1990, 2002)	3.8
Jordan	Not available	–1.2
Lebanon	3.0 (2002)	3.0
Malaysia	10.2 (1997)	3.1
Morocco	3.4 (1992)	–0.2
Nigeria	10.5 (1990)	1.6
Pakistan	2.8 (2001)	2.4
Panama	7.2 (1992)	2.0
Philippines	5.9 (1994, 1996)	–0.6
Turkey	5.5 (2001)	4.1
Uruguay	2.9 (1992)	0.3

Source: K. Derviş and N. Birdsall, *A Stability and Social Investment Facility for High Debt Countries*, Working Paper 77 (Washington, DC: Center for Global Development, 2006).
[a]Data are for 1999.

Table 4—Average Public and Private Investment in 1990s (% of GDP)

Country	Public Investment	Private Investment	Gross Domestic Investment
Brazil	4.53	15.77	20.29
Mexico	3.58	17.69	21.28
Argentina	1.98	15.70	17.68
Venezuela	9.93	7.10	17.03
Peru	3.47	17.74	21.22
South Korea	7.82	27.95	35.77
Malaysia	12.33	25.79	38.12
Indonesia	7.92	20.96	28.89

Source: World Bank, Global Development Network Growth Database, 2001 <http://www.econ.worldbank.org>.

Another consequence of past fiscal indiscipline is the inability to implement countercyclical fiscal spending during economic downturns. During recessions in developed countries, governments increase spending on unemployment, food stamps, and other safety net programs. The resulting increases in public spending protect the poor and help insulate the middle class, while helping to stimulate a sluggish economy. Such countercyclical measures, however, rely on the confidence of (domestic and external) market creditors in the government's willingness and ability to honor the new debt and on the local financial sector's ability to absorb new debt. Except for Chile, countries in Latin America have not been tested on this score since the 2001 debt crisis in Argentina.

In short, Latin American countries are still paying for fiscal indiscipline that mostly ended more than a decade ago. With the recent global economic boom, most have grown fast enough and kept overall fiscal deficits low enough to get ahead of the destructive debt dynamic in which the burden of past debt undermines aggregate growth. But continued progress relies heavily on more years of very tight fiscal policy (unless growth rates jump to Asian levels) and perhaps too heavily on a continuation of an unusually benign external environment, particularly for commodity producers.

Fiscal probity also helps limit the volatility that hurts the poor and the productive middle class. The poor and middle class gain less during booms and are the first to lose jobs during busts (those who already have real and financial assets gain most). When volatility leads to financial crisis, it also involves inequitable wealth transfers that create enduring adverse distributional effects. Evidence from the financial crises of the late 1990s in Asia and Latin America shows that many poor and middle-income households did not recover assets they liquidated during severe downturns.

Volatility is the outcome of many factors, including fluctuations in commodity prices and foreign capital inflows over which governments in developing countries have limited control. Latin America's past patterns of stop-and-go spending (driven sometimes by periods of populist governments) have been a factor too, however. By accommodating this fiscal indiscipline, monetary policy further undermined investor confidence, raising interest rates and limiting job creation. The region's stronger fiscal position today, along with more flexible exchange rates and improved financial regulation and supervision, bode well—but the recent calm may also rely mostly on ample global liquidity (itself at risk at this writing in August 2007) and buoyant export markets.

A "Fair" Tax and Redistribution System

Inclusive growth requires not only keeping aggregate spending in line with aggregate revenues, but also adhering to generally progressive tax systems and expenditures. The experience in Latin America is discouraging. The value-added tax, which is generally regressive, accounts for 60 percent of total revenue in Latin America, compared with 30 percent in Europe. More progressive and higher overall taxation in Europe reduce income inequality, and probably the burden on the middle class, much more than in Latin America, where loopholes and exemptions tend to reduce the tax burden on the rich, and tax evasion is rampant. Finally, high payroll taxes discourage job creation, hurting the poor and middle-income groups more than the rich, whose income comes relatively more from capital. Revenue generation averages just 18 percent, well below what might be expected given average per capita income. Low revenue generation combined with admirable fiscal discipline constrains public investments and expenditures that could otherwise be deployed to reduce inequality and induce more inclusive growth. Equally to the point, more visibly fair tax systems would not only encourage inclusive growth, but also make higher ratios of taxes to GDP more politically acceptable, including to the rich who now easily justify evasion (more efficient public spending and less corruption would also have this effect). In Argentina the effective average tax rate for the top 10 percent of households was estimated at 8 percent in the late 1990s. (In Africa the problem is heavy reliance on trade and other indirect taxes; relatively high taxes on imports raise input costs for businesses and keep consumer prices higher than otherwise.)

Greater spending—on health, education, and public infrastructure—as long as it is minimally efficient, is one key to more inclusive growth. Experience in Latin America also shows that the most inefficient, non-inclusive spending occurs in poorly designed and politically driven pension programs. In Latin America, the richest quintile of the population receives on average about 60 percent of net pension benefits (full benefit amount received minus total contributions), whereas the poorest quintile receives only 3 percent.

A Business-Friendly Exchange Rate

A competitive exchange rate is helpful to inclusive growth because success in manufactured exports is almost always associated with investment in new enterprises and creation of jobs for the semi-skilled—in Japan and then Korea and Taiwan in the 1950s and 1960s, and more recently in

China, Mauritius, and Vietnam. When Latin American countries monetized their high fiscal deficits, the results were inflation, persistently overvalued exchange rates throughout the 1970s and even in the 1980s, and excessive borrowing. Countries then attempted to protect local industries via tariffs and other barriers, reducing competitiveness. Over the past two decades, Chile, with a longer history of fiscal rectitude, has been best able to manage its exchange rate to limit appreciation.

Fiscal discipline does not guarantee a competitive exchange rate. Governments can get away with high deficits while avoiding currency appreciation if, as in India until recently, capital markets are closed, private savings to finance public debt can be captured, growth prospects are especially good, and people have confidence in the currency. But in most developing countries, maintaining a competitive exchange rate is likely to help ensure inclusive growth. The increase in the size of the middle class in urban China (Figure 1) is the outcome of multiple factors, including the country's undervalued exchange rate. In Brazil and Mexico, the slaying of inflation in the early 1990s has made it easier to avoid overvaluation, which hurt exports for the two prior decades.

Conclusion: From Pro-Poor to Inclusive, Middle-Class Growth

The middle class in all economies depends on a stable macroeconomic environment. Economic volatility—due to high fiscal deficits, poor monetary policy, unsustainable public borrowing, undervalued exchange rates that temporarily make imports cheap, and inflation—is bad for the incipient middle class. The experience of mature Western economies suggests that poor people benefit when an economically strong middle class insists on accountable government and supports universal and adequate public services, by paying taxes. That experience suggests that inclusive growth as defined here will benefit poor people both directly and indirectly, by helping them escape poverty. Perhaps it is not a coincidence that the two countries in Latin America that have sustained cash transfer programs for the very poor are two where the ranks and economic weight of the middle class have doubled. It is hard to imagine that this would have been possible without more than a decade of sustained, tough fiscal and other macroeconomic policies.

For Further Reading: W. Easterly and S. Fischer, "Inflation and the Poor," *Journal of Money Credit and Banking* (Vol. 33, No. 2, 2001); A. Kraay, "When Is Growth Pro-Poor?" *Journal of Development Economics* (Vol. 80, No. 1, 2006); N. Lustig, ed., *Coping with Austerity: Poverty and Inequality in Latin America* (Washington, DC: Brookings Institution, 1995); B. Milanovic, *Worlds Apart: Measuring International and Global Inequality* (Princeton, NJ: Princeton University Press, 2005); and World Bank, "Income Distribution, Inequality, and Those Left Behind," Chapter 3 in *Global Economic Prospects 2007: Managing the Next Wave of Globalization* (Washington, DC, 2007).

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ECONOMIC REFORM TO STIMULATE GROWTH AND REDUCE POVERTY

The Latin American Experience

Alberto Valdés and William Foster

A few decades ago a dominant view in the developing world was that growth problems in developing countries could be best understood in terms of the international environment. Today, no one seriously questions the influence of external conditions on growth. But most economists would also emphasize structural conditions within developing countries as key determinants of the large differences in the rates of per capita income growth among such countries. An examination of the economywide policy reforms that took place in Latin America and the Caribbean (LAC) during the 1980s and 1990s is particularly relevant to an understanding of these determinants. Though it is beyond the scope of this brief to discuss economic growth theories and assess the successes and failures of the economic reforms in the region, the discussion will focus on some of the significant linkages between growth, policy, and poverty.

Overview of Latin American Economic Policy Reforms since the 1980s

Economic regimes in Latin America started to change during the1980s. The results of previous import-substitution strategies bred disillusionment and a general acceptance of theoretical developments regarding the causes of inflation and macroeconomic disequilibrium. In most countries in the region, a macroeconomic framework designed for open economies began to replace the prevailing closed-economy approach. Governments introduced economywide reforms emphasizing macroeconomic stabilization, deregulation, unilateral trade liberalization, and privatization. Economists generally concur that the impetus for the reforms arose from concerns regarding economic strategies affecting all sectors, not any one sector in particular. Nonetheless, in several countries, certain import-competing subsectors did retain special status in economic policymaking.

Several countries introduced reforms amid major macroeconomic disequilibrium characterized by high inflation and unsustainable fiscal and current account deficits. In many cases, the options for macroeconomic reform were quite limited; for decades, several LAC countries suffered from high rates of inflation and recurrent external crises (balance of payments problems, foreign debt crises). Such macroeconomic instability substantially reduced growth rates and worsened income distribution. The poor, who lacked the wherewithal to shield the value of their assets and also suffered from real wage declines, were particularly harmed. The two main causes of inflation were large fiscal deficits, frequently financed by printing more money, and the mistaken notion that economies could buy prosperity with a little more inflation.

Beyond dealing with the severe macroeconomic disequilibrium, the goal of many reformers in the mid-1980s and early 1990s was to create a better climate for productivity and private investment in all economic sectors, including one very important for many of the poor—agriculture. For the farm sector, the result was to be an enhanced competitiveness of the tradable sectors in a new scenario in which agriculture was to be substantially more integrated with the world economy.

Of course, the reforms most immediately affected the incentives facing producers through changes in the prices of tradable goods as the result of the liberalization of trade policy. In most Latin American countries, the major change in trade policy was the partial or total removal of most quantitative restrictions on imports and exports, the elimination of export taxes, and a gradual reduction in the levels of import tariffs. This created incentives to move resources from import-competing goods toward the export-oriented and nontraded sectors. In most countries, importable goods were protected and exportable goods were taxed. A central goal of the reforms was to reduce the explicit and implicit anti-export bias that had existed previously—especially for agriculture, which had been burdened as a producer of wage goods and fiscal revenue and as a major employer of unskilled labor.

Perhaps more important for all sectors, but especially for agriculture, were the indirect effects on exchange rates and interest rates—two key prices to which the sector is particularly sensitive. By the mid-1990s, the exchange rate was recognized as the most important "price" affecting

the import-competing and export-oriented economy. This was not well understood at the time of the reforms, or at least it was not anticipated to be a future problem. Academicians expected that one result of trade liberalization and the reduction of the fiscal deficit would be a depreciation of the real exchange rate. What they did not anticipate was the significant appreciation of the currency associated with the opening of the capital account, the interest of foreign investors attracted to the promise of growing economies, or the significant increase in domestic real interest rates induced by macroeconomic conditions.

The depth and impact of the reform process within the LAC region has been quite diverse; it has also been the subject of various studies. But it is important to note the unilateral nature of trade liberalization in the region during the late 1980s, predating the Uruguay Round agreement of the World Trade Organization (WTO). Many LAC countries were members of the General Agreement on Tariffs and Trade (GATT), and those that were not joined the WTO at the time of the Uruguay Round negotiations. LAC emerged from the Uruguay Round without obligations to significantly reform trade policy.

Reforms—and often the lack of reforms—in the service sector also played a critical role in determining outcomes. It is important to note that deregulation and privatization had a major impact on the availability of more reliable and lower cost services to the economy as a whole. And these reforms in the domestic sector also complemented trade-related reforms. Examples include the privatization and deregulation of port facilities in Argentina, Colombia, Mexico, and Chile. Chile also initiated reforms in telecommunications and airline and shipping transport services that were soon adopted by most other countries. These apparently ancillary reforms were at the center of a new environment for trade-oriented producers and investors.

The Importance of Policy for Stimulating Poverty-Reducing Growth

A large body of recent economic literature focuses on the relationships between growth and poverty reduction. Dollar and Kraay's controversial study, *Growth Is Good for the Poor*, documented the empirical regularity of the link between growth and poverty using panel data from 92 countries over four decades and provoked wide debate by concluding that, on average, the mean income of a country's poorest quintile rises and falls at the same rate as average national income. Moreover, the study found that other policy-related factors, such as public expenditures on health and education, and improvements in labor productivity in agriculture had little marginal effect on the average income of the poorest.

The controversies sparked by these findings have raised questions regarding the role of inequality in determining the importance of growth for the poor, and the impact of education on poverty. For example, simple pro-growth strategies to reduce poverty could raise the incomes of the poor, but could more rapidly increase the incomes of the nonpoor, thereby exacerbating income disparities. Another study noted that although overall growth reduces the poverty rate, the degree to which the poor share in the growth varies widely across countries. It found that the ability of the poor to enjoy the benefits of growth is particularly sensitive to the initial conditions of a country's economy—especially to the degree of income inequality.

Additional research finds that improved educational outcomes should be a component of a "super pro-poor" strategy to both raise the incomes of the poor and lessen income disparities. This cross-country growth perspective is highly consistent with the literature on household survey analyses, where broad consensus holds that education is important for raising the incomes of poor households. The analyses almost always show increasing returns to education, though the returns are, of course, influenced by education quality, parents' schooling, and other variables. Importantly for the rural poor, the returns to education also depend on where and how that education is applied. In Latin America, the returns to schooling are higher in urban areas than in rural areas, and higher for nonfarm activities than for farm-related ones.

Despite the controversies surrounding the impact of growth on poverty and the importance of other variables such as education, there is no question regarding the direction of the impact of growth on poverty overall. Even in a scenario with high income inequality (which is often the case in middle-income countries, of which Latin America has many), the average income of households in the poorest quintile would still increase, although at a lower rate than average national income. Where there is lower inequality, the average income of the poorest would increase even more. Moreover, higher growth rates that lead to higher incomes across all households indirectly support government revenues, and, in turn, allow for higher levels of spending on social programs. Hence, economic growth has a complementary role in sustaining social policies.

Research has indicated that policies affect average income growth, that average income growth affects poverty, and that income distribution affects the influence of growth on poverty. But it is not clear how policy affects income distribution and how income distribution affects growth. One difficult question is whether or not a conflict exists between policies that affect distributional measures and poverty in the short term, and policies that foster growth and poverty alleviation in the long term. Of course, there may be policies that both reduce income disparities

and spur economic growth, such as enabling poor households to accumulate assets, improving access to education, and undertaking measures such as safety nets to sustain households in the event of adverse income shocks. Evidence strongly indicates that sustained growth continues to be a necessary condition for reducing poverty. The lesson that emerges from the literature is that economic growth can be more pro-poor in some circumstances and less in others, and that less inequality is better than more. But by itself, growth is pro-poor. Several studies have shown that the patterns of growth matter because some industries depend more on unskilled labor than others.

Policies that are biased against labor-intensive sectors work to the detriment of the poor. While certain policies do contribute to growth and reduce income disparities—such as education—other policies involve trade-offs. As documented in the growth literature generally and in studies on Latin America in particular, three broad policy-related concerns have immediate impacts on growth, but not necessarily on income distribution: financial deepening, trade liberalization, and limitations on the size of government. Opening the financial system and the economy, reducing government interventions and spending (often forced by fiscal deficits), and stimulating growth could result in greater opportunities for those with more human and physical assets. Although the incomes of the poor could rise, the incomes of the skilled labor force and the returns on capital could rise much faster. Before treasuries can enjoy the longer term benefits of economic growth, the very fiscal constraints that might have spurred reforms—coupled with institutional weaknesses—limit governments' ability to mitigate inequities via subsidies and transfers, and as a result exacerbate income inequalities. Eventually, however, governments can afford to focus on equity concerns and public goods. Then the question becomes one of the effectiveness of public spending (see Box 1 for an overview of the composition of public expenditure in Latin America).

Beyond these broad growth-stimulating policies, more specific policies can capitalize on synergies and, as a consequence, achieve a balance between generally enhancing growth and increasing the incomes of poor people. For example, investments in infrastructure development not only provide a boost to economic activity, but also provide poorer households with greater access to educational opportunities. Conditional cash transfers are another example; they directly raise the incomes of the poor and improve the health and education of children, which has dynamic effects for future income generation. A third example is the reduction of anti-export bias, which was employed to notable effect in Chile following economic reforms; the result was increased employment demand for the unskilled and a significant reduction in poverty.

Box 1—The Composition of Public Expenditures in Latin America

Many studies on rural development present a rich agenda for policy initiatives. The question of how to pay for the proposed strategies, however, is seldom addressed satisfactorily. This raises questions regarding the effectiveness of expenditures in producing growth, an extremely important factor in the design of strategies for development and poverty alleviation. Empirical work by Lopez provides a good example of the importance of priorities. Lopez finds that while government spending can slightly elevate agricultural gross domestic product (GDP) per rural person, a mix of spending on public goods and private subsidies is much more significant. A reallocation of 10 percentage points of total rural public expenditures (for example, from 40 to 50 percent spending on public goods) raises agricultural GDP per rural person by 2.3 percent—without spending a dime more in total. A dollar added to total rural expenditures would be shared by both public and private goods. In contrast, an intramarginal shift of a dollar from private to public goods is claimed entirely by public goods and is lost to private subsidies. This leads to more money for public goods and less encouragement for rent seeking, less overinvestment in subsidized activities, and delays in restructuring away from subsidized investments.

Very poor countries, with smaller income inequalities and limited fiscal resources, should emphasize pro-growth policies. For middle-income countries, where income inequality is higher and fiscal resources are less constrained, pro-growth policies should be complemented with policies aimed at reducing inequality. Within middle-income countries (most in Latin America) regional disparities appear to be increasing, creating a possible trade-off between aggregate growth and geographic equity. This is a concern because poor people often lack the necessary resources to allow them to migrate.

What Is the Pathway from Poverty to Growth?

Growth is important for poverty reduction, but does poverty impede growth? In a notable publication aimed specifically at Latin America, *Poverty Reduction and Growth: Virtuous and Vicious Circles*, Perry et al. discuss several channels through which poverty does in fact influence overall economic growth:

1. The poor often do not have access to credit markets and lack land titles or other means of supplying collateral; hence, potential investments lie dormant.
2. Poverty and illness are related: improving health improves productivity.
3. The quality of schooling often varies according to income. Inferior schooling is bad enough for adults in poor households, but they often can't afford to keep their children in school for long and, thus, miss out on the higher returns

to education that could accrue in the next generation with each year of schooling. Lower education levels reduce the earning potential and mobility of labor. Education also affects health, child mortality, and household size.

4. Poor households often lack the financial wherewithal to absorb labor-market shocks and the human capital that provides labor mobility to respond to those shocks. Investing in human capital or in a specialized activity, like any other investment, is a decision that balances expected returns with risks. The greater the risk, the higher the returns ought to be. Without adequate insurance and credit markets, poor households face higher risks of investment and so underinvest compared with households with more diversified income sources or access to funds to tide them over shocks.
5. Poorer regions and countries simply have fewer people ready and able to initiate or take advantage of productivity-enhancing innovations.
6. Furthermore, without infrastructure and human capital, poor regions do not attract investments from outside. And people living in those regions face even greater obstacles to seeking opportunities elsewhere.
7. Regional income disparities, especially when they overlap with disparities related to ethnicity or race, can sometimes lead to regional political problems and to a subsequent increase in the risks associated with all types of investments.

Concluding Comments

The Latin American economic reform process offers valuable lessons. Beginning in the 1980s, the reforms were deep and wide, and they were introduced during times of major macroeconomic crises and hence government spending restrictions. Not all expectations for reforms were fulfilled, but most countries have indeed undergone significant structural change. And despite early fluctuations, significant growth is occurring in many countries. An unanticipated outcome is that the reforms prepared Latin American economies for the now ongoing process of globalization.

The critical lesson for reducing poverty is that growth must be pro-employment—particularly of unskilled labor. In the long run, the main factor for both growth and poverty reduction appears to be education. The record of educational coverage and quality in Latin America is still disappointing overall, however—certainly compared to the East Asian experience. On the positive side, several countries are now emphasizing improved education for poor people.

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2020 FOCUS BRIEF on the World's Poor and Hungry People

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INTERNATIONAL MIGRATION

Can It Improve Living Standards among Poor and Vulnerable Populations?

Alan de Brauw

The migration of labor across international boundaries has increased rapidly since 1990. Over 190 million individuals now live outside their country of birth, and the majority of migrants leave developing countries for countries with higher living standards than their home countries.' Remittance flows have risen quickly over the same time frame, and aggregate official remittance flows now double official development assistance. Participating in growing international migration is therefore a potential way for poor or vulnerable households to increase their living standards. Nevertheless, constraints against migration can prevent members of poor or vulnerable households from reaping its potential benefits. Costs are the most obvious constraint, but policies in both the home and destination countries can also hinder migration. For example, in some countries passports cost more than 10 percent of per capita gross domestic product, making them prohibitively expensive for the poor. Similarly, migrant destinations often have policy preferences for highly skilled migrants, which can preclude migrants from poor or vulnerable households, who tend to be low-skilled. Developed countries also use visa quotas to avoid absorbing too many low-skilled migrants, in part because of perceptions that such migrants will strain social welfare systems. Costs and constraints combine to drive some migration underground; for example, it is estimated that 12 million immigrants in the United States are there illegally, and concerns exist elsewhere about migrants being forced into bonded labor or prostitution.

This brief explores how policy can help facilitate the use of migration to improve the living standards of poor or vulnerable households in developing countries. Since migration in general can be defined in several ways, the discussion is limited to international migration of individual household members specifically for the purpose of employment. The brief also highlights the formal costs of migration because they can be mitigated most effectively by pro-migration policy. Given the focus on international rather than rural–urban migration, it is important to note that some of the policy prescriptions may not be appropriate for fostering rural–urban migration.

Migration, Its Benefits, and Poverty Reduction

A rich theoretical and empirical literature covers the motivations of individuals in developing countries to migrate for work. Perhaps the most obvious motivation is the difference in wage levels between countries sending and receiving migrants. For example, when Tongan residents win a lottery giving them the right to move to New Zealand, their expected wages triple. But migrants also move for other reasons. Migration is often part of a household income-generation or development strategy. From a rural perspective, when household income depends on agriculture, with its inherent risks, sending a migrant to a place where their income will not be affected by those risks can increase the household's income security. Migration can also help raise funds for investment in better housing or in productive activities at home. Nevertheless, migration is also conditional on household characteristics given that migrants tend to be younger family members. As a result, migration is not likely to help the elderly rural poor unless they have children that have migrated.

Migration may have both direct and indirect effects on poverty. It can directly reduce poverty by reducing the number of people that a poor household must support. If the potential migrant was not working before leaving, this effect is particularly beneficial. Migrant remittances are also immediately beneficial when they are used to supplement consumption. More indirectly, migrants can and often do remit cash or goods to their families when negative income shocks occur. Remittances help stabilize household income and prevent the household from plunging further into poverty. Migration and migrant remittances can also have indirect effects on poverty in the migrant's home community. Migrants leave the local labor force, making local labor more scarce and pressuring wages upward, while remittances add liquidity to local markets, potentially stimulating economic activity. Furthermore, returning migrants bring new skills and experiences with them, sometimes even starting microenterprises that create local employment. Finally, migration can help households make long-term investments, such as educating their

children. As a result, there are several potential ways that migration can help increase the living standards of poor or vulnerable households.

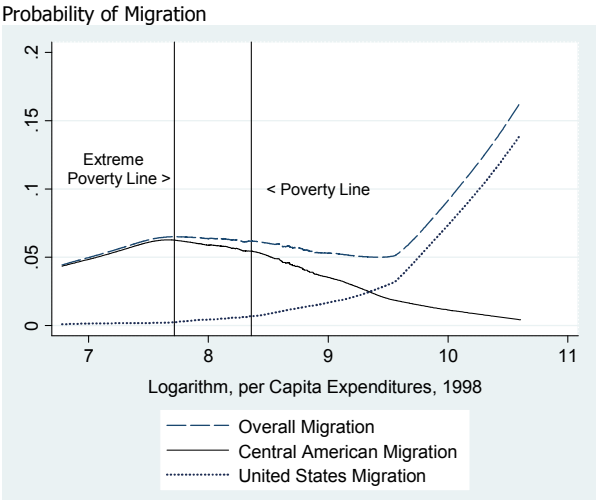
Lack of Evidence of a Causal Relationship between International Migration and Poverty Reduction

Primarily due to severe data limitations, researchers have not proven empirically that a causal relationship between international migration and poverty reduction exists. Most current sources of information on migration, such as population registers and censuses, do not include reliable information on living standards. While cross-country data indicate that migration is associated with lower poverty rates and smaller poverty gaps, little or no research claims that migration or migrant remittances directly cause reductions in poverty rates or gaps. In most countries, data on both emigration and poverty do not exist in a large enough sample to convincingly demonstrate a causal relationship. Even when such data are available, it is challenging to confirm that migration was the cause of poverty reduction rather than some other, unobserved factor.

One reason that few data sets including information on both migration and poverty exist is that, on average, relatively few individuals from any given country emigrate. A study of migration, poverty, and the effects of related policy would ideally be based on a multi-topic, nationally representative survey, but even in a large nationally representative survey, on average migration occurs infrequently. For example, consider a hypothetical 5,000-household survey completed in a country with an emigration rate of 3 percent of the adult population (the world average). If not specifically designed to collect information about migration, the sample would likely only include 200–300 households with an international emigrant—insufficient to support useful generalizations from statistical analyses. Migrants also use family or community networks to find employment, so emigrants tend to come from specific communities. If communities with strong emigrant networks were not included in the sample framework (by chance or otherwise), the number of migrant households would likely be lower still.

Due to the scarcity of appropriate data, migration studies are typically limited to countries with significant levels of migration. For example, a nationally representative data set collected in 2001 in Nicaragua indicates that 5 percent of households had a family member who had emigrated for work in the previous five years. The majority of emigrants went to Costa Rica or another Central American country, and about 20 percent went to the United States. Overall, households below the poverty line were less likely to have a member emigrate (Figure 1), and, if they did so, it was almost certainly within Central America. Only members of richer households were able to emigrate to the United States, and members of such households were less likely to emigrate within Central America.

Figure 1—The relationship between the probability of migration and per capita expenditures in Nicaragua, 2001



Source: Nicaragua National Household Living Standards Survey (EMNV), 1998 and 2001.

Nicaragua's experience may be atypical; in other countries, migration may be more or less accessible to the poor. For example, in Mexico poor households in villages with small migrant networks have few emigrants, while those in villages with stronger networks have more. Other research suggests that, in both Ghana and Guatemala, remittances to households from family members abroad have a positive effect on the severity, if not the absolute level, of poverty. Migrants may typically leave Ghana and Guatemala for nearby countries, making the cost of migrating low. Similarly, much migration from Nepal is to India, and research shows that poorer households are more likely to receive remittances as a result. Regardless—with the exception of Mexico—these findings only indicate correlations and do not suggest that remittances cause a decrease in poverty.

In summary, evidence of the relationship between migration and poverty exists for a few countries only, and conclusions about this relationship are highly country- and context-specific. Policies related to migration should, therefore, also be context-specific, taking into account the associated costs and barriers facing poor households.

Costs of and Barriers to Migration

Two types of specific costs are associated with migration: opportunity costs and direct out-of-pocket costs. A primary opportunity cost affecting rural households is the loss of the migrant's labor from household agricultural production. As

international migrants tend to be young and able-bodied, the agricultural labor input and its resulting income can decline when family members migrate. In this manner, migration is different from local work because individuals with local off-farm jobs can easily help during busy periods on the farm, whereas migrants cannot. In all cases, when migrants leave, other household tasks—such as rearing children or looking after the elderly or infirm—are shifted to those left behind.

Many of the direct costs associated with migration are up-front costs, although they can be partially mitigated by family and community networks. International migration requires costly travel from the source community to the destination—sometimes over long distances. Once a migrant arrives at a destination, further costs are incurred in finding work. Migration is therefore inherently risky, and the risk is mitigated if a potential migrant can secure a job prior to migrating. The process is made much easier when extended family or others from the home village are located at the migrant's destination and can offer assistance with the job search, a place to stay on arrival, and help in adjusting to the culture and language of the new country.

For poor or vulnerable households, the costs of migration can act as barriers in two important ways. First, even if jobs were available at the potential destination, poorer households may be unable to finance migration because they have few assets and lack access to credit. Second, community migration networks might not extend as readily to the poor, so the poor may face higher costs finding employment at the destination. Between travel costs and a lack of information about opportunities abroad, migration may not even be an option for poor or vulnerable households.

Potential migrants face further barriers to migration. First, passports and visas are necessary for legal emigration, and while networks can facilitate their acquisition, the poor may lack the information and connections necessary to do so. And, as previously mentioned, the cost of obtaining a passport can be prohibitively high. Perhaps more importantly, destination countries often implement policies that make legal migration for employment difficult. For example, most developed countries implement migrant visa quotas to restrict migrants to those with specific skills or education levels. This only leaves low-skilled migrants with the option of illegal migration with its many risks, dangers, and costs, such as exorbitant fees paid to intermediaries to facilitate migration, the risk of bonded labor resulting from debts incurred in migrating, and the lack of labor rights and bargaining power, to name a few.

Further institutional arrangements can temper the benefits of migration to communities of origin by limiting the amount of money available as remittances. Although remittance fees have declined in recent years, they remain both high and regressive, making it extremely expensive to send small amounts of money home. For example, Western Union charges a flat fee of US$10.99 for transfers of US$300 or less from the United States, and fees are often much higher in other parts of the world.

Policy Ideas to Foster the Benefits of Migration for the Poor

Increased migration by the poor or vulnerable can potentially reduce poverty and create further economic benefits in both countries of origin and of destination, and pro-migration policies in both—as well as bilateral agreements between the two—can facilitate the attainment of these benefits. However, it is worth noting that many pro-migration policy options are currently only ideas at this point, and they may not be appropriate in all circumstances.

From the perspective of the country of origin, three types of policies can promote emigration by the poor:

1. Governments can limit the direct costs of finding employment overseas. First, they can ensure that the cost of obtaining a passport represents a low income share. To limit migration costs, several Asian countries have licensed companies to recruit immigrants for low-skilled jobs, which can lower the cost of migration because recruiters can provide information on, or even negotiate, lower transportation costs, passports, and work visas. However, such companies should always be monitored by governments to ensure that emigrants are not exploited.
2. Governments can potentially encourage financial institutions to establish rural branches in order to lower the transaction costs of receiving remittances. Some companies have begun to allow individuals to send remittances via short message service (SMS) in exchange for cell-phone credit. Policies that encourage the development of these markets and foster creative programs like the exchange of cell-phone credits for cash—as is occurring in the Philippines—can further the positive effects of migration on poor households.
3. Countries of origin can enter bilateral agreements with countries of destination to design incentives for migrants to return, both to bring savings and new ideas back to source communities and to minimize the disruption of families for migration.

Destination countries can also adjust policies to ensure gains from accepting low-skilled immigrants. The countries of the Organisation for

Economic Co-operation and Development (OECD) are all facing a shift in their demographics that will ensure labor shortages in specific markets that could be filled by low-skilled immigrants. However, portions of OECD populations perceive labor migration as threatening. Consequently, policies that encourage either seasonal or circular migration for low-skilled employment in developed countries are likely to be most viable. Hence, policy could be designed to allow migrants to move between their home and destination countries under a fixed work contract. Suggestions include the following:

1. Bilateral agreements between countries of origin and destination could be established to enable migrants on fixed-length contracts to move between the two countries on multiple-entry visas. Many agreements exist for seasonal workers with European Union countries, but few go as far as to allow multiple entry. If governments in countries of destination were to make it easier for migrants to come and go, migrants could return home during slower work periods.
2. Governments could establish portable pensions for migrants to access in their country of origin. If migrants benefited in their countries of origin from social welfare contributions made while in their destination countries, they may be more likely to return home.

Emigration has become a more frequent phenomenon in developing countries in recent years. It offers significant potential for poor and vulnerable households, and pro-migration policies could help poor and vulnerable individuals to reap these benefits. Further studies are needed to quantify the potential contribution of migration to reducing poverty, but such studies depend on the availability of relevant data. If data on migration, its impacts, and the influence of various policy options were available, progress could be made in tapping the pro-poor potential of international migration. A final policy prescription, therefore, is that governments include migration as a specific issue in their data-collection efforts.

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FOR FOOD, AGRICULTURE, AND THE ENVIRONMENT

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GROWTH-PROMOTING SOCIAL SAFETY NETS

Harold Alderman and John Hoddinott

Publicly funded, noncontributory transfer programs targeted to the poor and vulnerable have a long history. Free food distribution was a feature of Egypt in the time of the Pharaohs and of Rome during its Imperial age. England had a succession of "Poor Laws" dating from the 16th century that provided assistance to those unable to work, while Germany inaugurated components of the modern welfare state in the late 19th century. These programs, typically referred to as social safety nets or social protection programs, are now ubiquitous in developed countries and are becoming more common in developing countries. They are, however, controversial. While proponents of such programs see them as a means of ensuring that the benefits of economic growth are shared widely, critics see them as squandering scarce public resources and doing little to promote longer term development, while at the same time discouraging work and investment. Overlooked in this often polemical debate is the contribution that social safety nets can make in promoting economic growth. This instrumental dimension of social safety nets is the focus of this brief.

Growth-Promoting Social Safety Nets

Social safety nets can take many forms: transfers of cash through welfare payments, child allowances, or pensions; in-kind transfers, such as food aid or school feeding programs; subsidies on goods purchased by the poor; unemployment insurance; and public works or workfare schemes. Recent innovations in social safety nets include both the means to improve targeting, such as proxy means testing, and the means to increase the impact of transfers on capital creation—for example, through conditional cash transfer (CCT) schemes and interventions that link recipients of cash or food payments to other government services and public works programs. Social protection programs are targeted toward the poor or those individuals who may become poor as a result of adverse shocks. This, together with their noncontributory dimension, distinguishes them from programs such as occupational pension schemes, which—while sharing certain similarities with social protection programs—base eligibility and benefit levels on employment and contribution history, rather than, say, current poverty status.

The provision of safety nets is motivated by both equity and efficiency concerns. In part, safety net programs arise from a desire to assist the least well-off members of society. Additionally, such programs seek to offset credit and insurance market failures, which leave poor households unable to make investments that would raise their future incomes or protect them from adverse events. Thus, in addition to the intrinsic value of such transfers in creating a fairer society, social protection programs have an instrumental function in promoting economic growth. This works through five channels:

1. social safety nets help create individual, household, and community assets;
2. they help households protect assets when shocks occur;
3. by helping households cope with risk, they permit households to use their existing resources more effectively;
4. they facilitate structural reforms to the economy; and
5. by reducing inequality, they directly raise growth rates.

Each of these channels is discussed in turn below.

Social Safety Nets and Asset Creation

Reducing poverty requires raising the asset levels of the poor and increasing the returns to those assets. Achieving these objectives requires making investments, but doing so is hard when households have few resources of their own. In theory, such households could borrow money to finance these investments, but—as is now well understood—despite the impressive spread of microfinance institutions, many poor households lack access to credit, which would allow them to acquire assets, invest in their children's human capital, or enter profitable activities. Social protection provides liquidity to poor households, giving them

additional resources that can be used to make such investments. In Nicaragua, the CCT program Red de Proteccion Social raised school enrollments by nearly 22 percentage points, while Mexico's former Programa de Educación, Salud, y Alimentación (Progresa, now Oportunidades) significantly reduced stunting. A study of Oportunidades found that beneficiaries invest just over 10 percent of their transfers, and that this leads to sustained increases in per capita consumption in the following five years.

In addition to directing resources to the poor, certain forms of social protection can create assets of value to the local economy. Many developing countries have public works programs that rehabilitate roads, refurbish canal and irrigation facilities, or build structures—such as schools and health clinics—that are of value to the community and local economy. Such investments stimulate growth in the local economy. So too do the transfers themselves and the investments households make using these transfers. In addition, local communities are increasingly involved in decisionmaking surrounding the choice of assets to be built, the management of their construction, and the oversight of the finances being used. This not only increases the likelihood that the assets constructed are of particular value to the community, but also that communities build up social capital and governance capacity.

Social Safety Nets and Asset Protection

Risk and shocks—such as floods, droughts, price shocks, market collapses, and civil strife—are pervasive in developing countries. Such shocks can directly lead to a loss of livelihoods by destroying assets, as when a flood washes away a farmer's topsoil, or by reducing current returns to existing assets, as when a drought causes harvests to fail. They may also affect livelihoods indirectly, as when the demand for service providers, such as barbers or hairdressers, falls because their customers have become impoverished. In the absence of insurance, shocks force households to lower consumption, deplete savings, or both. The consequences can be far reaching. Farmers in Ethiopia who suffered livestock and other losses in the droughts of the 1980s found it difficult to recover and experienced considerably slower income growth in the decades that followed. Studies undertaken in countries as different as Bulgaria and China found similar results.

Shocks, even if temporary, can also reduce investment in human capital with long-lasting consequences. In Zimbabwe, children exposed to the civil war preceding independence and the droughts that occurred in the early 1980s were more likely to be stunted as preschoolers, had reduced stature by late adolescence, and completed less formal schooling. These shocks translate into a reduction in lifetime earnings on the order of 14 percent. Similarly, children in rural Mexico have higher dropout rates when a parent loses a job and, once out, a much lower chance of returning the next semester.

Social Safety Nets and Resource Allocation

Even if shocks do not reduce asset holdings, the threat of shocks discourages innovation and risk taking. It is true that many households have developed ways of insuring themselves against risk, but these come with high opportunity costs. Studies undertaken in south India and Tanzania show that, because poor households deploy their assets more conservatively than wealthy households, their return on assets is 25–50 percent lower. Further, the threat of shocks can make households reluctant to access credit markets because they fear the consequences of an inability to repay. Others are simply unable to obtain credit because they are perceived to be at risk of default. Social safety nets, therefore, play two complementary roles in attacking the problem of risk and shocks. First, timely responses to shocks allow households to recover more quickly from these adverse events, thus reducing the likelihood that they have permanent consequences. Second, social protection programs that are reliably delivered and transparently operated provide a form of insurance that can encourage households to adopt new innovations.

Social Safety Nets and Structural Policy Changes

There are times when governments need to make significant policy reforms that, while necessary in order to improve economic efficiency and create the conditions for sustained growth, impose significant short-term costs on some households. Social safety nets can compensate households hurt by policy shifts and make policy reforms more politically palatable. Mexico introduced El Programa de Apoyos Directos al Campo (PROCAMPO) to mitigate the costs of adjusting to the North American Free Trade Agreement (NAFTA). The program had the added advantage of increasing production because the transfers helped relax credit and insurance constraints. Turkey introduced a similar direct income support in 2000 to facilitate reforms. So, programs that address the inherent stress of agricultural transformation and the reality that few policy changes are unambiguous sources of gains for all households may also improve efficiency in addition to equity.

Social Safety Nets, Redistribution, and Growth

Finally, by redistributing resources within an economy, social safety nets may make

economic growth more likely. While longstanding controversy surrounds the relationship between inequality and growth, the most recent evidence suggests that high levels of inequality are growth-retarding for at least two reasons. First, marked income or wealth inequalities create circumstances where political or institutional power is more likely to be captured by elites, who then make policy choices that generate rents to themselves rather than policies that encourage broader based growth. Second, high levels of inequality are often accompanied by low levels of social cohesion, which can reduce growth either because levels of trust are lower or because lowered social cohesion is often accompanied by high rates of crime.

Common Criticisms of Safety Nets

There are two common criticisms of safety nets: first, that they create disincentive effects; and, second, that they are simply too costly, particularly for very poor countries. While these concerns need to be taken seriously, the preponderance of existing evidence casts serious doubt on both.

Disincentive effects arise for several reasons. Sometimes, it is argued that the receipt of public funds discourages work effort because beneficiaries favor increased amounts of leisure. Additionally, in cases where strict means testing is used, individuals may worry that if they work too much, they will lose access to their benefits. In addition to the effect on labor incentives, public safety net programs may change incentives for private individuals to assist family and friends; thus, social safety nets might crowd out informal safety nets such as private transfers.

Most studies, however, find that public transfers have modest effects on work effort. In some cases, this is not a bad thing; for example, some evidence suggests that CCT programs reduce child labor. The evidence on the crowding out of private transfers is more mixed. Some studies suggest that effects are substantial; for example, in South Africa, it is estimated that every rand transferred via a pension scheme reduces transfers from children living away from home by 0.25–0.3 rand. However, in other countries—such as China, Papua New Guinea, Vietnam, and Indonesia—no such crowding out is found. Evaluations of CCT programs in Mexico and countries in Central America also failed to find evidence of crowding out. While disincentive effects are worth keeping in mind—and program designers should ensure that social protection schemes do not inadvertently create disincentives—existing evidence does not suggest that they are pervasive or severe.

Perhaps the most potent criticism of safety nets focuses on their affordability in highly resource-constrained environments. Such concerns are often couched in terms of trade-offs between different forms of pro-poor expenditures. How can, it is asked, a country afford a safety net when residents in remote rural locations lack schools? This concern, however, exaggerates the costs of many well-targeted programs; frequently, social protection programs are less than 1 percent of gross national product, an amount that can often be financed by re-allocating unproductive expenditures that offer little tangible benefit for the poor. For example, Brazil is expanding its well-targeted CCT program, Bolsa Familia, to cover the bottom quintile of the population at a cost of 0.4 percent of gross domestic product (GDP). While this is a considerable amount, it palls in comparison to the contribution made to federal pension programs, which receive nearly 10 times this amount, at 3.7 percent of GDP, while transferring more than half the benefits to the richest quintile! This is not an isolated example. Other countries spend considerable amounts of money on regressive energy subsidies, which tend to take the form of industry subsidies, bank bailouts, and military expenditures. That said, in very low-income countries, there may be limited scope for re-allocating existing expenditures or increasing domestic tax efforts. In such cases, international aid may need to play a larger role in financing social protection programs. Here, care is needed in terms of the form of this financing. A subset of transfer programs is financed by food aid, which under some circumstances may create local market distortions.

Caveats and Conclusions

Social safety nets are by no means sufficient to ensure pro-poor growth. Good governance, functional infrastructure, schools and health clinics, and so on are all important components of development strategies. Further, poorly designed or implemented social protection programs, or those with only token funding, are unlikely to meet the intrinsic or instrumental objectives described here. Much depends on correct design. All effective social safety nets have five key characteristics: (1) a clear objective; (2) a feasible means of identifying intended beneficiaries; (3) a means of transferring resources on a reliable basis; (4) ongoing monitoring of operations and rigorous evaluation of effectiveness; and (5) transparency in operation to encourage learning, minimize corruption, and ensure that beneficiaries and the wider population understand how the program functions.

Much has been learned about how to design and implement equitable and efficient safety nets with these characteristics. An important remaining challenge is the design of safety nets that address the long-term consequences of transitory shocks. This requires improving the identification of those affected by a transitory shock, devising flexible means of financing responses to these events, and developing mechanisms for scaling up and down quickly.

Safety net interventions can contribute to economic growth through their impact on asset creation, asset protection, resource allocation, structural policy change, and redistribution. Social safety net interventions, when well-designed and implemented, can complement pro-poor investments and thus contribute to longer term poverty reduction in addition to their short-term direct impacts.

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FOR FOOD, AGRICULTURE, AND THE ENVIRONMENT

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CONDITIONAL CASH TRANSFER PROGRAMS

A "Magic Bullet" for Reducing Poverty?

Michelle Adato and John Hoddinott

In 1997, the Government of Mexico introduced a conditional cash transfer (CCT) program called Programa de Educación, Salud, y Alimentación (Progresa), providing assistance to about 300,000 extremely poor households. The essential premise of a CCT program is a cash transfer to households, conditioned on their participation in health, nutrition, and education services. Ten years later, Progresa, now Oportunidades, covers more than 5 million households in all 31 Mexican states. Approximately 20 countries have adopted a pilot or full-scale CCT program, and another 20 countries have expressed interest in starting one. Most current programs are in Latin America, but others can be found in Asia, Africa, and the Caribbean, and interest is increasing among African countries struggling with extreme poverty and low human capital. CCT programs are increasingly perceived as being "a magic bullet in development." Are they? This brief presents a review of the rationale and operation of CCT programs, an assessment of their effectiveness, and a discussion of key issues facing countries considering these interventions or reforming existing programs.

How Do CCT Programs Work?

CCT programs have the following characteristics: They are targeted to poor households, and the cash transfers are usually paid to mothers. Some programs also include transfers such as nutritional supplements or school supplies for children. Cash transfers may be made as a lump sum or determined based on the number of children, with the amount varying by the children's age and sex. In some countries, higher transfers are paid for girls' school attendance and for secondary school attendance. In return for these transfers, recipients commit to undertaking certain actions, such as enrolling children in school and maintaining adequate attendance levels; attending pre- and postnatal health care appointments; and seeing that preschool children receive vaccinations, growth monitoring, and regular checkups. Some programs require women to attend regular health and nutrition training workshops. Some provide resources that improve the supply and quality of the schools and health care facilities used by beneficiaries.

As such, CCT programs aim to reduce current poverty, while also seeking to improve human capital formation and, in doing so, help prevent the intergenerational transmission of poverty.

Impacts of CCT Programs

Rigorous evaluations—often built into the programs themselves—show that many, but not all, CCT programs have been successful in improving human capital outcomes. In Mexico, Progresa increased enrollment in secondary school by 6 percentage points for boys and 9 percentage points for girls. For girls—who often drop out before secondary school—those making the transition to secondary school increased by 15 percentage points. Children in the program also entered school at an earlier age and repeated fewer grades. Progresa had relatively little impact, however, on school attendance rates, on achievement on standardized tests, or in bringing dropouts back to school. These objectives must thus be pursued through design improvements or complementary programs. CCT programs in Colombia, Mexico, and Turkey all improved secondary school enrollment but had little impact on primary school enrollment rates because these were already high. Where pre-program enrollment rates are extremely low, the effects of CCT programs can be very high: in Cambodia, for example, secondary school enrollment increased by 30 percentage points and attendance by 43 points.

In Bangladesh, where 3 million children are still not enrolled in primary school, a small CCT program targeting the hardest-to-reach children (including street children) increased primary school enrollment by 9 percentage points, though this occurred only in schools where grants were also provided to improve school quality. In Nicaragua, where primary school enrollment was also low, the CCT program increased overall enrollment by 13 percentage points, enrollment of children from the very poorest households by 25 points, and regular primary school attendance by 20 points. Two years after households stopped receiving benefits, however, enrollment dropped by 12.5 percentage points, but this was still 8 points higher than before the program, implying some sustainability of impact. This experience points to the important, but little understood, question of how to maintain the effects of CCT programs after households graduate from a program or after it ends.

CCT programs have also had significant impacts on health and nutrition. In Mexico, health visits increased by 18 percent in Progresa localities, and illnesses among Progresa children 0–5 years old were reduced by 12 percent. Young children in Honduras increased use of health services by 15–21

percentage points, though there, as in Brazil, no effects on children's illness rates were found. Some of the largest increases were found in the regular monitoring of children's growth in CCT programs in rural Colombia, Honduras, Mexico, and Nicaragua.

A number of CCT programs are also associated with increased child height, which is an important measure of long-term nutritional status. Stunting was reduced in Mexico by 10 percentage points, in Nicaragua by 5.5 points, and in Colombia by 7 points. Although the exact mechanism that triggers improvement is not known for certain, it may result from one or several program characteristics, such as higher incomes that permit increased expenditure on food, growth monitoring and information about nutrition and child care, or nutritional supplements. In both Mexico and Nicaragua, for example, calorie intake increased, as did the consumption of fruits, vegetables, meat, and dairy products. In Honduras, no positive nutritional impacts were found because of implementation problems, while in Brazil, the program was initially associated with a slightly reduced weight gain, but this phenomenon was subsequently reversed. According to anecdotal evidence, mothers may have kept children underweight under the mistaken belief that they would lose their benefits if children gained too much. This points to the importance of well-functioning mechanisms to ensure clear and regular communication between the program and beneficiaries so that conditionalities do not create perverse incentives. In Turkey, insufficient or incorrect information about the program also reduced impacts.

Some programs also address micronutrient deficiencies. In Mexico, program beneficiaries had anemia rates substantially lower than nonparticipants, though rates remained high. In Nicaragua, although mothers reported receiving the iron supplement, anemia rates were not affected, in part because they did not give the supplement to children, believing it was bad for their stomach and teeth. Both cases point to the continuing challenge of addressing nutritional deficiencies, where multidimensional approaches, rather than cash transfers or supplements alone, are needed.

CCT programs have a sharp gender focus. They have been successful in significantly increasing school enrollment rates for girls, who have historically faced discrimination because educating them is not considered as important as educating boys. Research in Mexico and Nicaragua has found that CCT programs are associated with improved attitudes toward educating girls, as well as a heightened profile for women more generally. Although there has been concern and some evidence that women's program responsibilities can lead to conflicts with men, in both countries there is more evidence that the program's infusion of financial resources has reduced intrahousehold tensions. Where CCT programs organize collective activities for beneficiaries, such as meetings, committees, and workshops, women report increases in their knowledge, social awareness, and self-confidence. Nevertheless, not all CCT programs provide these opportunities, and therefore they overlook potential for increasing women's status. Research in eastern Turkey found that sociocultural biases against schooling for girls were more powerful than cash incentives, indicating the need for complementary approaches to overcome these constraints. Even in this region, however, the program provides opportunities for women to spend time out of their homes and to engage with institutions such as banks and government offices.

CCT programs tend to be administratively centralized because their complexity requires standardization; hence, they offer fewer avenues for community participation than many other development interventions. Nevertheless, the programs still affect communities—positively or negatively—depending on their design and implementation. Programs in Brazil, Colombia, Honduras, and Mexico have all found ways to integrate varying types of local input into their programs: from a beneficiary feedback system in Mexico, to local input into targeting in Brazil, to school-based parents' organizations and quality improvement teams for the health services in Honduras, to mothers' assemblies in Colombia. While data-based centralized targeting has generally been successful in reaching the poor and avoiding political manipulation at the local level, it has also frequently bred discontent in communities when people do not understand the targeting criteria, perceive it as unfair, or do not have access to a functioning appeals mechanism. Exploring country-specific options for participation could lead to programs that are even more effective in achieving their primary goals, while increasing collective and individual empowerment.

Development and Implementation Issues

Are CCT Programs Too Expensive?

The concern that governments in poor countries can't afford CCT programs should be considered within the context of the large sums spent by many governments on programs directed to the nonpoor. Energy subsidies, for example, are typically highly regressive and often more costly than CCT programs: Egypt spent 8 percent of gross domestic product (GDP) on energy subsidies in 2004, and Indonesia spent 5 percent in 2005. Bailouts of insolvent contributory pension funds are another example. The expansion of Brazil's well-targeted CCT program, Bolsa Familia, to cover the bottom quintile of the population would cost about 0.4 percent of GDP, while the Brazilian government now spends nearly 10 times that amount covering the deficit in the main federal pension programs, which deliver more than 50 percent of their benefits to the richest quintile. These are not isolated examples: many other countries spend considerable amounts of money on industry subsidies and military expenditures. In some very poor countries, particularly in Sub-Saharan Africa, donors and nongovernmental organizations

(NGOs) have stepped in as partners with governments considering or implementing CCT programs, viewing them as potentially cost-effective approaches to increasing human capital—for example, by protecting children in households affected by AIDS.

Even if a country can afford a CCT program, it is sometimes argued that, relative to other types of social safety nets, they are expensive to operate. For example, in its first year of operation, Progresa spent $1.34 on administrative costs for every dollar spent on transfers to beneficiaries. Statistics like these shape a common perception that CCT programs are too expensive. Closer scrutiny, however, shows a different picture. First, as with any program, fixed establishment costs, such as buying computers, identifying beneficiaries, and so on, are comparatively high. But by Progresa's third full year of operation, administrative costs had fallen to only 5 cents for every dollar spent on transfers. Second, many administrative costs—such as identifying beneficiaries, establishing mechanisms for delivering the benefit, and monitoring and evaluating the program—are common to all social protection programs. Further, some of these costs are incurred to improve the program's effectiveness. Reducing expenditures on targeting, for example, might reduce administrative costs, but if targeting performance is severely weakened as a result, the cost savings are counterproductive. An important cost issue is whether conditionality significantly increases program costs. Existing evidence is mixed, largely because the intensity of monitoring conditionalities is a choice made by program designers and implementers. In the case of the CCT program in Honduras, monitoring accounted for about 9 percent of administrative costs.

Is Conditionality Necessary?

An important question being debated as new countries consider cash transfer programs is whether to impose conditionalities. Are conditional cash transfers in fact better than unconditional ones when it comes to achieving objectives, and, if so, for what objectives and under what conditions? Three broad arguments support conditionality: the first relates to the externalities associated with certain types of human capital investments. For example, when making decisions about their children's care—say decisions about girls' schooling—parents may not take into account the benefits that society derives from educating girls, and, as a result, they underinvest in girls' schooling relative to optimal levels from a societal perspective. Conditionality can be an effective means of increasing these investments. Second, sociocultural biases against schooling may be imposed by more powerful groups (for example, men) on the less powerful (for example, their daughters), and conditionality provides state legitimation of social change. Third, conditionality may overcome the possible stigma associated with welfare payments if conditions are seen as part of a social contract between beneficiaries and the state. Finally, conditionality may be required for reasons of political economy. Politicians and policymakers are often evaluated by performance indicators, such as changes in school enrollment or use of health clinics, and the impacts of CCT programs provide a basis for sustaining public support. Conditionality has also increased the credibility of programs where, historically, the public has often been suspicious of antipoverty efforts that were deemed ineffectual.

Conditionality also raises several concerns: first, there must be reasonable access to schools and clinics. Second, governments and NGOs must be able to handle the costs and administrative requirements or adapt them to local circumstances. These two questions are particularly relevant for African countries establishing CCT programs; in Kenya, for example, an evaluation comparing the impacts of conditional and unconditional transfer programs is under way. Third, if poor people's preferences differ sufficiently from the conditions placed on their behavior by the government, the restrictions that conditionality imposes may actually reduce total welfare gains. Another way to look at this is to consider that conditional transfers can be perceived as demeaning, implying that the poor don't know what is good for them and need to be told by the government. Fourth, poverty, culture, social exclusion, discrimination, and other historical processes may prevent people from participating in activities regardless of the benefits, such that the people in most need can actually be punished rather than helped by conditionality.

Balancing these arguments and comparing the benefits of programs against the costs associated with conditionality is important but difficult; sparse evidence to date makes rigorous comparisons even harder. In the case of Progresa, monitoring conditionality represented approximately 2 percent of total program costs. Monitoring attendance had no effect on primary school enrollment but appears to have had a major impact in increasing the likelihood that students continue school after completing their primary education, with conditionality increasing enrollment in the first grade of lower secondary school by approximately 20 percentage points.

Are CCT Programs Sufficient as a Poverty Reduction Strategy?

CCT programs as currently designed are important parts of a poverty reduction strategy that aims to improve the health, nutrition, and education of young children in the short term and their income-earning potential in the future, ultimately reducing the likelihood they will remain poor as adults. Other complementary strategies are needed, however, for people at other stages of the life cycle. Mexico's Oportunidades is partially addressing this by offering (1) benefits throughout high school; (2) a cash incentive for high-school graduation conditional on its investment in higher education, a productive activity, health insurance, housing, or continued savings; and (3) a cash transfer for beneficiaries 70

years of age or older. Of course, poverty reduction also requires other approaches to promote economic development and job creation.

Would All Developing Countries Benefit from a CCT Program?

With a proven track record, CCT programs are a powerful approach not only to reducing poverty, but also to improving various educational, health-related, nutritional, and other welfare-related outcomes. That said, not all CCT programs have functioned as well as their designers had hoped. CCT programs are not for every country, and no two countries should necessarily adopt identical programs. In assessing whether a CCT program is appropriate, four main issues come to the fore:

1. What are current levels of *specific* human capital outcomes? If enrollment rates of primary school children are nearly 100 percent, it makes little sense to condition transfers on primary school enrollment. If, however, enrollment rates were only 70 percent, greater scope would exist for a CCT program—although the extent of this scope would only be revealed through further disaggregation of enrollment rates. For example, are the rates uniform across rural regions or for boys and girls? If pronounced regional, gender, or ethnic differences are present, a CCT program targeted to those lagging groups would be more effective than a countrywide program.
2. Why are specific human capital outcomes too low? Do they reflect an income constraint, such as parents needing the income that children bring in when not in school? Or are schools nonexistent, too far away, or considered unsafe for children to travel to or attend? Whether low school enrollment rates or poor nutrition outcomes reflect constraints at the household level or the absence of adequate service provision needs to be determined prior to initiating a program. CCT programs are ideal where the supply of supporting services is good but underutilized; they are much less effective when supporting services are limited. In such cases, improvements to the supply of schools, clinics, and so on should precede or accompany the launch of a program. In some countries CCT programs have provided a strong impetus for improving services.
3. Is there high-level political support for a CCT program? By design, CCT programs require coordination across different sectors, most notably social welfare, education, and health. This implies that interministerial coordination will be necessary, which is difficult to achieve. An influential political champion of the program is needed to ensure that this coordination occurs. In Mexico, for example, strong support from inside the Ministry of Finance was an important factor in Progresa's success.
4. What administrative resources are available? Is the necessary intersectoral coordination feasible, particularly when both transfers and supply-side interventions are envisaged? The level of complexity of program design should reflect administrative capacity.

CCT programs—while not a magic bullet—are worth serious consideration as part of an integrated poverty alleviation strategy.

For Further Reading: J. Maluccio and R. Flores, *Impact Evaluation of a Conditional Cash Transfer Program: The Nicaraguan Red de Protecciòn Social,* IFPRI Research Report No. 141 (Washington, DC: IFPRI, 2005); E. Skoufias, *PROGRESA and Its Impacts on the Welfare of Rural Households in Mexico,* IFPRI Research Report No. 139 (Washington, DC: IFPRI, 2005); S. Levy, *Progress against Poverty: Sustaining Mexico's Progresa–Oportunidades Program* (Washington, DC: Brookings Institution Press, 2006); J. Das, Q. Do, and B. Özler, "Reassessing Conditional Cash Transfer Programs," *World Bank Research Observer* (Vol. 20, No. 1, 2005).

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HOW TO MOBILIZE PUBLIC RESOURCES TO SUPPORT POVERTY REDUCTION

Shenggen Fan, Anuja Saurkar, and Ghada Shields

While the role of public investment in promoting economic growth and poverty reduction is widely recognized, it is not clear how governments can mobilize these resources and use them efficiently and effectively. Exploring these issues in the context of agricultural and rural development and poverty reduction, this brief looks at current trends in public expenditures, strategies to raise public funding, and prospective reforms to increase public spending efficiency.

Government Spending in Developing Countries

Over the past two decades, 44 developing countries reported overall growth in total government expenditures in real terms (measured in 2000 international dollars). Expenditures increased from US$981 billion in 1980 to US$1,562 billion in 1990, an annual growth rate of 4.8 percent. In the 1990s, government spending power increased by 7 percent per year. By 2000, total government expenditures rose to $2,969 billion, reaching $3,988 billion by 2004, an annual growth rate of 7 percent between 2000 and 2004. Growth in government expenditures in developing countries has clearly accelerated.

Total government expenditures as a percentage of gross domestic product (GDP) measures the amount a country spends relative to the size of its economy. For countries in this study, the percentage increased from 20 percent in 1980 to 22 percent in 2004. On average, developing countries spend much less than developed countries. For example, total government outlays as a percentage of GDP in the countries of the Organisation for Economic Co-operation and Development (OECD) ranged from 27 percent in 1960 to 48 percent in 1996, compared with 13–35 percent in most developing countries.

Among the three regions, Sub-Saharan Africa spent the most as a percentage of GDP—roughly 28 percent over the past two decades, 7 percentage points higher than Asia and Latin America. For Asian developing countries, the percentage increased from 19 percent in 1980 to 21 percent in 2004. Latin America experienced no discernible spending pattern.

Equally important is the composition of government expenditures, which reflects government spending priorities (Table 1). The top three expenditures for Sub-Saharan Africa in 2004 were education, health, and defense. That Africa and Latin America spend so little on transportation and communications is discouraging: the share gradually declined in Africa from 11 percent in 1980 to 6 percent in 2004. The decline was even sharper in Latin America, from 7 percent in 1980 to 2 percent in 2004.

Agriculture is the largest sector in many developing countries in terms of shares of GDP and employment. The majority of the world's poor live in rural areas and depend on agriculture for their livelihoods. Therefore, expenditure on public goods is one of the most important government instruments for promoting economic growth and alleviating poverty in rural areas of developing countries. Agricultural expenditures increased at an annual growth rate of 3.4 percent between 1980 and 2004 (Table 2). During the same period, the rural population grew by approximately 1 percent per year and agricultural GDP by 4.2 percent. That is, agricultural expenditures per capita of rural population increased slightly, and expenditures per unit of agricultural GDP decreased.

In Sub-Saharan Africa, government expenditures on agriculture increased gradually at an annual rate of 3.6 percent. Agricultural expenditures in Asia more than doubled between 1980 and 2004 at an annual growth rate of 4.5 percent, the highest growth among the three regions. Latin America was the only region that reduced its spending in agriculture, with an annual reduction of 1 percent. Seven of the 16 Latin American countries included in the dataset reduced their government expenditures in agriculture.

Agricultural expenditures as a share of total government spending indicate the level of priority a country gives its agricultural sector. For all regions, the shares declined between 1980 and 2004: in Latin America the share declined from 8 to 2.5 percent, in Asia it declined from 15 to 7.4 percent, and in Africa it declined from 7 to 5.3 percent. Africa's rate is well below the 10 percent target established by the Comprehensive African Agricultural Development Program.

Agricultural expenditures as a percentage of agricultural GDP measure government spending on agriculture relative to the size of the sector. Agricultural spending as a percentage of agricultural GDP is extremely low in developing countries (less than 10 percent on average) compared with developed countries (more than 20 percent on average). Asia remained relatively constant at 10–11 percent. Africa spent only half as much as Asia during 1980–2004 (4–6 percent) and only one-third as much as Asia spent during the Green Revolution period. For Latin America, agricultural spending as a percentage of agricultural GDP decreased from 15 percent in 1980 to 8 percent in 2004.

Table 1—Percentage Composition of Total Expenditure, 1980–2004

	Sub-Saharan Africa				Asia				Latin America			
Sector	**1980**	**1990**	**2000**	**2004**	**1980**	**1990**	**2000**	**2004**	**1980**	**1990**	**2000**	**2004**
Agriculture[a]	7.00	5.48	3.57	5.31	14.93	12.34	7.43	7.41	8.04	2.09	2.51	2.48
Education	14.41	14.46	14.11	15.53	13.83	17.41	14.20	11.58	10.36	7.94	14.79	14.19
Health	4.85	4.45	6.67	7.12	5.31	4.29	4.37	3.58	5.85	6.09	7.55	8.00
Transport and Communi-cations	11.00	4.49	4.66	5.83	11.71	5.21	3.80	3.97	6.78	2.65	2.56	2.29
Social Security	2.86	2.51	4.95	2.76	1.89	2.43	3.14	3.08	23.65	21.81	36.38	35.81
Defense	19.72	17.06	8.84	6.72	17.58	12.86	8.43	8.19	6.08	4.98	4.60	3.87
Other[b]	40.15	51.54	57.20	56.71	34.75	45.45	58.63	62.19	39.23	54.44	31.62	33.37
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Sources: Calculated by authors using data from International Monetary Fund's Government Finance Statistics Yearbook (various issues).
Notes: The countries were selected largely based on data availability; they include Botswana, Burkina Faso, Cameroon, Côte D'Ivoire, Egypt, Ethiopia, Ghana, Kenya, Malawi, Mali, Morocco, Nigeria, Togo, Tunisia, Uganda, Zambia, Zimbabwe, Bangladesh, China, India, Indonesia, Korea, Malaysia, Myanmar, Nepal, Philippines, Sri Lanka, Thailand, Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Mexico, Panama, Paraguay, Uruguay, and Venezuela. In 2004, these countries accounted for more than 80 percent of both total GDP and agricultural GDP in developing countries.
[a]Includes agriculture, forestry, fishing, and hunting.
[b]Includes fuel and energy; mining, manufacturing, and construction; and general administration.

Table 2—Agriculture Expenditures, 1980–2004

	Billion 2000 international dollars				Percentage of agricultural GDP			
Region	**1980**	**1990**	**2000**	**2004**	**1980**	**1990**	**2000**	**2004**
Sub-Saharan Africa	2.97	3.64	4.01	6.91	4.05	3.73	3.47	5.78
Asia	71.14	103.00	147.90	206.60	9.57	8.63	9.13	10.93
Latin America and the Caribbean	31.47	12.19	18.93	23.65	14.72	5.77	9.12	8.24
Total	109.94	123.03	177.14	244.48	10.37	7.93	8.85	10.35

Source: Calculated by authors using data from International Monetary Fund's Government Finance Statistics Yearbook (various issues).

Mobilizing Resources to Support Poverty Reduction Efforts

Finance for public spending has a number of sources. The different financing mechanisms have important implications not only for efficiency, but also for poverty reduction and distributional outcome. The financing options include *domestic* sources, such as savings, tax revenues (from income, corporate, value-added taxes, and so on), and domestic nontax revenues (such as user fees), and *foreign sources*, such as foreign direct investment (FDI), borrowing, debt relief, and foreign aid (such as official development assistance, or ODA).

The most effective way to boost a country's resource mobilization effort is to improve its tax system. Tax revenue in ratio to GDP is only 18 percent in developing countries, while it is 38 percent for industrial countries. An efficient tax system will finance the necessary level of public spending in the most efficient and equitable way. It increases revenues by eliminating exemptions, deductions, and loopholes and by effectively enforcing the tax laws. However, in most developing countries, it is a challenge to establish such a system due to the predominant agrarian structure of the economy (largely informal) and the limited capacity of the tax administration. Traditionally, tax reforms emphasize indirect taxes such as the value-added tax, rather than the more progressive direct taxes on income or wealth that would generate higher tax revenue. Evidence also shows that taxes on agriculture should be minimized or even eliminated, particularly in largely agrarian economies, so the poor—who mostly derive their livelihoods from agriculture—will not be adversely affected. No single taxing system is best: each system has to be designed to fit the country's economic, social, legal, and cultural context. Recent tax reform in Ghana introduced a system increasing the direct income tax, reducing the indirect tax, and decreasing reliance on import and export duties, which has increased total tax revenues and made taxes more amenable to the poor.

Subnational entities also raise revenues by levying taxes on personal income and corporate profits, as well as on customs and excise duties, nonagricultural wealth, and interstate trade. The management of these revenue streams is often divided between the central government and its state and municipal counterparts. Decentralization of government powers has been shown to improve revenues because local authorities have better and more detailed knowledge of local conditions. However, in this sharing mechanism, there should be an incentive structure for the subnational entities to raise more revenues by receiving a certain percentage for local public provision and administration. For example, in China, subnational entities have an incentive to raise more taxes because if they increase revenues, they get a larger share of the pie.

Domestic nontax revenues, such as user fees, are another source of public revenue, although user fees in some sectors can have a negative effect on the poor. For example, introducing user fees in the health sector can reduce public subsidies, resulting in more inequity in access to health services and in health outcomes. The same applies to education, where fees for books or uniforms may deter the very poor from sending their children to school. However, for public utilities such as electricity and irrigation, where

nonpoor households benefit more from access, a user fee is more efficient and equitable.

Foreign aid, such as ODI, can boost public investment programs, but cannot replace domestic resource mobilization in the long run. Debt relief is another way of boosting expenditures of poor countries by diverting expenditures from debt payments toward sectors such as infrastructure, health, and education. But foreign aid and expenditures from debt relief have to be used carefully. First, the allocation of aid among different sectors has to be aligned with national development priorities. Strong programming strategies have to be developed in accordance with a country's socioeconomic and political dimensions for foreign aid programs to be successful in reaching the goal of reducing poverty and hunger. Careful analyses must be conducted to provide evidence-based knowledge and information for policymakers and political institutions to determine what allocations to make. Second, too much foreign aid can lead to other dangers. Scarce local human resources can be used up quickly servicing multiple development programs that simply serve individual donor interests. As a result, fewer people are employed in productive activities. Moreover, the danger always exists that governments will spend more time being accountable to donors than to their own people, thus spending less money and time addressing the needs of the rural poor. Finally, when policy design, analysis, and management skills are inadequate, development activities will continue to demand a high price tag, as countries resort to hiring expensive foreign expatriates or consultants to do the job. Many donors have moved their aid from project/program support to budget support. This is a good way to ensure that donor support will align with the priorities of the national development strategies. Again, national capacity in setting spending priorities is crucial to improving the effectiveness of budget support. Donors may need to earmark special funds to build up the long-term capacity for formulating and implementing national development strategies and public spending programs.

Public–private partnership is another critical instrument for mobilizing private investment to promote economic growth and poverty reduction. The public sector is the dominant supplier of health, education, infrastructure, and technology services in many developing countries. Inefficiencies are widespread and arise from endemic problems with poor staff incentives and a lack of financial autonomy, accountability, and transparency. Privatization can be an effective way to improve efficiency. Private firms have a stronger incentive to build and run infrastructure industries in cost-effective ways and to be more responsive to end-user needs, as long as privatization goes hand in hand with the development of market institutions and contracting mechanisms that exert competitive pressure on the private firms. The extent to which such institutions can be put in place will also vary with the types of services and infrastructure to be provided: for example, the ability to recover costs differs by the type of service or infrastructure. Privatization also encourages and facilitates the imposition of cost-covering tariffs or user fees, thus addressing the problems of underpricing that have afflicted many publicly provided infrastructure services. Greater efficiency and cost recovery allow firms to make investments and provide services that might not otherwise have been possible. They simultaneously improve efficiency and the government's fiscal condition by making available the same quality and quantity of service with smaller budgetary subsidies. But privatization is not a panacea. Policymakers should consider both efficiency and equity implications when deciding what and how to privatize.

How to Improve Public Spending Efficiency

Public expenditures, regardless of their benefits and distribution, impose a cost on society, diverting resources from private use and resulting in deadweight losses associated with distortional taxation (that is, the "marginal cost of public funds"). For example, one study estimated that each unit of public expenditure raised in Africa had, on average, a social cost of $1.17. If the social return of a project is smaller than the marginal cost of public funds, it is not worth investing in that project.

Efficiency of public spending is defined as achieving the maximal outcome given the same unit of spending. It can be further disaggregated into allocative efficiency and technical efficiency. Allocative efficiency reaches a maximum when the spending outcome is maximized by reallocating public spending among different sectors or functions. To do this, information is needed on the relative returns to different expenditures. In assessing their effects, two issues are particularly worth noting. First, it is critical to assess the impact of spending through all channels. For example, investment in rural infrastructure may affect agricultural productivity, rural nonfarm sectors, rural–urban migration, and food prices, and all of those, in turn, will contribute to overall economic growth, poverty reduction, and income distribution among different population groups. Second, more spending items should be included and assessed jointly, so their returns can be compared and their complementarities and interactions can be considered.

To improve allocative efficiency, public spending needs to be reallocated from low- to high-return sectors and regions (see the Fan, Brzeska, and Shields brief in this series). To improve technical efficiency of public spending, the efficacy of spending in sectors where returns are low needs to be improved by reforming public institutions and governance. Simply increasing the amount of resource flows into poor sectors is insufficient without adequate checks and balances to ensure that resources and investments are being made effectively. In other words, are governance structures and institutions sufficient to

ensure that the planning, implementation, and monitoring of development processes is transparent and that policymakers are highly accountable? Since good governance also means having in place institutional incentives for private-sector growth, are there well-established and transparent "rules of the game" to encourage economic activities with domestic, regional, and international markets? Uganda, for example, has reduced poverty and hunger rates rapidly over the past decade, thanks to an improved governance and policy environment, improved bureaucratic and management structures, greater transparency in decisionmaking, and overall a conducive environment for private-sector growth. The quality of governance structures and existing institutions in each country will determine how well policies and development strategies will ultimately reduce poverty. For example, the service delivery mechanisms may work far more efficiently at a decentralized level and through traditional institutions. However, centralized systems will be more cost effective and efficient for the delivery of large public works such as roads, electricity, and irrigation.

Social security expenditures are important to the development process, particularly in protecting the welfare of the most disadvantaged and vulnerable groups. This type of spending can also help achieve long-term growth and poverty reduction by improving the productivity of the poor. There are synergies between social protection and pro-poor agricultural growth.

Another important reform that can increase the public resources available to invest in more productive sectors is to reduce government subsidies on inputs and output. In India, initial subsidies on credit, fertilizer, and irrigation helped farmers, especially smallholders, to adopt new technologies. Small farms are often losers in the initial adoption stage of a new technology because the increased supply of agricultural products from large farms benefiting from the new technologies pushes prices down. These initial subsidies helped small farmers to access the new technologies and therefore also gain in this initial stage. Eventually, however, these subsidies will yield low marginal returns in both agricultural growth and poverty reduction, despite their large impact in earlier decades. To sustain long-term growth in agricultural production and therefore achieve a long-term solution to poverty, government should cut subsidies and increase investments in agricultural research and development, rural infrastructure, and education.

The Way Forward

Many developing countries have committed to poverty reduction by developing national strategies and by committing financial resources to these efforts. How can governments mobilize these resources and use them efficiently and effectively? First, developing countries need to increase their tax revenues by reforming their tax systems, so the dependence on foreign aid can be reduced. A simple, transparent, and direct taxing system is often more efficient and equitable than a more complex, indirect system. Second, the government should cut subsidies on inputs and output and increase investments in agricultural research and development, rural infrastructure, and education. Third, reforms in institutions and governance related to public spending are urgently needed. A decentralized, participatory, and evidence-driven governance structure is necessary for efficient and pro-poor government spending.

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INVESTMENT PRIORITIES FOR ECONOMIC GROWTH AND POVERTY REDUCTION

Shenggen Fan, Joanna Brzeska, and Ghada Shields

Public investments have contributed significantly to agricultural growth and rural poverty reduction in rural areas, and to urban poverty reduction through growth in the national economy and lower food prices. Without such investments, agricultural and national economic growth would have been much slower, and many more rural and urban people in developing countries would be poor. Yet, despite these successes, the poor still number about 1 billion, and many developing-country governments still face severe budget constraints. Thus, public resources need to be targeted more effectively to the sectors and regions that can generate the largest economic growth and poverty reduction. This brief presents a synthesis and review of several case studies conducted by IFPRI and its national collaborators to quantify the effects of government spending on both growth and poverty reduction in India, China, Vietnam, Thailand, and Uganda—countries representing different stages of economic development and, hence, the need for different spending priorities.

The Impact of Public Spending in India

Using state-level data spanning 1970 to 1993, the India study clearly shows that additional government expenditure on roads has the largest poverty-reducing impact, as well as a significant impact on productivity growth (Table 1). For every 1 million rupees spent on rural roads, 124 poor people could be lifted above the poverty line—the largest rate of poverty reduction among all types of investment. Furthermore, 1 rupee invested in rural roads would generate more than 5 rupees in returns from agricultural production, which is the second-largest production growth effect after agricultural research and development (R&D). Additional government spending on agricultural R&D and extension has the largest impact on production growth, with a cost–benefit ratio of 13; it also leads to large rural poverty-reduction benefits, second only to rural road investment. Additional government spending on education has the third-largest impact in reducing rural poverty, largely because of the increases in nonfarm employment and rural wages that it induces. Finally, public investment in irrigation has an impact on agricultural productivity similar to that of education investments and only a small impact in reducing rural poverty.

Table 1—Returns to Agricultural Research in India, State-Level Analysis, 1993

Sector	Returns in Rupee per Rupee Spending	Numbers of Poor Reduced per Million Rupees
R&D	13.45	84.5
Irrigation	1.36	9.7
Roads	5.31	123.8
Education	1.39	41.0
Power	0.26	3.8
Soil and water conservation	0.96	22.6
Health	0.84	25.5
Anti-poverty programs	1.09	17.8

Source: Calculated by authors from S. Fan, P. Hazell, and S. Thorat, "Government Spending, Agricultural Growth, and Poverty in Rural India," *American Journal of Agricultural Economics* (Vol. 82, No. 4, 2000).

Another study found that, for every type of investment, the highest marginal impact on agricultural production and poverty alleviation occurs in rainfed lands, while irrigated areas rank second or last. Moreover, many types of investments in low-potential rainfed lands yield some of the highest production returns, and all investments except education have some of the most favorable impacts on poverty. These results strongly suggest that more investment should be channeled into less-favored areas.

The Impact of Public Spending in China

The Chinese case studies indicate that government expenditure on education had the largest impact on reducing rural poverty and regional inequality and had significant impact on production growth (Table 2). Increased rural nonfarm employment was responsible for much of this poverty- and inequality-reducing effect. Government spending on agricultural R&D had the largest impact on agricultural production growth. The benefits of agricultural production growth also trickled down to the rural poor, with the poverty-reduction effect per unit of additional agricultural R&D investment ranking second after investment in rural education. Government spending on rural infrastructure (roads, electricity, and telecommunications) had a substantial impact on poverty and inequality, mainly through improved opportunities for nonfarm employment and increased rural wages. Investments

in irrigation had only a modest impact on agricultural production growth and an even smaller impact on rural poverty and inequality.

Table 2—Returns to Public Investment in China, 2000

Investment	Coastal	Central	Western	Average
Returns to total rural GDP	*Yuan per yuan expenditure*			
R&D	5.54	6.63	10.19	6.75
Irrigation	1.62	1.11	2.13	1.45
Roads	8.34	6.90	3.39	6.57
Education	11.98	8.72	4.76	8.96
Electricity	3.78	2.82	1.63	2.89
Telephone	4.09	4.60	3.81	4.22
Returns to agricultural GDP	*Yuan per yuan expenditure*			
R&D	5.54	6.63	10.19	6.75
Irrigation	1.62	1.11	2.13	1.45
Roads	1.62	1.74	1.73	1.69
Education	2.18	2.06	2.33	2.17
Electricity	0.81	0.78	0.88	0.82
Telephone	1.25	1.75	2.49	1.63
Returns to nonfarm GDP	*Yuan per yuan expenditure*			
Roads	6.71	5.16	1.66	4.88
Education	9.80	6.66	2.43	6.79
Electricity	2.96	2.04	0.75	2.07
Telephone	2.85	2.85	1.32	2.59
Returns to poverty reduction	*Number of poor reduced per 10,000 yuan*			
R&D	3.72	12.96	24.03	10.74
Irrigation	1.08	2.16	5.02	2.31
Roads	2.68	8.38	10.03	6.63
Education	5.03	13.90	18.93	11.88
Electricity	2.04	5.71	7.78	4.85
Telephone	1.99	8.10	13.94	6.17
Poverty loan	3.70	3.57	2.40	3.03

Source: S. Fan, L. Zhang, and X. Zhang, "Investment, Reforms, and Poverty in Rural China," *Economic Development and Cultural Change* (Vol. 52, No. 2, 2004).

For all types of government spending, the poverty-reducing returns to investments were highest in the less-developed western region, while returns from agricultural production growth were the highest in the more developed central region for most types of spending. Furthermore, investments in the western region led to the greatest reductions in regional inequality for all types of government spending, while investments in either coastal or central regions exacerbated large regional inequalities. Another study found that low-grade (mostly rural) roads have cost–benefit ratios for national GDP that are about four times larger than the cost–benefit ratios for high-grade, mostly urban, roads. Even in terms of urban GDP, the cost–benefit ratios for low-grade roads are much greater than for high-grade roads. In terms of agricultural GDP, high-grade roads have no statistically significant impact, while low-grade roads are not only significant, but also generate 1.57 yuan of agricultural GDP for every yuan invested. Investment in low-grade roads also generates high returns in rural nonfarm GDP. Every yuan invested in low-grade roads yields more than 5 yuan of rural nonfarm GDP. Equally important in terms of poverty reduction, low-grade roads raise far higher numbers of rural and urban poor above the poverty line per yuan invested than do high-grade roads.

The Impact of Public Spending in Vietnam

The results from Vietnam reveal that government investment in education has the largest poverty-reducing impact, followed by roads and agricultural R&D (Table 3), while investment in agricultural R&D has the largest return to agricultural growth, followed by roads. Investment in irrigation has the smallest impact on both agricultural growth and poverty reduction. The large poverty impacts resulting from investment in education and roads are derived from improved nonfarm employment opportunities, which accounted for 89 percent of the total education impact on poverty. The remaining gains resulted from improved agricultural production. For roads, improved nonfarm opportunities accounted for 67 percent of the total effect of road investment.

Table 3—Returns to Public Investment in Vietnam, 2000

Region	Irrigation	Roads	Education
	Dong per dong spending		
Northern uplands	0.21	1.87	0.95
Red River delta	0.40	3.26	2.08
Central north	0.22	3.27	1.01
Central coast	0.21	2.44	1.23
Highlands	0.28	3.09	1.97
Southeast	1.33	3.30	4.66
Mekong River delta	0.37	3.40	2.08
Vietnam total	0.42	3.01	2.06
Total agricultural R&D		12.22	
	Numbers of poor reduced per billion dong		
Northern uplands	12.03	153.04	65.60
Red River delta	7.93	91.38	49.40
Central north	14.90	311.57	81.28
Central coast	12.99	215.58	92.31
Highlands	8.37	130.54	70.14
Southeast	27.85	98.64	117.64
Mekong River delta	5.68	74.14	38.24
Vietnam total	12.93	132.34	76.40
Total agricultural R&D		338.96	

Source: S. Fan, Pham Lan Huong, and Trinh Quang Long, "Government Spending and Poverty Reduction in Vietnam," (IFPRI, Washington, DC, 2004).

The Impact of Public Spending in Thailand

The Thailand case study found that additional government spending on agricultural R&D improves agricultural productivity the most and has the second-largest impact in reducing rural poverty (Table 4). Investments in rural electrification have the largest impact on rural poverty and the second-largest impact on growth. These two investments dominate all others. Road expenditure has the third-largest impact in reducing rural poverty, but only a modest and statistically insignificant impact on agricultural productivity. Government spending on rural education has only the fourth-largest impact on poverty, but a significant economic impact through improved agricultural productivity. Irrigation investment has the smallest impact both in reducing rural poverty and in improving agricultural productivity. Disaggregating the investments shows that additional investments in the northeast—especially in electricity and roads—contribute more to

reducing poverty than investments in other regions. Since the growth impacts of many investments are also greater in the northeast than in other regions, there is no evident trade-off between investments for growth and investments for poverty reduction.

Table 4—Returns to Public Investment in Rural Thailand, 1999

Investment	Northeast	North	Central	South	Thailand
	Cost–benefit ratio (bhat/bhat)				
Agricultural R&D	n.a	n.a.	n.a.	n.a.	12.62
Irrigation	0.76	1.11	0.55	0.62	0.71
Roads	1.23	1.23	0.44	1.24	0.86
Education	1.26	2.92	2.89	2.51	2.12
Electricity	8.66	8.04	2.59	5.48	4.89
Phone	n.s.	n.s	n.s	n.s	n.s
	Number of poor reduced per million bhat				
Agricultural R&D	n.a	n.a	n.a	n.a	138.10
Irrigation	21.05	5.22	1.74	4.53	7.69
Roads	483.39	82.71	19.48	130.12	126.25
Education	34.74	13.71	9.08	18.53	22.75
Electricity	1,253.02	198.57	42.79	211.99	276.07
Phone	n.s	n.s	n.s	n.s	n.s

Source: S. Fan, S. Jitsuchon, and N. Methakunnavut, *The Importance of Public Investment for Reducing Rural Poverty in Middle-Income Countries: The Case of Thailand*, DSGD Discussion Paper No. 7 (Washington, DC: IFPRI, 2004).
Notes: n.a. indicates not available; n.s. indicates statistically insignificant.

The Impact of Public Spending in Uganda

All types of public spending in Uganda were found to reduce poverty while increasing agricultural production (Table 5). Sizable differences, however, resulted in production and poverty-reduction gains across expenditure items. For the country as a whole, government expenditure on agricultural R&D has the highest return to labor productivity and poverty reduction, followed closely by investments in feeder roads. Education ranked third in terms of productivity and poverty-reducing effects, whereas health had the smallest impact. For all types of investments except health, returns in terms of increased agricultural productivity were highest in the relatively well-developed western region, while returns to agricultural productivity from agricultural extension were lowest in the eastern region. The central and northern regions have the lowest returns from education and roads, while the eastern region ranks in the middle. The northern region is Uganda's poorest, with 67 percent of its residents classified as poor. In terms of poverty reduction, this region has the highest returns (except for health), with the poverty-reducing effect of spending on infrastructure and education being particularly high. For all types of investments, the poverty impact was the smallest in the central region.

Conclusions and Implications for Spending Strategy

Increasing public rural investment significantly is difficult—if not unlikely—so countries must use their public investment resources more efficiently. This requires improved targeting of investments to achieve growth and poverty-alleviation goals, as well as improved efficiency within the agencies that provide public goods and services. Reliable information on the marginal effects of various types of government spending is crucial for governments to be able to make sound investment decisions. Despite the countries' vast differences in economic systems, natural resource endowments, socioeconomic conditions, and size, these case studies offer some important lessons:

Table 5—Returns to Public Investment in Rural Uganda, 1999

Investment	Central	East	North	West	Uganda
	Cost–benefit ratio (shilling/shilling)				
Agricultural R&D	12.49	10.77	11.77	14.74	12.38
Education	2.05	3.51	2.10	3.80	2.72
Feeder roads	6.03	8.74	4.88	9.19	7.16
Murram roads	n.s.	n.s.	n.s.	n.s.	n.s.
Tarmac roads	n.s.	n.s.	n.s.	n.s.	n.s.
Health	1.37	0.92	0.37	0.96	0.90
	Number of poor reduced per million shillings				
Agricultural R&D	21.75	66.31	175.52	48.91	58.39
Education	3.57	21.60	31.38	12.62	12.81
Feeder roads	10.51	53.85	72.82	30.49	33.77
Murram roads	4.08	11.88	14.80	9.77	9.70
Tarmac roads	2.59	13.12	62.92	9.39	9.73
Health	2.60	6.15	5.95	3.46	4.60

Source: S. Fan, X. Zhang, and N. Rao, *Public Expenditure, Growth, and Poverty Reduction in Rural Uganda*, DSG Discussion Paper No. 4 (Washington, DC: IFPRI, 2004).
Note: n.s. indicates statistically insignificant.

1. Agricultural research, education, and rural infrastructure are the three most effective types of public spending for promoting agricultural growth and reducing poverty.
2. Limited evidence from China and Uganda indicates that it is often the low-cost types of infrastructure that may have highest payoffs in terms of growth and poverty reduction per unit of investment. In the case of China, rural road investment not only contributes to rural growth and poverty reduction, but also to urban growth and poverty reduction.
3. Regional analysis conducted for China, India, Thailand, and Vietnam suggests that more investments in many less-developed areas not only offer the largest poverty reduction per unit of spending, but also lead to the highest economic returns. In Africa, however, such regional trends are not as prevalent, with most regions having comparably high returns in terms of poverty reduction regardless of development status. This implies an overall underinvestment of public resources in Africa.
4. Government spending on anti-poverty programs generally has only a small impact in reducing poverty, mainly due to inefficient targeting and misuse of the funds. Although many

governments have realized the seriousness of the problem, it is essential to improve the targeting of funds to the poor, or otherwise use the investments to improve rural education and infrastructure, which promote long-term growth and hence a long-term solution to reducing poverty.

5. Government spending on irrigation played an important role in promoting agricultural growth and reducing poverty in the past, but today this type of spending has smaller marginal poverty and growth returns for many Asian countries. Instead of increasing investment in irrigation, the efficiency of the current public irrigation system should be improved by reforming public institutions and governance.

The case studies also indicate that different spending priorities are needed during different stages of development; "one-size-fits-all" strategies do not work. During the first phase, strategies should focus on reducing widespread poverty through broad-based economic growth that reaches rural areas. In subsequent phases, more direct attention should be focused on lagging sectors and regions, as well as on poverty at the community and household levels, in order to reduce the poverty and income inequalities that arise and persist despite reform.

Most Sub-Saharan African countries are still in the first phase of development. Investments in support of economic growth remain central to reduction of their mass poverty. In these countries, governments have the central responsibility to forge a well-sequenced and coherent growth strategy and determine what public investments are required. Public investment in infrastructure and agriculture are the main areas needing attention. In recent years, some African governments have started to make progress. For instance, Ethiopia and Nigeria recently increased their public investments in agriculture and rural areas.

Countries such as China, India, Vietnam, and Thailand have successfully completed the first phase of poverty reduction and now need to begin to address regional inequities and poverty issues at the household level. China has traditionally favored a sectoral and regional targeting approach (such as employment programs) to deal with rising inequalities but has recently expanded to more household- and community-targeted programs. India, in contrast, has concentrated on targeting specific sections of the population and has recently expanded employment programs, too. India's experience shows that the use of a variety of targeted programs directed to specific sections of the poor can help improve targeting compared with the broader income- or area-based approaches.

For Further Reading: S. Fan, L. Zhang and X. Zhang, "Investment, Reforms, and Poverty in Rural China," *Economic Development and Cultural Change* (Vol. 52, No. 2, 2004); S. Fan, X. Zhang, and N. Rao, *Public Expenditure, Growth, and Poverty Reduction in Rural Uganda*, DSG Discussion Paper No. 4 (Washington, DC: IFPRI, 2004); S. Fan, P. Hazell, and S. Thorat, "Government Spending, Agricultural Growth, and Poverty in Rural India," *American Journal of Agricultural Economics* (Vol. 82, No. 4, 2000); S. Fan, P. Hazell, and T. Haque, "Targeting Public Investments by Agroecological Zone to Achieve Growth and Poverty Alleviation Goals in Rural India," *Food Policy* (Vol. 25, No. 4, 2000); S. Fan and C. Chan-Kang, *Road Development, Economic Growth, and Poverty Reduction in China*, Research Report No. 138 (Washington, DC: IFPRI, 2005).

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SOCIAL INNOVATION AND ENTREPRENEURSHIP

Developing Capacity to Reduce Poverty and Hunger

Suresh Babu and Per Pinstrup-Andersen

Social entrepreneurs can provide the new approaches needed to hasten the process of reducing poverty and hunger. By combining innovative ideas from individuals and investments from public, private, and civil society organizations, such entrepreneurs can guide complex global food systems and rural institutions toward their goals. Often, however, inappropriate and stifling bureaucratic processes, along with insufficient understanding of how food system and rural institutions function, slow the identification and implementation of innovative solutions. As a result, potential social entrepreneurs lack the motivation to take action, and their potential contribution to the global goals of reducing poverty and hunger is lost.

Social innovation—meaning, new strategies, concepts, ideas, and organizations that meet social needs—and social entrepreneurship—a drive for social missions that combine business principles and motivations—are emerging as promising approaches to international development. Recent experiences have shown that introducing entrepreneurial spirit into the development process can improve the effectiveness of intervention programs. World history shows that every society produces its own social entrepreneurs to solve their problems. Yet, until recently, organized efforts to develop and promote the capacity for social innovation and entrepreneurship have been limited. This is in sharp contrast to the private sector, where entrepreneurship has been and continues to be a major force driving development.

Unfortunately, social entrepreneurs are in very short supply in the arena of policymaking. Expanding their number and improving the environments within which they operate effectively would greatly enhance the capacity at local, national, and international levels to address developing-country poverty and hunger problems through planning, policymaking, program design, implementation, and monitoring and evaluation of interventions. It is high time that the public sector—and in particular the social sector—removes the barriers to creative action and provides incentives for social entrepreneurs.

This brief reviews existing paradigms for strengthening capacity for social entrepreneurship and innovation to reduce poverty and hunger. It identifies various approaches for increasing the number of social entrepreneurs at various levels and highlights the challenges developing countries face in building such capacity.

Increasing Capacity for Social Entrepreneurship and Innovation

Social entrepreneurs are needed in adequate numbers in different spheres of development—that is, global, national, and community levels—to enable the effective design and implementation of poverty and hunger reduction programs. Expanding the benefits of social innovation to reduce widespread poverty and hunger will, however, require a plethora of social entrepreneurs who function as change agents by innovating, inspiring, and implementing new ideas at various levels.

At the global level, it is highly unlikely that the Millennium Development Goals (MDGs) related to poverty and hunger will be achieved with "business as usual" approaches. Current approaches to reducing poverty are based on several assumptions: programs designed to address poverty should operate effectively, markets should function and deliver, poor people should have the same opportunities as others in society, and they should have equal access to public and financial services. Social entrepreneurship and innovation are particularly useful when these assumptions break down, as they often do in developing countries. Many are concerned that the MDGs may not be reached through poverty reduction programs led by the public sector alone. Social entrepreneurship and innovation do not replace public-sector interventions, but they can make them more effective and enhance their impact on the ground.

At the national and local levels, several success stories document how social entrepreneurs in different countries have responded to social challenges with innovative solutions. For example, the seemingly simple social innovation of helping poor rural women in Bangladesh to access small-scale, group-based loans through microfinancing continues to be a major poverty reduction strategy in rural Bangladesh. It was the removal of regulatory barriers in the banking sector that allowed individuals to form microfinance groups. In Tanzania's Iringa region, an innovative idea to identify village volunteers and train them to monitor child growth—

as part of an integrated nutrition program—helped to reduce infant mortality and child malnutrition substantially. Although successful, many of these advances are largely isolated, typically developed as local interventions that target a limited geographic area.

While such interventions make a difference in people's lives, their impact may not be sufficiently large to lift millions of poor people out of poverty and hunger. Such endeavors are simply not supported by the necessary capacity to scale up and scale out. Furthermore, most successful social entrepreneurs operate outside the public sector, partly because they need the freedom to innovate and to implement their ideas rapidly. Yet the publicly funded intervention programs also require innovation, change agents, and entrepreneurial approaches to enable a larger impact with fewer resources. The current challenge is to identify cost-effective methods of developing a large number of social innovators and entrepreneurs who can contribute to the process of reducing poverty and hunger.

Three Roles for Social Entrepreneurs

Social entrepreneurs can contribute to reducing poverty and hunger in many ways and at different levels within a country. At the macro level, social entrepreneurs could help formulate and implement policy; at the business level, they could use their business skills to address social issues; and at the community level, they could help solve specific local problems. Three kinds of social entrepreneurs are needed, based on their roles and working environments: policy, program, and business entrepreneurs. The abilities required by each type of entrepreneur vary, although several traits are common to all.

Policy Entrepreneurship

Social entrepreneurs well versed in policy processes are needed to expand successful local programs into large-scale national programs with a wider poverty impact. Bringing about significant changes in policy at national or global levels, however, requires change agents at the highest levels of decisionmaking. At the global level, policy entrepreneurs could influence policymaking by multilateral aid agencies. At the national level, they could guide national systems toward specific strategies, either through innovation or adoption of ideas that have succeeded in other places and contexts. At the local level, while their influence is limited, they could help create a policy environment that enables other types of social entrepreneurs to be effective. Developing an adequate number of policy entrepreneurs in developing countries with the knowledge and expertise needed is essential for solving hunger and poverty problems.

Program Entrepreneurship

Program entrepreneurs are instrumental in designing and implementing innovative programs to reduce poverty and hunger funded by development partners, national governments, and nongovernmental organizations (NGOs). It is essential that program managers and implementers have the entrepreneurial skills to address local problems with global ideas. With improved capacity for identifying innovative solutions, local authorities, elected officials, and leaders could become effective initiators of grassroots change.

Youth and youth leaders are increasingly seen as partners in development. Their active participation in solving development problems could have a profound impact on reducing poverty and hunger. On the one hand, many youth are engaged in community affairs, have a high level of commitment, and are well connected through information and communications technologies. On the other hand, the growing number of educated but unemployed youth in many countries increases the risk of social instability and armed conflict. Given appropriate skills, mentoring, recognition, and support, these individuals could become effective social entrepreneurs, and their engagement and collective action could transform from negative to positive action.

Business Entrepreneurship

Applying the principles of business development to social problems could be another way of solving the challenges of poverty and hunger in developing countries. Social business entrepreneurs use business principles to implement social innovations. At least three types of such entrepreneurs can be identified. The first category encompasses business leaders who are successful in their own field and bring their business acumen to bear in solving social problems—for example, a commercially successful physician who organizes fellow doctors to provide health services to the rural poor at no cost, or minimal cost. The second group views poor people as a business opportunity. Instead of seeing poor people as victims or a burden to society, these entrepreneurs recognize them as potential consumers of their products and services. Recent attempts by corporations to devise strategies that combine business objectives with social concerns are good examples of social innovation within the business sector.

The third group is a subset of poor people, who—although they all fall below the poverty line—still have different levels of income, resource ownership, social capital, and entrepreneurship. Some have become business-oriented social entrepreneurs with little financial help or training. Microfinance programs enable poor and otherwise vulnerable people to organize themselves and develop businesses, thus addressing their own social challenges in innovative ways. For example, the private schools that have emerged in the slums of India, Kenya, and Nigeria in response to poorly run government schools indicate that poor people can address their own social needs. Moreover, futures markets for goods and services are to be found

among the poor. Building capacity for social entrepreneurship among poor people themselves and connecting them with financial markets could transform poor societies.

Developing Social Entrepreneurship through Education

To achieve the MDGs, adequate social innovative capacity is needed at various levels in public, private, and NGO sectors. Existing systems of higher education must gear up to be able to develop the capacity for problem solving. While social entrepreneurship is a relatively new area for capacity development, considerable progress has been made in several spheres.

Universitywide Approaches

Increasingly, many developed-country universities and selected institutions of higher learning are adopting an entrepreneurship approach to education. Education in entrepreneurship supports students in becoming leaders, innovators, and creative problem solvers because it blends real-world experience with conceptual learning in the classroom. It seeks to develop entrepreneurial characteristics in students and to simulate reality by bringing actual policy, program, and business cases into the classroom and by employing a participatory, hands-on approach.

From the perspective of reducing poverty and hunger, universities can help students gain a better understanding of the complexities of the global food system and how government policy and actions by the private and civil sectors can influence it. Courses are being developed to provide students with a social entrepreneurship approach to the analysis, design, and implementation of actions aimed at improving the global food system. Such an approach could enhance undergraduate and graduate training in policy analysis, with the overall purpose of reducing poverty and hunger in developing countries and promoting sustainable development (see Box 1).

While the trend toward universitywide programs in entrepreneurship education is increasing in developed countries, programs specifically addressing international development issues are still few in developing countries, where the need to build such programs and to make higher education relevant to meeting social needs and challenges is enormous.

Business School Approaches

In recent years, business schools both in developed and developing countries have approached the problems of poverty and hunger from the perspective of large-scale entrepreneurship for and among poor people. This approach to business education goes beyond the concepts of philanthropy and corporate social responsibility to business management teaching that applies the energy, resources, and innovations of good business practices to solving the problems of poor people. The approach emphasizes that poor people can be active, informed, and involved customers, and poverty can be reduced as a result by co-creating a market around the needs of the poor. Students are encouraged to develop case studies of social entrepreneurship that address poverty, health, and other social challenges.

Some business schools offer courses on social entrepreneurship (see, for example, social entrepreneurship programs at Duke, Michigan, Oxford, and Stanford universities). Programs are designed to enable students to integrate strategies for social change into their business and entrepreneurial careers. They help students to recognize and address opportunities to create social values. Educational programs at the postgraduate level offer specialization in social entrepreneurship—programs that specifically develop the skills, knowledge, and perspectives necessary to have social impact. Such focused programs are designed to develop the capacity of students to become social entrepreneurs, program managers, and executives in cause-based organizations or volunteers in their communities.

Box 1—Teaching Food Policy Analysis through Participatory Social Entrepreneurship

An example of this new educational style is a recently created program at Cornell University that teaches a social entrepreneurship approach to solving issues of poverty and hunger. The Cornell program attempts to instill in students a social entrepreneurial mind-set with which to analyze and design policy. The course uses case studies from real life, developed through collaborative arrangements with several institutions and individuals, to emphasize the characteristics of social entrepreneurship.

During the course, students are presented with a set of guidelines with which to analyze the case studies in question. The social entrepreneurs (in this case, the students) are urged to make policy recommendations, aiming to change the underlying causes of problems, rather than the symptoms. They are encouraged to make innovative use of new developments in modern science and technology, including molecular biology and digital technology, as well as new knowledge in the social sciences and the opportunities presented by globalization.

The program, integrating social entrepreneurial thinking into analysis of the global food system, has also been applied in courses at the University of Copenhagen in Denmark and Wageningen University in the Netherlands. It will be made available to other interested universities in developed and developing countries by the end of 2007.

Developing Local Leadership

The success of poverty reduction programs depends on the skills and capacity for innovation of the

program managers and local leaders who deliver them. As a trend toward decentralization emerges in many developing countries, the need for strengthening the capacity of local leaders becomes paramount. Approaches for developing the skills needed to address local problems for a new generation of leaders should be expanded. One example of a program that focuses on a specific sector is the Leadership for Environment and Development (LEAD) Program for environmental leadership, which has developed a global network of more than 1,600 individuals from various sectors and professional backgrounds with a strong commitment to sustainable development causes.

NGOs also have a need for a cadre of social entrepreneurs to bring innovation to bear on local problems. Multiplying the success of one NGO or local leader requires an organized way of transferring contextual skills and knowledge to others who are implementing similar programs. For example, the Panchayat Academy in India, a capacity development program for village leaders, has been successful in improving the social entrepreneurial skills of a large number of local leaders. Similarly, the Songhai Center in Benin is training African youth to become social entrepreneurs and change agents for African agriculture.

New approaches to developing social entrepreneurs include young people as development partners. Recognizing the ability of young people to see old problems in new ways, these approaches target youth as potential social innovators. Their energy and idealism, propelled by their connectedness through information technologies, can be effective in addressing the poverty and hunger challenges of their communities. The recent launching of the Youth Institutes by the International Youth Foundation in several developing countries aims to develop youth as social entrepreneurs through leadership training and mentorship.

Conclusion

In sum, achieving the poverty and hunger reduction goals of the MDGs and beyond requires new approaches and skills, which social innovation and entrepreneurship may well be able to provide. Social entrepreneurs and their innovations for reducing poverty should not replace large-scale public-sector poverty intervention programs but rather enhance them with improved effectiveness.

The emerging models of capacity development for social innovation and entrepreneurship need to be scaled up and mainstreamed. Social entrepreneurs should not be limited to the elite and highly educated who have the influence and resources to implement their ideas. Rural volunteers and youth leaders could be trained as social entrepreneurs. Publicly funded development interventions could benefit from implementers and managers who have learned social skills. Professionals with such skills can improve the social impact of business enterprises. Considering the crucial need for social entrepreneurs at policy, program, and business levels, skills related to social innovation and entrepreneurship should be mainstreamed into education programs. Without new approaches and skills in regions where poverty and hunger are chronic, strategies and programs will continue to fall short of their intended goals.

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LAND ISSUES AND POVERTY REDUCTION

Requirements for Lasting Peace in Sudan and Afghanistan

Gunnar M. Sørbø and Arne Strand

During the last decade, an increasing share of foreign aid has been provided to countries coming out of civil war or experiencing severe conflict. Most of these countries—like the Republic of Congo, Sudan, Somalia, Sierra Leone, and Liberia—suffer from a combination of conflict, a state in crisis, underdevelopment, and poverty. Under most circumstances, poverty is greatly exacerbated by conflict, but it is also one of a number of factors that may contribute to violent conflict. Addressing what Frances Stewart has called "horizontal inequalities" is, therefore, likely to play a role in preventing the shift from grievance to violence, as well as in building and sustaining peace in postwar situations. In several countries that have suffered from protracted conflict, however, an approach focused on poverty has been slow to emerge. To a large extent, peace-building missions have become state-building missions, first, because "fragile states" are seen as a risk both for their society and for international security and, second, because it is broadly assumed that one vital condition for sustainable peace is that the state apparatus has the capacity to exercise core functions of statehood in an efficient, nonviolent, and legitimate way. In the process, however, the extent to which the poverty and marginalization of large rural populations have spurred recent wars has been underestimated. As a consequence, donors and policymakers risk rebuilding the causes of war.

This brief uses examples from Sudan and Afghanistan to highlight the role that land issues have played both in causing poverty and in driving and sustaining protracted conflict. In both countries, a number of interconnected conflicts have global reach, as well as occurring at regional, national, and local levels. For example, conflicts over water and grazing rights in Darfur and elsewhere in Sudan have become entwined with political rivalries on a larger scale, even including neighboring countries. In a similar fashion, efforts by foreign troops to track down remnants of Al-Qaida and Taliban forces in Afghanistan have become entangled with localized conflicts. A great challenge, therefore, is to identify which particular types of interventions affect the different levels and dimensions of current conflicts.

This is a tall order, but it seems safe to conclude that the international community has not yet responded adequately to the challenge. In Afghanistan, postwar reconstruction efforts have been focused on establishing an effective central state that operates under the rule of law and in accordance with principles of transparency and accountability. While the U.S.–led coalition has invested heavily in military efforts, aid strategies have created a state that depends on foreign funds and military forces for its survival. In the process, the role that rural land issues have played in driving and sustaining internal conflict has been insufficiently considered. In Sudan, the international community has been drawn into continuous crisis management because of Darfur, as well as the slow and very difficult implementation of the Comprehensive Peace Agreement (CPA) signed in 2005 between the Government of Sudan and the Sudan People's Liberation Movement. As one consequence, there is less concern with the patterns of development that have been and are being pursued in Sudan, and the way in which they may promote or reduce poverty. In both countries, land use is a key grievance that fuels a number of local and regional conflicts.

Sudan

Civil war has been fought in Sudan for most of the period since independence in 1956, with only a brief spell of peace from 1972 to 1983. After the signing of the CPA, two other peace agreements were concluded in 2006: the Darfur Peace Agreement and the Eastern Sudan Peace Agreement. The international community has provided substantial funds for the implementation of the CPA; however, due to the continued crisis in Darfur and continued unrest and lack of basic services in the south, the bulk of donor aid to Sudan has so far been directed to humanitarian assistance. Successive Khartoum governments have argued, as they do now for Darfur, that violence is caused by local-level, ethnic conflicts mainly arising from pressure on a diminishing resource base. However, the civil strife that has spread throughout many parts of Sudan since the 1980s should be seen as part of a pattern of violence in which the Sudanese state—as a vehicle for special interest groups—has played a major role.

Historically, state resources have been concentrated in the central Nile areas in the north, reflecting the longstanding political dominance of groups from this area. A process of uneven development and economic dislocation began during the colonial period and became massive in the 1970s. The shift from subsistence agriculture to export-oriented, mechanized agriculture had its greatest impact in the so-called Transition Zone between north and south—along southern Kordofan, southern Darfur, Blue Nile, and the Sudan–Ethiopian border region—resulting in the dispossession of smallholder farmers from their customary rights to land, the erosion of the land-use rights of pastoralists, and the creation of a large force of agricultural wage laborers, whose numbers were increased through displacement by drought and war in the 1980s and 1990s.

This process generated important benefits for a key political constituency, mainly in Khartoum. It also created serious structural problems in the agricultural sector. The rate of increase in production has been declining and many areas have high food insecurity. A major grievance has been land use. The area of land under mechanized farming increased from around 2 million feddans at the beginning of the 1970s to some 14 million feddans by 2003 (1 feddan equals 1.038 acres). A vital factor here was the passage of laws undermining the control that local authorities and local people were able to exert over land. This process was accelerated by the National Islamic Front regime after it came to power in 1989. Policies have also been divisive at local and regional levels, creating growing regional subcultures of ethnic violence.

From the 1970s onward, the agricultural growth model adopted in Sudan gave little or no consideration to those who were displaced or otherwise affected, whether in Darfur, among the Nuba in southern Kordofan, or among the Beja in eastern Sudan. It is no coincidence, therefore, that aside from Khartoum—which saw major violence following the death of John Garang and occasionally suffers from confrontations between groups—most of the violence has taken place in rural (pastoral and agropastoral) areas. Populations from these areas also constitute the main source of street children, poor female-headed households, displaced persons, and refugees. They come from three broad regions: the areas struck by drought and famine during the 1970s and 1980s, the areas that saw an expansion of mechanized farming during the same period, and the former "closed districts" of the colonial period, such as south Sudan.

Changes in rights to land and its use represent fundamental transformations in Sudanese society. Their effects will not be removed by the signing of peace accords. In addition to various obstacles to improved productivity and access to markets, land issues have far-reaching consequences for rural poverty and development, as well as for local, regional, and national conflicts. Thus, in Darfur the inability of land ownership and land management systems to cope with the demand for agricultural land and pasture has been a key element of the often deadly conflicts, also between different Arab groups. Illegal land occupation has also been an integral part of the crisis. It is also a critical issue in eastern Sudan, where the loss of traditionally owned land to mechanized agricultural schemes has undermined the sustainability of the pastoralist livelihoods of the predominant group in the region, the Beja, and pushed many Beja to settle in urban slums, particularly in Port Sudan. In the south, land rights have become increasingly disputed as refugees and internationally displaced persons start returning, and oil exploration continues in new areas.

While Sudan is becoming wealthier because of oil exports, rural poverty is accentuated because spending on social services has been among the lowest in the world. The poor track record on development spending is paralleled by a very limited capacity at state and local levels to plan and manage projects. As a result, poverty and human deprivation in all probability worsened over the past decade.

Afghanistan

Afghanistan shares Sudan's long history of war, displacement, and drought, with continued armed conflict since 1978. Several factors affect the continuation of conflict despite the ousting of the Taliban regime in 2001. Often overlooked is the importance of conflict arising from land issues and how these tie in with the postwar structure of political economy.

According to the latest report from the United Nations Office on Drugs and Crime (2007), Afghanistan currently produces 90 percent of the world's heroin. Part of the explanation for both the increasing conflict level and the sharp increase in poppy production since 2002 relates to land issues. Most Afghans depend at least in part on agriculture for their livelihood, but a significant proportion are either landless or are farming plots that are too small to generate adequate income. A high degree of uncertainty exists over landownership, particularly in sharecropping and the closely related practice of land mortgaging; there is no regime to manage land rights and disputes beyond local councils dominated by local power holders; and the policy and legal framework to regulate the use and transfer of substantial state landholdings is also highly inadequate.

Previous governments have tried to introduce land reform, including a king (in the 1920s), a president (in the early 1970s), and a communist government (in the late 1970s). The most radical attempt was by the government of the Soviet-backed People's Democratic Party of Afghanistan

following the coup d'état in 1978. However, such reforms led to armed revolt with strong backing from the conservative and traditionalist religious networks and landowners. Following the Soviet invasion in 1979, armed resistance was primarily mounted in rural areas, with mujahideen forces operating within the population and from their bases in Pakistan and Iran. A combination of targeted destruction and lack of maintenance following the outflow of 5 million Afghans to neighboring countries destroyed much of the underground irrigation systems—the *kareezes*. Drug production started to pick up as it required less water and was not discouraged by the international backers, both Western and Islamic, who supported the resistance with funding and arms. The commanders emerging in the resistance parties were frequently religious leaders or landowners able to command people through religious or financial bonds. When these parties assumed power in Kabul in 1992, they were neither willing nor able to address land issues. Rather, they used their military power to increase their own holdings.

The Taliban movement that emerged in southern Afghanistan in 1994 restored the rights of land and property confiscated by commanders, but the Taliban did not establish a functional government and administration, nor were they willing to address land issues. Hoping for international recognition and using religious arguments, they banned the production and processing of drugs, knowing that this would reduce the income of many farmers and seasonal workers.

Following the military defeat of the Taliban in late 2001, rapid change was on the horizon. With an elected president and parliament, national plans and international funding to promote development, and the North Atlantic Treaty Organisation to provide military security, Afghans hoped that they had seen the end of both poverty and violence. Expectations were high, as the Afghans were to be rewarded for assisting in the "war on terror." However, as part of the settlement, the former commanders returned and regained influence, lands, and properties. The Taliban, primarily drawn from the poorest rural areas in the south, were excluded from peace negotiations and the new government and opted to continue their military struggle.

Leaving security aside, land issues remain largely unaddressed in Afghanistan, and very limited efforts have been made to improve and increase agricultural production and ensure food security. According to a 2007 report by the Food and Agriculture Organization of the United Nations, 6.5 million out of an estimated population of 27 million face food insecurity. The priority has rather been to strengthen the central administration in Kabul and initiate projects with high visibility. "The outcome in the agricultural sector is not easily and quickly visible and measurable to the donors," was the explanation provided by a senior adviser to the Minister of Agriculture.

With 4.8 million Afghans returning from Iran and Pakistan since 2002, pressure on land and unemployment has sharply increased. Problems have been exacerbated by corruption, ethnic tension, and arbitrary use of power by local strongmen. Large landholdings have been transferred to a few well-connected persons. Moreover, the present pattern of landownership, powerful commanders/landowners, and high availability of unemployed young men provide ideal conditions for drug production and warfare. When a poor sharecropper knows he has to pay as much as 50 percent of his yield to the landowner, he will select the produce that provides the highest outcome—if given a choice. When the government and the international forces threaten to eradicate the harvest, many see no option but to join the insurgency to protect their livelihood.

Policy Implications

An approach that focuses on poverty and gives due consideration to land issues and livelihood support has been slow to emerge in the postwar reconstruction of both Sudan and Afghanistan. In both countries, the lack of economic development in the rural areas negatively affects the perception that the population has of the international community's intervention.

In Afghanistan, it is difficult to envisage any possibilities for building sustained peace until landownership, agricultural production, and rural employment are properly addressed. Years of misdirected policy have entrenched deeply inequitable landownership relations among tribes, between agricultural and pastoral systems, and among feudally arranged classes of society. These challenges have not yet been adequately recognized among donors in Kabul despite the existence of rural programs funded by the World Bank, U.S. Agency for International Development, and others. Growing insecurity, massive corruption, and the expanding drug economy have diverted the attention of both donors and the Afghan government and reinforced the mantras of the importance of state building and "good governance" as priority areas for development.

In Sudan, alienation of land as part of processes of marginalization and increasing poverty has been a key determinant of conflict, but there is an absence of an overall framework to deal with the problems with the necessary urgency. True, funds have been allocated for a number of programs targeting rural populations in the areas of health and education, mainly in southern Sudan. Agricultural development has received little attention so far, and a striking feature of current aid to Sudan is the lack of priorities related to an understanding and critique of the patterns of development that have been and are

being pursued. Given that the influx of revenues from oil exports may consolidate a "rentier" state that renders it less accountable to its population, the prospects for reducing poverty and inequities—and, for that matter, promoting democratic forms of development—may not be encouraging.

Despite similarities, Sudan and Afghanistan are of course different, and so it is important to look at context and particular settings before identifying strategies. The conclusions offered here, therefore, must be of a more general kind, emphasizing the following issues.

First, on a general level, a blend of approaches is essential in order to promote sustainable peace building. On the one hand, it is important to build state capacities, and a strong, accountable state is best when it comes to alleviating persistent conflict and the chronic poverty it generates, protecting entitlements, and providing health care and education. On the other hand, peace will not be achieved unless the grievances of the marginalized and the benefits accruing from violence are addressed. Recent research clearly indicates that low levels of development adversely affect the chances of successful peace building, whereas patterns of development that meet the needs of ordinary people may weaken the position of warlords, extremist politicians, and leaders who offer to meet these needs through more violent means.

Second, land rights management is a cornerstone of social management and poverty reduction in agrarian states like Sudan and Afghanistan. While both countries share the need for an overall framework for land management, it must also be recognized that the problems differ, and that the adoption of localized and community-based approaches is essential. As Liz Wiley suggests in *Land Rights in Crisis: Restoring Tenure Security in Afghanistan*, addressing problems only through new law or new policy cannot have much success in the often lawless conditions that operate beyond the reach of the current administration.

Finally, most international investment in peace building has happened at the state level. Despite political and other constraints, there is both scope and need for local-level peace building and reconciliation work and for rebuilding state–society relations through bottom-up processes. Aid strategies need to be designed to support such processes. In Sudan and Afghanistan, this would include addressing land issues that may underpin the recovery process and also provide opportunities to bring about changes in governance through development of systems that are fairer to the poorest and most marginalized communities. It also implies that policymakers must pay more attention to low-intensity and local conflicts. These struggles are often over access to agricultural and pastoral resources and can establish pockets of discontent, reduce food production, flare up into greater conflicts, or be linked to other, larger scale conflicts.

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THE DYNAMICS OF POVERTY

Why Don't "The Poor" Act Collectively?

Anirudh Krishna

Where the poor form a majority or near-majority, why don't they vote themselves to power in democracies? In Madagascar, Mozambique, Mali, Guatemala, Honduras, Kenya, and Bangladesh, where the poor constitute 71, 70, 64, 56, 53, 52, and 50 percent of the population, respectively, why don't poor groups emerge and take power democratically? Even in countries where the poor form a smaller but still sizable part of the population—such as India (29 percent), Ecuador (35 percent), and the Philippines (37 percent)—why are the politics of poverty not more emphatic, potent, and visible? Traditionally these questions have been answered by referring to factors that create divisions among the poor, such as caste, religion, or tribe; but a more fundamental basis of division also exists, emanating from the separate relationships that different poor people have with poverty itself.

Not everyone who is poor was born into poverty. New research shows that large numbers of poor people have fallen into poverty within their lifetimes. Their relationship with poverty is qualitatively different from that of people who have been chronically poor. Different trajectories into and out of poverty define different relationships that produce different identities and interests among subgroups of poor people. Apart from those who have newly fallen into poverty and those who are persistently poor, a further subgroup consists of upwardly mobile poor people on the cusp of escaping poverty. Members of each of these subgroups have quite different interests, and their demands from the state are correspondingly disparate. These divisions make it difficult for poor people to unite and make common cause. Rather than considering "the poor" as a homogeneous group requiring some common policy responses, it is preferable to take account of subgroup-specific requirements. Policymakers intending to deal more effectively with poverty will do well to mount a more comprehensive response. Unless the creation of new poverty is first stemmed, efforts to move people out of poverty will ultimately be ineffective. Mounting a more comprehensive response—addressing escape and descent concurrently—will also help empower poor people socially and politically.

Poverty Creation in the Midst of Economic Growth

Poverty is being constantly refreshed, with two concurrent streams flowing in parallel. Even as some people escape poverty, others are simultaneously falling into poverty. The numbers on both sides are large, though they vary across contexts. Everywhere, however, the rate of falling into poverty is worryingly high (Box 1). Large movements in both directions constantly reconfigure the composition of "the poor." Until relatively recently, however, these movements were hidden from view. Conventionally, poverty has been measured as a stock, considering the numbers of poor people at a particular moment in time. Such stocks can be compared across two points in time and the net change calculated. Such analysis does not reveal, however, exactly how this change was derived: how many people fell into poverty within the specified time frame, and how many others concurrently escaped poverty?

It is only quite recently, mostly within the past 5 to 10 years, that scholars working independently in different parts of the world have examined poverty in a dynamic context. These studies collectively help construct a new and more complete view of how poverty is simultaneously created and reduced. Regardless of the country or period studied or the definitions and methodology used, the results are the same: descents and escapes occur concurrently. A study of more than 1,000 households in KwaZulu-Natal, South Africa, shows that while 10 percent of households moved upward out of poverty over the five-year period 1993–98, another 25 percent of households simultaneously fell into poverty. Ironically, and quite counter-intuitively, poverty increased overall even as many people moved out of poverty. Similarly, in Bangladesh over the 13-year period 1987–2000, 26 percent of households studied escaped poverty, but another 18 percent of households concurrently fell into poverty. Movements both out of and into poverty are large in every instance.

These movements into and out of poverty are not marginal or temporary events. Thus, people do not fall into poverty only to escape in a later period, nor indeed are these results confined to borderline households fluctuating around the poverty line. For instance, in Uganda, only one-third of households that fell into poverty during the 15-year period 1979–

94, were able to escape from poverty over the next 10 years. The remaining two-thirds were still poor when investigations were conducted in 2004. Meanwhile, an additional 11 percent of households had fallen into poverty, further adding to the ranks of the poor in these communities.

Box 1—The Complexity Underlying Net Poverty Changes

The realization of the complexity underlying net poverty changes emerged through the process of conducting studies of household poverty dynamics over the past six years in countries of Africa, Asia, and North and South America using the Stages-of-Progress methodology, which enables measurement and comparison to be made reliably and reasonably quickly. More importantly, this methodology enabled the identification of the factors associated with movements out of and into poverty. Research teams interviewed more than 25,000 people, identifying who had escaped poverty and why, and who had fallen into poverty and why. These teams met hundreds of very poor people who had not been poor 5, 10, or 20 years earlier. Their accounts of descents into poverty were awful to hear, but they provided an understanding of the incompleteness and ultimate futility of most current efforts to reduce poverty.

The data reproduced below show, for example, that even as 19 percent of people came out of poverty in the 20 western Kenyan villages studied, another 18 percent fell into poverty, resulting in a net reduction of only 1 percent. Such paltry gains have become frustratingly familiar from newspaper accounts, the inference being that nothing much seems to be happening. In truth, a great deal is happening (Table 1).

Each row in Table 1 relates to a separate study, and each row illustrates the fundamentally dynamic nature of poverty. Take Andhra Pradesh, for example: 14 percent of people in villages studied there came out of poverty over the 25-year period 1979–2004, but another 12 percent fell into poverty over that period. Overall, only a 2 percent reduction in poverty resulted, but a total of 26 percent of all households experienced a change in their poverty status. Similarly large movements have been experienced elsewhere. Net change in poverty was only 9 percent in the studied Uganda villages, but 39 percent of people fell into or came out of poverty.

Table 1—Households Escaping from and Descending into Poverty over 25 years

Region/Country/ Communities/Households	Share of Total (%)	
	Escaped Poverty	Became Poor
Rajasthan, India: 35 communities, 6,376 households	11	8
Gujarat, India: 36 communities, 5,817 households	9	6
Andhra Pradesh, India: 36 communities, 5,536 households	14	12
Western Kenya: 20 communities, 1,706 households	18	19
Central and Western Uganda: 36 communities, 2,631 households	24	15
Cajamarca and Puno, Peru: 40 communities, 3,817 households	17	8
North Carolina, United States: 13 communities, 312 households[a]	23	12

Source: Compiled by author; see www.pubpol.duke.edu/krishna for more information.

Movement reconstitutes the profile of people in poverty. Who is poor at the end of a period is considerably different from who was poor at the beginning. "The poor" is a swiftly changing and diverse collection of people, with subgroups that are traveling in opposite directions. For this reason alone, it is difficult for all who happen to be poor at some moment in time to consider themselves part of some collective-action group; but there is also another reason related to the different factors that are associated, respectively, with movements into and out of poverty. Escaping poverty and falling into poverty are not symmetric in terms of their underlying causes. As a result, two separate sets of policies are required to address these two issues. Those countries that have adopted both sets of policies are also the ones in which poverty has been reduced to single digits. Other countries have been less successful.

Asymmetric Reasons for Escape and Descent

Ill health and high health care costs are associated with the majority of descents studied. In low-income regions, such as rural Rajasthan or urban Nairobi, as much as in high-income areas, such as North Carolina in the United States, the majority of households that became poor faced one or more serious illnesses (or injuries) in their family. Other people, who were poor constantly, also faced one or more episodes of debilitating ill health. Ill health imposes a double whammy—when high treatment costs go together with loss of earning power—and it has the biggest influence on becoming poor in all regions underlying this study, including Gujarat, a state with economic growth rates of 9 percent and higher. Health is an equally critical factor of descent in areas of Kenya, Uganda, and Peru. The positive influences that families experience when new earning opportunities come their way become nullified when health care expenses take a bigger bite out of the household budget. Other factors also matter, but nowhere do these factors matter as much as or more than ill health (Table 2). Researchers comparing trends across multiple, diverse countries have concluded similarly: a "medical poverty trap" is driving thousands into poverty. Thousands of families are living one illness away from poverty, and thousands have become deeply indebted on account of health-related costs.

Escaping poverty is responsive to an entirely *different* set of reasons (Table 3). Developing a new income source is most importantly associated with successful escapes. Jobs in the government and private sectors are important for this purpose, but they are not always quantitatively the most important reason for escape. Diversification within agriculture has been more important in several regions, and new sources of income from the urban informal sector constituted the primary reason for escape in some other regions. About three-quarters of all escapes examined through the research underlying this brief were associated with income diversification through informal sector occupations and agriculture.

Assistance in the form of education, transportation and communication links, agricultural infrastructure, irrigation, and regular information about available opportunities are regarded by the people involved as important for facilitating their escapes out of poverty. On the other hand, the subgroup of the newly poor, having faced different

experiences, prefers to have very different types of policy supports—most notably, better health care. Consequently, their demands from the state are quite different from those of the upwardly mobile subgroup of poor people. One study conducted in early 2004 in 36 villages of Andhra Pradesh, India, shows how putatively similar demands of "the poor" diverge so significantly across different subgroups. All households in these villages were classified within four mutually exclusive subgroups: those who were poor seven years ago and also poor in 2004 (the persistently poor); those who were poor seven years ago but had since escaped from poverty (the formerly poor); those who were not poor seven years ago but had since fallen into poverty (the newly poor); and those who were not poor at either point in time (not poor). Hence, apart from the not poor subgroup, members of the other subgroupings could be included, at one time or another, within the omnibus category of "the poor." More than 1,000 adult residents were selected for interview using random sampling. A list of major demands had been constructed and pilot-tested earlier. Respondents were asked to rank these demands in order of priority.

People belonging to the different subgroups are not very different in terms of gender, age, caste, religion, or education. But demands from the state vary considerably across these subgroups. Wage labor is the most important demand of the persistently poor. As many as 46 percent of respondents in this subgroup rated this demand among their top-three priorities, but only 8 percent of the newly poor and only 5 percent of the formerly poor considered this demand among their top-three priorities. Better health care services constituted the top demand of respondents from the newly poor subgroup, as could be expected, given that ill-health was the most important reason associated with their impoverishment. The largest group of newly poor respondents, 34 percent, regarded health care services as a critical demand from the state. However, only 8 percent of persistently poor respondents and only 7 percent of formerly poor respondents considered health care their key demand from the state.

Housing support was another key demand by newly poor respondents, but relatively few respondents from the other two subgroups—less than 10 percent in all—considered housing support among their top-three demands from the state. Members of the third subgroup, the formerly poor, have still different demands. Irrigation, high schools, and jobs are their most important demands. These were the means that helped take members of this subgroup out of poverty in the past, and these were their key demands in the present as well. These highest-priority demands for the formerly poor subgroup ranked quite low, however, for members of the other two subgroups. Hence, because they face different opportunities and have experienced different threats, different subgroups of the poor have quite different demands from the state, making it even more difficult to organize poor people for collective action.

Conclusion

A sluggish pace of net poverty reduction does not occur because there is no movement out of poverty. It is a result of two large and frequently offsetting trends: large numbers of people are falling *into* poverty, even as large numbers make their escape. Until poverty *prevention* is more effectively targeted, poverty reduction will, at best, be a transient gain. These aspects of poverty's fundamentally dynamic nature have come to be understood only quite recently as a critical mass of studies has emerged to track households and individuals over time and examine movements in and out of poverty. As a result, it is now known that many poor people—the majority in some cases—were not born poor, nor have they always been poor. Many have become poor within their lifetimes. On the other hand, many others who were poor in the past have risen out of this state in recent times, and yet others are on the cusp of escaping poverty.

Disaggregating the poor into these constituent subgroups serves a number of important functions. First, it facilitates a better understanding of the sources of poverty, in particular allowing us to consider how poverty is freshly created and how such new creation can be controlled more effectively. Such a disaggregated view aids in the design of more cost-effective policies. It may prove less expensive to increase protective measures that prevent the creation of poverty rather than to invest in poverty relief only after people have fallen into poverty. How much, for instance, does a government spend on housing and other welfare assistance than could have been saved earlier in the process through better medical coverage? Second, considering different subgroups provides a more nuanced and ultimately more useful means for analyzing the politics of the poor. It shows that requirements of the state depend *not* so much on where households lie on the income scale at any given moment but on which direction they are moving. Two households with the same level of income or wealth cannot be assumed to have similar interests; if one has fallen into poverty while the other is persistently poor, their interests will more likely diverge than be similar.

It is useful for all of these reasons to examine poverty not as it is often visualized—that is, a somewhat homogeneous mass—but as it really is: an inconstant, internally differentiated, and fluid collection of individuals who are moving in different directions at the same point of time. "The poor" is merely a figure of speech. Those to whom it refers have different identities and interests, and distinct trajectories vis-à-vis poverty. Policymakers will do well to address separately the disparate requirements of different subgroups. Assisting escapes from poverty has always been and should remain an important pillar of policy, but assistance is

required equally urgently to prevent descents into poverty. Efforts to move more people out of poverty—through job creation in the formal and informal sectors, irrigation, education, and the like—will need to be accompanied by parallel efforts to prevent or at least slow down descents into poverty. Waiting until someone arrives into poverty should hardly be the sole time to provide assistance. Acting preemptively is not only better; it may be the only way to overcome poverty comprehensively. Dealing more successfully with health care will be of primary importance in this regard.

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Table 2—Principal Reasons for Descent into Poverty

Reasons	Rajasthan, India	Gujarat, India	Western Kenya	Andhra Pradesh, India	Central and Western Uganda	Puno and Cajamarca, Peru
	Share of Descending Households (%)					
Poor health and health-related expenses	60	88	74	74	71	67
Marriage/dowry/new household-related expenses	31	68		69	18	29
Funeral-related expenses	34	49	64	28	15	11
High-interest private debt	72	52		60		
Drought/irrigation failure/crop disease	18			44	19	11
Unproductive land/land exhaustion			38		8	
Number of observations	364	189	172	335	202	252

Source: Compiled by author; see www.pubpol.duke.edu/krishna for individual research papers and results.
Note: These percentages sum to more than 100 because more than one reason was involved in most cases.

Table 3—Principal Reasons for Escaping Poverty

Reasons	Rajasthan, India	Gujarat, India	Western Kenya	Andhra Pradesh, India	Central and Western Uganda	Puno and Cajamarca, Peru
	Share of Households Escaping Poverty (%)					
Diversification of income	70	35	78	51	54	69
Private-sector employment	7	32	61	7	9	19
Public-sector employment	11	39	13	11	6	10
Government/nongovernmental organization assistance	8	6		7		4
Irrigation	27	29		25		
Number of observations	499	285	172	348	398	324

Source: Compiled by author; see www.pubpol.duke.edu/krishna for individual research papers and results.
Note: These percentages sum to more than 100 because more than one reason was involved in most cases.

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IMPROVING GOVERNANCE TO ERADICATE HUNGER AND POVERTY

Regina Birner

Why has eradicating hunger and poverty proved difficult despite its being a declared goal of the international development community for more than half a century? Why has the number of hungry people increased in recent years? Why is poverty particularly persistent in Sub-Saharan Africa? Why do economically successful developing countries in Asia and Latin America have regions lagging in eradicating poverty? Over time, the answers to these questions—the basis of development strategies—have changed. With the emergence of a more comprehensive understanding of the challenge of development, various constraints have been identified: adverse ecological conditions, inadequate technology, lack of capital and education, cultural factors, and institutional failures. In analyzing the challenges of eradicating hunger and poverty, governance has attracted particular attention in the past decade. As Kofi Annan, the then secretary-general of the United Nations, told world leaders in 1998: "Good governance is perhaps the single most important factor in eradicating poverty and promoting development."

Governance is the exercise of economic, political, and administrative authority to manage a country's affairs at all levels. Different definitions of good governance have been proposed by development organizations. The definition offered by the United Nations Development Programme highlights participation, accountability, transparency, consensus, sustainability, the rule of law, and the inclusion of the poorest and most vulnerable people in making decisions about allocating development resources. A widely used set of aggregate data from a broad range of sources compiled by the World Bank Institute measures the following dimensions of good governance: political stability and absence of violence, the rule of law, voice and accountability, regulatory quality, government effectiveness and control of corruption, and environmental governance. As is explained below, each of these dimensions of governance is important for eradicating hunger and poverty. Overall progress in improving governance, as measured by these dimensions, has been slow in the past decade. This is alarming because the poorest and most food-insecure people live in countries with weak governance. However, encouraging trends are evident in some countries—including some African countries—that are making considerable progress in improving governance.

Relations between Governance and Poverty and Food Security

The dimensions of governance affect hunger and poverty in numerous ways:

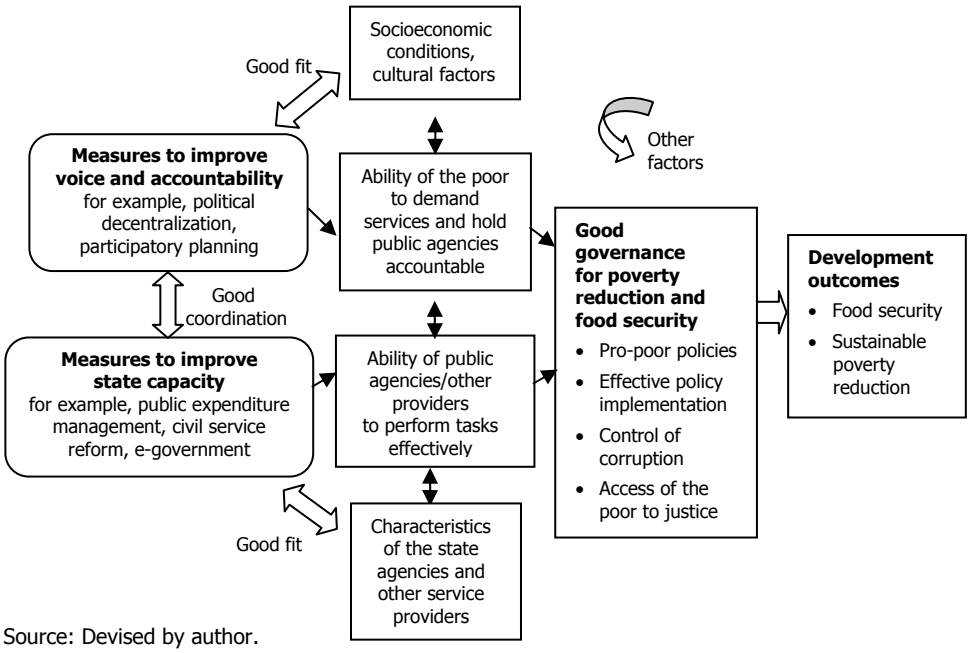
- *Political stability and the absence of violence*. A stable environment is a fundamental precondition for food security and development. A study of Uganda shows that a threshold of security exists below which public investments in infrastructure and education have little impact on development.
- *The rule of law*. Poor and disadvantaged groups, especially the rural poor and women, often lack access to justice. The transaction costs of accessing the formal juridical systems are typically high, and the system is often captured by elites who have few incentives to serve disadvantaged groups. Poor people thus have few prospects to defend their land or labor rights or to take action against violence, which contributes to inequalities.
- *Voice and accountability.* The extent to which a country's citizens can participate in selecting their government is a measure of the people's voice and the public sector's accountability, as is freedom of expression, association, and the media. The relations between this dimension of governance and development outcomes are complex. Famines are less likely to occur in functioning democracies with a free press. Even in democratic systems, however, poor people often struggle to make their voice heard. They need to form organizations and compete in political processes, which is particularly challenging for the rural poor.
- *Regulatory quality.* Policy instruments and government regulations that create macroeconomic stability and foster economic growth are obviously important for poverty reduction. However, regulatory and policy instruments cannot benefit the poorest and most disadvantaged groups unless equity—including gender equity—is considered in choosing those instruments.
- *Government effectiveness and control of corruption.* These dimensions of good governance are important for the implementation of every policy instrument that the state can use to alleviate poverty and ensure food security. The impact of increased public spending and donor funding is limited when government effectiveness is low and corruption widespread.
- *Environmental governance.* Because most poor people depend on agriculture for their livelihoods, the governance of natural resources, such as water, soil, rangelands, and forests, requires special attention to ensure that hunger and poverty reduction strategies are sustainable in the long run.

Strategies to Improve Governance: A Conceptual Framework

Figure 1 presents a conceptual framework for identifying and assessing strategies that aim at improving governance.

The major types of strategies are, first, demand-side strategies intended to facilitate poor people in communicating their demands for services and infrastructure from public-sector institutions and to hold them accountable and, second, supply-side strategies designed to increase the capacity and incentives of public administration and other service providers to fulfill their functions. Some strategies directly involve users in the provision of public services; these can be classified as mixed strategies.

Figure 1—Framework for Improving Governance: Demand- and Supply-Side Approaches



Source: Devised by author.

Figure 1 shows that both demand- and supply-side strategies must fit with context-specific conditions (as indicated by the "good fit" arrows). For example, in communities with hierarchical power structures and social exclusion, special provisions for disadvantaged groups can help tailor demand-side strategies to those conditions. In India, seats in local councils, including chairperson positions, are reserved for women and for scheduled castes and tribes. Studies show that the reservations can be effective in improving service provision for women and disadvantaged groups. On the supply side, approaches to reforming public administration are more effective if they tailor responses to the specific problems that public agencies face.

While governance is an important factor in achieving food security and sustainable poverty reduction, other factors also matter. These include agroclimatic conditions, weather events, and international commodity prices.

Demand-Side Strategies to Improve Governance

Demand-side strategies thus focus on the voice and accountability dimension of governance. These approaches include strengthening the capacity of poor people and disadvantaged groups, including women, to demand better services, and creating institutional arrangements that help them channel their demands to public agencies and hold them accountable.

The route to accountability can be either long or short. In the case of the short route, citizens or citizen groups are empowered to provide direct feedback to public agencies. In education, parent-teacher associations can help to reduce teacher absenteeism, which particularly affects poor rural areas. The representation of farmers' organizations in the management boards of agricultural research and extension organizations can make those organizations more responsive to the specific needs of poor and food-insecure farm households. Participatory planning and budgeting methods also increase voice and accountability. In the well-known case of Porto Alegre, Brazil, participatory budgeting led to an increased share of public investments that benefited the poor. In using such approaches, the challenge is to avoid local elite capture by ensuring the participation of poor and food-insecure people, including women. In Porto Alegre, citizens attending budget meetings can spontaneously form groups, limiting the power of established organizations.

In the case of the long route to accountability, poor people can use lobbying and voting to induce political decisionmakers to take steps to improve the performance of public services. Democratization, reducing vote buying, and promoting political competition can make this route more effective. Democratization also allows parliamentarians to play a stronger role in improving the accountability of public agencies to the poor. Political decentralization is attracting increasing attention because it can bolster accountability by bringing government closer to the people. It can, however, lead to local elite capture, though whether this is likely to occur depends on country-specific conditions.

The short and long routes to accountability benefit from increased transparency in the performance of service providers. The citizen report card approach developed by the Public Affairs Center, a nongovernmental organization (NGO) in Bangalore, is a prominent example. This method combines surveys among the users of services with public action and collaboration with service providers. In Ethiopia, NGOs assess farmers' satisfaction with agricultural and irrigation services using report cards, and development agencies use the method to benchmark district-level performance in providing public services. Additionally, national statistical bureaus increasingly conduct service delivery surveys. An example is Uganda's National Service Delivery Survey, which has been

conducted on a national basis since 2000. If proper sampling approaches are used, the citizen report cards and national service delivery surveys provide equal opportunities to the poor and disadvantaged groups to report their access and satisfaction with public agencies. More could be done, however, to report the results of such surveys by income group and gender, thereby making the instruments more effective for disadvantaged groups. Increasing transparency requires an enabling policy environment. In India, the Right to Information Act was an important step toward empowering citizens, including the poor, to demand information from public agencies.

Supply-Side Strategies and Mixed Approaches to Improve Governance

Efforts to improve citizens' ability to demand better services and hold service providers accountable have little impact if the providers do not have the capacity to respond to the demand and deliver better services. Therefore, demand-side strategies to improve governance should be coordinated with appropriate supply-side strategies.

One strategy on the agenda for decades is public administration reform, and various models have been tried. Training, introducing merit-based recruitment and promotion, and creating incentives by adjusting payment structures have been central elements in most approaches. The New Public Management approach has introduced private-sector management techniques into public service and emphasizes the role of the citizen as a customer rather than as an obedient subject. Other recent approaches, which focus on the responsive governance model, entail a combination of supply- and demand-side strategies.

Innovative approaches and new technologies can help make supply-side approaches more effective. For example, El Salvador, Mexico, and Malaysia subject government agencies to the ISO 9000 management certification of the International Organization for Standardization. Certification is based on performance orientation and client satisfaction. E-government, under certain conditions, also holds promise for developing countries. In the Indian state of Karnataka, computerizing land records under the Bhoomi program has enabled the rural poor to access land records, and also limited opportunities for bribery by increasing transparency.

Administrative and fiscal decentralization are other supply-side approaches. Unfortunately, these types of decentralization often lag behind their corresponding demand-side approach: political decentralization. Public officials at the central level resist the loss of influence and transfer to locations outside the capital city. Yet the effectiveness of political decentralization remains limited as long as local governments lack fiscal and administrative resources.

Another set of supply-side reforms aims at improving public-service provision by involving private-sector agencies, user organizations, and NGOs in the provision of public services.

- *Outsourcing.* Contracting, or outsourcing, is suitable for functions that require public finance but not necessarily public provision. For example, in Uganda's new National Agricultural Advisory Services system, the provision of agricultural advisory services is contracted to private-sector enterprises, individual consultants, and NGOs that compete for the contracts. The approach is combined with a demand-side strategy, giving farmer organizations a say in awarding the contract.
- *Public–private partnerships.* Going beyond outsourcing, public–private partnerships create joint responsibilities for financing and provide services and infrastructure. Urban water and electricity supply and irrigation infrastructure projects have been implemented using this approach. Not all such programs are suitable for targeting the poor, but they can free up public resources, which can then focus on the poor under other institutional arrangements.
- *Privatization.* For services that are not confronted with market failure, privatization is well suited. Creating an enabling investment climate for the private sector is essential to make this strategy work. If market failures result from natural monopolies and other reasons, as with water and electricity supplies, privatization needs to be combined with regulation. In these cases, regulation is important for ensuring that the poor, especially the rural poor, have access to such services. Regulation can be combined with demand-side approaches, for example, by making regulatory decisions subject to public consultations, as they are for electricity regulation in India.

A range of reform strategies represents mixed demand- and supply-side approaches because they involve citizens directly in public functions such as service provision and regulation.

- *Public–private people partnerships.* These partnerships involve civil society organizations, such as farmer organizations, along with public-sector agencies and private business enterprises. This strategy can be important in linking smallholders to new markets, as in the Sustainable Uptake of Cassava as an Industrial Commodity Project in Ghana. In this project, more than 100 stakeholders from public, private, and civil society organizations have been organized to develop a value chain for cassava.
- *Devolving management authority to user groups.* This strategy is widely applied in natural resource management. Community forestry in India and Nepal is a prominent example. The strategy was also essential in making the Office du Niger irrigation scheme in Mali work better for the poor.
- *Service cooperatives.* Formed and owned by producers, including smallholder farmers, service cooperatives can be important for providing pro-poor services. In India, dairy cooperatives provide livestock services to more than 12 million households, benefiting women particularly because of their large role in dairy farming.

The extent to which any of these governance reform strategies improves the quality and accessibility of public services for the poor depends on how the approach "fits" the specific problems of the public agencies to be reformed. It also depends on the capacity of the private sector, NGOs, user groups, and others to be involved in service provision.

The Political Economy of Governance Reforms

Governance reforms typically confront political challenges because they change power dynamics and affect vested interests. Reforms of public administration are particularly

difficult if they retrench staff and switch from seniority-based to performance-based remuneration systems. When general reforms are politically too difficult, "unbundling" public administration reform and pilot reforms in key government agencies is often advisable. Whatever path is chosen, reforming governance requires vision and leadership. For example, the Bhoomi program in Karnataka would not have been possible without the leadership of Rajeev Chawla, a committed member of public administration, and India's right-to-information movement has been driven by the leadership of social activist Aruna Roy.

Policy Implications

Governance reforms are high on the political agenda, but making them work for food-insecure and hungry people requires specific action. Although there is still much to learn about improving pro-poor governance, several policy implications can be derived from current reform experiences.

- *Moving from "one size fits all" to "good fit" approaches*. Governance reforms work only if they are tailored to country- and sector-specific conditions. A wide range of demand- and supply-side strategies exists to help improve governance, but the combination of approaches to be applied must be based on a careful analysis of the opportunities and challenges for reform available in a particular context.
- *Promoting experimentation and learning*. Because reforming governance is complex, it is useful to provide scope for experimentation and learning and to use approaches that are flexible enough to allow for adjustments over time. Strengthening the analytical capacity to evaluate reforms based on evidence can contribute to learning processes.
- *Combining demand- and supply-side approaches*. Various strategies to reform governance can reinforce each other. Particularly promising is combining demand-side approaches that give the poor more voice with supply-side approaches that give public administration the capacity and incentive to respond to the needs of the poor.
- *Creating an enabling environment.* Both demand- and supply-side approaches to reform governance depend on an enabling policy environment. For example, private enterprises require a conducive investment climate. Likewise, cooperatives depend on a legal framework that prevents undue state influence and creates access to financial and other services. Civil society organizations are better able to hold government agencies accountable, if they have the right to free association and the right to information, and if the freedom of the press is guaranteed.
- *Strengthening leadership*. Governance reforms require leadership from political decisionmakers, members of public administration (supply side), and civil society (demand side). Investing in people's leadership capacity is thus an important dimension of governance reform.
- *Donor coordination and alignment*. Although governance reforms, as political and social processes, are ultimately driven by a country's citizens and their leaders, donors can play an important role. Coordination of donor activities and alignment with country-owned strategies and programs, as foreseen in the Paris Declaration on Aid Effectiveness, is particularly important in promoting governance reforms.
- *Mainstreaming poverty in all governance reforms*. Mainstreaming a focus on poverty in all types of governance reforms is necessary to prevent the poor from losing out in the reform process. Supply-side strategies that aim at making public administration more efficient—for example, through outsourcing and cost recovery—require special provisions for the poor. Likewise, demand-side or mixed strategies may not give more voice to the poor unless strategies to avoid elite capture are applied.

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SCALING UP
A Path to Effective Development

Arntraud Hartmann and Johannes F. Linn

The global community has set itself the challenge of meeting the Millennium Development Goals (MDGs) by 2015 as a way to combat world poverty and hunger. In 2007, the halfway point, it is clear that many countries will not be able to meet the MDGs without undertaking significantly greater efforts. One constraint that needs to be overcome is that development interventions—projects, programs, policies—are all too often like small pebbles thrown into a big pond: they are limited in scale, short-lived, and therefore have little lasting impact. This may explain why so many studies have found that external aid has had weak or no development impact in the aggregate, even though many individual interventions have been successful in terms of their project- or program-specific goals.

Confronted with the challenge of meeting the MDGs, the development community has recently begun to focus on the need to scale up interventions. Scaling up means taking successful projects, programs, or policies and expanding, adapting, and sustaining them in different ways over time for greater development impact. This emphasis on scaling up has emerged from concern over how to deploy and absorb the substantially increased levels of official development assistance that were promised by the wealthy countries at recent G8 summits. A fragmented aid architecture complicates this task; multilateral, bilateral, and private aid entities have multiplied, leading to many more—but smaller—aid projects and programs and increasing transaction costs for recipient countries. In response, some aid donors have started to move from project to program support, and in the Paris Declaration, official donors committed themselves to work together for better coordinated aid delivery.

The current focus on scaling up is not entirely new, however. During the 1980s, as nongovernmental organizations (NGOs) increasingly began to engage in development activities, scaling up emerged as a challenge. NGO interventions were (and are) typically small in scale and often apply new approaches. Therefore, the question of how to replicate and scale up successful models gained prominence even then, especially in connection with participatory and community development approaches. Indeed, the current interest among philanthropic foundations and NGOs in how to scale up their interventions is an echo of these earlier concerns.

In response to this increased focus on scaling up—and its increased urgency—this policy brief takes a comprehensive look at what the literature and experience have to say about whether and how to scale up development interventions.

To Scale Up or Not to Scale Up?

The first question to ask is whether a project, program, or policy should be scaled up at all, and, if so, by how much, for how long, and in what direction or dimension. Dams and flood-protection works have natural physical or environmental limits. Replication or scaling up beyond those limits makes no sense. On the other hand, attaining universal school enrollment in quality primary schools and providing clean water to all are explicit targets under the MDGs, and most countries are way below the scale needed to achieve these goals. It is not surprising, then, that it is especially in the areas of social policy—education, health, poverty reduction programs, rural and urban community development, and so on—that scaling up is of particular concern.

A decision to scale up a program (or project or policy) requires a reflection on its optimal size. Should the program operate on a national, provincial, or only local level? Diseconomies of scale, quality/scale trade-offs, and institutional/organizational constraints might limit the scaling-up path. Therefore, scaling up does not necessarily mean national coverage. On the other hand, scaling up also may entail going beyond national borders. To be effective, some programs need to be expanded to a regional scale. This is typically the case for regional infrastructure, and for water, energy, and environmental programs—especially for

small countries in Africa, Central America, Central Asia, and southeastern Europe. Some interventions must operate on a global scale, such as programs to combat global epidemics (HIV/AIDS) or global environmental threats (global warming).

Considerations about desirable size are particularly important for programs based on participatory processes. Because these programs are highly contextual and depend on the trust and processes established in a community, the scope for expansion might be limited. If greater outreach is sought, a "franchise model" may be suitable, where basic principles are transferred to another environment, but ample room is left for the establishment of context-specific decisions and interactions among community members. Good examples of organizations that successfully transferred activities are the Bangladesh Rural Advancement Committee (BRAC) and the Grameen Bank—microcredit programs in Bangladesh that are replicating some of their programs in African countries. In a very different field, Transparency International, the global anticorruption NGO, scaled up across countries via a franchise model.

Scaled-up interventions should not always last indefinitely. Some interventions have a natural limit. For example, privatization has a limit both in terms of extent (how much to privatize) and in terms of duration: once all requisite firms and assets have been privatized, the process needs to be wound down. Scale limits and sunset provisions are especially important in areas where public action is taken to correct for what are at best seen as temporary private market failures (state banks, state marketing boards, and so on). In these cases, the critical issue is how to ensure an effective enabling environment for private initiatives rather than providing large-scale, long-term public intervention.

Finally, there has been a lively debate in the literature about the dimensions of scaling up. It helps to distinguish among horizontal, vertical, and functional scaling up. Horizontal scaling up refers to the expansion of coverage of a project, program, or policy across more people and greater space. Vertical scaling up refers to creating the organizational and political framework needed to permit going to a larger scale. Functional scaling up means going beyond one function (for example, health or education) to include others. The key here is that, usually, horizontal and vertical scaling must go hand in hand: expanding programs to cover more people across wider geographic areas inevitably requires working with higher level (provincial, national, regional, and even global) institutions and political forces. Functional scaling up is more of an optional dimension, but functional stovepiping can be a serious threat to the long-term success of development interventions. These are the risks that the new global "vertical funds," such as the Global Fund to Fight Aids, Tuberculosis, and Malaria, now face as they intervene in countries with weak overall health systems. Mexico's conditional cash transfer program, Oportunidades (formerly Programa de Educación, Salud, y Alimentación, or Progresa), which gives cash benefits to millions of poor families provided they use certain public services, clearly benefits from combining health, education, and nutrition interventions.

The Building Blocks of Scaling Up

The answers to the questions of what to scale up, how far, how long, and in what dimension cannot be set in stone. It is important to be aware of the questions and address them systematically and continuously when proceeding with the implementation. At the same time, it is important to consider how to scale up. Scaling up takes time, often 10 to 15 years, or more. This long time horizon poses great challenges: donors shift priorities, governments change, NGO funding is driven by fashion, and agency managers and staff move in and out. The long time horizon requires that scaling up be perceived as a systemic effort, not a short-term fad. Experiences with successful scaling-up programs have shown the importance of long-term commitment on the part of institutions, donors, and individuals. External partners need to stay the course. At the same time, programs have to be designed in such a way that they survive changes in government. This requires a systematic strategy for how to scale up. At a minimum, it requires a basic set of institutional values and incentives to ensure that key actors are continuously searching for ways to build on successful interventions, which, in turn, ensures that they are replicated, expanded, transferred, and adapted in other settings.

There are three building blocks for designing scaling-up strategies and instilling them with the basic values and incentives of vision, drivers, and space to grow.

Vision

Ideally, a vision for scaling up should be developed as the first phase of a program, frequently called a pilot, is being put into place. Pilots should be designed in such a way that they can be scaled up if successful. However, such a vision for scaling up rarely exists when programs are first designed and initiated. Far too frequently, donors and governments design

operations as onetime interventions. Projects that are "expensive boutiques" with high unit costs and high management and human skill intensities may be successful on a limited scale, but they generally cannot be and are not being replicated on a larger scale. Because not every project or program could or should be scaled up, the question of whether scaling up is appropriate should be explicitly factored into the decision of whether and how to implement the intervention in the first place. If program designers believe that their interventions eventually should be taken to a larger scale, then they need a vision and a strategy for how to proceed beyond the first phase or pilot project. Oportunidades is a good example of a program whose designers had a clear vision of the appropriate scale of intervention; although it started with a pilot phase, it aimed from the very beginning to eventually provide conditional cash transfers to all of Mexico's poor.

Drivers

Scaling up is a dynamic process requiring a force—or driver—to propel it forward. First, there has to be an idea, an innovation that meets a need or creates a demand among people. Second, there has to be a leader or champion. All successful programs that have expanded from small beginnings have benefited from charismatic leaders who are endowed with a vision, are persistent in their efforts, are often well connected to major stakeholders and constituencies, and have the ability to command respect and guide people. The innovative idea that microcredit could help poor entrepreneurs was propelled by the vision and leadership of Mohammed Yunnus and Fazle Hasan Abed to achieve the tremendous scale and impact of the Grameen Bank and BRAC. Similarly, the notion that an NGO can combat global corruption required the inspired leadership of Peter Eigen, which led to the establishment of Transparency International. Finally, external catalysts can serve as drivers of change and scaling up. They might be crises such as natural disasters or economic melt-downs. Or they can be agendas introduced by outside actors. In central and southeastern Europe, the prospect of accession to the European Union has been a driver of sustained change, reform, and scaling up for more than a decade.

Space to Grow

Ideas, champions, and external catalysts are not enough, however. For interventions to be scaled up, they need space in which to grow. Sometimes, such space already exists, but more often than not it has to be created. A number of interrelated spatial dimensions must be available if interventions are to be replicated and scaled up successfully. These are discussed in turn below.

Fiscal Space

In most cases, increased capital costs can only be covered by determining what other expenditures can be reduced or what additional revenues can be raised. In Mexico, for example, existing social programs were, very transparently, phased out to make room for Oportunidades. Since most budgetary decisions need endorsements by parliaments, however, creating fiscal space also involves determining whether there will be political support for curtailing certain activities.

Political Space

Scaling up requires political commitment. Political dynamics often change as programs grow. Small programs tend to be watched benevolently and with appreciation by those in power. But as the programs expand, as they build constituencies around them and replace other activities, they can be perceived as threatening and evoke negative reactions. Creating political space is a long-term process that must be started early on in the scaling-up journey. It requires advocacy and the legitimization of the programs. This goes beyond simply informing decisionmakers about the benefits of the program. It requires creating constituencies and mobilizing stakeholders who are willing to place the expanded programs on their political platforms. For this to occur, win-win solutions need to be forged and at times, second-best outcomes must be accepted. Advocacy, political engagement, leadership formation, and participation in the political process need to be integral parts of programs hoping to become larger and be politically sustained. In China's many successful scaling-up experiences, the political space created and sustained by the Communist Party clearly played a significant role.

Economic Space

Scaling up requires that sufficient demand must exist for the services offered by the larger program, or that this demand can be readily created. Insufficient demand is often an issue for preventive-health and family-planning services and sometimes, albeit less so, for education programs, where cultural factors, earnings opportunities for children, or previous poor service provision might inhibit demand. Many agricultural innovations could not be scaled up because farmers were unable to accept the risks inherent with new crop varieties, inputs, or technologies. In the case of

illicit drug-substitution programs, substitute crops could not compete with higher value drug production. A realistic assessment of demand and of the factors needed to create it is therefore an essential step in scaling up successfully.

Capacity Space

Institutions that are unwilling or unable to operate the larger program are perhaps the single biggest constraint to scaling up. The problem is typically twofold. First, institutions lack the human resources, skills, and processes to manage the enlarged program. Second, they are unwilling to support the change process needed to scale up. The inertia of institutions, especially in the public sector, is a significant impediment. Therefore, it is essential to provide incentives for change, as well as to build a constituency within the institution—not only at the highest level of management, but also at the middle-management and staff levels. The standard view of development practitioners that training will create the capacity required is inadequate. Training is one component, but it is by no means sufficient. Improving organizational capacity, incentives, and commitment are equally important. In some cases, existing organizations were bypassed for successful scaling up, as was the case with Indonesia's Kecamatan Development Program to support community-driven public-service provision. And setting up separate donor-supported project implementation units is often likely to harm the chances of scaling up and sustaining interventions in the longer term, as the World Bank has learned the hard way.

Cultural Space

It is particularly important for participatory programs and for programs that deliver culturally sensitive services (education, health, family planning) to determine whether the expanded or replicated program will fit culturally. Programs often need to be adjusted as they are being extended or replicated to accommodate other values or social-interaction patterns, especially in multicultural communities and countries, or when successful interventions are transferred to another country or continent.

Partnership Space

It is also essential to determine whether external and internal partners will continue to support the program, or whether new partners will be required. In most successful scaling-up operations, partners were a key factor in helping to maintain the momentum and focus. They can support the drivers and provide financial support in the scaling-up process. Successful programs like BRAC and the Grameen Bank in Bangladesh have cooperated readily with partners despite clearly being in the driver's seat. The long-term partnership among international drug companies, international donors, and national health agencies was essential for the success of the River Blindness Eradication Program in Africa. And even as China has chosen its own way of scaling up and sustaining its highly successful development programs, it has frequently sought the technical and financial input of outside partners (as in the case of the Loess Plateau Watershed Rehabilitation Project supported by the World Bank). Effective cooperation among aid agencies remains a special challenge, even as official agencies have pledged to coordinate their activities under the Paris Declaration.

Space for Learning

Scaling up is not a linear process; it extends over many years and navigates much uncharted territory. Though a solid process must be laid out, it also needs to be adjusted regularly. Monitoring, evaluation, and feedback loops are important for learning and adaptation. BRAC and Oportunidades effectively used monitoring systems to provide learning opportunities, while China's ability to adapt its policy reforms and program implementation has been one of its greatest assets.

Five Lessons

Pulling together the various elements of the scaling-up story, five key lessons emerge for scaling up most development interventions:

1. Scaling Up Needs Leadership and Values

More than anything else, scaling up is about political and organizational leadership and values. If leaders don't drive the process of scaling up, if institutions don't embody a clear set of values that empower managers and staff to continuously challenge themselves to scale up, and if individuals within institutions don't have any incentives to push themselves and others to scale up successful interventions, then the current pattern of pervasive "short-termism" and fragmentation will continue to characterize national policies and programs as well as the policies and approaches of donors. No scaling-up manual, no check list, and no compilation of case studies will make a lasting difference.

2. Scaling Up Needs Political Constituencies

Social change needs to be embedded in a society and needs to be supported by political constituencies. These constituencies generally do not emerge by themselves; they need to be created. Far too often, development practitioners believe that the message of "good programs" will be sufficient to secure support. Political constituency–building involves more than providing information about a successful program. Political constituencies need to become actively engaged in the process, and political leaders need to find that it is in their interest to place the concerns to be addressed by the scaling-up process on their agendas. Often "second-best" solutions have to be accepted in order to be supported politically. Scaling up is not only a technical process, but also a political one—it moves an agenda into the public domain and stirs political debate. But care needs to be taken to ensure that the agenda will not be partisan. Political parties move in and out of power, but scaling up is a long-term process, and the agenda needs to be broadly anchored in a political system.

3. Scaling Up Needs Incentives and Accountability

Institutions work best with appropriate incentives, and accountability is the best way to ensure that incentives are aligned between the goals of the individual and the goals of society. Scaling up is a change process, but changes are often stalled by unwilling players. In social-delivery programs, these players are often public bureaucracies where inertia, combined with inadequate skills and human resources, prevents change from happening. Scaling-up processes thus need to include incentives for the key actors. One important tool for creating incentives is to plan for incremental steps with early results, rather than building the perfect program to be rolled out after a long preparation time without intermediate results.

Accountability is important for pilot projects, but its importance increases as programs are taken to scale, systems become larger, and the visibility of and political attention to the programs increase. Accountability is often directed upward toward the organizational and political leadership. But a particular concern related to expanding programs is "elite capture." As program size increases, political interests become more pronounced and the risk that particular elites will "capture" programs for their specific interests increases. Therefore accountability downward toward beneficiaries and participants in programs is equally important. Large organizations are often not able (or willing) to exercise top-down controls effectively. Downward accountability provides for corrective mechanisms and systemic controls. Citizen report cards, beneficiary surveys, and results-based monitoring are all ways to ensure accountability. Good leaders make sure they ground their efforts in constant reality checks at the base.

4. Scaling Up Needs Systematic Monitoring and Evaluation

It therefore comes as no surprise that effective evaluation and monitoring is critical for a sustained scaling-up process. Monitoring and evaluation will be necessary on two levels: first, for the original limited-scale or pilot operation and, second, during the scaling-up process. The successful scaling up of the BRAC operation in Bangladesh depended crucially on regular feedback from monitoring and evaluation systems. This allowed the programs to be adjusted as they expanded. One of the secrets of Progresa's success was the existence of credible impact evaluations, undertaken with randomized samples. The evaluations clearly demonstrated the impact of the program and thus played an important role in convincing politicians to maintain and build it through successive electoral cycles. But even simple evaluations can play an essential role in providing feedback on whether scaling up is embedded in the institutional and managerial values of an organization, as was the case with recent evaluations of the United Nations Development Programme's country programs. Unfortunately, this type of evaluation practice remains the exception rather than the rule.

5. Scaling Up Benefits from an Orderly and Gradual Process

The literature on the diffusion of innovations focuses on the spontaneous spread of innovations and observes that some ideas/innovations can spread very quickly, especially when they are market driven (for example, the diffusion of information and communications technologies). However, social process innovations—which rely on political processes; public-sector bureaucracies; and, often, participatory, bottom-up community engagement—generally do not spread instantaneously or spontaneously. An orderly and gradual process, careful logistical planning, a clear definition of partners' roles, and good communication are important ingredients to scale up development interventions.

Scaling up is a complex and long-term challenge, and it may seem from the literature

that it is almost impossible to get right. But many examples of successful scaling up initiatives show that it is indeed possible—though such examples should be far more numerous. If, for starters, the aid agencies and private foundations were to seriously put scaling up on their agendas, there would be hope for a significant improvement in aid effectiveness. There would also be many more demonstrations of what can and must be done to achieve serious progress toward the MDGs and thus toward reducing global poverty and hunger.

For Further Reading: H. Binswanger and A. Swaminathan, *Scaling Up Community Driven Development: Theoretical Underpinnings and Program Design Implications* (World Bank, Washington, DC, 2003); S. Gillespie, *Scaling Up Community-Driven Development: A Synthesis of Experience*, FCND Discussion Paper No. 181 (Washington, DC: IFPRI, 2004); R. Kohl and L. Cooley, "Scaling Up: From Vision to Large-Scale Change," *Management Systems International* (December 2005); B. Moreno-Dodson, ed., *Reducing Poverty on a Global Scale: Learning and Innovating for Development* (Washington, DC: World Bank, 2005); P. Uvin, "Scaling Up, Scaling Down: NGO Paths to Overcoming Hunger," in *Scaling Up, Scaling Down: Overcoming Malnutrition in Developing Countries*, T. J. Marchione, ed. (Australia: Gordon and Breach, 1999).

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THE MILLENNIUM DEVELOPMENT GOALS
How Realistic Are They?

Michiel Keyzer and Lia van Wesenbeeck

In its Millennium Declaration of September 2000, the United Nations (UN) adopted the Millennium Development Goals (MDGs), to be reached in 2015 through concerted efforts worldwide. According to UN calculations, the estimated costs in terms of additional development aid of meeting the MDGs in all countries vary from US$121 billion in 2006 to $189 billion in 2015. It appears that while Asia is well on track to achieving the goals, essentially through its own efforts, Africa is lagging behind. But how realistic are these levels of funding? And regarding the goals themselves, are the necessary mechanisms in place to monitor their realization, and do the proposed measures promote sustainable development? These questions are the focus of this brief.

The UN's 2005 MDG report does not focus on replacing all other development efforts. It typically aims to send a can-do message to the developed world that calls not for fundamental change but, rather, for a modest additional financial contribution of US$48–74 billion annually until 2015. There is undoubted merit in widely circulating the message that the world's most serious problems can be solved at relatively low cost. In this regard, the MDG process has been instrumental in putting development back on the international agenda. Furthermore, agreeing on a list of targets has practical value in helping to keep donors dedicated to a common development agenda, facilitating the coordination of aid among donor countries to promote economies of scale, and providing a well-defined list of regularly monitored targets to encourage public support for development cooperation. Nonetheless, creating hope is one thing; generating unfounded expectations is another. The MDG process asks the public for funds that eventually will have to be repaid in terms of success. Hence, there is a definite need to consolidate the process by focusing on realistic aims that are well cast in an overall development perspective reliable monitoring and, obviously, credible funding assessments.

United Nations Financing Estimates

Various figures have been circulated on the amount of funding needed to achieve the MDGs in 2015: the UN report mentions an additional US$50 billion annually. While conceding that this estimate is crude at best, the UN report expresses a firm belief that it provides a good indication of the order of magnitude of the funding required. Starting from a "shopping list" of targets, the 2005 UN Millennium Project provides an independent assessment based on costings of target quantities at assumed prices for a handful of countries. The actions identified and costed lead to a funding budget generally rising from US$77.5 per capita in 2006 to $140.5 per capita in 2015—half of which is to be obtained from household contributions and domestic government expenditure. The last step in the estimation of total financing requirements is to use the per capita investment needs to compute the total investment required to achieve these goals worldwide, totaling the amounts obtained after multiplication of the average per capita need by the relevant segments of the population in low-income countries. Furthermore, an estimate is presented of the financing needs for middle-income countries and for some actions at the global level. The resulting financing gap to be covered by official development assistance (ODA) amounts to US$135 billion in 2006, $152 billion in 2010, and $195 billion in 2015, which would imply an increase in ODA over existing commitments of US$48, $50, and $74 billion, respectively.

An important element of the costing is the assumption that there is a committed, well-organized public sector. The calculation of total ODA even includes an "adjustment for countries not qualifying due to inadequate governance," by which US$21–25 billion are deducted from the total requirements to reflect the exclusion of some countries—implying that other countries should contribute more to the attainment. The report suggests that in assessing the quality of governance, a clear distinction can be made between deliberate unwillingness on the part of those in power to act in the best interest of the country, and failures caused by poverty and lack of institutional capacity. Only the first category of countries is excluded; hence, many countries remain, especially in Africa, where improved government reach and quality requires major investments.

What Is Overlooked in the Estimates?

The MDG report expresses its cost assessments in per capita terms and points to the striking similarity of the estimates for the five countries that serve as benchmark cases, suggesting that this warrants

generalization to other countries. This section looks at the calculations of MDG investment needs in health, transport infrastructure, and education (close to 60 percent of the total investment needs in the report) primarily to highlight that, although the report mentions most of the possible items, the actual budgeting omits many items and scale-independent costs and makes optimistic assumptions about the quality of governance. Moreover, the report tends to neglect the upward cost push of up-scaling services resulting from intensified use of scarce skills and material resources.

Health

The MDGs on health cover a broad range of topics, such as reducing the under-five mortality rate by two-thirds and the maternal mortality rate by three-quarters, and halting and having begun to reverse the spread of HIV/AIDS, malaria, tuberculosis, and other major diseases. The report estimates that per capita investments of US$13–25 in 2005, $19–33 in 2010, and $30–48 in 2015 will be sufficient to achieve these goals. Such statements, however, neglect many minor diseases that together burden a sizable share of the population.

The Center for Global Development ranks a number of successful projects with respect to the eradication of diseases through vaccination campaigns or treatment programs. Treatment of malaria and leprosy—two important diseases in developing countries—are not included in the list. Estimates on the costs of malaria treatment vary from US$0.1 to $9 per treatment, depending on the resistance of the disease to cheaper drugs in the area considered. For the treatment of leprosy, estimates of treatment costs per patient vary from US$20 to $30. Factoring in the costs of treatment of these diseases, the total annual per capita health cost already equals half the average needs for 2006 and takes up more than a quarter of the estimated average investment need in 2015. In addition, there are also diseases for which no adequate therapy is available at present and for which the costs of therapy and/or vaccination are as yet unknown.

Since the MDGs on health also include a well-functioning health system in general, costs of achieving this should also be factored into the total. A further complication in the treatment of many of these illnesses is that treatment should start almost immediately after the disease has been contracted, and often involves extended regular visits to clinics. This requires that health services be located near patients, which is especially costly in view of the dispersed nature of settlements in many parts of Africa. HIV and AIDS obviously require special attention. The latest estimates show that in Africa 25.8 million people were HIV infected in 2005, of which 3.2 million represented new infections in that year, while 2.4 million people were estimated to have died from AIDS that same year. Additional resources are needed for treatment and prevention, including training teachers and strengthening systems of distribution for preservatives, outreach programs, and training of health care workers to provide advanced treatment. Furthermore, degree training should be included for health personnel. Finally, infrastructure should be expanded to offer a larger percentage of the population access to schools and health facilities. In the case of Thailand, a densely populated country with a well-functioning health care system to start with, the annual costs of addressing AIDS are already almost US$6 per capita, suggesting that any cost estimate for AIDS treatment and prevention in Africa should be far above this average.

In short, judging by the cost of the items explicitly listed, the shopping list neglects certain diseases, the cost of developing the health delivery system and providing surrounding infrastructure, and more generally the cost of up-scaling present activities to the required levels.

Transport Infrastructure

Poor infrastructure is often mentioned as one of the most important bottlenecks inhibiting growth and development in Africa. While the UN Millennium Project refers to several items, there is no separate entry for investment in telecommunications. For roads, the estimated per capita investment needs are in the range of US$11–13 in 2006, $10–21 in 2010, and $10–31 in 2015 for the cost of maintaining and expanding road networks only. The report does state, however, that "a more comprehensive assessment must factor in the costs of improving access to transport services as well as expanding ports and other transport infrastructure" (pp. 243–244). Suffice it to say, the financial implications of this statement would definitely not be minor.

Furthermore, the construction of physical infrastructure is only one of the many steps needed to arrive at a well-functioning transport system. Assuring security along the roads is at least equally important. The cost of achieving security on transport infrastructure, especially in Africa, is particularly high due to the widespread rural population, low intensity of road traffic, and pressing need to monitor the police force itself. As an admittedly special point of reference, it should be noted that the 2006 UN intervention in Sudan budgeted almost US$1 billion to help 6.1 million people. Even for transport proper, costs are only to a limited extent proportionate to scale. The World Food Programme (WFP) budget for the 2005–06 food aid operations primarily for the Darfur region shows the cost of providing 730,000 metric tons of food. The current costs of procurement and transport are about US$163 million ($27 per capita). Total estimated costs for WFP are 4.5 times as high ($746 million) and include many items that are independent of the scale of the operations, such as assistance on tertiary roads that are normally considered unsuitable for commercial transport, emergency road repairs and mine clearance, rehabilitation of river assets, emergency upgrading of infrastructure, creation of storage facilities, and expansion of field offices.

Reference to the costs of food aid operations is of special relevance in Africa because of the large number of people who depend on it. On average, during the period 1985–2000, some 30 million people in Sub-Saharan Africa were partly or fully dependent on food aid that, for more than three-quarters, had to be obtained via seaports. Of these, about 5–6 million people are fully dependent on food aid; and of them, 2.5 million—and rising—are living in refugee camps due to the many conflicts, which might eventually strain the MDG resource. Sub-Saharan Africa harbored around 90 refugee camps in 2000 with populations from a few hundred to over 350,000 people. To give an indication of the logistics involved, the average distance of the seven largest camps, with populations of 100,000 or more, to the nearest seaport is 3,300 kilometers by road, and the Sudan operation mentioned earlier is not unique in the scope of activities required to transport food.

The Food and Agriculture Organization of the United Nations (FAO) provides an Africa-wide overview showing the investment needed to upgrade rural infrastructure. The total per capita investment of US$11–15 annually already covers the lion's share of the estimates made in the UN Millennium Project, and given that the investment reported covers rural infrastructure only in a narrow sense, it is clear that the total costs will be much higher. The inclusion of irrigation schemes, for example, increases the annual per capita costs for 2006, 2010, and 2015 to US$16, $25, and $32, respectively.

Education

The MDG on education is to achieve universal primary education for boys and girls in 2015. The estimated per capita requirements mentioned in the report also include secondary education: "our education estimates build upon the Education for All estimates by also including secondary school education" (p. 243). The estimated annual per capita investments needed to achieve this goal are US$11–17 in 2005, $13–19 in 2010, and $17–25 in 2015. The estimates seem particularly low because achieving universal primary education in many countries requires major up-scaling of the number of teachers. While the United Nations Educational, Scientific and Cultural Organization estimates that about US$7–8 per capita would be required to pay the salaries of the additional 18 million teachers, the costs of educating these teachers should also be taken into account. Cost calculation for this is not straightforward, as it is clear that the additional demand for education will put more pressure on the already fragile system, but even a low estimate of the cost of training only new teachers results in figures in the range of US$10 per capita. In addition, expanding the education sector also requires investments in buildings and educational materials.

Measuring Progress

A primary goal in defining the MDGs was to create a list of objectives that could be quantified and then monitored for progress. Measuring the number of undernourished people is particularly problematic, however: the FAO estimates that approximately 204 million people are undernourished in Sub-Saharan Africa, but comparable estimates using body weight measurements in demographic and health surveys result in a much lower figure of approximately 120 million people. Such discrepancies cast doubt on the accuracy of MDG 1 yardsticks and, consequently, the assessment of subsequent progress.

Conclusion

Setting up clear lists of explicit policy targets such as the MDGs can be effective in providing general background on the magnitude and importance of the task at hand and in mobilizing public support. The cost calculations associated with the MDGs generally convey the message that achieving the goals is a matter of goodwill, and that a relatively minor financial effort over the next 15 years will suffice. If the MDGs are primarily intended to rally taxpayer support for increased development aid, then the accuracy of the cost calculations is of lesser importance. What counts are the achievements realized with the tax money spent.

The Millennium Village initiative of the Millennium Projects seems to focus on this aspect and aims to show that, with good management and adequate investments, African communities throughout the continent can flourish. The underlying idea is that success will breed success—locally because the good practices will be emulated by other villages, and globally because the donor agencies and commercial investors will become less shy once they see positive and tangible results. Small rural villages in this initiative, however, can at best become showrooms of progress; they will often be no more than classic Potemkin villages visited by television crews during special campaigns, as well as by rich individuals in search of a philanthropic project. Moreover, the international community cannot neglect the moral implications of selecting a happy few to receive medical care, education, sanitation, and the like, while leaving the large majority outside the fence.

The shopping-list approach pursued by the Millennium Project carries, among other factors, the danger of omission. In the case of health, it is the omission of a host of nonmajor diseases and the requirement to build a network of skilled staff to monitor medication intake and effects on patients. For transport infrastructure, it is the scale-independent cost of delivery related to police surveillance and the improvement and maintenance of tertiary roads. For education, it appears that neglecting the teachers needed to teach the teachers and the requirements for construction and adequate maintenance of schools has led to serious cost underestimation. Furthermore, shopping lists treat prices as given, whereas development experience indicates that targeted efforts tend to generate local scarcities of trained personnel and other inputs that trigger price increases. More generally, establishing

adequate government institutions to provide security and justice in addition to health, education, transport, and irrigation facilities involves high levels of scale-independent costs.

In addition, if the targets are actually meant to be reached, rather than functioning as mere symbolic reflections of moral concern and public relations tools, they should be defined in detail, and adequate measurement procedures should be agreed upon to monitor progress in meeting them. Indeed, by making the concepts more clear, and by agreeing on them internationally, the MDG undertaking has made significant steps in this direction, but greater efforts are needed to arrive at reliable indicators.

Finally, it seems remarkable for the UN to define its own agenda for development at a time when Asia (China and India in particular) is teaching the world at an unprecedented scale and pace what development is about. Asia is convincingly demonstrating that growth is indeed the solution to poverty, but equally that an MDG time horizon of 15 years may be too short for results to become visible. Asia also demonstrates that growth starts in urban agglomerations, absorbing labor from the surroundings and gradually spreading via labor migration from less-favored or less-well-governed areas, followed by gradual industrial expansion to these areas. In this process, trade liberalization is important as fuel for growth, but government has its role in keeping up physical and social infrastructure, in providing social safety nets, and in spreading progress across the territory.

All this illustrates the tension between defining separate and simple targets with associated externally funded projects and financing requirements, and the broader idea of development. The MDG approach appeals to a public tired of stories of how the complexity of development makes it difficult, if not impossible, to implement simple policies with clear effects. But the Asian experience also teaches that development is organic: given proper general guidance from government, it finds its own way through the markets without central control of every detail or ideal circumstances in all cases. For Africa, this would suggest identifying potential winners, with South Africa—and, hopefully, Nigeria and its West African neighbors—as a natural candidate. For development cooperation with Africa, this would amount to betting on such winners in terms of trade concessions and industrial development rather than focusing on the least developed countries that lack the capacity to deliver substantial quantities anyway—notwithstanding the need to maintain humanitarian aid flows and to help achieve basic levels of infrastructure in less promising areas. At the same time, it should be recognized that the eventual spatial configuration of African regional partnerships remains unclear. In the meantime, Europe might choose to act as a growth pole, but for this it would have to relax its restrictions on labor migration, which seems unlikely at present. Above all, the Asian experience is relevant to Africa in so far as countries that only 30 years ago were commonly portrayed as the basket cases of the world have almost simultaneously, and despite rising dependence on imported energy and other mineral resources, shown an incredible capacity to reduce poverty and hunger.

For Further Reading: UN Millennium Project, *Investing in Development: A Practical Plan to Achieve the Millennium Development Goals* (New York: United Nations Development Programme, 2005); Center for Global Development, *Overview of Case Studies in Health Care* (http://www.cgdev.org/section/initiatives/_active/millionssaved/overview>2006); M. A. Clemens, C. J. Kenny, and T. J. Moss, *The Trouble With the MDGs: Confronting Expectations of Aid and Development Success*, CGDEV Working Paper 40 (Washington, DC: Center for Global Development, 2004).

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POVERTY, INEQUALITY, AND WELFARE IN A RAPID-GROWTH ECONOMY

The Chilean Experience

Dante Contreras

Chile is maturing politically and becoming a more modern and globalized society. The country's current priority is to ensure more equitable distribution of economic growth and overall opportunities, which depends on the government's ability to improve public policy and expand its reach. By international standards, Chile has a high level of income inequality (being among the 50 percent of Latin American countries with the highest levels). Though poverty has declined significantly since the early 1990s, the risk of people falling into poverty remains high because half the population has low household income and is subject to significant income fluctuations. Access to education has increased considerably, but socioeconomics continues to determine the opportunities available to young people. For these reasons, it is critical that the country addresses social issues in order to continue its development and use its public resources more effectively.

This brief focuses on the strategies the Chilean government has used, and is currently using, to tackle issues related to poverty, inequality, and welfare, and to address the challenges that remain. Initially, economic and social policies sought to protect and strengthen economic growth while at the same time providing basic goods and services to the neediest sectors of society through a range of targeted social policies. The resulting pro-growth reforms led to significant reductions in the country's poverty levels, but they were not designed as social protection instruments to fully address household vulnerability or provide integrated solutions to the multiple constraints facing Chilean families. Consequently, the government has more recently begun to focus on social protection instruments that integrate and optimize social services in order to improve service provision to the poorest groups.

Poverty, Equality, and Welfare: Recent Successes and Ongoing Challenges

Since the early 1980s, Chile has been the most successful of all Latin American countries when it comes to economic growth, which has averaged approximately 5 percent per year. Although this sustained growth has led to a dramatic reduction in poverty rates—from 40 percent in 1990 to 13.7 percent in 2006 (Figure 1)—inequality has remained persistently high. A variety of cross-sectional and survey data indicate that Chile has successfully reduced poverty, targeted its public policies, and increased household well-being over the past decade. Other survey data, however, indicate that Chilean households perceive that they remain unprotected in certain areas. Surveyed households reported—among other concerns—significant labor instability, lack of health insurance, poor access to quality education, and uncertainty regarding social security programs. In other words, despite the documented increases in welfare, many Chilean households consider themselves to be vulnerable. Furthermore, the available evidence regarding income convergence is weak, implying that although economic growth has positively affected poverty levels, it has not ensured a significant reduction in inequality. Existing social protection instruments only cover some risks related to income, such as old age and unemployment in the case of salaried workers. The day-to-day risks of low-income workers are not addressed by current social policy.

Nevertheless, the evidence suggests that the current, and sustained, high levels of inequality in Chile are not necessarily associated with decreased welfare because inequality has remained stable in the presence of income increases for both rich and poor households. In other words, despite high inequality, both the rich and the poor are better off. Table 1 presents Gini coefficients for Chile and Latin America, whereby a low Gini coefficient indicates more equal income or wealth distribution, while a high Gini coefficient indicates more unequal distribution (thus, 0 corresponds to perfect equality, with everyone having exactly the same income, and 1 corresponds to perfect inequality, whereby a single person has all the income).

Table 1—Poverty and Inequality in Chile and Latin America, 1990 and 2005/06

	Chile		Latin America	
Indicator	**1990**	**2006**	**1990**	**2005**
Poverty Headcount (%)	39	14	48	40
Inequality (Gini index)	0.57	0.54	0.52	0.52

Sources: Panorama Social CEPAl 2007 and Mideplan, Encuesta CASEN 2006.

Figure 1—Poverty and Extreme Poverty in Chile, 1990–2006 (%)

Source: Mideplan 2007.

The coefficient for Latin America remained relatively stable between 1990 and 2005, but—using per capita autonomous income—the coefficient for Chile decreased from 0.57 in 1990 to 0.54 in 2006. Nevertheless, inequality in Chile remains significantly higher than in the rest of Latin America. Hence, it can be inferred that inequality is linked to factors other than purely economic ones. As a result, the medium-term challenges facing Chile are complex and multidimensional, involving income and wealth levels; education and employment opportunities; power and social status; and so on, all of which are strongly interlinked. Their complexity makes it very difficult to design effective social policies, especially with short-term results.

Poverty can be measured both in terms of average income levels and in terms of the degree of income inequality. The intergenerational transmission of poverty reflects the unequal distribution of opportunities, and the exclusion of poor people from the decisionmaking process reflects the unequal distribution of power. Segregation in neighborhoods and schools, for example, is both a cause and an effect of poverty and inequality, with negative consequences for social cohesion and the opportunities available to the segregated groups. This exclusion includes lack of access to education and the labor market, which only compounds poverty and inequality and creates poverty traps. Chile is a good example of this, in that economic growth and general social policies have been insufficient to improve the living conditions of a small group of extremely poor people.

A panel data set collected by Chile's Ministry of Planning for the period 1996–2001 indicates that at a given point within this timeframe approximately half of all static poverty (that is, poverty measured using cross-sectional data) was transient and remained stable as overall poverty rose due to steady increases in the levels of chronic poverty. Static poverty fell from 22 to 18 percent between 1996 and 2001, but at least at one point during that time more than 34 percent of the population was poor (Table 2). This emphasizes the broader reach of chronic poverty. Data indicate that 46 percent of people who were poor in 2001 were not poor in 1996, and that the newly poor in 2001 were drawn from all deciles, although only 14 percent fell within the top half of the income distribution in 1996.

Table 2—Transition Matrix, 1996–2001 (%)

	2001		
1996	**Poor**	**Nonpoor**	**Total**
Poor	45.2	54.8	22.3
Nonpoor	11.4	88.6	77.6
Total	18.9	81.1	100.0

Source: C. Neilson, D. Contreras, R. Cooper, and J. Hermann, "The Dynamics of Poverty in Chile," *Journal of Latin American Studies* (forthcoming).

A detailed examination of the variables associated with the probability of entering and exiting poverty shows that the main factor causing people to fall into poverty, and enabling them to escape it, is employment. This validates the need for policies in support of employment opportunities and employment security, such as the newly introduced unemployment insurance. This finding further suggests an increase in the relative importance of employment issues in the design of future social safety nets, including instruments that would facilitate the participation of more family members in the labor force, such as public child care, job training, and so on.

Health shocks to the household head are also a significant barrier when it comes to escaping poverty, although this does not hold true for households with

higher incomes. Poor households need adequate health coverage and insurance against adverse shocks that can permanently impair their capacity to generate income. Somewhat relatedly, the number of children under the age of 15 years negatively affects the probability that a household will move out of poverty and increases the likelihood of its falling into poverty. And while the educational level of the household head reduces the risk of poverty, other than for technical education, it does not significantly help poor people to escape poverty; in this sense, education appears to function more as insurance against poverty than a pathway out of it. Households that own their own home or a second home are also less likely to become poor. The reality that 9 percent of households remain poor over time justifies greater focus on social programs that target extreme poverty—such as Chile Solidario (discussed in the next section). Nevertheless, strategies to reduce poverty will also have to focus on households that are not currently poor but are at risk of falling into poverty in the future.

Social Protection Instruments

The evidence discussed above shows that social inequality in Chile affects not only income levels, but also health, education, and social and economic opportunities. Despite a sharp reduction in poverty and an increase in real incomes, both the poor and the middle class face serious risks associated with unemployment, economic well-being, health, and aging. In addition, new challenges are emerging as the society modernizes. Citizens are becoming more autonomous and aware of their rights, requiring cultural and institutional changes to promote universal equality and participation. To this end, the government has supported two programs to extend and optimize its social protection network: Chile Solidario and Chile Crece Contigo.

Chile Solidario, established in 2003, is a conditional cash transfer program—similar to Mexico's Oportunidades and Brazil's Bolsa Familia—which targets people in extreme poverty. In Chile, extremely poor people are often unaware either of their eligibility for government assistance or how to go about accessing or applying for such assistance. With this in mind, the Chilean government introduced Chile Solidario with the aim of targeting the extremely poor through a national system of registered beneficiaries who are monitored by public social workers. The program currently covers about 290,000 households. Families are invited to take part in the program based on a score that generates a multidimensional ranking index. Families are visited by a social worker (or a similarly trained professional) who works with the family to establish a plan to address major problems, including access to public services in areas such as health, employment, and domestic violence. In addition to family support, beneficiaries are entitled to the "Bono de Protection a la Familia," a conditional cash transfer paid to female household heads or the female partners of male household heads, with the provision that the family is supported. Chile Solidario works in collaboration with the municipalities—the local public service providers—to ensure the efficient day-to-day operation of the program in response to beneficiaries.

Established in 2007, Chile Crece Contigo is a social safety net program that supports children—and hence their families—from conception to preschool age. The program provides universal access to services and benefits through a network of coordinated public services with the ultimate aim of improving the children's psycho-emotional and physical well-being. Chile Crece Contigo provides nursery facilities and preschool care for children of working mothers, job-seeking mothers, and mothers still attending school—which together represent the poorest 40 percent of the population. The program gives each mother a guide to pregnancy, arranges childcare at the time of the first pregnancy checkup, and offers childcare training for the mother during key stages of child development. Recipient families are also given access to benefits such as home improvement, education, and programs addressing domestic violence. This initiative, based on experience of the United Kingdom, is unique in Latin America. It is being implemented sequentially across Chile, beginning with 160 municipalities in August 2007, but by January 2008 it is expected to be expanded to include all children in the public health system.

Promoting Equal Opportunity

Inequality has been a permanent feature of Chilean society, particularly in terms of opportunities for advancement. Although increased social service coverage in education, health, and housing has ensured at least some skill development among the vast majority of children and youth, current social policy means that the accumulation of those skills is proportional to household resources, reinforcing the foundation upon which inequality is based. A more equal distribution of opportunities requires two interventions. First, it is important to level the playing field through policies that compensate for inequalities among the most disadvantaged groups. Second, discriminatory practices with regard to access to employment opportunities and positions of power need to be eliminated.

One measure used to quantify social mobility and the equality of opportunities is to compare the income elasticity of children and their parents. In this context, a low elasticity indicates that socioeconomic background is less important when it comes to defining the set of economic opportunities. In Chile, the intergenerational elasticity of income is approximately 0.66, which is significantly higher than international standards (in Canada and Sweden, for example, this elasticity nears 0.2). However, once education is

controlled for among the children, the elasticity is no longer statistically significant. This indicates that the low level of intergenerational mobility in Chile results from a lack of quality educational opportunities for the poorest segments of the population.

Education

The evidence convincingly demonstrates that education is a key factor for raising incomes, social mobility, and welfare—although as previously mentioned, education—unless technical—is a means of avoiding rather than escaping poverty. Policies to improve education constitute a key area of focus toward achieving sustainable economic growth and development. In recent decades, debate on how to improve access to and the quality of education has been controversial to say the least. Since 1990, Chile has significantly increased its expenditure on education: as a percentage of gross domestic product (GDP), public expenditure on education increased from 2.6 percent in 1990 to 4.0 percent in 2006. Further, profound and widespread reforms of the school system have been implemented, including decentralization; demand subsidies; standardized evaluations, such as the National System of Evaluation of Education (SIMCE test); special programs to improve the quality of education and the equity of access to it; educational programs targeted to the poorest schools; and the extension of the school day. Still, the educational attainment of Chilean students remains well below that of students in developed countries. Indeed, according to the 2003 results of standardized international tests by the Programme for International Student Assessment (PISA), only 5 percent of 15-year-old Chilean students achieved as high as the average level of students from countries of the Organisation for Economic Co-operation and Development (OECD). In addition, only 6 percent of these students achieved a level of excellence (Levels 4 and 5), compared with 31 percent of OECD students.

This outcome is also observed in other Latin American countries. According to the PISA test, Argentina, Brazil, Chile, Mexico, and Peru exhibited educational outcomes below those of other countries with similar levels of per capita expenditure. In Chile, access to high-quality education is unequally distributed: the most vulnerable children receive the poorest quality of education. Consequently, the government has instituted a voucher scheme that differentiates students according to their vulnerability. Students from low-income families now receive additional funding, at a rate 50 percent higher than other students, in order to compensate for their socioeconomic disadvantages.

Concluding Remarks

Chile is undergoing a process of significant change. While the country is consolidating gains in terms of economic growth and poverty alleviation, new social demands are arising that require new strategic approaches. There are three pending challenges. First, if social interventions are to be sustained, economic growth and political stability are required. Second, existing social protection programs need to be consolidated; this requires ongoing program evaluation, efficient allocation of public expenditures, and adequate institutional arrangements to support initiatives. Finally, given the high level of inequality, improved social mobility and access to opportunities will ultimately determine the country's success in advancing its development agenda.

For Further Reading: D. Contreras, "Poverty and Inequality in a Rapid Growth Economy: Chile 1990–1996," *Journal of Development Studies* (Vol. 39, No. 3, 2003); Inter-American Development Bank (IDB), ed., *Reformas y Equidad Social en América Latina y el Caribe: Memorias de la primera fase del foro de equidad social* (Washington, DC: IDB, 2004); C. Neilson, D. Contreras, R. Cooper, and J. Hermann, "The Dynamics of Poverty in Chile," *Journal of Latin American Studies* (forthcoming).

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CHOOSING POLICY INSTRUMENTS TO REDUCE POVERTY AND HUNGER

Is It Possible to Overcome the Feasibility Dilemma?

Regina Birner

So far in this first decade of the 21st century, more than 1 billion people are subsisting on less than US$1 per day, and more than 800 million people are suffering from hunger. Many countries, most notably in Asia, have made spectacular success in reducing their overall rates of poverty and hunger, but these countries still have regions where poverty remains widespread. And despite its high rates of poverty reduction, South Asia still has the greatest prevalence of underweight children in the world. In Africa, the number of poor people increased during the past two decades as poverty reduction failed to keep pace with population growth.

Poverty and hunger persist throughout the world, even though their eradication has held prominence on the international agenda for more than half a century. The Food and Agriculture Organization of the United Nations was one of the first global institutions created at the end of World War II, because the international community recognized the need to ensure adequate food for all as a precondition for security and peace. Political declarations have continued voicing the goal of reducing poverty and hunger, most notably in the Millennium Development Declaration adopted by more than 190 nations. Given the billions of dollars invested and the commitment of the international community, why has overall progress in eradicating poverty and hunger been inadequate?

Policy instruments that could be useful in reducing poverty and hunger are not in short supply. They include public investments aimed at promoting pro-poor growth, redistributive policies, and social safety nets. Thinking and practice on the appropriateness of various policy instruments have changed over time; some instruments have reappeared in different forms, such as community-oriented development, and new ones have been invented, like microcredit. Choosing the appropriate mix of policy instruments to reduce poverty and hunger is at the heart of nearly every country's effort to define its development strategy. In view of trade-offs and the need for value judgments, the choice of policy instruments is inherently political, and views on the right mix of growth-promoting, redistributive, and environmentally sensitive instruments differ across the political spectrum, especially between the right and the left. The analytical techniques to assess the combinations of policy instruments have evolved in past decades—for example, by using computable general equilibrium models. Yet analysts often ignore the reality that every option for reducing poverty comes with at least one of three major challenges: political feasibility, administrative feasibility, and fiscal feasibility.

The challenge of political feasibility implies that a policy instrument is politically contested and provokes political opposition. Instruments that face this challenge, such as land reform, are either not adopted at all or are implemented half-heartedly. The challenge of administrative feasibility points to the need for a well-functioning and effective public administration to implement the respective policy instruments. Policy instruments that are technically complex or create scope for corruption, like large-scale infrastructure projects, are particularly vulnerable to this challenge. The fiscal feasibility challenge especially affects policy instruments that require a constant flow of financial resources and are difficult to maintain over time, especially after donor funding ends; agricultural advisory services fall into this category. Likewise, policy instruments that require high investments, such as large-scale infrastructure, face fiscal feasibility issues. The fiscal feasibility challenge can lead to political challenges: if the poor lack political voice, the financial resources needed to provide services or infrastructure are either not invested or not directed toward the poor.

Types of Policy Instruments and Their Challenges

Various types of policy instruments and their associated challenges are presented in Table 1. Any assessment of policy instruments must consider country-specific conditions, political beliefs, and values, as mentioned previously. Thus, the table is not exhaustive but serves to illustrate what can be called a feasibility dilemma: policy instruments that are not politically contested tend to involve the challenges of fiscal feasibility, and vice versa; almost all policy instruments face the challenge of administrative feasibility; and every type of policy instrument involves at least one of these challenges.

The Political Feasibility Challenge

Redistributive policy instruments are almost always politically contested because, by definition, they create winners and losers. The political feasibility challenge is particularly pronounced if the losers are politically powerful and well connected, as is usually the case with redistributive land reform. Not surprisingly, successful reforms are typically linked to special political situations,

such as major regime changes, as in Taiwan. Making tax policies more pro-poor by reducing tax evasion, for example, is politically difficult because the losers are politically powerful. The same applies to affirmative action policies, such as reserving positions in public administration or in the education system for socially disadvantaged groups. India's reservation policies are an example. Likewise, market liberalization policies are politically contested because they create losers. Hence, market liberalization policies typically are implemented only under the pressure of conditionalities, as was the case with structural adjustment lending, or under the obligations of international trade negotiations, most notably the World Trade Organization.

Table 1—Feasibility Challenges of Various Types of Policy Instruments

Type of Policy Instrument (Example)	Political Feasibility[b]	Administrative Feasibility	Fiscal Feasibility
Redistribution of assets (land reform)	Low	Low	Low/ neutral
Investment in public infrastructure (roads, irrigation)	Low/high	Low	Low/ neutral
Investment in public services (health, education)	High	Low	Low
Investment in technology (agricultural research, extension)	Low/ neutral/ high[a]	Low	Low/ neutral/ high[a]
Social safety nets (food-for-work or other public works, insurance schemes)	High	Low	Low
Subsidies, trade protection (regulating producer and consumer prices, input subsidies for agriculture)	High	Low	Low
Market liberalization policies (switching to targeted subsidies, trade liberalization)	Low	Low/ neutral/ high[b]	Low/ neutral/ high[b]
Pro-poor fiscal and tax policies	Low	Low	High
Affirmative action	Low	Low/neutral	Neutral

Source: Devised by author and informed by discussions with the authors of the 2008 World Development Report *Agriculture for Development* (Washington, DC: World Bank, 2007).
Notes: The table does not include an assessment of the appropriateness of the respective policy instruments with regard to reducing poverty and hunger. Policy instruments are rated "high" on political feasibility if they are not confronted with major political opposition. It may, however, be difficult to create sufficient political support for the respective instruments.
[a]Depending on the type of technology.
[b]Depending on the type of market liberalization policy.

Investment in infrastructure may be politically contested for environmental and social reasons, as in large-scale infrastructure projects like dams. However, developing or improving small-scale infrastructure, like rural roads and irrigation facilities, often has a positive political payoff. In addition, investments in social services, such as health, education, and agricultural advisory services, rarely face political contests. As indicated previously, the political challenge of these instruments is not opposition but the weak political voice of the poor, especially the rural poor, which stifles their ability to convey their needs and preferences for public infrastructure and services. The same applies to social safety nets. Nontargeted subsidies and trade protection are typically promoted politically by special-interest groups. They do not face general political opposition but are confronted with criticism from international financial institutions, donor agencies, and the domestic policy circles that promote market liberalism.

Most public investments in new technologies are not politically contested because they have the potential to increase the income of the poor while avoiding the political opposition inherent in redistributive instruments. However, some new technologies are politically contested, either because of environmental concerns, as with agricultural biotechnology, or because they are expected to have negative effects on the poor, as with agricultural mechanization in labor-abundant economies.

The Administrative Feasibility Challenge

Almost all policy instruments are accompanied by the challenge of administrative feasibility (Table 1). This challenge is particularly pronounced if policy instruments are transaction intensive, implying that they require frequent activities across a variety of locations. At the same time, instruments that are discretionary or specific are difficult to standardize. Further, the transaction costs of monitoring and supervising such activities are very high. Services, such as primary education or agricultural extension, fall into this category: they must be provided every day, all over the country, and they require dedicated staff to meet the specific learning needs of children or the specific knowledge demands of farmers.

Other factors that contribute to the administrative feasibility challenge are scope for corruption and technical complexity. Large-scale infrastructure projects are affected by both factors. Many irrigation projects in Africa failed because they were not well designed for the specific hydrological conditions and because corruption in procurement lowered the quality of their construction. State intervention into markets—for example, restrictions on the marketing of agricultural products—typically creates scope for rent seeking and corruption, even if such interventions are not technically complex. Accordingly, policies that reduce the level of state intervention in the economy, such as market liberalization, are among the few policy instruments that have advantages in terms of administrative feasibility. However, in areas where market failures are inherent, such as electricity utilities, privatization can foster corruption because it requires effective regulation to prevent corruption. Likewise, the move from general price supports to targeted subsidies involves an administrative feasibility challenge. Targeting subsidies, such as subsidized food grains, to individual households is a complex process subject to corruption, as India's Public Distribution System has shown.

The Fiscal Feasibility Challenge

Policy instruments that require a constant flow of budgetary resources, such as social services and social protection programs, are typically confronted with problems of fiscal feasibility. Teachers and health facility staff, for example, often do not receive their salaries regularly, which results in high absentee rates and low

service quality. If extension agents lack operational resources, such as transportation to get to the field, they cannot be effective. Large-scale infrastructure projects are also confronted with fiscal feasibility challenges, but they are more easily financed by donor funding. In the case of infrastructure such as roads, drinking water facilities, and irrigation, maintenance is particularly susceptible to the fiscal feasibility challenge. Market interventions differ widely with regard to their fiscal feasibility implications because some, such as import tariffs, generate budgetary resources, while others, such as input or export subsidies, require financial resources.

Overcoming the Feasibility Dilemma

Each type of policy instrument faces at least one of the three feasibility challenges, and many are confronted with two (Table 1). Current efforts to formulate development strategies often include assessing the fiscal feasibility challenge because it is the focus of international financial institutions and donor organizations. In contrast, the challenges of political and administrative feasibility often receive less attention. Although this brief provides some guidelines, in practice, the limitations of policy instruments depend on context-specific conditions. Having experts and stakeholders participate in assessing feasibility challenges may foster a realistic country-specific appraisal. The assessments could be integrated in the participatory processes of developing poverty reduction strategy papers or other development strategies or sectoral policies.

An assessment of feasibility challenges is useful in devising strategies for dealing with them. Three strategies are possible: (1) selecting an instrument that is "second best" from an economic perspective but involves fewer feasibility challenges than the "first best" instrument; (2) adjusting the design of the policy instrument or its implementation modalities to reduce the challenges confronted; and (3) improving the political, administrative, and fiscal conditions. While the first and second strategies can be applied in the short term, the third strategy requires a longer time commitment. The second and third strategies are summarized in Table 2.

Strategies to Deal with the Political Feasibility Challenge

For redistributive policy instruments, one important strategy to improve political feasibility is to compensate the losers. In the case of land reform, for example, the state could compensate landowners. However, this leads to the fiscal feasibility challenge. Packaging popular with unpopular policy reforms can also reduce the political feasibility challenge. Some policy reforms can be introduced "by stealth" ("below the radar" of public attention). The Mexican program of poverty alleviation, Programa de Educación, Salud, y Alimentación (Progresa, now Oportunidades), which introduced direct cash transfers, was piloted in a remote area to avoid possible opposition until policymakers could prove its effectiveness. Policymakers can also use "windows of opportunity," such as those arising after a change of government. One way to promote the introduction of targeted subsidies is improving transparency about the extent to which nonpoor people benefit from untargeted subsidies. For example, increasing transparency on the extent to which better-off farmers benefit from agricultural input subsidies and from price supports can help to promote pro-poor reforms.

Table 2—Strategies to Overcome the Feasibility Challenges

Adjusting Policy Design and Implementation	Improving the Underlying Conditions
1. Political feasibility challenge	
• Compensating the losers; packaging unpopular with popular measures • Using "windows of opportunity"; stealth • Increasing transparency	• Strengthening political voice of poor people – Democratization – Political decentralization • Social mobilization/political organization
2. Administrative feasibility challenge	
• Reducing technical complexity • Reducing scope for corruption • Working with nongovernmental organizations	• Supply-side reform strategies – Increased capacity and incentives – Administrative decentralization • Demand-side reform strategies – Social audit – Citizen report cards – Right to information
3. Fiscal feasibility challenge	
• Recovering costs • Targeting	• Reform of the budgetary process • Reform of tax system

Source: Devised by author.

A major challenge to reducing poverty and hunger is the lack of political voice of poor and food-insecure people. The problem is most severe for the rural poor, as emphasized by "urban bias" literature. The social and political mobilization of the rural poor is undoubtedly an important factor—perhaps the most important factor—in overcoming the political feasibility challenge. The type of political regime affects the opportunities that rural poor have to develop their voice. Democracies have a better record in avoiding famines, as Amartya Sen has shown, but the relationship between the type of political regime and success in reducing poverty is complex. A range of nondemocratic regimes had remarkable success in reducing poverty. These regimes had strong development orientation, in some cases combined with an egalitarian ideology, as in China. Emphasis on political decentralization in recent decades is associated with the hope that bringing government closer to the people will increase the rural poor's voice. However, whether it is easier to prevent local elites from capturing development resources than it is national elites depends on country-specific political and socioeconomic conditions.

Strategies to Deal with the Administrative Feasibility Challenge

One short-run strategy to deal with the administrative feasibility challenge is reducing the technical complexity of policy instruments and their scope for corruption. For example, the pumps now promoted for supplying drinking water in rural Ghana are technically less complex than those used earlier, enabling community

members to maintain and repair the pumps themselves. Offering public works programs at a wage below the market is a targeting strategy that eliminates the need to identify target households and reduces the scope for corruption. In so-called failed states—where public administration is virtually absent in large parts of the country—working with nongovernmental organizations may prove to be an important strategy. In the agricultural sector, producer organizations can play a major role in providing services. In India, dairy cooperatives provide livestock services to more than 12 million households, benefiting poor households, and women in particular, who may not otherwise be reached by public or private service providers.

In the medium and long term, the most promising option for overcoming the administrative feasibility challenge is to improve the quality of public administration. Efforts to improve public-sector management have a long history. Early efforts focused on the "supply side" of public administration by providing training; promoting merit-based recruitment and promotion; adjusting the pay scales of civil service employees; and strengthening systems used in managing procurement, auditing, and public expenditures. More recent approaches target demand-side reforms, strengthening the capacity of citizens to demand public services and hold service providers accountable. Examples include citizen report cards, social auditing, public-service delivery surveys, and participatory planning and budgeting. Civil society organizations play an important role in these strategies, as exemplified by India's "right-to-information" campaign.

Donor policies can contribute to overcoming the administrative feasibility challenge in several ways. Donor coordination, as agreed in the Paris Declaration on Aid Effectiveness, reduces the administrative burden caused by fragmented development assistance. Administrative feasibility is also enhanced by avoiding externally imposed solutions at odds with local institutions, needs, and practices. Another important strategy is avoiding "blueprinting," instead choosing flexible and adaptable approaches that provide opportunities for learning.

Strategies to Deal with the Fiscal Feasibility Challenge

Among the available strategies for coping with the fiscal feasibility challenge are cost recovery approaches, including charging user fees for drinking or irrigation water or for agricultural extension. These approaches have their own political feasibility challenges. Moreover, making them pro-poor may require special provisions, such as exempting the basic consumption of the commodity from user charges. Targeting of subsidies is another strategy, even though this approach is confronted with both political and administrative feasibility challenges, as indicated previously.

Strategies to promote fiscal feasibility at the system level include reforms of the budgetary process and the tax system. Increasing tax revenues makes it possible to expand public spending for poverty reduction without jeopardizing macroeconomic stability goals. In many countries, the tax system is far from pro-poor, because wealthier households are in a much better position to avoid paying taxes. Increasing the contribution that better-off citizens make to a country's tax revenues could go a long way in meeting the fiscal feasibility challenges of pro-poor policy instruments, even though the political feasibility challenge of this strategy has to be met.

Conclusion

Progress in achieving the First Millennium Development Goal—to halve hunger and poverty by 2015—has proved difficult, but reaching the "other half" of the poor and food insecure is an even greater challenge. Nevertheless, a world free of hunger and poverty is possible. Focusing on the three types of feasibility challenges discussed in this brief is an important step toward this goal.

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ECONOMIC EXCLUSION AND POVERTY IN ASIA

The Example of Castes in India

Sukhadeo Thorat

Exclusion on the basis of race, religion, and ethnicity exists in many nations under diverse social, economic, and political systems. Such exclusion is a problem in several countries in Asia. And while many Asian countries—such as China, India, Japan, Malaysia, Nepal, and Pakistan—have developed equal opportunity policies to overcome economic discrimination, the nature of both market and nonmarket discrimination is still not well-understood, and neither are its direct and indirect effects on poverty. The limited number of studies on exclusion in Asia has affected the development of appropriate policies to overcome discrimination and its impact on poverty.

This brief presents the argument that market- and nonmarket-related forms of discrimination directly affect poverty but also exacerbate it indirectly by reducing growth. The brief highlights the need for socially inclusive policies; offers an analysis of the consequences of discrimination through the historical example of scheduled castes in India; and indicates potential policy options to redress exclusion and its effects.

The Concept of Economic Exclusion and Its Relationship to Poverty

Broadly speaking, social exclusion can be defined as "the process through which individuals or groups are wholly or partially excluded from full participation in the society within which they live." The concept rightly focuses on both the processes by which social and economic institutions exclude groups, and the multidimensional nature of the adverse consequences experienced by those who are excluded.

Social exclusion is group-based in nature. Economic exclusion or discrimination affects whole groups in a society, independent of the income, productivity, or merit of individuals within the group. Anyone can be excluded from access to markets because of lack of income, or from employment on the grounds of low productivity, or from admission to educational institutions on the basis of low merit. In the case of group-based exclusion, however, the basis for exclusion is group identity and not the economic or productive characteristics of the specific individual. While exclusion does result in the denial of economic opportunities—such as access to capital assets, development of skills, and education—the originating cause is not lack of income, productivity, or merit but rather the individual's group identity.

It is quite clear that in so far as exclusion and discrimination involve the denial of access to resources, employment, education, and public services, they certainly impoverish the lives of excluded individuals. Economic theory also implies that such discrimination can hamper economic growth by reducing efficiency. Labor market discrimination causes less than optimal allocation of labor among firms and sectors (given that those who are discriminated against receive a lower wage than their marginal product), and it reduces the effort expended by workers who perceive themselves to be discriminated against. Discrimination also results in inefficiency by reducing the magnitude of investments in human capital by discriminated groups and by reducing the return to any human capital investments made. Discrimination is thus a concern not only for equity but also for economic growth, and in this way it affects poverty both directly by adversely affecting the income distribution and indirectly by affecting economic growth. Moreover, discrimination can also lead to intergroup conflict by exacerbating existing inequality and contributing to its perpetuation from one generation to the next.

The Need for Socially Inclusive Policies

Conclusions regarding the consequences of market discrimination on economic growth and income distribution are derived from mainstream economic theory of discrimination, which also predicts that in highly competitive markets, discrimination will prove to be a transitory, self-correcting phenomenon because market discrimination comes at a cost to employers and firms, which erodes their profits and acts as a deterrent.

The free-market solution is not, however, a final and practical remedy for a number of reasons. For example, market discrimination is a competitive equilibrium if social norms ensure that all the employers are discriminators. This is the likely reality, as the persistence of labor market discrimination in high-income countries over decades attests. In the absence of interventions, markets will continue to operate imperfectly, and discrimination will persist. Interventions are thus called for in the form of legal safeguards and policies that ensure fair and equal access and redress longstanding inequities through affirmative action and other measures. Given that excluded groups face discrimination through many market and nonmarket channels, policy interventions are

Table 1. The Incidence of Poverty and Access to Markets among Scheduled Castes

Indicator	Scheduled Castes	Other
Poverty incidence		
Average monthly per capita consumption expenditure of rural households (rupees)	418.51	577.22[a]
Average monthly per capita consumption expenditure of urban households (rupees)	608.79	1,004.74
Landownership		
Landless (% of rural households)	10.00	not available
Owning land, but less than half an acre (% of rural households)	65.00	not available
Employment		
Self-employed in agriculture (% of rural households)	16.40	41.10
Regular wage/salary (% of urban households)	27.30	35.50
Agricultural wage labor (% of rural households)	51.40	19.00
Casual labor (% of urban households)	26.50	7.40
Unemployment rates based on the current daily status (%)	5.00	3.50
Average weekly wage earning (rupees per week in 1993–94 prices)	174.50[b]	197.05[b]

Sources: Employment/Unemployment Survey, 1999–2000, and Consumption Expenditure Survey, 55th Round (National Sample Survey Organisation, Central Statistical Office, New Delhi).
Notes: "Other" refers to nonscheduled castes and tribes. Scheduled tribes, though not considered here, are found in certain regions of India and often face greater poverty than scheduled castes.
[a] Excludes those castes classified as "backward."
[b] Estimates are based on 1999–2000 National Sample Survey employment data, calculated by A. Dubey, Note and statistical tables on social groups prepared for the U.K. Department for International Development (New Delhi, 2003).

required in the provision of social services and in various markets, such as for land, labor, capital, and produce.

A Focus on Castes in India

While exclusionary practices are evident throughout Asia—for example, ethnic minorities in Laos and Vietnam, and religious minorities in Central Asia—this brief focuses on one example of exclusion, the case of scheduled castes in India. This is a useful example because the Indian government has taken significant action to reduce the incidence and impact of exclusionary policies against scheduled castes, so a discussion of the policies introduced in India provides some indication of the type of interventions that can be used to combat social exclusion.

Present Social and Economic Conditions of Scheduled Castes

The caste system is based on the division of people into social groups, whereby each group's occupations and property rights are inherited. The assignment or division of occupations and property rights across castes is unequal and hierarchal, with some occupations considered socially inferior. Castes at the top of the order enjoy more rights at the expense of those located at the bottom. The caste hierarchy is maintained through a system of social and economic penalties that are philosophically justified and supported by elements of the Hindu religion.

It is important to recognize the uniqueness of caste discrimination. The caste system involves exclusion and discrimination in multiple market and nonmarket transactions and societal interactions. Exclusion for scheduled castes (those at the very bottom of the caste hierarchy) may involve

1. limited access to markets such as land, inputs, consumer goods, and social services;
2. differences between prices charged or received and market prices;
3. exclusion from participating in certain categories of jobs and sale of certain consumer goods such as vegetables or milk because the occupational and physical touch of individuals from scheduled castes is considered "polluting";
4. discrimination in the use of public services such as roads, temples, and water bodies; and
5. physical or residential exclusion that prevents contact with community members and full participation in community life.

Some statistics illustrate the multifaceted nature of this discrimination and its impact (Tables 1 and 2). Those in scheduled castes (SCs) have a lower average level of expenditure than those in other castes, resulting in a rural poverty rate of 35 percent among SCs compared with 21 percent among other castes, and an urban poverty rate of 39 percent among SCs compared with 15 percent among other castes (Table 1). Individuals from scheduled castes are less likely to own land or any productive assets to enable self-employment; they are more likely to depend on casual wage labor for income, resulting in higher levels of underemployment; and, when they are employed, they receive lower average wages that their non–SC counterparts.

Historically, in addition to being excluded from property rights, SCs have also been denied rights to education. High dropout rates, poor-quality education, and discrimination in education are some of the problems children from scheduled castes have faced. As a result, there are large gaps in literacy rates and education levels between children of SCs and those of other castes. In 1991 (the last census year for which data are available), the literacy rate among children of SCs was 37 percent, whereas among children of other castes it was 58 percent.

Data from the 1998–99 National Family Health Survey also reveal a wide gap between SCs and other castes in

health status and access to public services (Table 2). Infant and child mortality is much higher in SC households than in others, and women's health and childbearing are much worse (perhaps a contributing factor). The extent of malnutrition and undernutrition among children of SCs is also much higher than among children of other castes.

Table 2. Health Indicators for Women and Children

Indicator	Scheduled Castes	Other
Infant mortality (per 1,000)	83.0	62.0
Under-five mortality (per 1,000)	119.0	82.0
Proportion below 3 standard deviations of the average weight for age (%)	21.2	13.8
Proportion below 2 standard deviations of the average weight for age (%)	53.5	41.1
Women with anemia (%)	56.0	48.0
Women with antenatal checkup (%)	61.8	72.1
Home-delivered births (%)	72.1	59.0

Source: National Family Health Survey, 1998–99 (Central Statistical Office, New Delhi).
Note: "Other" refers to nonscheduled/nonbackward castes and nonscheduled tribes.

Policies and Strategies for Combating Exclusion

Despite the continued exclusion of individuals from scheduled castes, the level of discrimination they face has in fact reduced over time. Self-employment rates among SCs suggest that about one-third of SC households in rural and urban areas have acquired access to capital assets from which they were traditionally prohibited. The literacy rate improved threefold from 1961 to 1991, rising from 10 to 37 percent. Assessed against the background of the traditional restrictions facing SCs in the ownership of capital assets and education, these are gains indeed. The cumulative impact of this and other improvements is reflected in the decline in rural poverty among SCs, from 59 percent in 1983/84 to 35 percent in 1999/2000.

The Government of India has been proactive in addressing exclusion and undertaking policies to foster social and economic empowerment among SCs. These efforts have had some success, but, as previously suggested, they have not fully addressed exclusion. Although the caste economy has undergone changes, some of its traditions persist. In order to reduce the disparities between SCs and other castes, improvements in asset and income levels need to be faster among SCs. This, however, is not the case: calculations by both Dubey and de Haan indicate that although poverty fell among SCs between 1983 and 2000, the rate of reduction was lower for SCs than for other castes (–2.50 percent per year compared with –3.02 percent per year).

With this in mind, it is instructive to consider the policies implemented in India. The government's approach draws mainly from provisions of equality for SCs laid out in the constitution and is influenced by two considerations: to overcome the multiple deprivations that SCs inherited from their past exclusion, and to provide protection against ongoing exclusion and discrimination.

The result is a twofold strategy as follows:

1. Anti-discriminatory or protective measures. The Protection of Civil Rights Act (1955) and Prevention of Atrocities Act (1989) outlawed "untouchability" and other forms of discrimination in public places or in the provision of public services and provided legal protection to SCs in the event of acts perpetrated against them by higher castes. The practice of reservations in government services, state-supported educational institutions, and various democratic bodies also falls under this category. Reservations are used by the government to ensure proportional participation of SCs in public spheres.
2. Developmental and empowerment measures. In the absence of legal affirmative action policy in the private sector, the State has used general programs to promote economic, educational, and social empowerment for SCs. These programs have been primarily undertaken as a part of anti-poverty programs that target or fix specific quotas for SCs where possible, as follows:
   - Measures for economic empowerment include improving the ownership of capital assets; enhancing the business capabilities and skills of SC members; distributing surplus land to landless households; subsidizing credit and input provision to SC households; providing employment generation schemes to address the lack of employment opportunities in the lean season; and providing programs to support the release and rehabilitation of bonded laborers, given that SCs constitute about 61 percent of bonded laborers in India.
   - Educational development programs comprise about half of the central government's spending on SCs. These programs include improvements in educational infrastructure in areas predominantly populated by SCs; admission to educational institutions through quotas and other measures; financial support for education at various levels; remedial coaching; and special hostels for boys and girls from SCs. Under all of these schemes, girls are given particular attention.
   - Additional schemes focus on improving SC access to civic amenities like drinking water, housing, sanitation, electricity, roads, and public food distribution, since SCs often live in segregated residential areas with unequal access to these civic amenities.

While SCs are represented in parliament through reserved seats, it is perceived that they have not been able to effectively participate, contribute to decisionmaking processes, or monitor program implementation. The paucity of the studies on the role of government representatives from SCs makes it difficult to understand the reasons behind this. Isolated research indicates that problems stem in part from the presence of numerous, fragmented political groups; limited

understanding of the complexity of the issue and its required policy response; and the absence of institutional support to enhance the capacity of representatives to effectively participate in political decisionmaking.

Similar constraints to effective participation are also observed in civil society. While many civil society initiatives targeting SCs exist, many of them having rich grassroots knowledge (and some even receiving selective support from the government), their effectiveness in bringing about change is limited by their lack of access to resources, knowledge of appropriate working methods, and connections to those with influence.

A Call for Research to Develop Inclusive Policies

Given the importance of exclusion in aggravating persistent poverty, the need for action in this area, and the lack of clear insight on how to do this (particularly in the Asian context), research on these issues needs to be undertaken. Systematic studies would support the development of appropriate policies. In particular, research should be undertaken on the following:

1. *The structural context of exclusion.* Further theoretical research is needed on the institutionalization of exclusion associated with caste, ethnicity, religion, color, and other forms of group identity; the effects of such forms of discrimination on economic growth, poverty, and governance; and the remedies against discrimination and deprivation.
2. *The nature and dynamics of exclusion.* A gap exists in empirical research on the economic, social, and political conditions of excluded groups and the forms and dynamics of market discrimination (in land, capital, employment, product, input, and consumer markets) and nonmarket discrimination (in the provision of social services and in public institutions and political bodies).
3. *The consequences of discrimination.* Further empirical research is needed on the poverty consequences of discrimination and the resulting effects on excluded groups in terms of their access to livelihood opportunities, markets, services, and political institutions.
4. *Policy interventions.* Further research is needed to analyze the impact of public policies intended to combat exclusion and alleviate its impact on poverty. Such research must incorporate scientific analyses of interventions undertaken in Asia to empower marginalized groups in economic, educational, political, and sociocultural spheres, as well as analyses of civil society initiatives, issues relating to implementation and governance, and policy experiences in other countries.
5. *Collective action.* Research is needed on effective forms of collective action by deprived groups and other sections of society—such as political parties, social organizations, and nongovernmental organizations—in striving to secure human rights.

Conclusion

While the purpose of this brief has been to highlight the direct and indirect effects of economic discrimination on poverty and the need for socially inclusive policies, above all, the brief draws attention to the current paucity of knowledge on the full impact of discrimination and how this knowledge gap can be effectively addressed. Studies on these issues, as outlined above, are a necessary foundation for the development of appropriate policies to combat discrimination and reduce poverty.

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FACING UP TO INEQUALITY AND EXCLUSION TO END POVERTY AND HUNGER IN LATIN AMERICA

Marco Ferroni

In the last two decades of the 20th century, recurring fiscal and financial crises, unsatisfactory growth, and deep and persistent inequality endangered development prospects in Latin America and the Caribbean (LAC). Since then, financial stability and growth have improved, but inequality and economic and social exclusion remain key areas of concern; they are, arguably, the main challenges to be addressed in designing strategies to end poverty and hunger.

Responding to high prices and demand for commodities, the region's economies have done well in recent years. After a long period of sluggish growth, the current upturn is in its fifth year and, thus, has lasted longer than other expansions in a generation. While growth in LAC has been lower than in the developing world overall—averaging 4.5 percent per year from 2002 to 2006 (or 3 percent per capita per year)—it is taking place in a context of low inflation, relatively balanced monetary and fiscal policies, dynamic capital markets, growing reserves, and declining foreign debt. Growth varies widely, as is to be expected, but most countries are participating in the boom. Growth, coupled with new poverty reduction programs, has begun to improve livelihoods and transform social conditions. But the fruits of growth are distributed unevenly within countries, and the media and academics are raising new concerns about two-speed, diverging national economies.

Deep and persistent inequality implies that the ability of some groups to take advantage of opportunities is consistently inferior to that of others. This is unfair and polarizing, and (as is explained below) it limits growth and the scope for sustainably reducing poverty. Growth and poverty reduction programs alone are unlikely to shift the region out of poverty and hunger. Both approaches are necessary and have tallied up impressive gains in recent years, but both also need to be supported and enhanced by policies and programs that create and distribute opportunities more widely; generate productive, well-remunerated jobs; raise the capabilities of potential job holders; foster inclusion; and reduce inequality. This calls for broad-based social policies with supportive and well-aligned public investment and economic and fiscal policies.

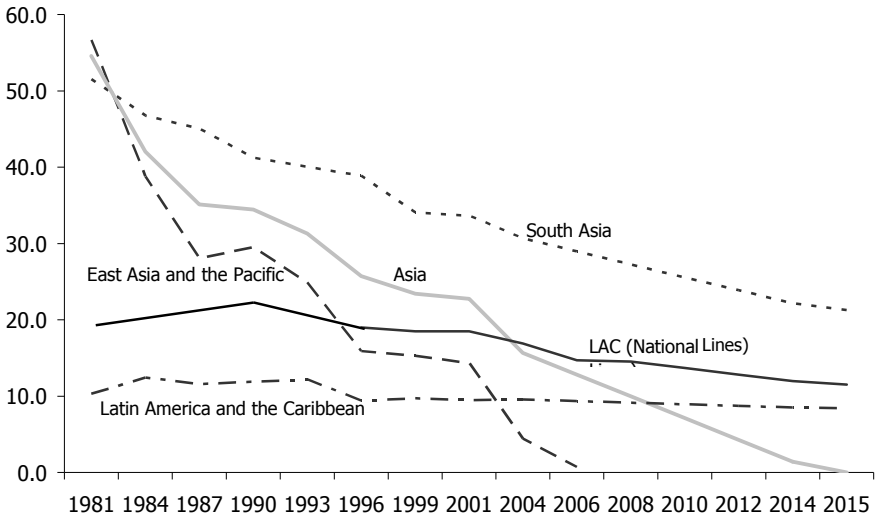
Progress in Reducing Poverty and Hunger

Growth and new poverty reduction programs have measurably affected poverty in recent years, causing it to decline, albeit slowly. As a result, for the region as a whole, it now seems possible to halve the proportion of people living in extreme poverty by 2015, relative to the 1990 baseline. Country-specific projections by the United Nations' Economic Commission for Latin America and the Caribbean (ECLAC)—using national poverty lines—indicate that this target has been met today in Brazil and Chile and seems reachable in 7 more of 17 countries that are being tracked; prospects are less hopeful in the remaining countries, however. Progress toward the target is behind schedule in these countries, but the trajectories vary widely: in some of these countries, the reduction of the proportion of people in extreme poverty has recently accelerated.

Progress in reducing poverty is slower in LAC than in Asia—a region with lower inequality, higher rates of growth, and higher initial levels of poverty (Figure 1). Trends in LAC growth and poverty reduction point in the right direction, however, even though the share of poor people in the population today has changed little from the share reported in 1980, according to ECLAC. It took the better part of a generation after the transformations of the 1980s and the 1990s to recover gains once achieved.

Extreme poverty is defined internationally as incomes of less than US$1 per capita per day. Figure 1 also shows trends for LAC based on definitions of extreme poverty or "indigence" using national poverty lines. The proportion of indigent people in the population is higher with the Latin American national lines than when the international definition is applied. Plausibly, as seen in the figure, the proportion based on these national lines diminishes more rapidly in a context of positive per capita growth. Trends beyond 2001 in the figure (2006 in the case of LAC for national lines) are extrapolations to 2015, the target year for the United Nations' Millennium Development Goals. Future actuals may vary. The curves portray averages for major world regions, which are not explicit about the true situation in individual countries in those regions.

Figure 1—Evolution of Extreme Poverty: Share of Population below US$1 per Capita per Day



Sources: World Bank, PovcalNet Database <http://iresearch.worldbank.org/PovcalNet/jsp/index.jsp> and U.N. Economic Commission for Latin America and the Caribbean, *Social Panorama of Latin America 2006*, Santiago, 2007 <http://www.cepal.org>.

Today, 39 percent of the population in LAC (about 205 million people) is classified as poor, and 15 percent (about 80 million people) is classified as extremely poor or "indigent." Poverty is worse in rural than in urban areas, and, while there are more poor people in the towns and cities of this heavily urbanized region than in the countryside, the absolute number of indigents in rural and urban areas is almost the same. Poverty is also an ethnic and racial phenomenon in many countries in that it disproportionately affects citizens who are of indigenous or African descent.

Lack of income (particularly in the case of the very poor) is strongly correlated with manifestations of hunger, although other factors (including access to health care, levels of education, and household and community variables) affect nutritional outcomes as well. ECLAC data indicate that between two multiyear periods ending in 1993 and 2003, respectively, the prevalence of underweight children under five years old decreased from 10.4 to 7.5 percent (varying from 0.7 percent for Chile to 22.7 percent for Guatemala more recently). This indicator and others therefore suggest that some manifestations of hunger may be subsiding—slowly—as poverty improves. At the same time, nutritional deficiencies affecting young children and their development potential remain prevalent in some countries or parts thereof—most notably in the rural areas of Central America and the Andean region.

Growth, Poverty, and Inequality

Latin America is the world's most unequal region, with a coefficient of inequality greater than 0.5 (Table 1). The distribution of income and wealth, and that of the underlying productive assets, is thus highly skewed and changes little over time. (Recently, income inequality has declined somewhat in Brazil, Mexico, and Peru, but it has increased in Colombia, Costa Rica, and Ecuador, for example.) According to the literature, deep and persistent inequality harms growth, particularly in countries with per capita incomes up to about the LAC average. The paths through which this occurs include inefficient results from imperfect markets interacting with asset inequality; weak incentives to create accountable political and economic institutions and a meritocracy; and a fragmented society, which favors the emergence of a climate of distrust. Inequality also constrains demand (and therefore growth); keeps the poverty-reducing impact of growth low (thus lengthening the time required to meet specific poverty reduction targets); and is responsible for higher-than-expected levels of poverty in LAC, given the region's middle-income status and economic development achievements.

Table 1—Gini Coefficients by Region, 1997–2004

Region	Gini Coefficient
Organisation for Economic Co-operation and Development	0.321
Eastern Europe and Central Asia	0.335
South Asia	0.374
Middle East and North Africa	0.385
East Asia and Pacific	0.399
Sub-Saharan Africa	0.420
Latin America and the Caribbean	0.521

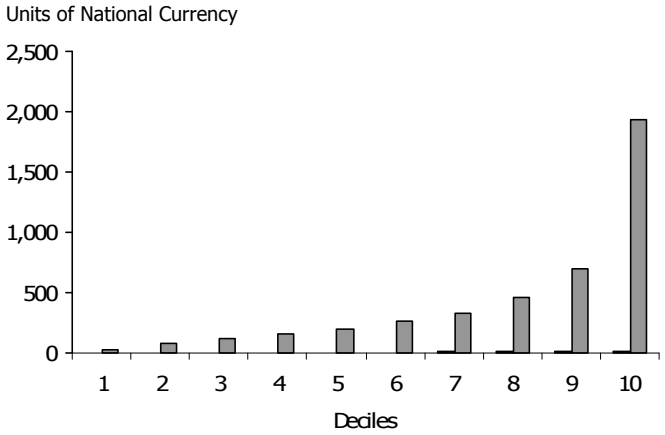
Source: World Bank, World Development Indicators Database <http://go.worldbank.org/6HAYAHG8H0>.
Note: 2004 is the latest year for which data were available by country/region.

Deep inequality in LAC manifests itself in income distributions at the country level that are rather flat up to decile 8 (if not 9) and top-heavy, with the richest decile capturing 40 percent or

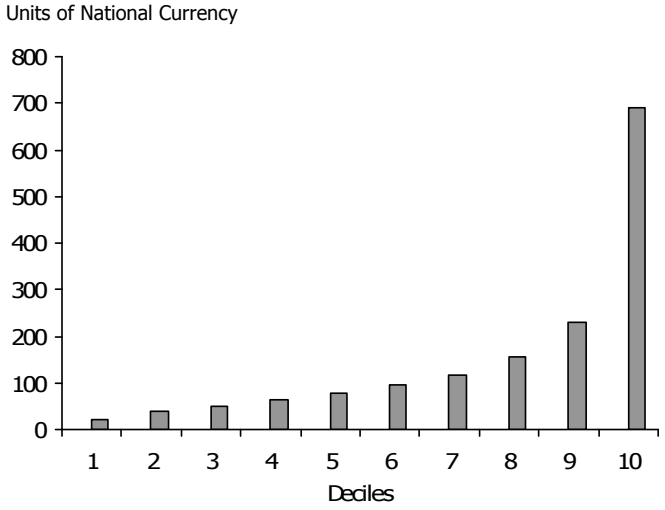
more of total income (Figure 2). This pattern implies that the differences in average absolute incomes among the deciles of the middle segment (here defined as deciles 3 to 8) are small, and that the mean income of this numerically and politically important group is low. Panel data point to a high degree of income instability among the middle deciles over time. Structural, extreme poverty at the low end of the distribution (deciles 1 and 2) therefore coexists with a great deal of privilege, protection, and stability at the top (decile 10) and frequent cyclical adjustments in between.

Figure 2—Income Distribution by Decile, Selected Countries

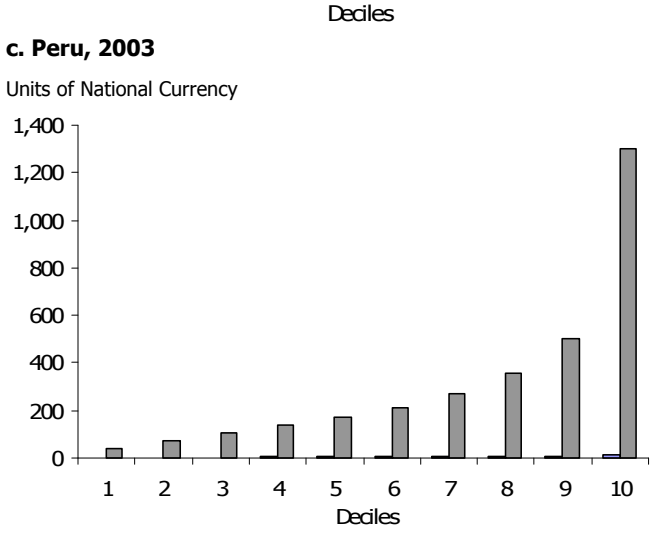
a. Brazil, 2004



b. Chile, 2003



c. Peru, 2003



Source: Socio-Economic Database for Latin America and the Caribbean (CEDLAS and World Bank) <http://www.depeco.econo.unlp.edu.ar/cedlas/sedlac/> accessed 2007.

Households in the middle range may fall into poverty or near-poverty as a result of employment shocks or other contingencies, even as some of those officially classified as poor may exit poverty, with or without the help of government redistributive programs. The middle range of households, therefore, is not "middle class" by most criteria but rather relatively vulnerable and poor, with low health and education indicators, limited physical and financial assets, and limited capacity to help drive growth. Policies that benefit the middle range of households are therefore needed, in addition to policies targeting those classified as poor.

The challenge for LAC today, as in the past, is to accelerate lasting and poverty-reducing growth. Efforts to take advantage of the potential economic contribution of the majority (hence including the middle range) are central to this endeavor, as are measures and incentives encouraging productivity and innovation. The region needs reforms that go beyond those of the past; focus on microeconomic aspects, as well as institutions and the politics of change; and take a new, committed approach to broad-based social policy benefiting a wide spectrum of the population. The standard, poverty-targeted approach must be embedded in a comprehensive social strategy that focuses on job-based growth.

Growth and targeted poverty reduction programs are currently reducing poverty by creating employment (mostly in unskilled, informal-sector jobs) and through a range of programs, including conditional cash transfers to eligible beneficiaries. But such transfers are only effective in reducing poverty today; reducing poverty tomorrow, through gains in human capital acquired under the terms of the transfers, depends on the availability of good and stable jobs.

So far, the region's economies are not creating this category of jobs on the scale required. Poverty reduction programs cannot fulfill this need, so other efforts must be brought to bear. These revolve around the domestic determinants of growth, as opposed to foreign demand, and thus are largely in the realm of social policy: education and the quality of the workforce; equality (since inequality constrains how the "asset-poor" contribute to and share in the benefits of growth even in a context of good economic policies); labor markets, social security, and social protection; the amount, composition, spatial distribution, and productivity of public (and private) investment; law and order; regulations; and the state of infrastructure and finance. Labor markets deserve a special word.

Labor Markets and Exclusion

Labor markets have been an increasingly important source of inequality and exclusion since the crisis in the 1980s. Unemployment grew from 6 percent in 1990 to 11 percent in 2002, especially in parts of the Southern Cone, the Andean countries, and Central America, while average real wages tended to decline. Employment shifted to unstable, low-productive, and ill-remunerated activities in the informal sector, where workers lacked health care coverage, insurance, social security, and job protection, and where having a job was no longer a ticket out (and to staying out) of poverty. In addition, wage inequalities worsened as schooling improved (by about 1.1 years over the 12-year period to 2002), average returns to education slowed, and employers paid premiums to highly skilled workers, who became the main segment of the population deriving prosperity from trade liberalization and integration.

The relative inability of economies to create "good" jobs since the 1980s, and the attendant rise in the share of precarious, low-wage jobs in total employment, is therefore the core of the problem, which has been linked not only to the occurrence of crises and persistent low growth, but also to the rising importance of the services sector as the low-skilled workforce continued to expand. Further, the phenomenon has been linked to factors that vary widely in their scope and implications, including economic volatility; macroeconomic and financial imbalances; high interest rates; limited access to credit; deficiencies in governance, security, and law and order; rent-seeking behavior; the "natural resource curse"; and unmet demand for higher skilled workers prompted by shifts in technology and new equipment. Another set of factors that is sometimes invoked has to do with employers' and workers' incentives under the rules governing social security systems, which may militate against the formalization of the workforce under highly differentiated seasonal and year-round work and employment conditions on the ground.

Since the 1980s, markets and systemic forces have produced a situation very different from the postwar years of growth, where, at least for some, inclusion and social integration were promoted through the expansion of formal-sector jobs in government and manufacturing and solidified through "corporatist" arrangements for the benefit of given groups. Basic economic and social rights, including protection against contingencies, became attached to employment in the public and (formal) private sectors, but subsequent difficulties brought this route to inclusion to a halt. Stabilization ended the practice of inflationary financing of social services and systems of protection at about the time when trade opening and globalization began to pose new challenges to job growth and inclusion.

But markets are not, and have not historically been, the only force behind exclusion. Prejudice, discrimination, and biased rules, whereby access to resources, justice, jobs, and other goods becomes unequal among groups, are in effect and play important roles in furthering exclusion. One way to view the phenomenon is in terms of dysfunctional

political, economic, social, and cultural processes, by which the excluded are denied access to the opportunities and quality services that are needed for fulfilling, productive lives (Box 1).

Box 1—Definitions of Economic and Social Exclusion

- A multidimensional, multidirectional, multicausal process . . . affecting the *functionings* and well-being of individuals and groups.
- A group phenomenon rooted in culture and traditions (afrodescendants, indigenous, gender, disabled, stigmatized) . . . reproducing itself through discrimination, unresponsive institutions, and economic change.
- A moving target . . . operating through the labor market, differences in endowments, growing informality, and lack of social protection.
- An entrenched condition . . . effectively inhibiting upward mobility.

Some individuals and groups are excluded because of innate factors over which they have no control: ethno-racial factors are important determinants of exclusion, as can be traits such as gender, age, physical ability or disability, and other considerations. Ethno-racial correlates of exclusion potentially affect up to 40 percent of the region's population, including more than 40 million indigenous people and many of the region's approximately 150 million people of African descent. These groups are underrepresented politically and overrepresented among the poor.

Exclusion and entrenched inequality are at the center of the sense of dissatisfaction and disengagement that (as reported by opinion surveys and other sources) affects the region's population, despite the presence of good news on the economic front.

Broad-Based Social Policies to Accelerate Inclusive Growth

The *purpose* of the approach to broad-based social policies outlined and espoused here is ambitious but straightforward: to end both poverty and hunger, and the near-poverty affecting many in the middle range. This calls for strategies, investments, and the alignment of incentives to reduce inequality, advance inclusion, and foster job-based growth. On a different plane, the *ways and means* also include the generation of political support and agreement to start down the proposed road and to persist, shifting from a tradition of short-term policies to a culture of long-term action anchored in legal frameworks and a system of rights.

The *approach* will vary by country depending on local conditions and what can be learned from the past. There is nothing on the horizon to suggest that silver bullets will work. The operationalization, finally, will be country-specific, requiring solidarity and resources. For most countries (given their low tax burden) this in turn leads to a topic not fully discussed here for lack of space—the need to reform fiscal and tax systems to raise revenue and progressivity, increasingly through direct taxes within appropriate bounds. In LAC, unlike other parts of the world such as the countries of the Organisation for Economic Co-operation and Development, the effect of taxes and transfers in lowering income inequality (and hence Gini coefficients) is very low.

In terms of policies, the espoused elements can be visualized as four interacting clusters, as follows.

Labor Market and Entrepreneurial Capability

The first broad cluster, *labor market and entrepreneurial capability*, focuses on the supply-and-demand side of the task of creating productive, well-remunerated jobs. A key element, clearly, is education and training, where the region has made advances but with much more to be done. According to existing analyses and evaluations, furthermore, labor market policies and programs are a neglected area that could be promising in important respects, for example, job intermediation; training and competency accreditation; income protection mechanisms, which are vital for job flexibility; and policies to address exclusion and to facilitate upward mobility for less advantaged workers. Other aspects to be addressed in this cluster include basic services and infrastructure, which need to be improved; the many obstacles that hamper the establishment and functioning of businesses as sources of employment in the formal sector; and new areas such as guiding remittances to sustainable, productive use. As the analysis of poverty trends indicates, rural development continues to be relevant and needed, even though in many countries it does not receive the attention it deserves.

Social Protection and Tools for Risk Management

The second cluster, *social protection and tools for risk management*, addresses the widespread lack of protection against contingencies, such as economic downturns and job losses, natural disasters (which are frequent in the region), violence and crime (also frequent), and personal and family-related events and risks (sickness, accidents, disability, old age). The lack of protection against these contingencies is not only a "social" problem, but a major economic one as well, inasmuch as it can generate paralyzing insecurity and prevent households from taking entrepreneurial risks that would support growth and increased job opportunities. The most ambitious reform agendas in the areas under this cluster include gradual moves toward universal guaranteed health services (Chile's Plan AUGE is a beginning) and the extension of pension coverage through contributory and noncontributory components. In both cases, challenging issues of financial viability need to be addresed.

Social Programs

The third cluster, *social programs*, addresses structural poverty at the low end of the income distribution. Here, the best of the available experience with targeted programs requiring "co-responsibility" on the part of the beneficiaries should guide the agenda. The conditional cash transfer programs, in particular, represent an improvement over previous approaches, but they are too limited in scope to solve structural poverty by themselves and they also have an opportunity cost (with more or less "bite" depending on the level of resources available overall) in the sense that the corresponding funds could be spent on other aspects, such as infrastructure needed to create good jobs. There are reasons to argue that social programs as understood here, with accountability on the part of politicians, beneficiaries, and intermediary institutions and constant feedback from evaluation to operations, should be expanded thematically, and extended to all eligible groups. For example, nutrition programs are needed in many settings as evidenced by the analysis of poverty and hunger trends above, as are follow-on programs to the cash transfers to foster access to productive assets such as credit and other resources that can underpin a small-scale entrepreneurial push.

Affirmative Action

The fourth cluster, *affirmative action*, is shorthand for public policy to advance inclusion. The task in this difficult area is to achieve equality in access and opportunities for excluded groups by bringing them into the political, institutional, and community structures that make the decisions affecting their prospects. The task is hampered by a dearth of analysis and experience in constructing "inclusive" public policies, although some efforts toward inclusion have been made in the region (for example, in bilingual education). As suggested by the Inter-American Development Bank, the promotion of inclusion through public policy requires normative frameworks, institutions, and instruments, some of which currently exist (such as legislation proscribing discrimination based on ethnicity and race in some countries), but the application is often deficient and enforcement is lacking. Many incidences of exclusion are subtle, intangible, and hard to prove, and the real need—as argued by the Inter-American Development Bank—is to transform rights on paper into effective rights in practice.

Conclusion

To conclude, the elements of the approach to broad-based social policies as advocated in this brief are far-reaching and ambitious, but so are the expected benefits in terms of more equal opportunities, jobs and upward mobility for the disadvantaged, cohesive social systems, and, in time, the end of poverty, near-poverty, and hunger. The current, favorable environment of growth provides an opportunity for a political and policy commitment along these lines.

For Further Reading: U.N. Economic Commission for Latin America and the Caribbean (ECLAC), *Social Panorama of Latin America 2006*, Santiago, 2007 <http://www.cepal.org>; N. Birdsall and R. Menezes, "Beyond the Washington Consensus: A New Job-Based Social Contract in Latin America," *Foreign Affairs en Español* (July–September 2005) <http://www.foreignaffairs.org>; Inter-American Development Bank (IDB), *Outsiders? The Changing Patterns of Exclusion in Latin America and the Caribbean*: *Economic and Social Progress in Latin America 2008* (Washington, DC: IDB, 2007).

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TRADE LIBERALIZATION AND CHILDREN

Understanding and Coping with Children's Vulnerabilities

Javier Escobal

The arguments in favor of trade liberalization are well known: it promotes the efficient allocation of resources through comparative advantage, allows the dissemination of knowledge and technological progress, and encourages competition. Trade liberalization is likely to have a major impact on the lives of poor children and their families. Although this effect may be positive in the long run, the development literature recognizes that it may have a negative short-run impact in sectors that are unable to adjust rapidly enough to the new policy context. Vulnerable groups, especially children, may be affected in a variety of ways based on the effect on household livelihood and the intrahousehold distribution of power and resources. Complementary policies need to be put in place in order to cope with these vulnerabilities.

Four dimensions associated with the research on the effects of trade liberalization are relevant to the well-being of children. First, trade liberalization changes the relative profitability of economic activities, so some groups within a society may benefit while others lose—at least in the short run. Second, the effects of trade liberalization occur gradually over time. Third, trade liberalization affects not only household welfare, but also the welfare of individuals within households, so vulnerable groups may exist even in households that can benefit from trade liberalization. Fourth, trade liberalization has fiscal impacts that may generate reallocation in public spending. It is also important to note that the complex interactions of these dimensions make the welfare impact of trade liberalization difficult to trace.

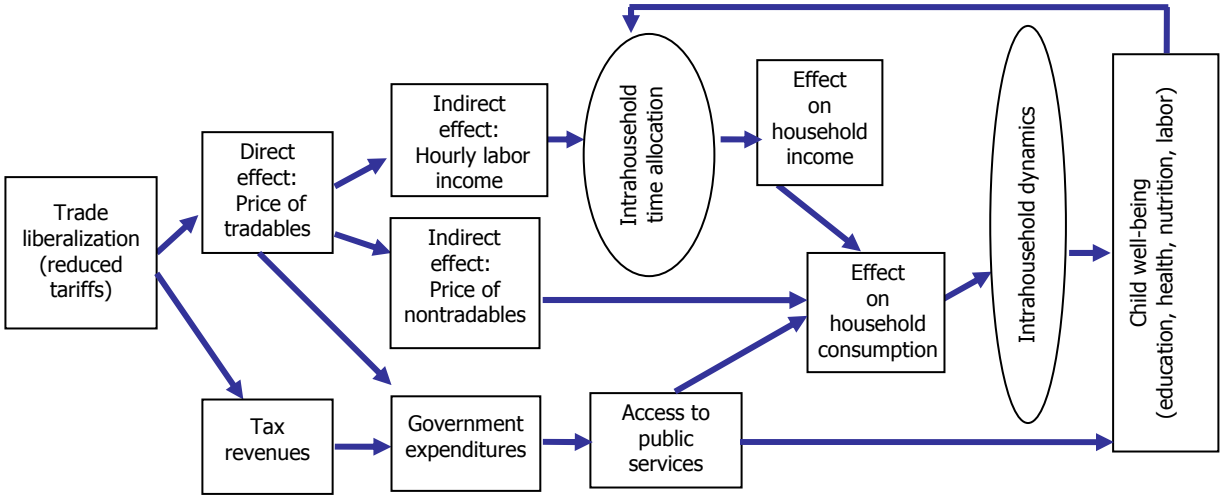
Long- versus Short-Term Effects

Trade liberalization has both direct and indirect effects on the well-being of children (Figure 1), and these effects operate both short- and long-term. A first effect relates to the impact of trade liberalization on the domestic prices of goods and services. Among small developing countries, trade liberalization may directly affect the prices of tradable goods due to direct interaction with international prices. In turn, these price changes induce further changes in the prices of nontradable goods. Similarly, the change in the prices of consumption goods induces a change in hourly labor income, which in turn affects the allocation of household and intrahousehold time and resources. A second link consists of the effects of these changes (in consumption good prices and hourly labor income) on both household consumption and household income. In addition to these effects, the reduced tariffs that trade liberalization brings about will also affect tax revenues and hence the supply of goods and services provided by the government. Depending on the intrahousehold distribution of power and resources, all these changes may affect the allocation of children's time among work, school, and play; their access to health services; and their consumption of goods and services. Finally, given that children are also considered a resource, child labor, health, or nutrition outcomes will feed back into household decisionmaking processes. This feedback effect may have implications for whether or not a household engages in opportunities brought about by trade liberalization.

How Trade Liberalization Affects Children's Welfare

Although an enormous body of research deals with the effects of trade liberalization on economic growth and household welfare, little research focuses on the effect of trade liberalization on child welfare. The most researched topic is the impact on child labor. As trade liberalization has accelerated, attempts to ban child labor have increased through the introduction of harmonized international child labor trade regulations. Several authors have noted, however, that using trade restrictions to deter the exploitation of foreign child labor may have had the opposite effect: children can be negatively affected as the worst types of child labor increase, especially in cases where export earnings are severely reduced due to the introduction of export restrictions.

Figure 1—Key Short-Run Linkages between Trade Liberalization and Child Welfare



Source: Adapted from Figure 6 in J. Escobal and C. Ponce, "Trade Liberalization and Child Welfare: Assessing the Impact of a Free Trade Agreement between Peru and the United States," Young Lives Working Paper No. 36 (Oxford: Department of International Development, University of Oxford, 2008) and Figure 1 in N. Jones, N. N. Anh, and N. T. Hang, "Trade Liberalization and Intra-household Poverty in Vietnam: A Q2 Social Impact Analysis," Q-squared Working Paper No. 46 (Toronto: Centre for International Studies, University of Toronto, 2007).

In general, the effect of trade liberalization on child labor is ambiguous. The effect will depend on changes in the opportunity costs of children's time and whether an income effect on child labor is brought about by changes in employment or wages. Growing evidence indicates that, in many cases, trade reform may reduce the incidence of child labor through its income effects. However, short-term vulnerabilities do arise and may divert children from school to work.

The short-term impact of trade liberalization over child labor and schooling decisions is critically mediated by two key factors: whether or not the household has credit constraints and whether or not female labor participation increases due to trade liberalization. Under the presence of credit constraints, short-term vulnerabilities may induce parents to withdraw children from school even if the long-term income effect generates a positive incentive in favor of schooling. On the other hand, increased female labor participation—whether from new access to labor opportunities provided by trade liberalization or a need for additional income due to its negative effects—may have important effects on child welfare, especially for girls. Under increased female labor participation, childcare may become the responsibility of older siblings, reducing their chances of attending school.

If trade liberalization reduces school attendance in the short run, it will also have long-term implications for the intergenerational transmission of poverty. Even if the policy shock does not induce changes in schooling and time spent on education, it may reduce the effective accumulation of human capital through cuts in expenditure on education, from both the state and the family, which may also have long-term implications for children's well-being.

Young Lives Evidence

Young Lives, an international research project investigating the changing nature of childhood poverty over a 15-year period (starting in 2002), provides a unique opportunity to study the short- and long-term effects of trade liberalization on children's well-being. The project has studied the relationship between trade liberalization and child welfare for two countries currently moving toward trade liberalization and for which the project is collecting longitudinal data: Peru and Vietnam. For Peru, the project studied the likely impact of a free trade agreement (FTA) with the United States, while for Vietnam, it is tracing the impacts of increased trade liberalization since Vietnam's entry into the World Trade Organization in November 2006.

Peru and Vietnam have moved toward more open economies in the past two decades. The effect of this move has been impressive in terms of higher growth, lower inflation, and sustained foreign investment. Further, these macroeconomic trends have been accompanied by reduced poverty in Vietnam, though this trend has been much less pronounced in Peru. In both countries, however, income inequality is increasing (Table 1).

In Peru, Young Lives studied school attendance and the time children had available to study and play (as opposed to having to work) as indicators of skill formation. The project also

looked at the effect of an FTA on the employability of the mother or caregiver, which may increase the burden of children (especially girls) in performing household chores and caring for younger siblings. Young Lives research found that both boys and girls—especially those living in Peruvian rural areas—may be vulnerable to reduced school attendance if complementary policies are not put in place alongside FTA tariff reductions.

Table 1—Trade Liberalization and Poverty in Peru and Vietnam

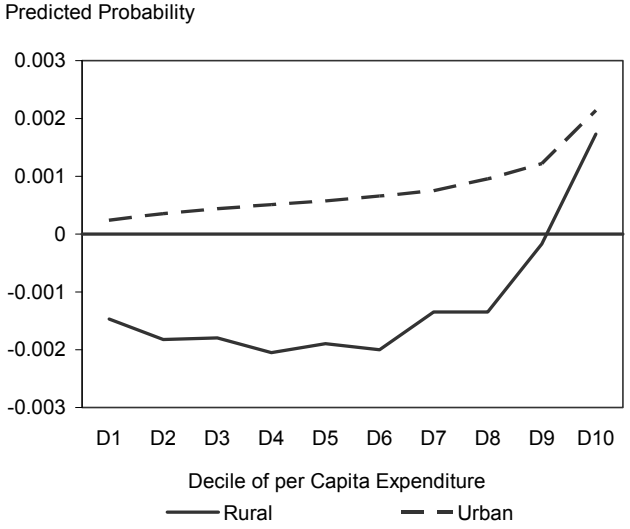
Country/Indicator	Early 1990s	Late 1990s	Early 2000s
Peru			
Real GDP growth (per year)	2.1	6.8	4.8
Trade openness (X+M/GDP)	20.6	26.0	32.7
FDI stock/GDP	4.0	13.1	19.4
Inflation (% per year)	132.0	8.6	3.7
Poverty rate	54.5	42.7	48.0
Extreme poverty rate	23.5	18.2	14.9
Inequality (Gini index)	0.388	0.386	0.403
Vietnam			
Real GDP growth (per year)	2.3	8.1	5.5
Trade openness (X+M/GDP)	50.9	77.5	104.0
FDI stock/GDP	0.9	4.0	2.1
Inflation (% per year)	67.5	3.2	4.0
Poverty rate	58.1	37.4	28.8
Extreme poverty rate	24.9	15.0	10.9
Inequality (Gini index)	0.329	0.350	0.367

Sources: For Peru: Central Reserve Bank, Instituto Nacional de Estadística e Informática, and Instituto Cuanto; for Vietnam: Vietnam General Statistical Office, World Bank, and IMF staff estimates.
Notes: GDP indicates gross domestic product; FDI, foreign direct investment; X, exports; and M, imports.

School attendance may be affected by two factors. First, household incomes may be negatively affected, at least in the short run, and parents may have difficulty meeting education expenditures (an income effect), and, second, in those sectors where employment opportunities for women increase, it will become more likely that mothers or caregivers will engage in wage-dependent activities, requiring the transfer of household responsibilities to school-age children (a substitution effect). In the case of urban boys and girls from Peru, however, the Young Lives study found that, on average, trade liberalization is likely to bring additional income into their households, so the probability of their attending school may in fact increase.

Trade liberalization may reduce the probability of school attendance for children of households in rural areas (Figure 2), and this reduction will be larger for poor households. In contrast, however, trade liberalization may have a positive, although small, effect on the probability of school attendance among children of households in urban areas. It is interesting to note that research indicates that the least-poor children (the upper 20 percent of the expenditure distribution) are the ones with the largest increase in the probability of attending school.

Figure 2—Change in the Probability of School Attendance for Children in Urban and Rural Peru



Source: J. Escobal and C. Ponce, "Trade Liberalization and Child Welfare: Assessing the Impact of a Free Trade Agreement between Peru and the United States," Young Lives Working Paper No. 36 (Oxford: Department of International Development, University of Oxford, 2008).

In Vietnam, the Young Lives study undertook both quantitative analysis, through a longitudinal survey, and in-depth qualitative analysis based on two key sectors that are expected to be affected by trade liberalization—aquaculture and sugarcane. After looking at three key aspects of children's well-being (child work, educational attainment, and health status) the study concluded that those likely to be vulnerable in an environment of greater economic liberalization are girls in general; children of ethnic minority, female-headed, low maternal education, and impoverished households (due to their susceptibility to economic shocks); and communities with highly concentrated poverty.

Policy Implications

The effects of trade liberalization are difficult to trace and are mediated by regional and local characteristics, including differentiated transaction costs and market imperfections, that affect the impact of international prices on local prices. It is therefore safe to say that the effects of trade liberalization are uncertain and that the perceived

"losers" in fact may not be affected to the degree expected if local conditions act as a buffer. Similarly, those anticipated to be the "winners" may not benefit as much if they are adversely affected by market imperfections. The fact that clear winners and losers cannot be identified in advance does not mean that policymakers cannot devise appropriate policies to address the potential negative short-term effects of trade liberalization. It does mean, however, that the uncertainty of outcomes needs to be taken into account.

Policy options to be considered to address vulnerability to possible negative trade liberalization impacts include the following:

- At the macroeconomic level, a contingency fund can be maintained for use in case of a negative event, whereby "losers" can be identified and appropriately compensated.
- At the household level, conditional (or unconditional) cash transfer programs can be instituted to redress liquidity constraints resulting from shocks induced by trade liberalization.
- At the individual level, differentiated incentive mechanisms can be employed to reduce the gender imbalance, whereby girls face a disproportionably higher risk of being negatively affected.

When determining cash transfer amounts, governments should provide higher amounts to girls as a safeguard against a widening of the gender gap in school attendance. In this context, conditional cash transfer programs, such as Juntos in Peru, may play an important role in reducing children's vulnerability to the negative effects of trade liberalization. On the other hand, an increase in the number of childcare centers may also be an important factor in reducing the probability that children will be required to take on greater domestic responsibilities as more adults enter the labor market in response to new economic opportunities brought about by trade liberalization. In Peru, the Wawa Wasi program—a public program targeting poor children between the ages of 6 and 48 months—is expected to be expanded to cope with a higher demand for childcare services in areas were female labor participation is likely to expand.

Concluding Comments

Research clearly shows that children are indeed susceptible to the negative effects of trade liberalization and that they belong, in general, to the same types of vulnerable groups identified in many other development and poverty contexts. The key implication is that poor, marginalized, and disempowered households are least likely to participate in or benefit from trade liberalization policies targeting economic growth, so the children of these households are the most at risk from negative effects.

For Further Reading: J. Escobal and C. Ponce, "Trade Liberalization and Child Welfare: Assessing the Impact of a Free Trade Agreement between Peru and the United States," Young Lives Working Paper No. 36 (Oxford: Department of International Development, University of Oxford, 2008); N. Jones, N. N. Anh, and N. T. Hang, "Trade Liberalization and Intra-household Poverty in Vietnam: A Q2 Social Impact Analysis," Q-squared Working Paper No. 46 (Toronto: Centre for International Studies, University of Toronto, 2007); P. Pereznieto and N. Jones, "The Social Impacts of Trade Liberalization: How Can Childhood Poverty Be Reduced?" Young Lives Policy Brief 1 (2005) <http://www.younglives.org.uk/>.

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POLICIES AND LESSONS FOR REACHING INDIGENOUS PEOPLES IN DEVELOPMENT PROGRAMS

Lennart Båge

Despite great efforts to reduce rural poverty at the national and global levels, many of the poorest groups remain difficult to reach through mainstream development programs. In particular, there is ample evidence that indigenous and tribal peoples and ethnic minorities are disproportionately represented among the rural poor worldwide.[1] Several recent studies show that the poverty gap between these peoples and other rural populations is increasing in some parts of the world. In addition, indigenous peoples and ethnic minorities generally score lower on the Human Development Index than majority groups in their countries, and this is particularly true of women.

Better reaching out to these marginalized groups in poverty reduction efforts is an important policy challenge. Meeting this challenge requires, first, taking into account the heterogeneity of poverty and, second, building on the strengths and values of these peoples, including their capacity to act as stewards of biodiversity.

Taking into account the heterogeneity of poverty involves recognizing that poor people face different forms of disempowerment and marginalization. For ethnic minorities and indigenous peoples, these forms may be different from those of the majority in their respective societies. Their livelihood systems are often especially vulnerable to environmental degradation and climate change, especially as many inhabit economically and politically marginal areas in fragile ecosystems in the countries likely to be worst affected by climate change. They are often disempowered by lack of recognition of their cultural and socio-political systems, which undermines their social capital and their ability to shape their future. Their land, territories, and natural resources, with which they have ancestral bonds, and which are the basis of their livelihoods, are frequently threatened by encroachment, dispossession, and a lack of respect and protection of their rights. In many cases, their governance institutions, notably concerning natural resource management, have been weakened by socio-economic changes and by official policies. Finally, ethnic minorities and indigenous peoples are often at a disadvantage in capturing market opportunities. These factors of poverty impact on both men and women, but women are often most vulnerable to poverty, disempowerment, and exploitation.

Building on the strength and values of ethnic minorities and indigenous peoples is about enlarging their opportunities to pursue developmental goals that they themselves value, both collectively and as individuals, and to continue to play their roles as stewards of biodiversity and holders of unique cultural heritages. Listening to these peoples, both women and men, and involving them in decisionmaking about their future, are key elements of an effective response. However, ethnic minorities and indigenous peoples are not explicitly targeted by the Millennium Development Goals, they are often marginal players in decisionmaking processes about poverty reduction and development, and rarely have a strong voice in Governments' overall poverty strategies. This is only slowly changing. Several international and national policy institutions now exist that focus on indigenous peoples and ethnic minorities. Within the UN, these include the Permanent Forum on Indigenous Issues and an Inter-Agency Support Group for Indigenous Issues.

In September 2007, the General Assembly adopted a Declaration on the Rights of Indigenous Peoples, which affirms among other things the collective and individual rights of Indigenous Peoples over their territories; their institutional, social, economic, and cultural autonomy; and their unique paths to development. Several donor agencies also have policies and strategies to guide their work with these groups. These are important resources to use when formulating policies and programs to

[1] While there is no universally accepted definition of the term "indigenous peoples," it is UN practice to use the term to include groups that are called in different ways in different countries, such as ethnic minorities in China, tribal people in India, and hill people in Bangladesh. The UN Permanent Forum on Indigenous Issues estimates these groups to constitute 5 percent of the world population (or 370 million), and 15 percent of the global poor.

expand their capabilities. However, much effort is still needed to better understand the complexity of the forms of poverty, subordination, and disempowerment faced by these groups as well as to work with them to further their own objectives, values, and capabilities.

Lessons from IFAD's Experience

The International Fund for Agricultural Development (IFAD) has intensified its efforts to reach out to indigenous peoples, tribal people, and ethnic minorities in recent years, by better understanding the complexity and diversity of rural poverty and by striving to expand their capabilities both collectively and as individuals.

A few lessons can be learned from this and others' experience. **The first lesson** concerns the importance of participatory approaches to design and implementation of inclusive development policies and programs. A key tool to better deal with complexity and diversity is a strongly participatory approach to designing and implementing programs that are responsive to local problems and to the goals and visions of women and men from indigenous peoples and ethnic minorities.

The second lesson is that there are promising, reasonably tested approaches to work with ethnic minorities and indigenous peoples to help them to overcome poverty, including the following:

1. *Increasing incomes by diversifying livelihoods and opportunities.* Many ethnic minorities and indigenous peoples live in areas with difficult climates, poor soils, and high vulnerability to natural disasters. Livelihood diversification is thus key to enhance the economic capabilities of both groups and individuals. This entails crop diversification and intensification, research and adaptation of productivity-enhancing technologies, microfinance, support to micro-enterprises, and developing alternative income generation opportunities from natural resources, such as eco-tourism and processing of medicinal and food products. Experience shows that such interventions have great potential but may face problems of sustainability. These can be mitigated by building on local practices, values, and commitments, on sound gender analysis and the mobilization of both women and men, and on the identification of activities with both cultural value and market potential.
2. *Strengthening both group and individual natural resource entitlements.* Weak resource entitlements are often a major factor of rural poverty. In addition, their distribution plays a key role in local livelihood strategies and in cultural and social practices. Loss of land in particular may not only limit livelihood opportunities but also lead to disintegration of the social fabric and to the entrenchment of social marginalization. Some programs have boosted capabilities by facilitating the recognition or protection of indigenous entitlements over natural resources, for instance via demarcation and titling of ancestral lands, forest, and water sources, support to gender-equal distribution of entitlements, and advocacy. Such initiatives often entail new forms of natural resource management and new balances between individual and collective entitlements, which raise new challenges and opportunities for development requiring innovation.
3. *Strengthening local and traditional governance institutions.* Several donor-funded initiatives aim to strengthen and reform traditional governance institutions, particularly in relation to natural resource and conflict management. Strengthening these institutions constitutes both a challenge and an opportunity for development, as it may affect the balance between group and individual goals, practices, and visions in ways that development enablers must be better prepared to address.
4. *Respecting the principle of free prior and informed consent.* This is enshrined in the Declaration and should guide development interventions with ethnic minorities and indigenous and tribal peoples. Respecting this principle means both addressing the causes of rural poverty among Indigenous Peoples and nurturing their capabilities in decisionmaking.

The third lesson is that the application of programmatic and technical solutions developed in other contexts is often not an optimal response to the challenges facing indigenous peoples, ethnic minorities, and other marginalized groups. Solutions are required that are appropriate to these groups. These can be found through the following means:

1. *Engaging indigenous and tribal peoples and ethnic minorities shaping their future.* "Development with identity" is an important principle for development enablers working with these groups. This principle affirms that cultural distinctiveness, which includes specific values and perspectives on development, is part of indigenous developmental capabilities; hence it needs to be targeted with initiatives to enhance social and cultural capital and to improve communication and information about

indigenous cultures. IFAD-funded programs include initiatives to address cultural marginalization and loss of social capital and to involve indigenous communities in the design of programs to ensure adaptation to local conditions, cultural and social ownership, and gender equality.

2. *Building on local and indigenous knowledge systems.* Indigenous peoples and ethnic minorities are often stewards of biodiversity and holders of unique knowledge linked to local cultures and identities, which has two main implications for development policies and programs. First, technological packages to improve livelihoods should evolve out of adaptive R&D, in order to build on local knowledge systems in the face of new environmental challenges linked to climate change and to enhance local capabilities. Second, certain forms of local and indigenous knowledge (for example, about medicinal plants or underutilized plant species) need to be supported to be integrated into fair, sustainable value chains, which may boost local capabilities and strengthen local cultures while also contributing to climate change mitigation and biodiversity.

The fourth lesson is that we need to innovate to find new and better solutions to emerging challenges, rather than only to long-standing ones. A case in point is climate change. While poor people, including ethnic minorities and indigenous peoples, are among the least responsible for the problem, they are among those most vulnerable to it. However, they can also be part of the solution, due to their knowledge of how to manage their environments in a sustainable manner. This requires finding ways to help these marginalized groups to continue to manage their lands and to store carbon on them. In this regard, IFAD is discussing with the International Food Policy Research Institute (IFPRI), in the context of their strategic partnership, how to help poor rural people to benefit economically from storing carbon on their lands in the interest of all humanity.

Some Implications for Development Policies and Programs

The challenge of facilitating development among ethnic minorities and indigenous peoples requires better understanding and dealing with complexity and difference, both as concerns factors of rural poverty and local and indigenous values, capabilities, and visions. However, in order to do so we need to part with some previously held wisdom, beliefs, and visions.

First, the challenge of development for marginalized groups such as ethnic minorities and indigenous peoples is not, as they have also repeatedly stressed, one of access to "modernization." Policies and programs driven by this notion tend to ignore the fact that these groups have livelihood systems historically adapted to their environmental circumstances and often well suited to the tasks of climate change mitigation and adaptation. For many of these groups, "modernization" has historically meant pressure to assimilate, abandon their institutions, and accept economic marginality. Blending modern and traditional institutions and technology is the most effective approach in our experience.

Second, building "cultural sanctuaries" around ethnic minorities and indigenous peoples should be avoided, as it may perpetuate their marginalization and stifle change and individual choice. As noted, respect for the capacity of these groups to define themselves, their development strategies, and their future has been sanctioned by the recent UN Declaration on the Rights of Indigenous Peoples, and it should be central to rural development initiatives with these communities. However, this should not lead us to build monolithic understandings of the cultures of ethnic minorities and indigenous peoples or to discount difference and a capacity for change in their societies.

What is needed is **an approach that respects the rights of ethnic minorities, tribal people and indigenous peoples in line with the recent UN Declaration**, which affirms the cultural, economic, political, and civil rights of these groups and of individuals belonging to them.

The main implication of the above for development policies and programs is the need for robust, simultaneous action on three fronts, as elaborated below:

1. *Principles of engagement:*

   - broad-based policymaking and programming;
   - development with identity;
   - free, prior and informed consent;
   - engaging marginalized groups, such as ethnic minorities and indigenous peoples as full partners in development;;
   - gender equality;
   - flexibility and sensitivity to context;
   - long-term commitment and perspective; and
   - addressing the many forms of disempowerment of ethnic minorities and indigenous peoples as factors of poverty.

2. *Policy interventions to address*

   - the legal definition and protection of the natural resource rights of ethnic minorities and indigenous peoples;
   - the cultural, social, and political marginalization of these groups; and
   - factors and circumstances that hinder the participation of ethnic minorities and indigenous peoples in national, regional, and local development strategies.

3. *Program interventions to address*

   - income improvement through sustainable livelihood diversification;
   - cultural and social empowerment and education;
   - research and development, and adaptation of technological solutions to local knowledge and livelihood systems;
   - building on local knowledge systems and products and their fair and effective integration into broader value chains;
   - technological and institutional innovation to address new challenges linked to ecosystemic fragility and climate change; and
   - capacity building of local institutions particularly for natural resource and conflict management.

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FOR FOOD, AGRICULTURE, AND THE ENVIRONMENT

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INCLUDING PEOPLE WITH DISABILITIES IN ACTIONS TO REDUCE POVERTY AND HUNGER

Charlotte McClain-Nhlapo

According to the United Nations (UN), there are approximately 650 million people with disabilities in the world, and at least 80 percent of them live in developing countries. More often than not, they are among the poorest of the poor. The UN Convention on the Rights of Persons with Disabilities, adopted in 2006, defines such persons as "those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others" (Article 1). Recent World Bank estimates suggest that as many as one in five of the world's poorest people has a disability. While prevalence is difficult to measure effectively, it appears that about 10–12 percent of the population in developing countries lives with disabilities, and 2–4 percent with severe disabilities. Males at all ages have higher levels of disability, and the prevalence increases dramatically across the world in people older than 60. People with disabilities are not a homogeneous group. The following groups are particularly vulnerable:

- *Children with disabilities*. Mortality for children with disabilities may be as high as 80 percent in countries where the under-five-year-old mortality rate as a whole has decreased to below 20 percent. A World Bank study noted that the proportion of children with disabilities in developing countries is generally higher than in developed countries. It is estimated that 6–10 percent of children in India are born with disabilities and that, because of low life expectancy, possibly a third of people with disabilities are children.
- *Girls with disabilities.* In many countries, girls with disabilities are not sent to school or trained for economic self-sufficiency; as adults they often do not marry and rarely inherit or own property. Consequently, they are disproportionately represented among the poorest of the poor.
- *Women with disabilities.* Women with disabilities are negatively affected by both their gender and their impairments, often resulting in "double discrimination."
- *People with multiple disabilities.* Multiple disabilities compound the difficulties affected individuals face.
- *People with disabilities who are HIV positive.* HIV is even more challenging to individuals with a disability.
- *People with disabilities living in remote and rural areas.* It goes without saying that lack of access to services, and isolation in general, are significant issues for people with disabilities.

Though people with disabilities have diverse backgrounds, they all frequently experience discrimination and social, economic, and political exclusion. Discrimination occurs from birth or the time the disability occurs, and beyond. And often, exclusion causes poverty because it leads to a lack of resources, lower expectations, poor health, and poor education.

Poverty and Disability

Poverty is about vulnerability—being exposed and powerless in the face of risks and shocks to the household. It is also caused by scarce and uncertain levels of private assets and access to services. The relationship between poverty and disability is complex and multidirectional. Poverty contributes to disability through a lack of education, malnutrition, poor health care, polluted environments, occupational and road accidents, and conflicts and disasters. The few services that are available to people with disabilities are often underfunded, poorly managed, and capacity constrained. In tandem, poverty and disability create a vicious circle. While the nexus from poverty to disability may not be as clear as the nexus between disability and poverty, sufficient evidence highlights the risk factors that those living in poverty experience, as well as how those factors may increase impairment and disability. Poverty and hunger are almost inevitably linked to insufficient nutrition, poor housing, and inadequate health care services. These factors lead to an increased risk of impairment, which in turn may lead to disability.

The World Health Organization (WHO) estimates that 100 million people worldwide have impairments caused by malnutrition and poor sanitation. Research shows that in India, the percentage of rural and urban people with disabilities is similar. However, given that South Asian populations are predominantly rural, the actual number of people with disabilities in rural areas is nearly double that in urban centers. While not all people with disabilities are poor, evidence points to a

disproportionate number of people with disabilities in all countries living in abject poverty.

Figure 1—The Nexus between Disability and Poverty

Source: Department for International Development (DFID), *Disability, Poverty and Development* (London: DFID, 2000).

Disability affects not just the person with a disability but the present and future income of the entire household. Research in India reveals that households containing people with disabilities are worse off than the average. Similarly, research reveals that, in Uganda, households headed by an individual with a disability are 38 percent more likely to be poor than households headed by a person without a disability. Research also shows that per capita consumption among households whose head has a disability is 14–22 percent lower than that of households whose head does not, depending on the region. Poverty incidence is 15–44 percent higher in households whose head has a disability, and the depth of poverty is higher among people with disabilities as well. Finally, research in Zambia indicates that children living in households with a member who has a disability tend to have somewhat lower school enrollments and higher levels of chronic malnutrition. So, households with heads with disabilities are not only more likely to be poor, but also their degree of poverty is more likely to be higher.

In the developing world, poverty is exacerbated by (a) the likelihood that a person with a disability will not be working, (b) the likelihood that another family member will be taken out of work (or school) to care for a person with a disability, and (c) the reality that, in households with a family member who has a disability, the cost of health care and other interventions is higher than the same costs for families without a member with a disability. This is what Amartya Sen calls the "hidden costs of disability."

Though the relationship between disability and poverty is obvious, very little reliable statistical information substantiates this point, which makes it difficult to put together a detailed global picture of the linkages between disability and poverty. Poverty statistics for people with disabilities are virtually nonexistent. The information on disability and poverty that does exist is largely based on anecdotal evidence; this is beginning to change, however. Based in part on the WHO's recently established International Classification of Functioning, Disability, and Health (ICF), a number of countries are upgrading their data-collection systems to capture information on disability. The UN has established a group on disability measurement and is currently piloting a series of census questions on the subject, as well as developing an extended survey module. Similarly, the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) is piloting an extended set of disability questions in several countries in South and East Asia. Major disability surveys have also recently been completed or are under way in Afghanistan, Ecuador, Kenya, Nicaragua, and Vietnam.

Mounting evidence points to the high economic costs of excluding people with disabilities from the development agenda and the productive cycle. It is estimated that the global annual loss of gross domestic product due to the exclusion of people with disabilities from the labor market is between US$1.37 and $1.94 trillion. Research highlighting the importance of taking disability into account in assessing poverty found that in 1999, 23 percent of U.K. households with a member with a disability earned less than 60 percent of the median income, but when adjustments were made—such as workplace adaptations, work-related equipment, and support to workers (including readers, communicators, and personal assistants)—that percentage rose to more than 47 percent. This suggests that if people with disabilities had better access to services and opportunities, they could contribute more to growth and development. The 2006 *World Development Report* on equity highlights the importance of eliminating inequalities that limit growth. Preliminary estimates of global gross national product lost due to disability are in the range of 5–7 percent. Inclusive development can harness this potential to the benefit of all and could well pay for its cost. Equitable development and poverty reduction will only be achieved if people with disabilities are included in economic development.

Initiatives to Support Inclusion of Disability

International and national policymakers have a comparative advantage in raising the issue of disability through such sectorwide approaches as poverty reduction strategy papers (PRSPs) and other overarching national initiatives. It is clear that key development goals, such as the Millennium Development Goals (MDGs), cannot be met unless marginalized groups are included in national development strategies. PRSPs—key government policy instruments for poverty reduction—are seen as operational frameworks for implementing the MDGs. More PRSPs are now mentioning disability, but this is only partial progress. People with disabilities still remain largely invisible in the PRSPs, resulting in an

incomplete policy agenda. Three key constraints hinder the participation of people with disabilities in poverty alleviation activities: people with disabilities are economically excluded from pro-poor growth, they are socially excluded from education and health, and they have a weak political voice. Disabled people's organizations (DPOs) are consulted in only a few cases (29 percent of PRSPs). An analysis of PRSPs shows that when DPOs do participate in PRSP consultation, the social focus of disability policy decreases and the economic focus increases. DPOs should be involved not only in the preparation of PRSPs, but also in policy discussions.

The first MDG, to eradicate extreme poverty and hunger, cannot be achieved without taking into consideration those who are so disproportionately represented among the world's poorest—people with disabilities. Most micronutrient deficiencies primarily affect poor and disadvantaged households whose members cannot produce or procure adequate food, who live in marginal or unsanitary environments without access to clean water and basic services, who lack access to appropriate education and information, or who are otherwise socially disadvantaged. The health and nutritional status of people with disabilities is a case in point, particularly in relation to the quality of their lives and the prevention of secondary disabilities.

Helping to prevent childhood disability through immunization, micronutrient supplementation, and growth monitoring and promotion is essential. Early screening and simple community-based interventions by frontline workers have shown to be an effective tool for improving the lives and functioning of persons who already have disabilities, including vision and hearing loss and mild cerebral palsy. However, early screening and diagnosis must be linked to the provision of timely and appropriate support and advice to families, combined with the design and orientation of corresponding intervention plans for more complex problems and for developmental delays. Efforts should focus on building the capacity of health workers and others in the community to provide advice and assistance to parents.

The UN Convention mentioned earlier in this brief recognizes the rights of people with disabilities to an adequate standard of living for themselves and their families (including adequate food, clothing, and housing) and to the continuous improvement of their living conditions. It also declares that countries shall take appropriate steps to safeguard and promote the realization of this right without discrimination on the basis of disability. Governments that ratify the Convention will be legally bound to provide people with disabilities clearly defined rights. Nevertheless, the Convention's full potential will only be reached if there are complementary improvements in the economic well-being of people with disabilities. The entry into force of the Convention will likely lead bilateral donor agencies to strengthen their development cooperation in this area.

In many developing countries, policymakers have been slow to consider disability in the context of their national development programs and policies, frequently because people with disabilities have been underrepresented in positions of influence and power and face educational constraints and discrimination. But disability can and should be addressed through legislation, focusing on creating provisions for nondiscrimination and meeting the special needs of people with disabilities. This policy advocacy should build on the international momentum around the Convention. Excellent opportunities to advance this agenda and to promote responses that are tailored to the specific needs of people with disabilities include the development of sector strategies for social protection and inclusive education policies, as well as accessible health care.

Toward Inclusive Development

Governments, development agencies, and service providers have tended to either omit people with disabilities from their development programs or create "special disability" projects that effectively exclude or ghettoize people with disabilities from mainstream society. Often, these programs are small in scale and reach only those people with disabilities in urban areas. This neglect of disability in development planning reflects a broader tendency to undervalue the capacity of people with disabilities and not see them as full citizens with dignity and rights who can contribute to society. Only when the barriers facing people with disabilities are recognized and addressed programmatically can there be substantive or sustainable change in the marginalization and poverty they experience.

Some dynamics are changing. Disability-led organizations are becoming much more engaged with policymakers and are emphasizing the need to shift paradigms and to more closely examine inclusive approaches that recognize them as having rights like anyone else. Empowering people with disabilities and increasing resources for them can make a powerful contribution to reducing world poverty and hunger. However, they themselves must be part of the process, and even good, inclusive policies must have effective implementation. This requires accountability mechanisms as well as the necessary financial and human resources to ensure effectiveness.

Inclusive Development-Program Design

The goal of inclusive development is to create an inclusive society that takes vulnerable and marginalized groups into account. Inclusive development advocates the mainstreaming of disability as a development issue. In the context of reaching people with disabilities who are poor and hungry, this can be accomplished by boosting food production, improving nutrition, and integrating the issue of disability into sustainable rural development policies and programs. Such initiatives should aim to improve income-generating and employment opportunities for people with disabilities in all aspects of work, including

agriculture and related sectors. This will require upgrading agricultural production technologies to meet the special requirements of workers with disabilities, fostering accident prevention in the agricultural and forestry sectors, and eliminating nutrition-related disabilities through improved dietary practices and food-security interventions.

What Actions Can Be Taken?

The following are suggestions for actions that can be taken to include people with disabilities in actions to reduce poverty and hunger:

- strengthen partnerships and facilitate good coordination with UN organizations such as the United Nations Children's Fund; the International Labour Organization; the United Nations Educational, Scientific and Cultural Organization; the United Nations Population Fund, WHO, and the United Nations Development Programme—all of which are increasingly incorporating disability issues into their programming;
- promote the ratification and implementation of the UN Convention on the Rights of Persons with Disabilities;
- support policy advocacy and legal reform to create an enabling framework for people with disabilities and provide measures to remove barriers that prevent them from accessing services;
- promote community-based support services that address the needs of households with members with disabilities;
- provide livelihood opportunities for people with disabilities through microcredit and income-generating activities;
- develop institutional capacity on issues related to inclusive development;
- ensure access to information and communications technologies for people with disabilities, especially for those living in isolated rural or mountain areas;
- include disability in PRSPs, using a variety of approaches to ensure equitable participation;
- collect reliable statistics relating to poverty among people with disabilities, given that data are lacking to date;
- include indicators on the inclusion of people with disabilities during the evaluation and monitoring phases of development programs;
- establish effective actions to provide for people with disabilities in situations of conflict, disaster, and displacement; and
- adopt a twin-track approach including specific projects targeting people with disabilities while at the same time mainstreaming disability considerations into poverty alleviation programs—important because an inclusive policy will never be reached with mainstreaming alone.

Disability is moving up on the international agenda, with far greater visibility than before. It is imperative that any action taken on behalf of the world's poor and hungry include the needs of people with disabilities as part of the ultimate goal.

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ADDRESSING DISCRIMINATION AND INEQUALITY AMONG GROUPS

Frances Stewart

Economic and political inequalities among groups—for example, between Muslims and Hindus in India; between northern and southern Nigerians; or between ladinos and indigenous people in Bolivia, Guatemala, and Peru—are often significant and multidimensional, causing much resentment and even violent political protest. Moreover, as global migration accelerates and societies become more heterogeneous, the prevalence and significance of group inequalities is rising. Abundant policy, theory, and measurements focus on inequalities among individuals (so-called vertical inequalities), but far less work has been done on inequalities among groups (horizontal inequalities, or HI for short). Inequalities among groups are important from a number of perspectives: they may adversely affect the well-being of members of the deprived groups, hinder efforts to eradicate poverty, lead to unfair and exclusionary societies, impede the full realization of economic potential, and raise the risk of violent conflict.

The popular conception of *social exclusion* and HI hold much in common. A group or groups are said to be socially excluded when they are marginalized politically, economically, or socially, often on multiple levels. However, while similar policy recommendations stem from social exclusion and HI approaches, HI is more precise and draws attention to richer, as well as poorer, groups. For this reason, this brief focuses on HI, exploring the types of inequalities involved, why these inequalities matter, and what policy options—and associated implementation constraints—exist to address this form of discrimination and inequality.

Defining Group Inequalities

Societal group distinctions take many forms, from differences in race and major religions—and the branches within them—to ethnic and caste distinctions, and even geographic distinctions. Socially significant group identities arise partly from individual perceptions within groups and partly from the perceptions of those outside them. Leaders, educators, and the media, among others, have an important influence on the evolution of significant group distinctions. Although many groups have unclear boundaries and evolve over time, some group distinctions are an important way in which people interact and identify themselves. Group distinctions are therefore highly relevant to the well-being of both individuals and society as a whole. Moreover, as ideology has become a less-important source of identity and political mobilization, ethnic and religious distinctions have come to the fore, as indicated by the increasing proportion of violent conflicts labeled "ethnic."

The determinants of a group's well-being and prospects go well beyond the members' economic circumstances and instead encompass multiple dimensions. Significant dimensions of horizontal inequalities are described below:

- *Economic HI* include inequalities in asset ownership, incomes, and employment opportunities.
- *Social HI* cover inequalities in access to a range of services, such as education, health, and housing, and hence human outcomes, including education, health, and nutrition.
- *Political HI* involve inequalities in the distribution of political opportunities and power across groups at many levels, including governmental (executive), bureaucratic, and military power.
- *Cultural status HI* refer to differences in recognition and de facto hierarchical status of groups' cultural norms, customs, and practices.

While some outcomes are relevant across all societies—notably income, health, and political power—what is needed to achieve those outcomes varies by individual society, and therefore so do those inequalities of greatest significance. Ownership of and access to land, for example, is of great importance where agriculture accounts for a considerable proportion of economic output and employment, but it becomes less important as development proceeds—when access to housing and jobs in the formal sectors become increasingly important.

Why Horizontal Inequalities Matter

HI matter for a number of reasons. First, unequal access to political, economic, and social resources and inequalities of cultural status can have a serious negative impact on the welfare of members of poorer groups who are sensitive to

their group's relative position. This is illustrated by research in the United States showing that the psychological health of African-Americans is adversely affected by the position their group occupies. Second, severe HI may diminish the potential of a society to develop when individuals are barred access to education or jobs—regardless of individual merit—and are instead discriminated against on the basis of group membership. As deprived groups gain improved access to education and jobs, economic potential can be more fully realized. Malaysia exemplifies this: as policies enabled the majority population to participate in economic transformation, rapid economic growth followed. Third, HI can prove a major handicap to the elimination of poverty because it is difficult to reach members of deprived groups effectively with programs of assistance. In particular, deprived groups face multiple disadvantages and discrimination, and these challenges need to be confronted collectively. This, for example, has been a serious problem in tackling poverty in the Andean countries. Finally, sharp group inequalities make violent group mobilization and ethnic conflicts more likely by providing powerful grievances for leaders to use to mobilize people by calling on cultural markers and pointing to group exploitation.

Evidence across countries indicates a significant relationship between HI and the onset of violent conflict, while studies within Indonesia and Nepal present a similar picture, demonstrating that the location of conflict within a country is related to the extent of group inequality in that location. Of course, not all countries with high levels of HI experience conflict; rather, the likelihood of conflict increases as inequalities increase.

Policies Addressing Group Inequalities and Discrimination

Given the ways in which group inequalities can reduce well-being, efficiency, and political stability, a policy priority is the reduction of inequalities to bring about a socially inclusive and fair society and to reduce the probability of violent conflict. This is particularly important in countries where inequalities are severe. While this brief primarily focuses on policies related to socioeconomic inequalities, it is also important to address political and cultural inequalities. Indeed, political inequalities can be more politically provocative than socioeconomic ones. All major groups should participate in the political process in government and bureaucracy, as well as in the military and police. This does not necessarily happen even in a fully democratic system, and conscious constitutional design as well as formal and informal policies are needed to ensure that it does. In relation to cultural inequalities, policies with respect to language, religion, and cultural practices can all contribute to the development of more inclusive societies.

Three types of policy addressing socioeconomic inequalities may be differentiated: direct (targeted) policies; indirect (universal) policies; and integrationist policies (Table 1). Direct approaches target specific entitled groups using quotas and subsidies. Indirect approaches are general policies applied to the whole population but designed in such a way that relatively poor groups are the net beneficiaries. Integrationist approaches are policies aimed at reducing the significance of group boundaries.

The main advantage of direct approaches is that they can work rather quickly; they also tend to be highly visible, which has both advantages and disadvantages. One advantage is that groups can see they are being given better treatment. U.S. affirmative action on education, for example, was a visible response to the Civil Rights movement. Nevertheless, the visibility of direct approaches can also provoke opposition by the more privileged groups. Some argue that one cause of the Sri Lankan civil war in the late 1970s was Tamil resentment of policies that reduced their educational advantages and reversed their previous position of privileged employment in the civil service. Moreover, it is argued that direct approaches reinforce group distinctions, thereby encouraging prejudice and cultural stereotyping. People's perceptions of other groups, however, are also influenced by their relative position and the nature of their interaction with them. Greater social and economic equality among groups, resulting from direct action, may consequently reduce group prejudice. However, to avoid long-term problems from stereotyping, direct approaches should be time-limited if possible.

Indirect approaches are in some respects more attractive because, in principle, they improve equality without labeling people by the group to which they belong, but they may work more slowly. Monitoring and evaluation is essential for all approaches, but especially for indirect ones. The pros and cons of integrationist approaches have been much debated in developed countries. Some experts argue that integrationism threatens cultural and religious values by imposing uniformity, while others argue that integrationism is the most effective way to ensure social stability and group equality in multicultural societies.

Examples of Direct Policy Approaches

Many heterogeneous societies have adopted direct approaches to reducing group inequalities. Direct policies can consist of articulated targets or legally enforceable quotas. In either case, these policies may be backed by the allocation of public-sector contracts to enterprises that meet the predetermined targets. Direct policies have been adopted in a range of areas, as described below.

Table 1—A Summary of Policy Approaches Supporting the Reduction of Horizontal Inequalities

Type of policy	Direct	Indirect	Integrationist
Definition	Groups receive privileges; disincentives are tied to group membership	General policies with indirect implications for distribution to groups	Policies to minimize overt group distinctions and encourage national identity
Examples	Educational quotas; government contracts allocated preferentially	Progressive taxation; antidiscrimination law	Integrated schools; national sporting events
Advantages	Visible sign of action toward equality; effects are fast	Lack of visible indication of action toward equality; does not entrench group labels by drawing more attention to them	Reduces consciousness of group differences; makes discrimination less likely
Disadvantages	May provoke opposition; can entrench group differences by drawing attention to them; can encourage corruption	Slow; may not achieve much	Loss of cultural identity may lead to opposition and increase cultural status inequality for some

Source: Devised by author.

Asset Ownership and Access

This category includes land tenure policies involving redistribution of government-owned land, forcible eviction, purchases, and restrictions on ownership (as applied in Malaysia, Zimbabwe, Fiji, and Namibia); policies supporting the terms of privatization (Fiji); policies addressing inequalities in financial assets—for example, between particular groups (Malaysia and South Africa); credit allocation (Fiji and Malaysia); and preferential training (Brazil and New Zealand).

Public Expenditure

Public expenditure allocation has three distinct aspects. The first involves the construction of public facilities, such as infrastructure. Policies in support of public-sector contracts to ensure fairer group participation have been implemented in Canada, Malaysia, Northern Ireland, South Africa, and the United States. The U.S. Public Sector Works Employment Act of 1977, for example, required that at least 10 percent of each local works project grant go to minority businesses. Similarly, in Malaysia, bumiputera companies receive a margin of preference in competing for contracts. The second aspect relates to the operation of public facilities. Quotas for public-sector employment have been introduced in India, Malaysia, and Sri Lanka, for example. The final aspect involves targeting beneficiaries of education, health, and housing services. Quotas for university education have been introduced in Malaysia, Nigeria, and Sri Lanka; however, they are not very effective if educational inequality begins at the lower levels. Hence, policies need to be introduced at the appropriate level. Policies to improve health access and services in deprived areas were introduced in northern Ghana, and special efforts have been made to improve the access of the African-American population in the United States. In Northern Ireland, policies were introduced to ensure equal access to public housing.

Private-Sector Employment Quotas and Subsidies

Some countries—for example, Kenya, Malaysia, and South Africa—have introduced requirements for the private sector to meet group employment objectives.

Examples of Indirect Policy Approaches

All policies have some impact on distribution. Indirect policies aimed at reducing HI do so by designing policies with universal application that favor particular groups. Language policy is a clear example. Making a particular language a requirement can strengthen the position of some groups and weaken that of others with respect to access to and performance at school or university or in public-sector employment. Language policy has been used in this way in Malaysia and Sri Lanka. Legal, fiscal, and macroeconomic policies each have similar important consequences for HI, as is discussed below.

Legal Policies

Outlawing discriminatory practices can substantially improve group inequalities. This occurred in Northern Ireland, where the Fair Employment Acts were critical in reducing employment inequality. Moreover, policies that outlaw discrimination in employment, education, housing, and so on according to group membership are ethically just and generally politically acceptable. Another way the legal system can reduce inequalities is through the recognition and enforcement of economic and social rights. In Peru, for example, a human rights ombudsman (*defensorio del pueblo*) has been instituted to help enforce the rights of indigenous peoples. Still, policies that outlaw discrimination or recognize human rights are unlikely to be enough on their own. First, the law must be enforced, which is especially important in poor societies with weak legal systems, no legal aid, and discrimination reaching deep into the legal system itself. Second, as a result of

long-term disadvantage, deprived groups lack education and money and have poor social networks. Even with a level playing field, these groups would be disadvantaged in obtaining higher education, jobs, and credit, for example. Hence, policies to reduce group inequalities need to go beyond antidiscrimination legislation. While legal action has great potential to reduce discrimination, other supporting policies are needed, including legal aid.

Fiscal Policies

The introduction of progressive tax and expenditure policies (including anti-poverty programs) will generally benefit deprived groups relative to privileged ones. It is also possible to introduce specific reforms to the fiscal system with the aim of reducing HI, for example, through tax incentives for investment in particular regions or sectors where identified groups are concentrated. In many contexts, specific privileged groups are concentrated in the commercial trading sector, and taxes on wholesale and retail trade would alleviate HI. The poorest people and groups are generally not in the formal sector, so direct taxes would generally contribute to reducing HI. In Niger, for example, most people in the informal sector belong to a different ethnic group from those in the formal public or private sectors. Indirect taxation may also be designed to help improve distribution by exempting staple goods (such as food and basic fuels, which are consumed as a high proportion of income by poor groups) and, conversely, by raising the tax rates on so-called luxury goods (those consumed more by relatively well-off groups). Cultural differences in consumption patterns may also make it possible to use the tax system differentially. For example, the taxation of alcohol would benefit Muslim groups. Where groups are regionally concentrated, reallocation of public expenditure toward deprived regions is likely to reduce HI.

Macroeconomic Policies and the Need for Economywide Restructuring

Beyond the fiscal system, broad incentives generated by macroeconomic policy often affect group inequality as well. Changes in the exchange rate typically designed to favor tradable products often have implications for group inequality based on a group division of labor (a common result of colonial policy). In many African countries, for example, the groups who produce cash crops for export are different from those producing food for local or own consumption. In some cases, specific government actions supporting group equality—including investments in education and infrastructure—have been undermined by macroeconomic policies in terms of their impact on relative group incomes. Northern Ghana, for example, has suffered in this way.

Consequently,in addition to specific corrective actions in support of educational or infrastructural disadvantages, the implications of macroeconomic policies for group incomes and employment need to be taken into account in the design and introduction of compensatory policies in order to offset possible adverse impacts.

Examples of Integrationist Policies

These policies are directed at reducing overt group boundaries. Indirect policies—especially effective antidiscriminatory policies—tend to support integration. In addition, an integrationist approach brings people together from different groups in schools and universities, the workplace, sports and social clubs, and so on. These policies also encourage uniformity (for example, of dress and language) but may contribute to resentment by exacerbating cultural inequalities. Integrationist policies raise national consciousness while reducing group consciousness. Such policies are usually effected by political leaders, educationists, religious and ethnic leaders, and the media. One example is the policy pursued rather successfully by President Nkrumah in Ghana, emphasizing national identity and reducing ethnic consciousness. Integrationist policies require a change in culture and perceptions, and understandably take time. Moreover, if severe inequalities continue, consciousness of group distinctions may sharpen and thus render integrationist policies less effective.

The Need for a Comprehensive Approach

Group inequalities are often of historical origin, typically arising from colonial settlements and policy, and deeply embedded in a society. Moreover, the deprivations are generally multidimensional and hence reinforcing. Thus, groups that are educationally deprived also have few financial resources, and a corresponding lack of political power may prevent significant corrective action. Social capital asymmetries further reinforce other inequalities because social networks within the deprived groups rarely expand beyond the group or include opportunities for contact with better-off groups. For these reasons, effective policy needs to address several dimensions of inequality.

A combination of approaches is desirable: direct approaches can help make indirect approaches more effective, while integrationist policies can contribute to lessening divisions within society and increasing intergroup respect. For example, in South Africa, a direct approach was adopted to business "empowerment," targeting capital ownership by blacks, while other, indirect approaches focused on expanding education, for example, and dismantling discriminatory regulations. Integrationist policies were followed in the political and educational systems. Nevertheless, appropriate action critically

depends on context. In Indonesia, for example, any direct approach would be extremely difficult to manage since different groups dominate in different locations, and direct approaches would run the risk of provoking specific groups.

While many countries have adopted selective policies toward reducing HI, only those that have adopted a comprehensive approach have narrowed the gap substantially. The contrasting experiences of Guatemala, Peru, Malaysia, and Northern Ireland illustrate this point. Guatemala and Peru have recently made efforts to reduce HI between the indigenous and white populations with a particular focus on the education sector. Yet large gaps in incomes remain in both countries, while inequalities in child mortality in Guatemala remained unchanged from 1995 to 1999, and access to white-collar employment by the indigenous population declined relative to that of the ladinos. In Peru, inequalities in the areas of women's education, child mortality, and household wealth between the indigenous and ladino populations remained virtually unchanged from 2000 to 2004, and inequality in white-collar employment worsened somewhat. Moreover, the returns to education were far lower for indigenous people in Peru compared with other countries as a result of lower quality schools for indigenous children, discrimination in employment, and weaker social networks. These issues can be even more challenging when the deprived group is physically remote, as is the case for some of the indigenous population in Peru. It may also be necessary to tackle perceptions, since negative perceptions of the abilities of a minority may reduce their job prospects.

In contrast, in both Malaysia and Northern Ireland, a comprehensive approach to correcting group inequalities was taken. In Malaysia, the New Economic Policy was introduced in 1971, aiming to reduce inequalities between the Malays and the Chinese, following the anti-Chinese riots of 1969. The goal was to help secure national unity, using policies "to accelerate the process of restructuring Malaysian society to correct economic imbalance so as to reduce and eventually eliminate the identification of race with economic function" (Federation of Malaysia, 1971, p. 1). Restructuring policies included expanding the capital ownership share of the indigenous groups (the bumiputera), instituting educational quotas in public institutions in line with population shares, and creating credit policies favoring the bumiputera. Between 1970 and 1999, the ratio of the average income of the bumiputera to that of the Chinese increased from 0.42 to 0.57, the ratio of the share of ownership grew from 0.03 to 0.23, and the bumiputera share of registered professionals rose from 8 to 47 percent.

In Northern Ireland, the Catholics were systematically and consistently deprived over centuries following the English takeover. In 1971, for example, just 11 percent of senior public officials were Catholic. A concerted effort to correct inequalities was undertaken from the late 1970s through housing, education policy, and fair employment legislation. From the late 1970s to the late 1990s, the Catholic-to-Protestant ratio in higher education increased from 0.39 to 0.81, and the ratio of the share of high incomes among Catholics grew from 0.55 to 0.77. By 2004, inequalities in higher education and in access to basic health services had been eliminated.

Conclusion

Sharp group inequalities can produce many adverse consequences—the most serious of which is mobilization for violent conflict. It is therefore important to introduce policies to correct political, cultural, and socioeconomic inequalities. As this brief has highlighted, holistic approaches are needed, incorporating direct, indirect, and integrationist mechanisms. Antidiscrimination legislation is clearly an important first step, but it is insufficient on its own to correct asymmetries in the contexts of deep-rooted inequality. Ultimately, the appropriateness of policy is dependent on the particular context. Fundamental to policy design is a full analysis of the context and dynamics of existing inequalities across groups, including awareness of the evolution of those inequalities.

One major problem is securing acceptance of policies by the more privileged groups who stand to lose their advantageous positions relative to disadvantaged groups. It is essential to persuade decisionmakers of the importance of avoiding severe group inequalities in order to create a just and inclusive society and to maintain social and political stability. International consensus is needed on the desirability of inclusive political and economic systems, and of policies to correct sharp group inequalities. Currently, most international discourse largely ignores the issue of group inequalities, giving priority to accountability, democracy based on the majority, and growth and poverty reduction. Indeed, it is at a national rather than an international level that most awareness of this issue lies, along with the corresponding policy innovations. It is most politically feasible to introduce programs targeting disadvantaged majority groups at a national level, as in Fiji, Malaysia, Namibia, South Africa, and Sri Lanka. Elsewhere, programs targeting disadvantaged minorities have also been introduced by advantaged majorities—as in Brazil, India, and the United States—because the majority values the promotion of an inclusive society.

Governments that choose to implement policies to correct group inequalities risk possible social tension stemming from the resentment of losing groups. Generally, for corrective mechanisms to be successful, broad acceptance of the objective is required across all groups. Also

important are perceptions relating to the existence and causes of HI and, hence, the "fairness" of remedial policies. Dissemination of objective research on the nature and causes of HI may make a contribution to correcting perceptions and thus securing national support for corrective policies. Broad transparency in policy implementation is also important in providing legitimacy for policies. Given the rising heterogeneity of populations—as national and international migration and ethnic and religious mobilization increase—policies aiming to reduce discrimination and group inequalities must be positioned high on both the national and the international policy agendas.

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STRENGTHENING WOMEN'S ASSETS AND STATUS

Programs Improving Poor Women's Lives

John Ambler, Lauren Pandolfelli, Anna Kramer, and Ruth Meinzen-Dick

Poverty and hunger cannot be conquered without meeting the specific needs of poor women. Like poor men, they lack the assets and income necessary to exit poverty, but chronically poor women and girls are also subject to a confluence of gender-based vulnerabilities that keep them trapped in poverty. Women have fewer benefits and protections under customary or statutory legal systems than men; they lack decisionmaking authority and control of financial resources; and they suffer under greater time burdens, social isolation, and threats or acts of violence. Widowhood leaves women more vulnerable to chronic poverty, since a widow may lose her family assets and be forced to leave her husband's village upon his death.

This gender inequality fuels the intergenerational transmission of poverty. Girls systematically have fewer educational opportunities and thus lower lifetime incomes. In areas where few educational or income-earning opportunities exist for girls, they may be married as young as 13 or 14 years old. These child brides have a greater likelihood of early childbirth, resulting in serious health consequences for both themselves and their infants. The HIV/AIDS pandemic also affects women and girls who are chronically poor and hungry. In many countries, women bear the greatest burden of caring for family members stricken with AIDS or replacing the labor lost because of deaths in the family.

But the poor are not all alike, nor are all women. Very poor women experience forms of economic, social, and political deprivation different from those experienced by men and other women. Interventions to improve the lives of very poor women must address the unique dimensions of women's poverty, as well as the local contexts in which women's poverty occurs.

When designing programs to reach poor women, distinguishing between short- and long-term interventions is important, as is discerning interventions that help women spread risk, prevent them from falling even further into poverty, and help them or their children escape poverty. Different combinations of interventions will also be needed at different points in women's lives, from birth to old age.

All interventions need to evaluate how gender norms will affect their success and how the interventions will affect gender norms. Ideally, interventions to improve the lives of women should seek to build both women's assets and their societal status in order to transform gender roles. These programs must make women the primary agents to transform their lives. The following successful interventions have adopted this two-pronged approach to respond to the needs and capabilities of chronically poor women. The first two cases show how building women's economic assets improves their social status, and the second two illustrate how strengthening status can promote asset development. The Bangladesh schooling program is led by the state, and the remaining programs are supported by Oxfam America and local civil society organizations.

Mali: Saving Money, Building Assets

In the village of N'Golofala, Mali, most people rely on their crops for food and income. Between harvests, farmers have little available cash. So Djouri Konaré, a mother of six, earns a little money preparing rice flavored with tomatoes and piment, a super-spicy pepper, to sell on market day. With little available cash, Konaré used to have to borrow ingredients from a food dealer and repay him at whatever price he demanded at the end of the day. Profits were slim. Konaré found a better option when the local nongovernmental organization (NGO) TONUS helped the women in N'Golofala form a savings group. They pooled their deposits of just a few cents a week and then loaned each other the capital to invest in small moneymaking ventures. This group is part of Oxfam America's Saving for Change microfinance program.

Since April 2005, Saving for Change in Mali has grown to some 2,200 groups with more than 55,000 women members from nearly 900 villages. Saving for Change serves the rural poor at the very bottom of the economic pyramid, with a particular focus on women. The interest that participants pay on their loans builds in the savings groups and stays in communities instead of being repaid to moneylenders or external institutions. Because there are transparent rules for managing the money, women have a safe place to save and

flexible cash when it is needed most. This feature is especially important for chronically poor women because the money they save allows them to maintain their family's dignity in the face of shocks, such as a funeral of a family member. This approach can address poverty on a large scale with low costs, local control, and an easy-to-replicate format.

Djouri Konaré joined the savings group and borrowed enough to buy the ingredients for her small business at a better price than the food dealer's. After repaying her loan and interest, she can clear as much as US$65 a month—a good sum for a rural woman with few assets. Of the program's 26,000 outstanding loans, 99.8 percent are being repaid on time. Once a year the savings group divides up its assets according to how much each member has saved, and the women use these assets to invest, buy inputs for agriculture, or buy things for their families. Since 2005, groups in Mali have mobilized US$462,000 in savings, interest payments, fines, and the income from their collective group businesses. Of this amount, US$89,000 has been returned to members, generally just before the planting season when money is scarce. This year, Djouri Konaré's share of the group's savings was US$18, which she used to buy a sheep.

Because it is a locally controlled, self-replicating system, Saving for Change has taken root in places that are too unstable or unprofitable for formal financial institutions. Leaders from the trained groups go out and form new groups voluntarily in neighboring villages. Thirty percent of the groups are spontaneously formed in this way. Where even many microfinance programs may bypass the very poor, such savings-led programs offer the first step on a ladder of savings and credit. Malian women are also finding that the program's approach increases their visibility and representation within the community and the household and helps build their social capital. The savings program is thus an important entry point for improving women's status in society. Only a small percentage of rural communities in Mali are currently participating in the program, however, and significant scaling up is needed to reach more women.

Bangladesh: Keeping Girls in School

In Bangladesh, where girls from very poor households are less likely to continue their education after primary school because of higher school costs and longer commutes, the Female Secondary School Assistance Project (FSSAP) provides a stipend to girls who agree to delay marriage until they complete their Secondary School Certificate (SSC). The FSSAP was launched in 1993 with International Development Association (IDA) funding and entered its second phase (FSSAP II) in July 2002. FSSAP II covers one-quarter of rural Bangladesh, with an IDA credit of US$115.70 million and Government of Bangladesh financing of US$28.93 million for the five-year life of the project. In 2002, 5,837 secondary-level schools participated in FSSAP II. Of the 1.09 million girls enrolled in FSSAP schools in 2002, 90.1 percent (983,000) received the stipend.

One participant in the program, 18-year-old Selina, hails from Daragaon village in Habiganj district. Selina is the third child of a poor family of eight children. Her father, a retired guard for a tea estate, has a piece of land that he cultivates, but it is too small to support his family. Selina's father has always been eager to educate his children, but he could not afford to educate his two oldest children to the SSC level. The FSSAP made it possible for Selina to attend a high school about five kilometers from her home. She had to walk almost two kilometers each day to meet the school bus, and she used a part of the stipend to pay her bus fare. Commuting to school was hard for Selina, but she knew she had to maintain 75 percent attendance at school to receive the stipend so was seldom absent. Because of her regular attendance, she was able to improve her results every year. In 2000 Selina passed the SSC exam with a "B" grade.

At an annual cost of US$121 per student, FSSAP has been more successful at reaching girls from poor households than other such stipend programs because it uses geographic targeting, working in 119 rural upazilas distinguished by high poverty levels. None of the programs, however, provides a large enough stipend to cover the indirect costs of education, and thus nonpoor girls whose families can afford to supplement the costs of education are overrepresented among project beneficiaries. Though the stipend helped, "it is impossible," Selina says, "for a very poor student to continue her study depending solely on the stipend." She suggests that the government should provide very poor students with books and school uniforms along with the stipend. Reallocating project funds to poor households only could allow for an increase in the amount of the stipend each girl receives.

Interventions to increase girls' schooling also need to respond to the specific needs of adolescent girls, such as providing them with safe travel to schools and clean and private latrines. When girls were asked what they most needed in their schools, they named proper sanitation facilities as their number one priority, because girls prefer to skip school during menstruation rather than share latrines with boys.

Safety-net programs like FSSAP respond to both the short- and long-term needs of very poor women and girls through a combination of immediate assistance (cash or food rations) and investment in girls' schooling. In fact, research has shown that educating girls is one of the most powerful investments a country can make in poverty alleviation, economic growth, and child nutrition.

Mozambique: Strengthening Women's Legal Rights

Cecilia Reis is one of more than 250 traditional healers in Maputo province who have been trained by the local organization MULEIDE to teach people about Mozambique's Family Law, which took effect in 2005. The law addresses a common injustice in Africa: when a husband dies, by tradition his house and fields go to his brother or parents and thus his wife and children can be left without a home or an income. The new law raises women's status by allowing them to inherit property, to marry later (increasing the minimum age of marriage from 14 to 18), and to earn legal recognition for traditional marriages—the majority in Mozambique. Under the new law, women can make business decisions without a male relative's consent, and they can receive property in a divorce. The legal standing and rights provided under this legislation give women more security and options to earn a living. The freedom to marry later also means that Mozambican women have more opportunities for education.

This legislation, drafted by a women's coalition with support from Oxfam America, marks a huge step forward for the women of Mozambique. The challenge now is to teach all citizens about the new law and to build respect for it in places governed by a mosaic of local cultures and traditions. Seventy percent of women reside in remote rural areas of the country, and more than two-thirds of these rural women are illiterate.

To find an innovative solution to this challenge, the women's coalition turned to traditional leaders like Cecilia Reis to transmit their messages, because such leaders are trusted and respected. The approach is to use the very guardians of culture to help change it.

The impact of these interventions is under study, yet lessons learned from the Women's Legal Rights Initiative (sponsored by the U.S. Agency for International Development), which worked in 10 developing countries to shape legislation protecting women's rights, suggest that promoting local ownership of legal reforms and engaging government institutions and civil society organizations results in more sustainable reforms. These lessons, as well as those learned in Mozambique, will be applicable in other countries attempting to improve women's status through legal reform.

El Salvador: Countering Gender Violence

Tomasa Cosme de Lopez, holding her grandson, looks on as her husband samples her dulce de panela. Selling bags of these Salvadoran sweets has become a family business, and Cosme's husband now helps in the kitchen preparing the candy. This kind of equity is all too rare in El Salvador, where relationships between men and women can be strained by machismo and a legacy of violence from the 12-year civil war. Violence against women is particularly severe in this male-dominated country of 7 million. In 2003 there were 3,500 reports of domestic violence against women, including at least 25 women killed by their husbands. In a 2004 public opinion survey, more than half of those polled thought it was normal for a man to beat a woman.

Violence against women and girls has huge psychological and economic implications that make it especially difficult for poor women to escape poverty. Domestic and community-level violence may limit a woman's employment opportunities if, for example, her husband refuses to allow her to work outside of the home or she is afraid to leave her homestead for fear of sexual harassment. Violence against women also accounts for significant amounts of lost productivity through absenteeism from work, impeding overall economic growth and discouraging investment.

To address the public safety and women's rights situation in El Salvador, a coalition of six organizations, including Oxfam America and local partners, launched a public education and advocacy campaign in 2005: Entre Vos y Yo, Una Vida Differente (Between You and Me, a Different Life). The campaign's goal is to reduce violence against women by raising awareness of women's rights and calling on local government and its employees (such as police officers and city bus drivers) to prevent violence against women. The campaign has created innovative ways to call attention to the problem, reaching large proportions of the country's population through the media, street theater, and other public demonstrations.

Although violence and poverty are intertwined, programs like this can work to ensure that poor women do not bear the additional burden of gender-based violence. Early studies of the El Salvador campaign show that it has been successful in raising awareness of gender violence and generating new dialogue about women's status. For example, the campaign organized a series of "debate circles" in which more than 500 public officials participated in discussions about gender violence, women's rights, and public safety. Economic evaluations of interventions to prevent domestic violence from occurring suggest that investments like the El Salvador campaign make economic sense because they are less costly than the domestic violence itself.

Conclusion

The efforts described here have a number of features in common. First, they begin with an understanding of the needs of very poor women, which often go beyond "economic" development or a single sector to include safety and dignity of status as well as income and assets. These initiatives are emblematic of the multidimensional approaches needed to improve women's lives. Each case brought together multiple actors to address the complexity of the problems involved. The El

Salvador program targeting violence against women relies on coalitions among women's activist groups, politicians, university researchers, law enforcement agencies, and point-of-contact actors like bus drivers. These coalitions are important because they repeatedly reinforce common messages from different angles, and in different ways over time. Entrenched attitudes are difficult to change, but they can be modified through persistent and varied messaging. Similarly, achieving legal change in Mozambique relied on forming coalitions among women's research groups, activist organizations, politicians, jurists, and traditional leaders. Building a consensus around the need for change required careful facilitation; building consensus around the actions of change required careful coordination. Expanding girls' schooling in Bangladesh requires a combination of economic incentives, attitude changes, and the provision of basic facilities. Because the problems women face cut across so many dimensions, forming diverse and sustained coalitions and alliances is essential for macro-level change.

Second, change can happen at the micro level—household by household or group by group—when interventions are specifically designed to respond to the needs and capabilities of women. The Saving for Change program in Mali is expanding not only due to the efforts of Oxfam and its partners, but also because of the voluntary efforts of women themselves, who extend the methodology to their neighbors, relatives, and friends.

Third, efforts to "saturate the market" are important. Programs that seek total coverage change attitudes and create new societal norms regarding women. Legal change in Mozambique has been important because it applies to the whole country. In El Salvador, the involvement of politicians and the attorney general's office in social change has had nationwide implications. Bringing the savings-led methodology to all areas of a country like Mali not only expands the movement, but also creates a stronger sense that this new way of doing business—women working with women and women working with men—is legitimate. Bangladesh's programs to increase girls' education have led girls to outnumber boys in secondary school (although overall enrollment rates are still low for both girls and boys). When everyone adopts an activity, what once seemed strange becomes normal.

Finally, programs to empower women need to be constantly aware of threats that can arise. Those in power may overlook women without money, rights, or a voice; when women begin to gain assets and status, however, a backlash can result from men and even other women. The challenge is to help people see that empowered women present an opportunity, not a threat.

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CLIMATE CHANGE

Pro-Poor Adaptation, Risk Management, and Mitigation Strategies

Gary Yohe, Ian Burton, Saleemul Huq, and Mark W. Rosegrant

Climate change results from an increased concentration of greenhouse gases like carbon dioxide, nitrous oxide, and methane associated with economic activities, including energy, industry, transport, and land use patterns. Rich countries emit the majority of these gases, while poor countries are more vulnerable to their negative effects. Further, developing countries are more vulnerable and less able to adapt to these changing climatic conditions because of their locations; greater dependence on agriculture and natural resources; larger variations in weather and temperature conditions; and lower availability of critical resources like water, land, production inputs, capital, and public services.

The inability of developing countries to respond and act immediately to lessen the impacts of climate change will have serious global economic consequences. Appropriate climate change policies, if adopted now, can stimulate pro-poor investment. More specifically, they can increase the profitability of environmentally sustainable practices even as they generate income for small producers and investment flows for rural communities. Climate mitigation through carbon offsets and carbon trading can increase income in rural areas in developing countries, directly improving livelihoods while enhancing adaptive capacity. In its recently released fourth assessment report, the Intergovernmental Panel on Climate Change concluded that a portfolio of both adaptation and mitigation will be required. This brief supports this conclusion as it explores pro-poor adaptation, risk management, and mitigation strategies in response to climate change.

Adaptation and Risk Management Strategies

Emissions of greenhouse gases universally contribute to observed and anticipated climate change, but their benefits are experienced locally. Anthropogenic climate change is thus an exploitation of the global commons that requires, almost by definition, policy intervention. Yet, given the profound uncertainty that clouds our understanding of the climate system and our expectations about how future economic activity will unfold over time, standard cost–benefit techniques are giving way to a risk management perspective within which uncertainty is itself a reason to act. Inasmuch as even the most stringent restriction of emissions would still leave the globe committed to significant risk of climate impacts, a mix of adaptation and mitigation is required. And given the lack of capacity to adapt to climate change in many developing countries—and the imperative to do so—the key issue is how national governments and the international community can work together to assist poor constituencies in adapting to observed and anticipated climate-related stresses, even as they also work to reduce emissions. This includes the type of assistance required and how it can be targeted effectively to the poor. Further, many communities, not necessarily limited to the poor, are not even well adapted to their current climates. It therefore follows that any efforts toward adaptation must build on present circumstances.

Adaptation Measures, Policies, and Strategies

Most of the literature about adaptation focuses on a variety of adaptation "measures." In any given context, however, the choice of measures may be constrained by factors such as their expense, lack of knowledge on how to implement them, and countervailing beliefs and cultural practices. Notwithstanding these impediments, farmers and others at risk from climate change can be provided with external help. Possibilities include the provision of technical information, advice, or guidance; the provision of weather and seasonal climate forecasts and warnings; drought or flood relief; and insurance or other forms of financial assistance and risk spreading.

Decisions about adaptation measures are shaped by public policy, which can be supportive or provide barriers or disincentives. Issues include how much the government and international community is doing to create and deploy improved technology and management techniques; the effect of public policy on crop and livelihood diversification; the agricultural policies in place; and how climate variability and change is factored into policy choices. Many of the policies that can be adopted or strengthened represent existing needs.

Effective adaptation requires the judicious selection of measures within a policy context and within a strategic development framework. Market signals are an essential factor in determining the necessary responses to a changing environment, but they also involve potentially significant and expensive time lags, and they overlook equity. A risk management perspective addresses both these issues, but it is the second that provides the measure of success or failure.

Modes of External Assistance

Public intervention in implementing adaptation measures and policies, encouraged and facilitated by the international community, falls into five categories:

1. *Providing information and advice.* Government agencies can provide information and advice about climate risk and available adaptation or coping strategies.
2. *Providing guidance and training.* Beyond information and advice, governments can proactively demonstrate how specific adaptation measures can be designed and implemented.
3. *Promoting adaptation measures.* A further step is for governments to promote desirable adaptation outcomes through policy measures, including eliminating inappropriate measures, such as electricity subsidies in India that promote overuse of electricity and overmining of groundwater.
4. *Mandating adaptation.* In certain cases, it is appropriate for governments to require adaptation to safeguard public health and safety. For example, vulnerability to climate change would rise if irrigation agriculture were to expand beyond available water resources.
5. *Institutionalizing adaptation capacity and policy.* It is not unusual for climate change policy to be managed and kept within the confines of one ministry or department, but some form of interdepartmental cooperation is necessary.

Mainstreaming Adaptation into Development Planning

Economic growth is necessary for poverty reduction and promoting adaptation to climate change, but long-term growth cannot be sustained without ensuring that emerging patterns of agriculture, industry, and trade do not unduly impinge on ecological health and resilience. The tendency has been to treat adaptation to climate change as a stand-alone activity, but it should be integrated into development projects, plans, policies, and strategies. Development policy issues must inform the work of the climate change community such that they combine their perspectives in the formulation and implementation of integrated approaches and processes that recognize how persistent poverty and environmental needs exacerbate the adverse consequences of climate change.

Although linkages between climate change adaptation and sustainable development should appear to be self-evident, it has been difficult to act on them in practice. A significant adaptation gap exists in many developing countries, particularly those populated by the rural poor who subsist on agriculture. While mitigation within the United Nations Framework Convention on Climate Change (UNFCCC) includes clearly defined objectives, measures, costs, and instruments, this is not the case for adaptation. Much less attention has been paid to making development more resilient to climate change impacts and to identify the barriers to mainstreaming climate change adaptation within development activities.

Moving Forward

Clearly the adaptation agenda is broad. Much of the action required is at the local level, and its precise nature depends on local circumstances. But much can be done with international support at the national level to support local adaptation initiatives. Three such actions are described below:

1. *National adaptation action plans.* All countries should have national adaptation plans that take a broad strategic view of future development paths and expected climate change impacts, and examine and adjust policies, including those related to agriculture, forests, fisheries, water, and other natural resources, as well as health, infrastructure, and ecosystems. The policy review could also include the management of extreme weather events and areas of particular risk, such as exposed coastal zones, steep mountain slopes, and so on. Specific adaptation measures could then be evaluated and selected within the context of a climate-sensitive strategy and set of policies.
2. *Financing for national adaptation plans.* A common concern of developing countries is that their participation in multilateral environmental agreements imposes high costs. It seems realistic to suggest that developed countries, acting collectively through the Global Environment Facility (GEF), support the preparation of adaptation plans. This would help not only to ensure that climate is adequately considered in national development plans and sectoral policies, but also to reassure donors and investors that climate change adaptation measures are well conceived and represent sound expenditures. Plans also need to be implemented, requiring further support. Most of the present funding for adaptation has been on a voluntary basis. Funds are established under GEF, developed countries make contributions, and developing countries access the funds indirectly through one of three implementing agencies (the United Nations Development Programme, the United Nations Environment Programme, or the World Bank). The growth in these funds has been slow, partly because donor countries lack sufficient confidence in the modalities for the effective use of the funds. Creation of national adaptation plans could go a long way toward alleviating this problem. Negotiations on the preparation of such plans would require time, so if such ideas are to be included in post-2012 agreements, there is no time to lose.
3. *Climate insurance.* A further suggestion concerns the provision of insurance against climate risk. Countries, communities, and individuals in most developing countries have little or no insurance coverage against extreme weather events. The private insurance industry is poorly developed in many cases, and fear of losses in uninsured catastrophic events is a significant deterrent. The need and opportunity exists to develop public–private partnerships to expand insurance against climate-related events in developing countries. Such initiatives could serve three purposes: first, they could perform the classical insurance function of spreading risk; second, they could ensure continuity of government operations after a severe loss event; and third, and most important in the adaptation context, they could help to ensure that

adequate adaptation measures are taken. Insurance in this case would be an instrument of public policy, not an end in itself, the objective being to reduce vulnerability by encouraging, facilitating, or even mandating the adoption of adaptation measures. Insurance could be made available at concessionary rates, subject to the insured activity or property meeting certain adaptation or vulnerability reduction requirements.

Pro-poor Mitigation Strategies

Since adaptation becomes costlier and less effective as the magnitude of climate changes increases, mitigation of climate change remains essential. The greater the level of mitigation that can be achieved at affordable cost, the smaller the burdens placed on adaptation. Effective reform of carbon trading and carbon offsets to better include farmers and foresters in developing countries could have significant benefits in mitigation in addition to encouraging environmentally sustainable practices and improving rural incomes to enhance adaptive capacity. Global carbon trading will increase dramatically under present trends, but two key constraints need to be overcome before significant benefits can be channeled to rural areas in developing countries: first, the rules of access—which still do not credit developing countries for reducing emissions by avoiding deforestation or improving soil carbon sequestration—must change; and second, the operational rules, with their high transaction costs for developing countries and small farmers and foresters in particular, must be streamlined.

The innovative approach of the Chicago Climate Exchange (CCX) to carbon trading suggests that the technical reasons for excluding forestry conservation and soil carbon sequestration can be overcome and transaction costs reduced by simplifying the rules and using modern monitoring techniques. The agricultural, forestry, and land use systems of developing countries can be better developed into the carbon-trading system through policy reforms in global governance of carbon trading, to sectoral and micro-level design of markets and contracts, and institutional development at the community level. Streamlining the measurement and enforcement of offsets, financial flows, and carbon credits for investors is also required.

Greenhouse Gases, Land Use, and Agriculture

Land use change (18.2 percent) and agriculture (13.5 percent) together create nearly one-third of greenhouse gas emissions. The share of these kinds of emissions is far larger in developing countries and still larger in least developed countries. Achieving significant carbon mitigation in developing countries will require tapping carbon offsets from agriculture and land use change. While not as large as the potential for savings from reducing the consumption of fossil fuels, the total potential savings from various agricultural and land use change activities is still substantial and is achievable at a competitive cost. With as much as 13 gigatons of carbon dioxide per year at prices of US$10–20 per ton, this represents potential financial flows of US$130–260 billion annually, comparable to annual official development assistance of US$100 billion, and foreign direct investment in developing countries of US$150 billion.

Adopting Innovative Pro-Poor Approaches for Developing Countries

In addition to the crucial steps of including soil carbon offsets and avoided deforestation in the Convention's Clean Development Mechanism (CDM), a number of other changes are needed. To ensure that these emerging carbon markets benefit developing countries, CDM rules should encourage the participation of small farmers and community forest and agroforestry producers, and protect them against major livelihood risks while still meeting investor needs and rigorously ensured carbon offset goals. This can be supported through the following mechanisms:

1. *Broadening the definition of afforestation and reforestation*. Agroforestry, assisted natural regeneration, forest rehabilitation, forest gardens, and improved forest fallow projects should all be eligible under CDM, because they offer a low-cost approach to carbon sequestration while offering fewer social risks and significant community and biodiversity benefits. Short-duration tree-growing activities should be permitted, with suitable discounting. Limiting project types would introduce forest product market distortions unfairly favoring large plantations.
2. *Promoting measures to reduce transaction costs*. Rigorous but simplified procedures as typified by the CCX should be adapted to developing-country carbon offset projects. According to the Marrakesh Accords, small-scale projects can benefit from simplified ways of determining baselines and monitoring carbon emissions. Small-scale agroforestry and soil carbon sequestration projects should be eligible for simplified modalities to reduce the costs of these projects. The permanence requirement for carbon sequestration should be revised to allow shorter term contracts, or contracts that pay based on the amount of carbon saved per year, which would avoid the need for "locking up" land in forest land uses for prolonged periods.
3. *Establishing international capacity building and advisory services*. The successful promotion of livelihood enhancing CDM forestry projects will require investment in capacity-building and advisory services for potential investors, project designers and managers, national policymakers, and leaders of local organizations and federations. Regional centers could be established to assist countries and communities involved in forest carbon trading. Institutional innovations can provide economies of scale and specialization. Companies or agencies can provide specialized business services for low-income producers to help them negotiate deals or design monitoring systems. Locally accountable intermediary organizations can manage projects and mediate between investors and local people.

Finally, further investment in advanced measurement and monitoring can dramatically reduce transaction costs. Measurement and monitoring techniques have been improving rapidly thanks to a growing body of field measurements and the use of statistics and computer modeling, remote sensing, global positioning systems, and geographic information systems, so that changes in stocks of carbon can now be estimated more accurately at lower cost.

Conclusions

Policies focused on mitigating the effects of climate change, if carefully designed, can create a new development strategy that encourages the creation of new value in pro-poor investments by increasing profitability of environmentally sustainable practices. To achieve this goal, it will be necessary to streamline the measurement and enforcement of offsets, financial flows, and carbon credits for investors. It is important to enhance global financial facilities and governance to simplify rules and increase funding flows for mitigation in developing countries.

Challenges and opportunities are not quite as clear when it comes to adaptation, however. There is no single definition of what it means to adapt to a stress, and there are no firm quantitative measures for adaptive capacity. It is, however, widely accepted that the underlying determinants of a high capacity to adapt (and to mitigate, for that matter) include routine access to resources, strong social and human capital, and routine access to risk-spreading mechanisms. The rural poor are lacking in most of these factors; thus, they are highly vulnerable under climate change. Moreover, climate impacts vary over space and time. As global adaptation funds accrue (as more members of the UNFCCC sign on to Kyoto and a successor agreement to Kyoto is developed), care must be taken to allow countries to follow their own approaches; but success across nations must be measured against consistent and as yet undefined standards.

Some will read these recommendations with trepidation because very little climate change has occurred to date in many—but not all—places, so fears arise that large-scale adaptation programs may be premature or run the risk of being misdirected. It is also widely understood that the sources of low adaptive capacity are extraordinarily diverse. Will poor farmers in a particular location, for example, fail to adapt because of lack of knowledge, lack of resources, or poor government policies, and what would be the appropriate role of the international community in each case? The counterargument presented here is that these concerns do not constitute reasons not to act but rather are reasons to proceed cautiously in recognition that no single approach will work everywhere. The only way to learn what works, where, and why is to try, and—in the most difficult circumstances where action can actually begin to help the most vulnerable—now is the time to start trying in earnest.

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DEVELOPING AND CONNECTING MARKETS FOR POOR FARMERS

Nicholas Minot and Ruth Vargas Hill

Agricultural markets play a key role in the lives of poor people in developing countries. More than half the population in developing regions (58 percent) and more than three-quarters of the poor—defined as those living on less than US$1 per day—live in rural areas where agriculture typically constitutes 50–90 percent of household income. As a result, the development of efficient agricultural markets has a large impact on the economic opportunities of rural households. Rural households, however, are subject to a number of constraints that make their participation in the market both costly and risky, often leaving them "unconnected." This brief summarizes these constraints and examines policy interventions to address them.

Enabling farmers to sell their crops provides significant benefits: when constraints are removed, farmers can earn more by specializing in crops for which they have a comparative advantage and purchase commodities that are relatively costly for them to grow. Indeed, those who produce mainly for their own consumption are the poorest, while those who are well integrated into markets and specialize in a smaller number of crops are better off. Cases where commercialization coincides with the loss of farmer income certainly exist—as in the Philippines, where expanded sugarcane production meant that tenant farmers lost access to land for maize production—but in most cases markets provide opportunities for smallholders to improve their incomes and livelihoods. Higher income and/or nutritional status has been associated with the adoption of commercial farming in Guatemala (vegetables), Malawi (tobacco), India (dairy), and Kenya (sugarcane).

Why Are Farmers Disconnected from Markets?

Given the potential benefits of engaging in markets, why do many farmers in developing countries produce largely for their own consumption? Farmers face numerous marketing constraints that can be categorized, roughly, as those that raise marketing costs and those that increase the risk associated with commercialization.

High marketing costs often stem from poor transportation networks, lack of market information, and—sometimes—lack of competitiveness of markets. Poor government policy can also contribute to high marketing costs through overregulation or sporadic intervention, which creates uncertainty and discourages marketing investments. One study found that marketing costs in Sub-Saharan Africa were up to 70 percent of retail values. These high costs reduce the effective "price" farmers receive for their products. Farmers living far from roads and markets, such as those in mountainous or semi-arid areas, tend to sell smaller shares of their outputs. For example, the share of crop production sold in Vietnam varies from just 34 percent in the sparsely populated northern uplands to 88 percent in the area around Ho Chi Minh City. Similarly, the marketed share of crops in Benin varies from 82 percent in the coastal province of Atlantique to 43 percent in the semi-arid northern province of Atacora. Studies of Laos, Malawi, and Zaire, among other countries, have found that the level of commercialization declines with the distance from roads and markets. Poor farmers have only small amounts to sell, making long-distance travel to sell their products unprofitable.

Production risk is another factor constraining market participation. Regardless of whether commercial crops are inherently more vulnerable to weather and pests, growing an unfamiliar crop or variety involves more uncertainty than growing a staple food crop. Commercial tree crops, such as coffee, cocoa, and fruit, involve additional risk and financial resources because they do not produce a harvest for several years after planting. In addition, producing for markets sometimes requires intensive and costly input use, which results in substantial risk for small farmers when yields are uncertain. The per hectare cost of inputs to grow vegetables for export in Guatemala, for example, is 12 times higher than the per hectare cost of inputs for maize production for farmers' own consumption.

A third factor preventing farmers from selling crops at market is marketing risk. A farmer's food security will be threatened if the price of the cash crop at harvest is lower than expected or the retail price of food is higher than expected. Perishable crops imply additional risk because their prices are more volatile, so the sale prices are more uncertain; the crops may spoil before sale; and, in the absence of competition, farmers don't have the option of returning to the market for better prices another day, so they may be forced to accept very low prices. A study of seasonality in Mali found that the off-season price was only 7 percent higher than the harvest price for rice and 40 percent higher for maize, but it was 100 percent higher for fruits and vegetables. Similarly, coffee prices in Uganda were found to be two and a half times as volatile as prices for staple crops like bananas and potatoes, making engaging in markets risky.

Given the high marketing costs, production risk, and marketing risk, small farmers in developing countries are generally unwilling to expand into commercial food production or reallocate land to commercial crops. Instead, they grow enough staple crops to meet most of their basic food requirements and allocate any remaining land to commercial production. Thus, intensification of staple food crop production is often a prerequisite for diversification into high-value commercial crops. In the northern uplands of Vietnam, land has been reallocated from rice to tea and horticultural crops, but only because rice yield increases have more than offset the reduced area.

Transformation of Agricultural Markets

The issue of connecting poor farmers to markets has become more important over time because of long-term trends that are transforming the agricultural sector throughout the developing world. First, agricultural markets have been liberalized in many developing countries over the past 20 years. Commodity marketing boards that offered guaranteed prices have been eliminated, price controls have been relaxed, state-owned processors have been closed or privatized, and restrictions on agricultural production and marketing have been lifted. These reforms have increased competition and reduced marketing costs in many cases, although the net effect on farmers is mixed because of the elimination of support prices in some countries. Importantly, these market reforms give farmers greater responsibility for production and marketing decisions.

Second, international trade has been liberalized and exchange rates have been adjusted to provide greater incentives to exporters, including agricultural exporters. Agricultural markets remain distorted by subsidies in rich countries and constrained by sanitary and phytosanitary barriers. Despite these barriers, agricultural trade has grown rapidly, particularly in terms of horticultural exports from developing to developed countries. Developing-country exports of fruits and vegetables grew at almost 12 percent per year during 2000–05, and net U.S imports of fruits and vegetables have tripled since 1990, largely due to imports from Mexico and other Latin American countries. Meanwhile, net fruit and vegetable imports to Europe have more than doubled since 1990 as supplies from Egypt, Morocco, Kenya, South Africa, and other countries have expanded. In Asia, Chinese horticultural exports are displacing domestic production in Japan and other countries.

Third, income growth and urbanization within developing countries, particularly in Latin America and Asia, are promoting a shift in consumer demand away from staple food crops toward meat, dairy, fruits, vegetables, and fish. The per capita demand for grains and pulses in developing countries is stagnant, while the per capita consumption of vegetables, spices, and eggs is growing at more than 3 percent per year, and demand for meat, butter, and vegetable oils is growing at 2–3 percent per year. As part of this change, higher income urban consumers willing and able to pay for food safety, and processed convenience foods are emerging. This shift in domestic demand is creating market opportunities for smallholders to produce more remunerative high-value commodities for the growing urban market if they can meet rising standards.

Finally, in response to new technology and changing consumer preferences, supermarkets and processors are playing an increasingly important role in food marketing in developing countries. The number of supermarkets is growing rapidly, and in middle-income countries they represent an important share of retail food marketing. The share of supermarkets is less than 10 percent in low-income countries, such as Kenya and Vietnam; 25–50 percent in lower middle-income countries, such as Guatemala and Indonesia; and 50–75 percent in upper middle-income countries, such as Argentina and Malaysia. One study uses cross-country patterns to predict that, in most countries, the share of supermarkets in the retail food sector will grow 5–10 percentage points by 2015. This has implications for farmers because supermarket chains generally set up coordinated supply chains to ensure a steady supply of good-quality produce. Small farmers need to learn to meet these quality and food safety standards to continue to participate in these growing markets.

Policy Options to Connect Poor Farmers to Markets

With the rapid evolution of food-marketing systems in developing countries, identifying the "best" crops for farmers to grow based on their agroclimatic conditions and proximity to markets is infeasible. Farmers themselves have better incentives and information to make these decisions. Rather, what is needed is a set of marketing policies and institutions that connect farmers to markets by reducing their marketing costs and risks. A number of interventions of this type are considered below.

A Stable Policy Environment

The first step in helping small farmers connect to markets is to establish a stable policy environment that facilitates private marketing operations. As mentioned above, agricultural marketing costs may be unnecessarily increased by overregulation, including policies to force crops to be sold through cooperatives, state enterprises, or official marketplaces. Similarly, private investment in storage facilities and transportation will be discouraged by unpredictable public intervention in markets, such as occasional export bans, government-managed trade, or vague policy injunctions against hoarding or overcharging. A price stabilization scheme with transparent rules of intervention is preferable to ad hoc intervention, but policymakers should recognize that even occasional intervention can dampen the incentives for private storage and transportation services.

Building Roads

As noted above, one of the largest marketing costs farmers face is the cost of transporting goods. Building roads and improving the surface of existing roads reduces both the time and cost of getting produce to market. In Bangladesh a carefully designed study

comparing outcomes before and after a road-building project in affected and unaffected villages found that paving rural feeder roads reduced transport costs by 36–38 percent, lowered fertilizer prices by 45–47 percent, and increased staple crop prices by 3–5 percent. Improving roads may also bring more goods to local markets to compete with goods farmers sell, but studies overwhelmingly show that improving roads promotes agricultural growth and farmer welfare. In the case of Bangladesh, improved roads increased per capita household expenditure by 11 percent.

Developing Market Infrastructure

Investing in market sheds and collection points can also make a big difference. In Nicaragua the development of collection centers throughout rural areas has allowed small-scale farmers who do not own vehicles to sell leafy greens to Hortifruti, a domestic supermarket. At the collection centers the leafy greens delivered are also graded and washed in chlorinated water. Developing market infrastructure for fruit and vegetable markets often also involves investing in cold-storage facilities and laboratories for testing produce for chemical residues and bacteria. Investing in other aspects of rural infrastructure, such as electricity, has also been shown to be important.

Investing in Market Institutions

Grades and standards become increasingly important with the development of high-value agricultural markets; they can be set by private companies, trader associations, or public bodies, but when common standards are absent the public sector is required to develop them. Once standards have been set, the public sector can also encourage their widespread adoption by providing information, training technicians, arbitration services, and infrastructure. Developing the institutional infrastructure needed to protect national companies operating in international food markets has also proved to be a valuable investment. For example, Guatemala has positioned consular officers at major ports of importation throughout the world, ready to assist in disputes over the quality of fresh produce. Complaints of poor quality have declined significantly since these positions were established.

Enabling Cooperative Behavior

Encouraging farmers to market their goods together can also reduce marketing costs. Farmer cooperatives have earned a bad name from poorly managed, state-promoted initiatives, but—if well managed—they can reduce costs and provide economies of scale in marketing. Some state-promoted cooperatives are still successfully marketing crops for small farmers, and recent developments in organizing farmers have proved successful. In the upland areas of Laos and Vietnam, a project by the International Center for Tropical Agriculture (CIAT) is reducing the search costs associated with marketing in this environment by organizing farmers, walking them through the market chain, and allowing them to establish contacts with traders and processors. Similarly, in the Indian state of Andhra Pradesh, groups of the poorest women have found that acting collectively they can afford new equipment and negotiate better prices.

Providing Market Information

One reason that marketing margins in developing countries are high is that farmers have little information about current prices in nearby markets. Even traders have incomplete information about market conditions. If farmers had better market information, they could bargain for higher prices from traders. If traders had better information, trading would be less risky, so their risk premium would fall. The government and farmer organizations can play a useful role in collecting and disseminating prices and other marketing information. Until recently, market information was distributed by radio and newspaper, but the Internet and mobile phones are creating new opportunities. In Kenya a project allows livestock traders to get up-to-date price information via text messages through their mobile phones. In India private companies are establishing Internet centers where farmers and traders can get agricultural price information and even carry out transactions.

Agricultural Advisory Services

Effective and demand-driven agricultural advisory services can enable smallholders to supply quality-driven markets and reduce the risks they face in doing so. However, many countries are cutting back on the provision of public extension services because of inadequate management and accountability within those systems. Similarly, many donors have lost interest in financing public extension because earlier models failed to reach poor farmers effectively.

In the absence of an effective publicly funded system of providing training to smallholder farmers, alternative means of preparing small farmers to connect to new markets are being used. The private sector has an important role to play in enabling farmers to compete in new markets. For example, an export firm in Madagascar that contracts poor smallholder farmers to produce beans for European markets relies heavily on extension staff to ensure farmers meet production schedules, quality standards, and safety requirements. Of course, public extension still has a role; extension services operate optimally when they involve several actors contributing their individual strengths. In Madagascar it took two to three years before the firm's extension staff could take on full responsibility for a geographical area, and the provision of state-trained extension workers may have helped.

Weather and Price Risk Management

Weather fluctuations can also dissuade farmers from producing for the market or from producing certain types of crops. Traditional crop insurance based on assessments of yield losses is highly costly because yields need to be monitored. A new development bases weather insurance not on yields but on local rainfall indexes in the region where the farmer lives. When the index falls below a certain level, farmers automatically receive a payment, eliminating the need

to estimate their potential yield losses. These cost reductions make it possible to offer insurance to small farmers. The microfinance organization BASIX, for example, sold 11,000 weather contracts to Indian farmers in 2006.

Cost-effectively dealing with agricultural price risk is difficult. Commodity exchanges are rapidly expanding in Asia through the provision of centers where farmers and traders can make reliable, low-cost transactions. The establishment of grading standards and the enforcement of contracts emerging from the development of commodity exchanges enable farmers to enter standardized contracts with traders to deliver a certain quantity of grain at a given price at a specified future point in time, thereby reducing price uncertainty. The development of futures contracts (when forward contracts are themselves traded) allows price risk itself to be reduced.

For small farmers of internationally traded commodities such as coffee, international commodity options contracts are a means of reducing price risk. Minimum scale requirements for participation, however, necessitate the involvement of intermediate organizations to buy contracts on behalf of large numbers of farmers. Kilicafe, a Tanzanian coffee trade association, makes use of these markets to reduce risk for its 10,000 smallholder members.

Contract Farming

Contract farming can be defined as agricultural production carried out according to a prior agreement under which the farmer commits to producing a given product in a given manner, and the buyer commits to purchasing it. Often the buyer provides the farmer with technical assistance, seed, fertilizer, and other inputs on credit, while offering a guaranteed price for the output. Proponents of contract farming argue that it links small-scale farmers to lucrative markets and reduces the constraints they face in diversifying into high-value commodities and connecting to markets. Contract farming is not appropriate for all commodities, but it can be useful in making the production of high-value commodities for a quality-sensitive market viable for small-scale farmers. A contract-farming scheme in Madagascar provides seed, fertilizer, and technical assistance to almost 10,000 poor farmers to help them produce green beans for export to Europe. Research suggests that the scheme has improved these farmers' level of food security by increasing food availability during the off-season. Similar results have been found in studies of contract farming in Mexico, Kenya, Madagascar, China, and Indonesia, among other countries. Contract farming can be facilitated by establishing an investment-friendly policy environment, legalizing direct purchases from farmers, promoting public–private partnerships in extension, mediating disputes between farmers and buyers, and helping to enforce contracts.

Conclusion

Poor farmers in developing countries are often disconnected from markets, producing largely for their own consumption and selling only a small share of their harvests. Policy interventions can help farmers connect to markets by reducing the costs and risks of doing so. This can be accomplished by creating a stable policy environment; investing in roads and other marketing infrastructure; providing effective market information systems; developing market institutions, such as grades and standards, to facilitate trade; improving extension services; introducing weather and price risk management mechanisms; and promoting contract farming.

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PROPERTY RIGHTS FOR POVERTY REDUCTION

Ruth Meinzen-Dick, Patricia Kameri-Mbote, and Helen Markelova

Rights over land and other natural resources play a fundamental role in human society. The distribution of wealth and poverty is a reflection of underlying property rights. But reforming property rights to give poor women and men greater access to and greater control over resources is not an easy task. This brief explains why property rights are important for poverty reduction, describes the challenges faced in attempting to strengthen the property rights of poor people, and identifies potential policies for overcoming these challenges.

Why Do Property Rights Matter for Poverty?

Property Rights Provide Assets for Livelihoods

Land is a critical asset for the rural poor. It provides a means of livelihood through the consumption and sale of crops and other products, and in many cases it can serve as collateral for credit or be exchanged for capital to start up another income-generating activity. Because the landless are excluded from these opportunities, they are often among the poorest. Data from South Asia, home to 40 percent of the world's poor, show that poverty is strongly associated with landlessness and insecure access to land. In Bangladesh, for instance, the landless and nearly landless (with less than 0.2 hectares) make up two-thirds of the poor. Without access to land, the landless depend on employment from other farmers or nonfarm income sources, but the growth and stability of such employment also depends on the growth of incomes (and thus spending) in local farming. Off-farm employment opportunities are often limited in rural areas with imperfect labor markets and a low stock of human capital among the landless poor.

Because access to land is often crucial for the livelihoods of the rural poor, it is also key to their food security; even if sufficient food is available overall, if people do not have access to the sources of food, they will be food insecure. For those with access to land, the strength of their rights over the land shapes their incentives for continued production. Stronger land rights will help ensure both their food security and a steady supply of products to the local market. Thus, land rights affect food security from the individual to the national level. Moreover, research suggests that land tenure increases investment in the human capital of children. Therefore, property rights are particularly important in shaping who has entitlements to food and may serve as an instrument to prevent the intergenerational transmission of poverty.

In addition to being crucial for food security and stable livelihoods, land provides a buffer to smooth consumption during shocks. When a shock affects labor and food markets, those who have access to land can turn to their farms for self-employment and food production. In cases of crop failure or other distress, landowners can sell or mortgage their land to meet basic consumption needs. Access to land alone is not enough to successfully deal with risks; its real value during a shock depends on the ability to manage it, transform it into income, and benefit from it based on the property rights regime. Those with secure rights to land also benefit when its value increases, allowing them to sell at a higher price or to put the land to more profitable uses. For example, with urban expansion, even small farmers can make large profits by converting their land to housing, whereas land users without secure ownership rights are squeezed out. But to benefit the poor in the long run, land sales must be based on complete information about the value of the land and do more than provide for immediate needs. Poor people need alternative assets or livelihoods so that land sales do not lead to greater impoverishment.

Property Rights Include Common Property

It is not only agricultural land that matters; other resources—including water for irrigation and household use, trees, rangelands, wetlands, and water bodies—play critical roles as major or supplemental sources of livelihood. Many of these resources are commonly, not individually, owned. Access to the commons is a key source of food, income, and productive resources. In fact, common property areas such as wetlands, forests, and pastures constitute more than 30 percent of the total land area in Africa. In India, community forests contribute up to 29 percent of the income of poorer households, accounting for US$5 billion a year. The commons not only serves as a vital source of livelihood, especially for poorer and marginalized people, but also plays an important

role as a fallback option for people to tide them over in difficult times.

Property Rights Have Social, Political, and Household Implications

Rights over resources have multiple meanings and implications for poverty reduction. In many rural societies, landownership is an indication of the person's social identity and social standing. This position in turn shapes access to many government services, influence in local politics, participation in social networks, and intrahousehold relations. Extension agents focus their attention on landowners, often to the exclusion of their wives, children, or tenants.

Whole communities are too often deprived of government services because they are not recognized as landowners. For instance, the Ogiek, a hunter-gatherer community in Kenya, have over the years challenged the government's actions limiting their access to the Mau forest complex, one of the few remaining indigenous forests in Kenya and a strategic water catchment area. Globally, control over land and territories has become a major issue for ethnic minorities and indigenous communities. Membership in many water users' associations is restricted to landowners, depriving other users of a voice in managing this critical resource. In addition, secure land rights enable the poor to participate in the political process without fear of losing their source of livelihood. Therefore, securing property rights for the disadvantaged elements of a rural community can increase their participation in community life and their presence in the local political arena, which can have positive effects on their well-being.

Even the distribution of property rights within the household matters. When women depend on fathers, husbands, sons, or other men for land, their access depends on the quality of relations with that man, and wives often lose their land when they are widowed or divorced. Women with secure rights to land are more likely to engage in independent economic activities and have stronger bargaining power in the household and community. This, in turn, contributes to the welfare of the household and enhances investment in the education and welfare of children.

Long-term security of land tenure provides an incentive to invest in production and conservation technologies that can improve crop yields and facilitate more sustainable use of land and other natural resources. People will not make such long-term investments, however, unless they have the right to plant, harvest, and benefit from those investments—factors linked with rights to the land. Even within the household, if women or young people do not have land rights, they cannot make such investments. Thus, property rights are a tool to promote environmentally sound management, which in turn can help to sustain the benefits from natural resources (Table 1).

Table 1—The Multiple Functions of Land Rights

Function	Examples
Economic functions	• Productive activities (farming, livestock rearing) • Land sales and rentals • Benefits from land appreciation • Investment incentive effects
Food security	• Source of food and income • Buffer against sudden price increases
Reduced vulnerability/ shock mitigation	• Source of food and employment • Collateral for credit • Income from land sales and rentals
Social functions	• Social standing/bargaining position within household, community, and nation • Membership in groups • Cultural identity • Religious functions
Conservation	• Authority to make decisions, investments • Incentives for sustainable management

Source: Compiled by authors.

The Challenges of Strengthening Property Rights

Efforts to create policies and programs that promote tenure security confront many challenges. No universal prescription can apply, because tenure regimes need to adapt to the nature of the resource and the society in which they operate. Systems that are appropriate in irrigated areas may not work for rangelands or forests; those that are suitable in a highly individualized society may not be appropriate where traditions of collective resource management are strong, and vice versa.

Property Rights Have Complex Meanings and Sources

To create effective poverty reduction strategies based on enhancing tenure security, it is important to remember that for rural people, land is a critical asset that has multiple functions and meanings. In addition to its economic function as a source of food production and income, land has social and political value, as well as important religious and cultural meanings (ancestral lands, for example). For many indigenous people, land has implications for the identities of individuals and communities. Therefore, policies that address only the economic value of the resource land may be resisted, even violently.

To understand the complexity of property rights in practice, it is important to move beyond state-issued titles to land to recognize the existence of multiple sources of property rights. In

any given community, access to land and related resources may depend on the following types of laws and interactions among them:

- international treaties and law,
- state (or statutory) law,
- religious law and practices,
- customary (formal and informal) law,
- project and donor rules (including project or program regulations), and
- organizational rules (such as rules made by users' groups).

Policies that consider only state law may undermine the access to and use of land that local people depend on. When government legal systems are more accessible to those with education, money, or central location, the poor and marginalized may depend more on customary or religious bases for claiming rights to resources. But it is important not to idealize: customary practices can also disadvantage women or poorer people. In such cases, government intervention can help strengthen the claims of weaker members (as in Mozambique's new family law and land law). This process is not automatic, however: a woman may not want to incur social sanctions by claiming stronger land rights from her husband, or a tenant may not want to risk losing other help from a landlord-patron. Legal reforms can provide a foundation for change, but if they are to have any effect, they must be carefully implemented to ensure that people know about the laws and have access to the relevant authorities.

What matters is not necessarily full "ownership" of land but tenure security. Many people have restricted, overlapping, or conditional rights to use and manage resources, such as to graze animals or harvest certain products from land officially "owned" by the state or by other people. Simplifying land rights to give complete authority to the owner of the underlying land in the name of apparent efficiency can cut off these other claims, which are important for the livelihoods, social standing, or security of others. When these claims are eliminated, the poor and marginalized often suffer most.

Land Is Scarce

Another challenge is the fact that there is only so much land. With a growing population and related needs for food, water, and other resources, the rural poor will continue to be disadvantaged in their quest for secure livelihoods. In many developing countries where other economic activities are lacking, land continues to be the main productive resource, and both the economy and people's livelihoods heavily depend on agricultural and other natural resources. But the holding of land may be skewed in favor of some groups, excluding the poor. In some cases, the poor are forcefully removed from land to make way for what are deemed to be more productive uses of land, such as foreign investment, urban development, or new infrastructure like dams. Dispossession from land entails loss of the resources that people depend on for their livelihoods. When poor people have been exercising rights to land without formal legal recognition and the rights granted to new users have their basis in law, poor people's rights are obliterated without compensation, so they become even poorer. In such a context, compensation must address the unjust expropriation and extinction of the rights of the poor. When common property is expropriated, whole groups may need to be compensated. Justice also demands that the terms of compensation be mutually agreed to by all concerned parties, which may include restitution of the land when possible. Because land has many continuing values besides its "sale" price, a lump-sum payment may be inadequate, especially when the money can be siphoned away to cover immediate expenses. Instead, alternative assets that provide a flow of benefits need to be identified.

The Poor Are Diverse

The third challenge is ensuring the inclusion of all the poor. Among people identified as poor and excluded from landownership and access, there are other forms of exclusion based on caste, gender, and age. Targeting the poor as monolithic communities may result in greater marginalization for some segments of the rural population.

What Can Be Done?

Policies are needed to ensure that the poor have secure access to land and other vital resources. Law remains a useful policy instrument in allocating property rights. It can be used creatively to change property rights holdings and to ensure that the poor have access to the land they need for survival. But because property rights must be tailored to the physical, social, and economic context, there are no universal prescriptions. Policies must consider not only economic productivity, but also issues of equity and less tangible considerations like the social or religious significance attached to land.

Ensure Access by the Poor

Once a country establishes normative provisions on inclusion, it must ensure that the poor have access to these provisions. It is useful to consider the impact of policies from the standpoint of a poor rural woman. For such a woman to have secure tenure that enables her to invest in and benefit from the land, her community must have rights over resources, her household within the community must have rights to the land, and she must have secure rights within her household. If these conditions are not in place, different policies

may be needed to address problems at each level. These policies could include stronger recognition of community rights to common property, provision of credit or rental markets to help make land available to landless households, and changes to family and inheritance law to give women stronger rights over land. Even if changes are made, she will not benefit from a land policy unless she knows about it and has access to the implementing agencies. Meeting this condition may require legal literacy campaigns to inform the public as well as the authorities. In many cases, improvements in supporting institutions—such as credit facilities, labor markets, institutions related to water or other resource use, and extension services—are also needed so that the poor can use the land effectively. Land markets, including rental markets, can offer a way of expanding landless people's access to land and its benefits and allowing those with underutilized land to gain income from it. But care is needed to ensure that land markets work in favor of the poor and are not exploitative, including safeguards against distress sales and better information about rising land values.

Build on Customary Arrangements

Effective land policies must take into account that in many rural areas, especially in Sub-Saharan Africa, government land administration systems are very different from the customary arrangements. Imposing land titling policies that ignore traditional tenure regimes might take a long time to implement (given the absence of supporting infrastructure) and lead to greater impoverishment and inequality in landownership, especially when those with better education or connections have better access to titling processes. In addition, interventions that promote individualized land rights and disregard existing or potentially beneficial common property provisions can worsen the distribution of land within the community. Therefore, statutory land titling policies must be carefully selected and harmonized with existing arrangements, which may demand the creation of innovative dual property rights regimes, looking for features of each system that safeguard the interests of the poor and disadvantaged.

Acknowledge the Many Values of Land

Political discourse on property rights should be framed in a way that recognizes the multiple values of land—as an economic resource that should be managed productively, a significant resource to which members of society should have equitable access, a finite resource that should be utilized sustainably, and a cultural heritage that should be conserved for future generations. This approach ensures inclusion of diverse interests, values, and persons in property relations and enhances the visibility of less obvious vulnerabilities. It can thus facilitate the formulation of policies that target various categories of people and ensure sustainable use of resources.

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SOCIAL SECURITY

What Can Developing Countries Learn from Developed Countries?

Jean-Jacques Dethier

In developed countries, social security covers workers and their dependents against old age, unemployment, health, and other risks. In developing countries, formal-sector workers have access to social insurance, and the very poor have some access to social assistance and health services, but large population groups are not covered. Extending social security coverage would require delinking social security benefits and labor-market status; creating new institutions to cover currently excluded groups; financing these new programs through general taxation; improving tax collection; reducing the costs of formal-sector benefits; and increasing the costs of informal-sector benefits.

Social security is defined in the European Union as social insurance and social assistance arrangements that protect the population against various economic risks. The U.K. definition, which includes cash benefits but excludes health services, and the U.S. definition, which includes only retirement benefits, are narrower. *Social insurance* denotes publicly provided or mandated *contributory* programs that cover workers and their dependents against major life risks—essentially unemployment, health risks, and old age. Beneficiaries receive income or services in exchange for contributions to an insurance scheme. *Social assistance* refers to *noncontributory* transfer programs that are means tested and targeted in some way to the poor or those vulnerable to poverty and shocks. Other policy instruments—in particular, progressive taxation and various regulations such as minimum wage laws and other labor market policies—help support social security. These instruments and their effectiveness should ideally be evaluated together with pension and health insurance systems and social safety net programs.

Social insurance is a substitute for market mechanisms when such mechanisms are not economically viable or tend to exclude part of the population. It cannot operate like standard private insurance (where each participant pays a premium equal to the expected loss plus operating costs) and cannot be financed by actuarially fair contributions. Social security is thus partly financed through taxes levied on people irrespective of their exposure to the risks that are covered. It implies substantial income redistribution across individuals. It is mainly through that redistribution that the public coverage of old age and health risks is truly *social* (rather than an actuarially neutral substitute for the market mechanism).

Social security has major social benefits, but it also has costs. Benefits arise from gains in efficiency and from a more harmonious and cohesive society. Costs arise from distortions generated on both the tax and the benefit sides, with additional distortions generated by non-insurance instruments (for example, by reducing the incentive to supply labor).

Social Security in Developed Countries

In developed countries, social security grew massively after World War II, in times of prosperity. In the past 30 years, many countries have introduced reforms in unemployment benefits and social assistance to re-establish individual incentives thought to be threatened by existing policies. Social security systems are complex and large—ranging from 31 percent of gross domestic product (GDP) in Sweden to 16 percent in the United States. Institutional differences between countries result from history and from differing views on the role of the private versus the public sector in insurable risks. Despite some significant direct and indirect costs, social security has generated enormous benefits in terms of income maintenance, poverty reduction, and economic stability. Cross-country studies of income redistribution that examine the coverage of low-income risks by government programs show that social security has helped reduce poverty drastically, by at least 40 percent in Europe—in heavily insured countries like Belgium and Sweden by more than 70 percent—and by 28 percent in the United States. Table 1 shows the antipoverty impact of these programs in eight Organisation for Economic Co-operation and Development (OECD) countries.

Pension Systems

Pension systems in developed countries cover more than 90 percent of the labor force. All countries have a mandatory pension scheme, but the balance between voluntary and mandatory provision of pension benefits differs greatly. Voluntary private pension provision is widespread in countries such as Canada, the United Kingdom, and the United States, which have relatively small mandatory pensions. In countries where a large share of income is replaced

Table 1—Antipoverty Effects of Government Spending in Selected Countries

	Share of Poor People by Income Source, in Selected OECD Countries				
				Percentage Reduction in Poverty	
Country	Market Income	Social Insurance (and Taxes)	Social assistance	Social Insurance	Overall
Belgium	31.0	8.7	7.9	71.9	74.5
Canada	24.8	13.8	11.9	44.4	52.0
Finland	18.1	11.4	5.4	37.0	70.2
Germany	28.6	9.9	8.2	65.4	71.3
Netherlands	21.6	10.9	8.9	49.5	58.8
Sweden	29.2	11.6	6.4	60.3	78.1
United States	23.7	19.3	17.0	18.6	28.3
Average	26.1	13.6	9.8	46.9	61.8

Source: Smeeding, "Government Programs and Social Outcomes: Comparison of the United States with Other Rich Nations," in *Public Policy and Income Distribution*. A. Auerbach, D. Card, and J. Quigley, eds. (New York: Russell Sage Foundation, 2006).
Notes: Poverty rates are for persons living in households with adjusted incomes below 50 percent of median adjusted disposable income. Market income includes earnings, income from investments, public- and private-sector occupations, pensions, child support, and other private transfers. Social insurances include the effect of taxes. Refunds from Earned Income Tax Credits (U.S.) and Family Tax Credit (U.K.) are treated as social assistance, as are near-cash benefits, such as food stamps and housing allowances. The percentage reduction in poverty is calculated as the market income rate minus the social insurance rate as a percentage of the market income rate.

under the mandatory system, those covered have no need to make any voluntary provision for retirement. Various approaches are used to guarantee that all older people meet a minimum standard of living. OECD countries can be divided into several groups, depending on whether the link between pension entitlements and pre-retirement earnings is weak, strong, or nonexistent.

- In Canada, Denmark, Ireland, and New Zealand—where pension benefits are purely flat rate—there is almost no link between pension entitlements and pre-retirement earnings.
- In the United Kingdom and Australia, which have significant means-tested public schemes, as well as in Belgium and South Korea, the link between pension entitlements and pre-retirement earnings is weak. There are important minimum credits in the earnings-related pension plans of Belgium and the United Kingdom.
- Switzerland and the United States, which have progressive formulas in earnings-related schemes, and France and Japan, which have redistributive (minimum and targeted) programs, fall in between.
- In Finland, Italy, and the Netherlands the link between pension and pre-retirement earnings is very strong, and the replacement rate is constant for much of the earnings range.

Pension systems also differ in the role that the public versus the private sector plays in pension provision. Where the link between pension and pre-retirement earnings is strong in the mandatory system, voluntary private provision will have a greater role. In some countries, primarily in Latin America, the private sector is involved in running the mandatory pension system. The private sector also plays an important part in pension provision in several OECD countries. In the Netherlands, Sweden, and Switzerland, occupational pensions are mandatory or quasi-mandatory. When the United Kingdom allowed workers to "contract out" of the public, earnings-related scheme in 1978, 50–75 percent of employees opted to substitute private for public provision. Sweden also recently introduced a mandatory defined-contribution scheme, while Denmark has a long-standing one. A defined-contribution scheme is one in which a periodic contribution is prescribed and the benefits depend on the contribution plus the investment return (as opposed to a defined benefit scheme, in which a benefit based on a prescribed formula is guaranteed).

Health Insurance

With the exception of the United States, all developed countries now have universal health insurance. European health insurance systems offer the same services as market insurance but redistribute income by raising participants' contributions in proportion to their income, although benefits are more or less equal. Health systems are classified as three types: (1) private finance plus private production/provision of services; (2) public funding plus public provision; or (3) public funding plus private provision *plus* stringent regulation of medical spending. Successful health care provision systems can be mainly public, mainly private, or mixed. There is no perfect model and each existing system has problems.

- Public funding plus public provision, as in the United Kingdom and Scandinavia, has two strengths: its ability to contain costs and promote access. Its weaknesses include limits on consumer choice and sometimes long waits for service.
- Public funding plus private provision—for example, in Canada and Germany—scores well on access, consumer choice, and the absence of waiting lists, but not on the ability of doctors, clinics, and hospitals to contain

costs; hence, it is vulnerable to upward pressures on medical spending. No country should consider this model unless policymakers are confident they have both the political and the administrative capacity to make the necessary cost-containment measures stick.

- The U.S. system, relying primarily on private funding plus private provision, suffers from coverage and cost problems. In the face of diverse and competing funding sources, third-party incentives have not been contained, leading to a major cost explosion. Despite heavy public spending, gaps in coverage remain, and access to quality care is unequal.

The key issue related to universal health coverage is how to maintain fiscal sustainability. Since medical expenditures are increasing rapidly, considerable effort is going into devising methods to contain medical spending in the face of third-party incentives—methods such as cost sharing, preferred providers, or mechanisms such as health maintenance organizations or diagnosis-related groups. Increasing cost recovery, with some exemptions for low-income persons, is equivalent to reducing the coverage of public health insurance schemes and offering more opportunities to private insurers. How much of that evolution is inherent in public health insurance systems and how much is due to the increase in the demand produced by rapid technological progress in the field or to the pressure of service producers has been debated for a long time.

Unemployment Insurance

Unemployment benefits decline as the length of unemployment increases. The replacement rate—that is, the ratio of benefits to wages replaced by unemployment insurance—varies widely from country to country. The gross rate has fluctuated about 10–15 percent in the United States and Japan and 35 percent in France and the Scandinavian countries in the past 30 years. But the generosity of unemployment benefits has no significant impact, in the long run, on the level of GDP. Any negative effects of unemployment benefits on employment are fully offset by a net positive impact of unemployment benefits on productivity.

Many people who are looking for work are not eligible for unemployment benefits, either because they are new entrants in the labor market or because they have exhausted their entitlement. In Greece, Italy, Portugal, and Spain, less than 25 percent of the unemployed receive benefits. The figure is higher in Germany (about 70 percent) and the Scandinavian countries. After a time, unemployed persons can receive social assistance payments (which are means tested and independent of past earnings), as opposed to unemployment benefits (which are paid for a limited period at a level linked to the wage earned in the previously held job).

Unemployment benefit systems (as well as minimum income guarantee schemes) are predominantly financed through social insurance contributions on earnings in France and Germany and predominantly from taxes in the United Kingdom. Social assistance and other programs (for example, family allowances or housing subsidies) represent a smaller share of total social security than pensions and health care, but they generally provide highly effective coverage of families at risk, thanks to powerful targeting. However, such transfers have an efficiency cost because they reduce incentives for low-income recipients to find employment, and because raising taxes to finance income transfer programs may reduce incentives to work and save among the middle- and high-income earners who have to pay the extra taxes.

Could Developing Countries Adopt the OECD Model?

Since a strong demand for social security and better social protection for all workers exists in many emerging economies, policymakers are considering emulating the OECD model. The long-term goal is a universal system in which all citizens have access to an adequate and affordable level of health services and enjoy a decent pension—or at least a minimum income—in old age. Moreover, the services provided must be efficient and of decent quality across the entire income distribution. But is it possible for them to follow the model of developed countries?

Developing countries differ structurally from developed countries in several respects:

- The per capita income level ($1,750 versus $35,000 on average) and the overall GDP share of social expenditures diverge greatly. For instance, developed countries spend 6.7 percent of GDP on public health programs, compared with 2.8 percent in developing countries. Poverty levels are much higher, mean income levels are lower, and the distribution of income is in general much more unequal in developing countries. Labor markets are fragmented, and the informal sector is large.
- All countries, to varying degrees, devote public resources to health care, social assistance, and, for some privileged groups, pensions. But few developing countries have social insurance. Where it is available, coverage is limited to wage workers in the formal sector of the economy.
- Existing systems of social protection are fragmented. The richest population group has access to formal social insurance, and the very poor have some access to social assistance and health services. But large population groups are not covered by formal-sector social security institutions and receive no social assistance.

- Redistribution of income is limited for all of these reasons: partial coverage, the limited size of social expenditures as a proportion of GDP, the concentration of benefits in privileged sectors, and the limited progressivity of social expenditures and the tax system.

Developing countries are experiencing major difficulties in extending coverage to and raising contributions from nonpoor, informal-sector workers for several reasons:

1. *Fiscal constraints*. Universal social insurance requires a tax base and a level of general taxation above what is currently in place in most countries. Fiscal constraints are particularly strong in low-income countries in which public spending—averaging 15 percent of GDP—is about half of what it is in developed countries.
2. *Administrative constraints*. The most important is the lack of official records of income and therefore the difficulty of collecting taxes. Also, minimum income guarantees cannot be put in place if the government does not have the ability to test for means, in which case insurance against employment shocks or fluctuations in earnings must be provided through other channels. Another constraint is the potential for misuse of funds. Many programs suffer notoriously from graft, corruption, and capture by nonpoor beneficiaries. Basic accountability and keeping eligibility criteria and payment structures simple can help reduce fraud.
3. *Incentive constraints and increasing informality*. Social insurance produces several types of disincentives that affect the general efficiency of the economy. Though it does not increase unemployment, social insurance acts as a disincentive for people to stay in formal employment, contributing to the "informalization" of the economy. Evidence from Latin America and Eastern Europe confirms that social insurance increases the share of workers in the informal sector. Where enrollment is voluntary or only weakly enforced (which is the norm), many workers choose an informal labor contract rather than paying a higher (though subsidized) price in the public system or taking out private insurance. Even when enrollment is compulsory, incentives to pay social insurance contributions are low (as in Argentina, where a large number of workers do not pay their pension contributions).

Minimum Pension Schemes in Developing Countries

Whereas pension systems (including minimum pension schemes in developed countries) are strongly redistributive, yielding a sizable difference between poverty rates before and after transfer, they have limited potential for preventing old-age poverty in developing countries because of their low coverage. How can a basic income be provided to the elderly in developing countries? One option would be to open existing retirement systems to all, regardless of labor status, and provide a minimum income to all persons 65 and older. This is consistent with a social contract in which all citizens pool old-age income risk. In addition to this risk-pooling component, the government might also want to provide incentives to working-age persons to achieve a higher old-age income through savings. This option would require that savings be voluntary, rather than mandatory, particularly since the income of a large group of nonsalaried workers is not observable.

But moving to a unified, universal system would have a high fiscal cost. This option might also weaken incentives to work in the formal sector. Therefore, several governments have chosen a more efficient policy option: lump-sum transfers financed by tax receipts. These are pensions aimed at providing a replacement income to old persons under the poverty line. They are of two types. The first provides a minimum pension unconditionally to all the elderly. Benefits are the same for everyone regardless of income, assets, or work history. Only four developing countries have such arrangements: Bolivia, Botswana, Mauritius, and Namibia. They are easy to administer and do not require information on the income or assets of the beneficiaries. Except for Mauritius, the pension they offer is not high enough to lift its beneficiaries above the poverty line. The second type of minimum pension is also universal but subject to means testing. Five Latin American countries—Argentina, Brazil, Chile, Costa Rica, and Uruguay—have noncontributory pensions. These programs have a social assistance character in that they are targeted to the poor and disabled who cannot afford to contribute. In Brazil and Costa Rica, part of the social assistance pension benefit is financed by cross-subsidies from social insurance programs. Chile, Costa Rica, and Uruguay cover the greatest share, but Brazil has the largest number of beneficiaries—more than 8 million if the recently introduced rural pension programs are included. Rural pension programs provide a pension corresponding to the minimum wage to all men above 60 and women above 55 in rural areas. Some universal means-tested schemes apply to the *household* but not to the individual. The most famous example is the South African minimum pension. It is quite generous (one-third of per capita income), and it reaches 88 percent of the covered population. The pension is paid to men aged 65 and women aged 60 and over, and it is funded through general taxation.

Several studies have examined minimum pension schemes. In rural Brazil and South Africa, noncontributory pension schemes were found to reduce both the rate of poverty for elderly people and the poverty gap. In Latin America, a study using

survey data found that a hypothetical universal minimum pension would reduce poverty almost by half among the elderly in countries where poverty rates were higher. Universal schemes have much to commend them in terms of incentives, spillover effects, and administrative simplicity. However, their fiscal cost—which is a function of the dependency ratio and the fiscal capacity of the country—is far from negligible, even for low pensions. Given that the tax base is limited and tax revenue represents a small share of national income in developing countries, this policy option is probably not feasible for countries with a per capita GDP below, say, US$2,500 or US$3,000. Means testing is cheaper but less efficient in alleviating poverty. The net cost after subtracting existing transfers to the elderly—that is, means testing the minimum pension transfer—would be much smaller.

Universal Health Insurance in Developing Countries

Out-of-pocket health expenditures are often large, compared with income, and this limits access to services and pushes many households into poverty when health shocks occur. The challenge is to increase participation in risk-pooling schemes for two population groups: the poor, who will probably never be able to pay the average cost of a health benefits package, and high-risk individuals whose health costs will be higher than they can afford for much of their lives.

Many countries have recently set up schemes for the poor, financing social health insurance membership out of general revenues. Most, however, typically commit substantial errors of exclusion, largely because poor households fail to apply. For instance, Colombia reformed its system in 1993, but 10 years after, less than 50 percent of the principal target group was actually enrolled in the noncontributory scheme. In Vietnam in 2004, about 40 percent of the poor who should have received health insurance coverage (or a free health care card) actually had done so. In the Philippines and China, evidence indicates that the "worst risks" are enrolling in rural social health insurance schemes.

To extend coverage to informal and self-employed workers—since participation in contributory health insurance is voluntary—the challenge is to find incentives for participation and to eliminate disincentives. Enforcing a mandate for participation in contributory schemes is almost impossible. There are four (not mutually exclusive) options: (1) facilitate participation of self-employed and informal workers through regulation; (2) improve enforcement of mandatory participation and evasion control; (3) increase means testing for access to publicly subsidized health services; and (4) reduce the gap between contributions and benefits by delinking risk-pooling financing from labor status, thereby shifting away from payroll taxes, reducing the costs of participation in contributory risk pooling, and increasing the perceived benefits of participation. Where subsidized national health services and contributory health insurance coexist, informal-sector households have alternatives and tend to move between the two systems. Thus, if a country decides to make the nonpoor contribute to risk-pooling coverage, it is essential to use means testing to determine access to subsidized care.

General taxation is potentially the most efficient and equitable way to finance risk pooling—especially when employers and workers can evade payroll taxes. It depends, however, on the progressivity of tax collection mechanisms and subsequent public spending. By delinking financing from labor status and financing health coverage through general revenue—that is, through a broader tax base—health risks are effectively pooled across all taxpayers. This is the least regressive method and has the smallest transaction costs of all tax types (since society as a whole becomes a single pool). Moving to general taxation could also have a positive impact on the "formalization" of the labor market.

General-tax financing does have disadvantages, however. For providers of public health services, the payroll tax is a more dependent and secure revenue source because it is more insulated from political budget discussions and, in general, less cyclical than general taxation. Payroll-tax financing creates a sense of entitlement so that governments may find it more difficult to cut health services or reduce the basic package of services offered. In developing countries, increasing general tax allocation to the health sector to replace payroll-tax financing will be difficult because tax collection capacity and "fiscal space" are limited. It will certainly prove difficult without governance improvements in existing social insurance systems.

Policymakers have no financially sustainable options other than general tax financing and delinking coverage for nonpoor informal workers from the labor market. All other options have a high fiscal cost and perpetuate the deficit, meaning that contributions can never be enough to cover the cost of the benefits package. The only other alternatives are to reduce benefits (especially those that are perceived by workers as unlikely to be realized) or to introduce a voluntary premium to take into account the actuarial risk of the worker or household. From a purely risk-spreading perspective, this is the most efficient way of extending risk pooling to the nonpoor in the informal sector. It allows delinking of health coverage from labor status and makes portability of benefits easier.

Moving toward Universal Social Security

Moving toward more universal forms of social security in developing countries would require that countries take the following steps:

- *Increase financing from general taxation*. This would decouple social security from labor-market status. When coverage is based on

residence (or citizenship), not on labor-market status, the distinction between a formal and informal worker becomes irrelevant. This option has been implemented in many OECD countries.

- *Improve revenue collection capacity and more effectively sanction tax avoidance.* This would expand the tax base so that the system could be financed from general taxation as much as possible. By reducing payroll taxes, this option increases demand for labor and is thus potentially job creating and efficiency increasing. Of course, the transition has to be carefully planned to provide incentives to workers to join contributory risk-pooling schemes and to foster incrementally the use of general taxation to replace these contributions over time. All these are important institutional and political challenges.
- *Create new programs and institutions to cover population groups excluded from existing social security arrangements.* Up-front costs are lower, but this approach runs the risk of fragmenting the social security system, which would limit risk pooling, forgo economies of scale, be prone to pressure from interest groups to expand benefits in a fiscally irresponsible or inequitable way, face coordination problems, and hamper portability and transferability of benefits.

Two often-contradictory goals, expanding coverage and maintaining incentives for formality, have to be taken into account when designing new programs. In providing social insurance to informal workers, it is important to avoid giving workers incentives to be informal. In other words, the benefits provided should hit the antipoverty target without being more generous than formal-sector benefits. Portability of benefits across institutions is also required so that workers can move between jobs without losing coverage. A number of additional reforms would be desirable: at least for a segment of the population, increasing subsidies from general taxation; improving "value for money" and the quality of services so that more workers would be willing to pay for social protection; reducing the costs of formality imposed by rigid labor laws (since this reduces the cost of accessing social security); and unbundling health and pension benefits to better align the system with workers' preferences. Recent reforms in several middle-income developing countries have often been based on some combination of the above policies, which are complementary.

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DESIGNING INSURANCE FOR THE POOR

Stefan Dercon

The provision of insurance for the poor, covering a variety of risks, could well be a key milestone in the fight against poverty. In richer economies, insurance achieved through broad public action and appropriately developed private mechanisms has fundamentally changed the lives of poor people. The difficulty in developing countries, however, is that insurance markets are limited, as (often) is the capacity of public agencies to provide sufficient protection. Much experimentation has occurred in the provision of health insurance, and microfinance institutions have begun to take more interest in insurance, providing coverage for risks like crop failure resulting from drought and loss of income due to illness or accident as part of their overall service delivery. The focus of this brief is the design of insurance schemes for the poor in some of the poorest settings of the developing world, taking potential synergies and pitfalls into account.

The Nature of Risk in Developing Countries

Risk is pervasive in developing countries. The standard household risks of fire, theft, unemployment, sickness, and mortality are all more severe for poor families in developing countries, and rural households, most of which derive their livelihoods from the land, face the additional risks of droughts, floods, and pests and diseases affecting their crops and livestock. Insurance provision is still limited, and state-provided social security or more basic social safety nets are often limited or unavailable for particular widespread disasters.

Richer families have reasonable access to insurance alternatives, such as credit and substantial savings, and while these are generally not options for poorer families, it is well known that such families do employ relatively sophisticated mechanisms to manage and cope with risk. They tend to diversify their crops and income-generating activities, often incorporating nonfarm activities into their income streams and even having family members migrate to reduce the household's overall exposure to risk. Where possible, they build up savings for precautionary purposes, often in the form of livestock or other liquid assets. Importantly, they also engage in informal mutual support networks in which assistance is provided in the event that a member experiences some form of shock. Nevertheless, given the variety and severity of risks to be dealt with, shocks inevitably have serious welfare consequences.

This is well illustrated by evidence from Ethiopia, where rural households face a considerable risk of drought. For example, about half the households interviewed in 2004 for a rural panel data survey in 15 communities across the country reported that they had faced serious hardship due to drought in the preceding five years, while around a quarter of the sample reported hardship resulting from illness, and a similar number reported problems related to illness. Despite a relatively widespread, foreign aid–supported safety net to cope with drought and increased investment in health services, these shocks continue to cause significant welfare costs. The consumption levels of those reporting a serious drought, for example, were found to be 16 percent lower than those of families not affected, and shocks from illness appeared to have similar average impacts. Further, the costs were not just short term: in the sample, it was found that those who had suffered considerably in the 1984–85 famine—the most severe famine in recent history—were still experiencing lower growth rates in consumption in the 1990s, a period of overall recovery, compared with those who were not seriously affected by the famine. In this way, risk should be seen as a cause of persistent poverty, in that shocks cause serious losses of physical and human capital assets. The presence of risk also tends to induce poorer households to become risk averse, even at the expense of potential returns: for example, they may choose to grow low-returning but safe crops and to avoid committing resources to more productive capital in order to preserve the liquidity of their asset base.

The Characteristics of Insurance to Meet the Needs of the Poor

Insurance interventions designed to meet the needs of the poor would need to take into account the surrounding environment, particularly other interventions affecting risk and the way potential consumers respond to risk. The use of (micro)credit

Box 1—Funeral Associations in Ethiopia

Most Ethiopians are members of one or more *iddirs,* which are funeral associations commonly found in both urban and rural areas. *Iddirs* traditionally offer their members insurance with benefits paid either in cash or in kind (such as in the form of funeral arrangements) in the event that a family member dies. Members usually pay a monthly premium, although there are specific mechanisms to ensure that even the poorest are included. In recent years, it has been observed that many of these groups have expanded their insurance to cover a number of different kinds of risk, including household- and fire-related damages, and personal injury and illness. These groups are typically local, so covariate risks cannot be insured. Some efforts have been taken to build on these groups to increase insurance coverage. A number of urban *iddirs* in Addis Ababa have joined forces, effectively broadening the risk pool. A pilot scheme offering health insurance to *iddirs* is also under way.

is expanding in most countries of the developing world, and in poorer settings schemes are often group based so as to provide increased incentives and possibilities for enforcement, thereby economizing on information and transaction costs. Much effort is also being expended on developing better safety nets targeted to the poor, although usually with limited insurance provision beyond large-scale disasters. Further, in most communities in the world, people have long collaborated to provide mutual support in the event of crises, forming networks based on well-defined extended families and social groups. Such networks may well be suitable for handling idiosyncratic risk—meaning risks that affect only a few members at a given point in time. Scope exists, however, to strengthen these networks via interventions to increase the risk pool as a means of guaranteeing sustainability. As it stands, these networks are not capable of handling covariate risk (meaning risks that simultaneously affect many members of a network) or catastrophic (and, hence, very expensive) risk.

The Scope of Insurance

It should be noted that many types of risk are not easily insurable, simply because they cannot be actuarially priced—as is the case with many of the more common risks in developing countries because even basic data on health, longevity, and climate are often largely incomplete—or because the risks are unknown, as in the case of rare natural disasters or catastrophes. Second, rather than insurance, risk reduction and management may be the relevant priority response for many types of risk. The obvious examples are conflict and crime, but others include water management and environmental protection in the event of drought and soil erosion in certain areas.

Insurance provision also suffers from serious informational and enforcement problems—possibly even to a greater degree than those faced by credit markets. Because it is difficult to observe the exact risk profile of each member of the population, insurance may attract those facing relatively higher risk on average, leading to adverse selection problems affecting the sustainability of a scheme. Further, people may actually start taking more risks once insured (the so-called moral hazard problem). Premium collection costs can be high, as can be the cost of verifying that certain insured risks actually occurred. These types of problems provide explanations for the limited development of insurance markets in poor communities. And since any scheme undertaken by the public sector or a nongovernmental organization (NGO) would face similar problems, there is a strong rationale for improving the design of insurance mechanisms in efforts to economize on these costs.

Another set of problems complicates matters even further: experimental evidence suggests that people's perceptions of risks tend to deviate considerably from observed distributions of risk; for example, relatively high probability events tend to be underestimated. Furthermore, people find it hard to attach any probabilities to many possible events.

These considerations promote certain "rules of thumb" when it comes to designing mechanisms for insurance delivery. Partnerships between private-sector insurance companies, which have the much-needed expertise in the field, and NGOs and possibly even public agencies, which are in a unique position to reach the targeted poor sectors of communities, are likely to be the most fruitful.

Developing and Designing Interventions for Poor Constituents

When it comes to specific insurance interventions, it makes considerable sense to attempt to build on existing groups, especially those with developed forms of insurance provision and mutual support. In Europe, much of the provision of social security historically began with health and unemployment insurance initially developed within cooperatives or trade unions; with public intervention, these mechanisms eventually grew to become fully fledged social insurance schemes. In developing countries, there is ample evidence of functioning self-help groups (for example, in India) and cooperatives. There are also more traditional, but no less sophisticated, institutions such as funeral associations, which provide cash and in-kind funeral benefits for members and their families (see Box 1). Importantly, these schemes tend to be highly inclusive of the poorest segments of the community. Existing groups such as these could be strengthened

Box 2—Rainfall Insurance

Rainfall insurance involves products that cover typical losses from low or high rainfall across particular geographical areas based on predetermined payouts, thereby eliminating the need to estimate individual losses. Such products are highly attractive to insurers because they enable them to sidestep the problems of moral hazard, adverse selection, and verification costs, which have bedeviled crop insurance schemes across the world. In the developing world, trials of rainfall insurance products have been undertaken in various areas of Ethiopia, India, Malawi, Mongolia, Nicaragua, Peru, and the Ukraine.

BASIX has experimented with rainfall insurance in Andhra Pradesh, India, since 2003. The findings of its controlled study illustrate some of the key problems of indexed insurance products designed for the poor: despite being offered in areas with serious drought risk, only a small number of eligible households bought the insurance (4.6 percent). All evidence indicates that those who bought the insurance were wealthier, better educated, and more able to withstand the shock of drought than the average farmer in the area. Why, then, did the poorer farmers forego the insurance? Evidence suggests that they either did not understand the product or did not trust the product or its provider. It is worth noting, however, that on average—despite the insurer-friendly indexed design of the product—insurance premiums were around three times higher than the expected payouts. Work in Malawi has returned similar conclusions on uptake problems, although a clear need exists for further exploration of the subject.

by providing broader risk-pooling as well as by offering protection for additional kinds of risk, most notably covariate risk, which they are not currently in a position to underwrite.

Working with groups has considerable advantages. First, it eliminates or at least considerably reduces the problem of adverse selection, as existing groups will have already internalized such risks. Relatedly, dealing with groups would considerably reduce monitoring costs because the insurance agency would only have to monitor the group portfolio, leaving the association to monitor the individuals within the group. Next, provided that groups were chosen to focus on the poorer segments of society, targeting could also be devolved to the level of the group, society, or association. An additional benefit of focusing on existing groups is that mutual support systems would already be in place within the group, making it easy to build on existing informal schemes with complementary activities. If only individual members within these groups were targeted rather than the group as a whole, the newfound protection of those individuals could well induce them to withdraw their support to existing networks, possibly leaving some with even less protection than before.

Targeting insurance to groups, just as to individuals, requires the careful design of products. Different risks have different specific informational or verification problems, which should be taken into account in this process. For example, health insurance schemes primarily tend to suffer from adverse selection problems; property or fire insurance are strongly affected by moral hazard problems; and insurance against crop failure suffers from moral hazard, as well as loss verification, problems. These risks are often also highly covariate, requiring a much larger risk pool. Life insurance has fewer of these problems and is typically observed to emerge early in new insurance markets. For example, the Indian Self-Employed Women's Association (SEWA) has begun to offer life insurance to its members.

In recent years, a number of innovative products have been developed relevant to the developing world. Indexed products have been developed for rainfall insurance, in which fixed payouts are made when local rainfall levels fall below particular trigger levels. These products are calibrated to cover typical losses from low or high rainfall across particular geographical areas, and predetermined payouts are provided to customers, without the need for specific individual losses to be verified and estimated. Such products have been piloted in India and Malawi, for example (see Box 2). They overcome costly verification problems, as well as all standard informational problems such as moral hazard and adverse selection.

Designing products is nevertheless relatively easy compared with the task of ensuring considerable uptake of insurance. Studies investigating the hypothetical demand for insurance consistently find that demand is high, but when insurance products are piloted, such as in India and Malawi, uptake is rarely swift or high. In insurance companies, this phenomenon is well known, such that it is often said that "insurance is always sold and never bought." Explaining this is harder, although the relatively high up-front cost of the insurance premium for some people may well explain their reluctance. It could also have to do with the fact that insurance is a difficult concept for most people to understand, and taking up an insurance product can often itself be seen to increase uncertainty, given its cost and its novelty.

For insurance to be successfully adopted, prospective clients need to be educated on the issue, and more research is needed to improve our understanding of why uptake is often low. These additional costs will increase the overall cost of insurance, but low uptake will reduce the benefits, viability, and ultimately the sustainability of insurance schemes, defeating their purpose. These realities may offer an additional incentive for a group approach, given that established groups have

established forms of mutual support, and this may lower additional educational and marketing costs.

Prospective Effects on Other Markets

Insurance may also affect the functioning of other markets. Specifically, one well-known reason why private credit markets function poorly or are poorly developed in the poorer regions of developing countries relates to enforcement problems associated with repayment. Offering insurance in such settings is rather analogous to offering bankruptcy protection. Bankruptcy laws provide a limit to enforced repayment, encouraging people to take more risk than is prudent. As a result, fewer people may be offered credit in the presence of bankruptcy laws than would be the case without them. Offering insurance against serious losses has a similar impact: it provides a limit to the "damage" caused by undertaking risky activities, but this increased risk-taking may in turn result in a reduction in the overall amount of credit offered. In short, insurance for broad income risks has the potential to crowd out credit.

Similarly, offering insurance to individuals as part of group-based credit schemes has the potential to undermine the credit scheme. These schemes economize on information and monitoring by creating incentives for members to ensure that they repay their loans, and a big factor in this is ensuring that they don't take on very high risks. Introducing insurance changes these incentives, running the risk of undermining the credit scheme. The implication is that in order to avoid undermining credit provision, potential gains would need to be incorporated into credit–insurance linkages—for example, by ensuring that contracts optimally internalized the different incentive, monitoring, and enforcement problems. One way to do this would be to offer credit with mandatory insurance, rather than allowing some to opt out of insurance.

Going a step further, insurance could be linked to the broader social safety net agenda. Social safety nets are arguably a crude form of insurance that offer benefits at times of crisis. A key difference is that the benefits are usually not well defined or known in advance, and the recipients have limited certainty that they will receive benefits and no contractual enforcement powers. For social safety nets to operate like insurance they would need to be credibly guaranteed. They should also be seen as an alternative in the event of the failure of credit and insurance markets, and one of a number of risk management strategies available to the poor. It is also important to recognize that they have the potential to undermine existing mutual support and credit schemes via the crowding-out problems previously discussed.

Concluding Comments

In conclusion, successfully devising insurance schemes to meet the needs of the poor requires a holistic approach that considers the risk behavior of users; the surrounding environment; and the potential side effects, such as on credit markets. Costs and benefits need to be taken into account, along with potential trade-offs and complementarities.

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HEALTH CARE FOR THE WORLD'S POOREST
Is Voluntary (Private) Health Insurance an Option?

Jacques van der Gaag

About 80 percent of the world population currently lives in countries that are either developed or developing. The other 20 percent lives in countries that are stagnant or falling behind. As a result, by the 2015 target date for the Millennium Development Goals, about one billion people will still live in severe poverty. Some of these people will live in countries that are stuck in one or more development traps; others will live in poor, remote, and backward areas of countries experiencing economic growth, on average. While it will be difficult, if not impossible, to reduce income poverty under those circumstances, other aspects of poverty—particularly bad health and premature death—can be reduced.

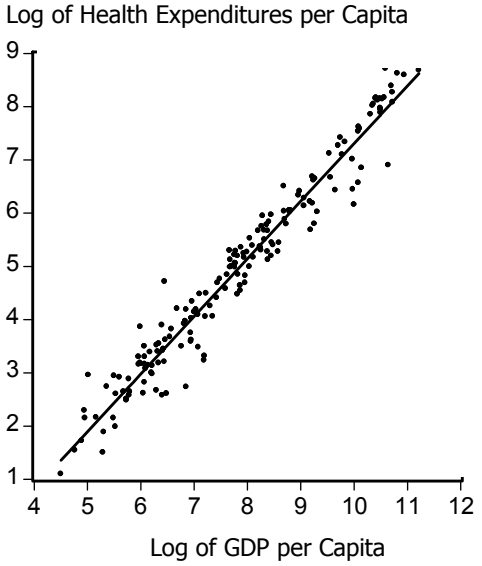
This brief focuses on options for increasing the chances that the billion at the bottom of the global income distribution will have access to affordable health care. The discussion draws on some long-standing regularities in health economics and new developments in the design and implementation of low-cost health insurance for low-income people in developing countries. It shows why private finance for health care will continue to play a major role, especially in poor countries, and argues that increased coverage of voluntary, private health insurance can be a suitable way of securing high-quality health care for the poor.

The First Law of Health Economics

The tight relationship between per capita health expenditures and gross domestic product (GDP) is illustrated in Figure 1. The cross-country regression is based on 176 observations for 2004. Other than for the countries of the Organisation for Economic Co-operation and Development, which show a slightly higher income elasticity, tests for regional effects are all negative. The fit of this simple regression is very tight (the R-squared is 0.954), which leaves little room for issues such as fee-for-service versus capitation systems, global budget caps (for hospitals), public versus private financing, and—most importantly for the purpose of this discussion—foreign aid and debt relief to have an additional impact on the overall financial resources available for health care within a country. (Health expenditures per capita increase 0.07 percent for every 1 percent increase in foreign aid; the standard error is 0.042.)

Why is per capita health expenditure so closely related to GDP per capita? One would expect that, in countries where governments give high priority to health care, overall spending would be relatively high, given GDP per capita—unless, of course, private financing for health care is being reduced as a result. This crowding-out phenomenon can also be at work when foreign aid for health care is increased, thus allowing governments, or the private sector, to spend less of their own resources. Whatever the mechanism, when GDP per capita is known, health expenditures per capita can be predicted with more than 95 percent accuracy.

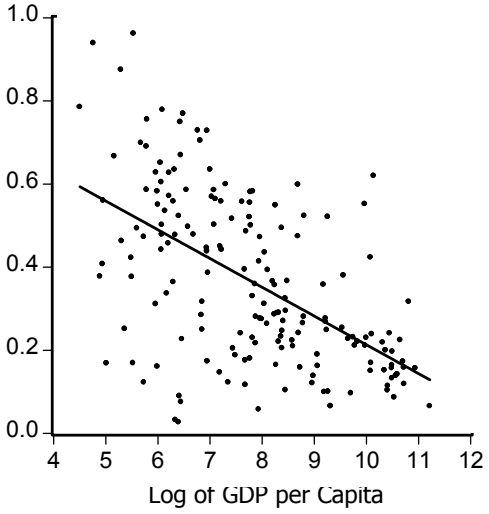
Figure 1. The First Law of Health Economics



Source: World Health Organization, Statistical Information System <http://www.who.int/whosis/en/index.html> (accessed 2004).

A second common observation is that in low-income countries, private, not-insured, out-of-pocket expenditures on health care make up a larger share of total financial resources than in richer countries (Figure 2). In many low-income countries the share exceeds 50 percent; in India and China it is over 75 percent. However, the R-squared for this regression is only 0.311, leaving plenty of scope for policy measures to reduce the out-of-pocket share, especially through the implementation of health insurance. Risk sharing for health care is critical to efforts to alleviate poverty. A recent study shows that about 150 million people per year suffer catastrophic financial shocks due to uninsured health care expenditures.

Figure 2. The Share of Out-of-Pocket Expenditures Decreases with Development



Source: World Health Organization, Statistical Information System <http://www.who.int/whosis/en/index.html> (accessed 2004).

These two observations prompt the conclusions that in low-income countries total future resources for health care will be small, and a large share will consist of private, out-of-pocket expenditures. Conventional efforts to increase health resources will not change this. The main challenges are to increase overall resources without crowding out existing private resources and to increase risk sharing for poor households.

Poor Pockets in Growing Countries

By 2015, a large number of the world's poor will live in poor, remote areas of what will by then be middle-income countries. For these countries, the problem will not be a question of sufficient resources for health care but of how those resources are being distributed. Equality in health has been high on the international policy agenda for decades, but it proves to be an illusive goal. Virtually without exception, country studies show that the poor have less access to all types of health care and benefit less from publicly provided services than do higher income groups. Thus, health status is universally lower for the poor than for the rich. The quest for health equality is often used as a major argument for heavy government involvement in health care. After more than 25 years of policy failure in this area, evidence suggests it is time to rethink reliance on the government as sole financier/provider of health care.

Colombia provides a good example on how progress can be made to achieve access for all. It introduced a comprehensive health insurance scheme in the early 1980s consisting of two regimes: a contributory regime focusing on workers with monthly incomes of about US$170 or higher and a subsidized regime for the poor. The contributory regime is financed through mandatory payroll taxes and the subsidized regime from a mixture of fiscal revenues and cross-subsidies from payroll taxes. A controversial but necessary aspect of the dual insurance scheme is that benefits are more limited in the subsidized regime, reducing the requirement of equality. Paradoxically, the overall effect of the introduction of the new system has been more equality in insurance coverage, access to health care, and health outcomes.

Further, even for the fully subsidized regime, the government has not solely relied on the public sector; instead, participants choose from among a mixture of public or private, for-profit or not-for-profit health insurance companies. In turn, the insurance companies contract health services from a network of public, private, or own clinics and hospitals. This supply aspect is often overlooked when discussing the feasibility of providing access to health services for the poor through low-cost health insurance. In many developing countries governments promise free health care for all but fail in the delivery. As part of the public sector, health staff often go unpaid for months, clinics lack drugs and equipment, and hospitals become dilapidated from lack of maintenance. The insurer–provider contracts provide for a steady and reliable income flow for clinics and hospitals, which facilitates sufficient staffing and much-needed investment in health care infrastructure. The Colombian experience suggests that health insurance coverage for all can be achieved in middle-income countries provided that a number of lessons are taken to heart: first, the goal of ex ante equality is an impediment to providing access for all. The global evidence on that is overwhelming. Second, higher levels of ex post equality can be achieved if coverage levels for the poor take the realistic view that resources are limited. And finally, by relying on insurer–provider contracts—where the providers can be public or private—incentives can be put in place to provide reliable access for all income levels.

Financing Health Care in Poor Countries

Financing health care in poor countries that have limited or no growth prospects remains challenging. But here too health insurance can play a major role. As shown above, the share of private payment for health care is large in poor countries. Given the overall limitations of resources, policies to increase access should be designed so as not to crowd out those private resources. Prepaid, low-cost voluntary health insurance provides such a mechanism. It harnesses the existing resources, provides a steady income flow for the providers, and protects participants from financial shocks as a result of illness. Recent experience in a number of African countries suggests a way forward.

The Dutch nongovernmental organization (NGO) PharmAccess develops low-income health insurance products for a variety of low-income workers. The NGO started with workplace programs in large international companies, providing comprehensive health insurance for the workers, including counseling and treatment related to HIV and AIDS and treatment of tuberculosis

and malaria. As in the case of Colombia, PharmAccess develops contracts between insurers and providers to guarantee easily accessible and high-quality care. This approach is currently being implemented in more than 30 African countries. The major challenge now is not only to provide insurance coverage to workers at large and often international companies, but also to increase coverage for workers in small and local companies and for the self-employed. Pilot projects of this kind are being developed and implemented in Namibia, Nigeria, and Tanzania. The schemes provide an easy mechanism for donor support to subsidize the insurance premiums, without risking the crowding out of existing public or private resources. Group insurances are developed for farmer cooperations, participants of microfinance schemes, market women, fishermen cooperations, small information and communications technology enterprises, organized coffee growers, and other target groups. In all cases the benefit levels are tailored to the needs (and means) of the target groups. With the aid of a generous grant from the Dutch government, insurance premiums are subsidized for the first few years to entice low-income households to participate in these new schemes. The steady income flow from these prepaid schemes allows providers to invest in improvements of health care infrastructure.

Of course, the success of this approach depends on the effective and sustained demand for these voluntary (private) prepaid insurance schemes. Long-term experience with such schemes is still limited, but a growing literature on the willingness to pay for health insurance suggests that the market for such schemes is large, also among the poor.

The Willingness to Pay for Health Insurance

In the absence of real world experience, economists gauge the willingness to pay (WTP) for health insurance in low-income countries by means of contingent valuation (CV) methods. The number of studies in this area is rapidly growing and provides a consistent picture. One study by Barnighausen et al. examines WTP among informal-sector workers in Wuhan, China, finding that these workers are willing to pay the equivalent of about US$4 per member per month. This amount is higher than the estimated cost of insurance based on past health expenditures. Another study by Dror et al. uses unidirectional bidding in a CV survey to obtain estimates of willingness to pay for health insurance in India, finding that the poor are willing to pay a higher percentage of their income on health insurance premiums than higher income groups. The median WTP for health insurance is the equivalent of about US$15, and 25 percent of the respondents are willing to pay the equivalent of US$20 or more. Asgary et al. examine willingness to pay for health insurance in rural Iran, finding that households are willing to pay US$2.77 per month on average. Asfaw and von Braun estimate that, on average, the willingness to pay for a community-based health insurance scheme in Ethiopia is the equivalent of about US$0.60 per month, pointing out on page 249 that, while this amount seems small, "if universal coverage of insurance is assumed, it is possible to generate around 631 million Birr (US$75 million) per annum from 1.57 million urban and 9.5 million rural households of the country. This amount is much higher than the maximum amount of money used as a recurrent budget by the health sector of the country."

A recent study for Namibia reports the results presented in Table 1. Using the CV method, the authors estimate that households in the poorest quintile are willing to pay the equivalent of about US$18.50, or 5 percent of their income, on health insurance. Remarkably, this is almost exactly the expected amount of their current expenditure level. Higher income households are willing to pay more for insurance, again reflecting their expected outlays (for the highest income group, the WTP is much lower than their expected expenditures, probably due to the limited coverage of the hypothetical insurance package that was offered).

Table 1. Mean Willingness to Pay for Health Insurance and Expected Health Expenditures

Quintile	Expected Health Expenditures per Capita per Year N$	Mean WTP per Capita per Year N$	WTP as a Percentage of Mean per Capita Consumption per Year %
1	130	132	4.97
2	162	180	3.07
3	215	204	1.96
4	324	264	1.31
5	902	312	0.47
Total	283	252	1.20

Source: Calculated by author based on Republic of Namibia Okambilimbili Survey, 2006, and A. Asfaw, E. Gustafsson-Wright, and J. van der Gaag, "Willingness to Pay for Health Insurance: An Analysis of the Potential Market for Health Insurance in Namibia," (Brookings Institution, Washington, DC, 2007).

Experience with Community Health Insurance Programs

Voluntary health insurance schemes have long been around in developing countries. Unfortunately, the experiences with such schemes are mixed and hard analyses into the causes of these mixed results are scarce. Based on an extensive survey of the literature, Preker et al. conclude that there is good evidence that community financing arrangements lead to better access to drugs, primary care, and even hospital care, but they also find that many schemes have difficulties in raising sufficient resources. Implementation problems are also mentioned in a report from the Ministry of Health in Tanzania that discusses experiences with community health insurance schemes in Tanzania, Zanzibar, Uganda, and Ghana. In particular, the need to introduce user fees (to entice participation in the insurance

scheme) and to design a system of exemptions (for instance, for pregnant women) and waivers (for the very poor) proved to be major obstacles for the successful implementation of such schemes. Wagstaff et al. find that the introduction of a heavily subsidized voluntary health insurance scheme in rural China did increase outpatient and inpatient utilization by 20 to 30 percent but had no impact on out-of-pocket spending or utilization among the poor.

It is worth noting that none of these studies analyzes or even describes the link of the insurance schemes with health care providers. The current evidence suggests that for such schemes to be successful, more experience is necessary with alternative forms of implementation, including effective insurance provider contracts.

The sustainability question for these types of schemes is not different from the sustainability question regarding budget support for public systems. For low-income countries, additional resources to provide free or highly subsidized public health care will be necessary for years to come. The same is likely to be true for prepaid health insurance schemes for low-income households. The main difference is that the prepaid schemes leverage the already available private resources and thereby empower low-income households to demand easily accessible quality care. Furthermore, the prepaid schemes can contract out services with both public and private providers, thus contributing to the development of a more integrated overall health care system.

Conclusion

In poor, nongrowing countries, and in poor pockets of countries that are developing, resources for health care will be scarce and a large proportion of those resources will be private. Donor aid for the first group of countries, and central government aid for the poor in the second group, should be designed in such a way that the private resources stay in the health system, rather than being crowded out. Private, voluntary health insurance may provide a mechanism to achieve this. It will also provide a reliable income flow for health care providers and protect the poor against the negative financial shock of having to face large health care expenditures. Potentially, the demand for suitably designed low-cost private health insurance is large, even among the poor. The main challenge is to design insurer–provider contracts that guarantee reliable and easy access to high-quality care. Experience with such contractual arrangements is scarce. The way forward should include experimentation with alternative contractual arrangements among (public and private) insurers and (public and private) providers, accompanied by serious evaluation efforts to learn from mistakes and accumulate best practices.

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2020 VISION
FOR FOOD, AGRICULTURE, AND THE ENVIRONMENT

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HOW EFFECTIVE ARE FOOD-FOR-EDUCATION PROGRAMS?

Sarah Adelman, Daniel O. Gilligan, and Kim Lehrer

Education and child health are important tools of poverty reduction and economic development. With the recent focus on universal primary education as a Millennium Development Goal, many developing countries have made dramatic improvements in primary school enrollment rates, but primary school attendance and secondary school participation remain low. One reason is that school-age children in poor households are often needed to work on the farm or to care for younger siblings so that parents can work. Another reason is that poor health and short-term hunger cause children to miss school. Children who are hungry during school also learn less effectively.

Food-for-education (FFE) programs, which include meals served to children in school, as well as take-home rations conditional on a child's school attendance, are a popular means of improving school participation while fostering learning and supplementing the inadequate diets of school-age children. When the meals provided are well timed, they can reduce short-term hunger and help children concentrate and learn. The food is often fortified, which helps address nutritional deficiencies and may improve health and cognitive functioning.

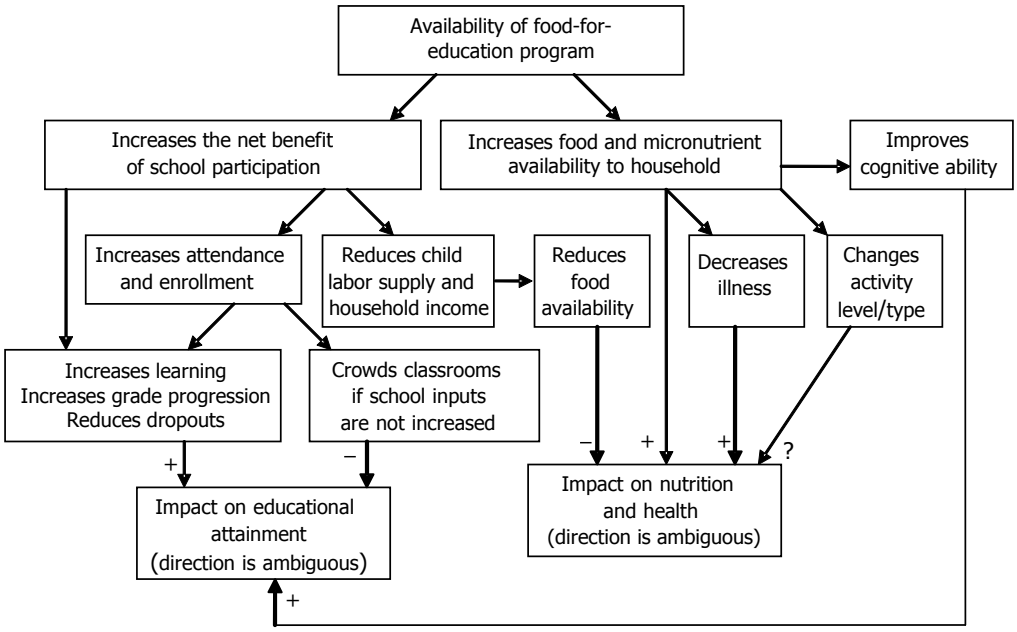
Figure 1 shows the pathways through which FFE programs may affect participants' education and nutrition outcomes. FFE programs raise the benefits of school participation, increasing enrollment and attendance. This may improve learning and educational achievement, which may be bolstered by improved nutrition and cognitive function. FFE programs may improve nutrition and health by directly increasing household food availability, but the net effect on nutrition could be negative if the family loses income because the child is spending more time in school and less time in productive activities. If an FFE program is not accompanied by increased school capacity, classrooms may be crowded, negatively affecting learning. Therefore, negative effects on both education and nutrition are possible. However, the evidence suggests that the effects on education are positive for most children. One possible exception is that children who were already attending school may suffer negative peer effects—the impact of lower ability children joining school. The impact on nutrition also appears to be positive, depending on the quantity and quality of food provided, but gains may be small relative to nutrition interventions in the first two years of life.

Despite these potential benefits, FFE programs have come under attack recently by some donors and policymakers, who contend that these programs are an expensive method for producing the stated education and nutrition objectives and that other more cost-effective mechanisms exist. The empirical evidence on these claims is mixed and can be misleading. One reason is that most evaluations of FFE programs fail to account for both the education and nutrition impacts and for the potential joint benefits of feeding hungry children during school. As a result, aggregate impacts can appear modest. Also, many impact evaluations fail to consider program costs. Indeed, few comprehensive and rigorous studies of the cost-effectiveness of FFE programs exist. Another common critique is that FFE programs often fail in implementation because of unreliable food availability or disorganized meals that disrupt learning. There are examples to support these claims, but the solution is usually one of implementation rather than program design. The remainder of this brief describes the scope and type of FFE programs in operation today, providing a critical assessment of the evidence on their impact and cost-effectiveness, concluding with policy implications and a call for more careful evidence.

The Scope and Type of Today's FFE Programs

It is difficult to know the full scope of FFE programs in developing countries, but a summary of the programs currently operated by the World Food Programme (WFP), likely the world's largest multicountry provider of in-school meals and take-home rations, gives a good indication of the typology and popularity of FFE programs. WFP's FFE programs reached 21.6 million children in 72 countries in 2005. In addition to in-school meals and take-home rations, WFP sometimes provides fortified biscuits for distribution at school. Nearly half of WFP programs combine these modalities of linking food to school participation. In 24 percent of participating schools, only fortified biscuits are provided, while 22 percent of program schools use only on-site meals, and 6 percent use take-home rations exclusively. On average, in-school

Figure 1—Potential Benefits of Food-for-Education Programs



Source: Devised by authors.

meals provide 876 kilocalories (kcal) of food energy per child per day, while biscuits provide 313 kcal of energy. The average cost of running FFE programs at WFP in 2005 was $15.79 per child per year. The cost of on-site meals alone was slightly higher, while that of biscuits averaged $9 per child. For take-home rations, the annual average cost was much higher, at $30 per child, due to transport costs and differences in food bundles. WFP also supports complementary activities to improve child health. For example, deworming is provided in 56 percent of WFP-assisted schools, micronutrient supplements in 40 percent of schools, and hand-washing facilities in half of schools. In some cases, WFP partners with nongovernmental organizations, national governments, or other United Nations agencies to provide complementary school facilities and services.

A Critical Review of the Evidence on Education and Nutrition Impacts

The empirical literature on the impacts of FFE programs on education and nutrition outcomes is substantial. Education outcomes considered include school participation, measured by enrollment and attendance; grades completed or dropout rates; learning achievement; and cognitive development. Nutrition outcomes include food energy consumption, anthropometry, and micronutrient status. However, the number of studies with experimental or quasi-experimental evidence capable of providing causal impact estimates is relatively few. The nutrition literature offers many more experimental studies on nutrition outcomes than are available in the economics literature on education outcomes. However, many of the nutrition studies are controlled trials conducted in closely managed conditions, making it difficult to ascertain how these programs would fare in practice in a more typical setting. The number of experimental field studies for any outcome is few, but growing. From the existing literature, it is possible to draw conclusions about the likely impact of FFE programs on some outcomes, while for others the literature is inconclusive. The summary below presents the evidence for school participation, learning achievement, cognitive development, caloric intake, anthropometry, and micronutrient status, focusing on the studies with the strongest methodology for identifying causal impacts.

Both randomized trials and field experiments demonstrate a small causal impact of in-school meals on school attendance among children already enrolled in school. However, most studies do not test for the effect of in-school meals on net primary school attendance (attendance among children already enrolled and those not enrolled prior to the program) or enrollment rates for all school-age children living in the service area of a school. Thus, most impact estimates reported in the literature could greatly underestimate the full participation effects of these programs, particularly in areas where pre-program enrollment is low. The best recent evidence on net attendance and enrollment comes from a nonexperimental study in Bangladesh. This study found a strong association between in-school feeding and net primary school attendance, but the estimated relationship is not causal. The only study found on the effect of take-home rations on net school attendance and enrollment, also in Bangladesh, provides some support for a moderate impact.

The evidence for learning achievement is less conclusive. While two studies detect an impact of school feeding on students' test scores, each found a significant impact in only one of three tests. One study, in Bangladesh, found a significant impact on mathematics

scores, but no impact on English scores, while the other in the Philippines found the reverse. Neither study identifies whether the gains in learning attributed to in-school meals operate through improved learning efficiency or increased school participation.

FFE programs may also have an impact on cognitive development; however, empirical evidence on the effects of in-school meals is mixed and depends on the tests used, the content of the meals, and the initial nutritional status of the children. Nonetheless, a randomized trial in Kenyan primary schools found evidence that school meals improve arithmetic abilities, and meals rich in animal-source foods improve arithmetic and perceptual function in Kenyan children. Another study demonstrates the effect of breakfast on cognitive function of nutritionally at-risk Jamaican students. However, all of the evidence thus far comes from highly controlled experiments, so it is difficult to determine whether the same impacts would be found in a less controlled setting.

For nutrition outcomes, most of the evidence comes from randomized, controlled, in-school feeding trials, though some recent studies in the economics literature employ quasi-experimental field evaluations to assess changes in energy consumption. In-school feeding programs appear to show greater potential to improve children's total daily macronutrient consumption when children's baseline consumption is well below age- or weight-recommended consumption levels. FFE programs may also improve the quality of children's diets, if not the quantity. Part of the same Kenyan study detected significant increases in micronutrient intake even among children whose overall food energy (calorie) consumption did not increase.

FFE programs also show the potential to increase children's body size and muscle mass, though it is unclear whether the benefits are derived from increased energy intake or the provision of micronutrient-rich foods. Moreover, there is virtually no evidence on how in-school feeding affects children's activity levels, which could ultimately impact anthropometric outcomes. Given sufficient treatment duration, the evidence shows that small increases in weight or body mass index can result from school feeding. However, increases in height and body composition have been detected only when micronutrient-fortified or animal-source foods are provided. Deworming treatments can also improve the nutritional benefits of school feeding. A controlled trial in South Africa finds that deworming interacts positively with iron-fortified school meals to significantly affect several measures of anthropometry depending on initial iron status. The combined treatment had larger effects than either deworming or fortified meals alone. No study was found that tested for a causal effect of take-home rations on student anthropometric status.

The evidence that FFE programs have an impact on children's micronutrient status is sparse, though the available evidence does show some potential for the improved status of some micronutrients. Most evidence suggests that iron-fortified school meals improve children's iron status, compared with unfortified meals; children with low baseline iron stores or higher iron demands may benefit more. However, improvements in iron status were not detected among Kenyan children receiving iron-rich, animal-source foods. The evidence is even less conclusive for other micronutrients. While β-carotene and iodine fortification do improve vitamin A and iodine status in South African primary school students, the Kenyan study finds no improvement in vitamin-A status among students consuming foods rich in vitamin A. In fact, this study only detected a positive impact for vitamin B-12, although foods rich in vitamin A, vitamin B-12, riboflavin, and zinc were provided, and high baseline prevalence of deficiencies in these micronutrients was reported. The presence of malaria or other infections may impede detection of these benefits, particularly with respect to iron status.

Policy Implications

A reasonable consensus exists among those experienced in managing and studying FFE programs that in-school meals increase primary school participation. Where calorie intakes are low, providing meals at school has a unique ability to attract children. However, careful estimates of the size of the causal impact of in-school meals on school enrollment and attendance rates for all children living in the service area of a school are still not available, making it difficult to assess the cost-effectiveness of these programs, even for this primary objective. The evidence on secondary program objectives is mixed, but there is potential for impacts on learning achievement, cognitive development, individual food consumption, anthropometry, and micronutrient status. An important finding that deserves further study is the complementary impact on anthropometry of in-school meals coupled with deworming.

Despite this evidence on the impacts of FFE programs, very little rigorous evidence exists on the central policy question of cost-effectiveness: "Do FFE programs yield higher impacts per dollar spent than alternative programs?" No study has provided a thorough analysis of FFE program impacts across all of the outcomes considered here to obtain a complete impact measure on which to base a comprehensive estimate of cost-effectiveness. FFE programs typically appear expensive relative to other programs targeted at fewer outcomes. For example, providing daily meals at school is certainly a more expensive way of increasing learning achievement than providing textbooks to students, but such a narrow comparison is incomplete. The difficulty in evaluating the cost-effectiveness of FFE programs is in aggregating impacts across various education and nutrition outcomes in common terms, such as gains in future income. Though difficult, such an analysis is certainly feasible.

Cost-effectiveness studies of FFE programs are also complicated by the fact that the main source of food for

many such programs is food aid, which is provided free or below market cost. In the short run, a cost-effectiveness analysis could treat the food aid as free to the program, but this approach to financing the food transfers also reduces the sustainability of these programs. More accurate cost-effectiveness measures would capture the complete cost of funding and operating the programs. Because of concerns over sustainability and effects on local markets, "home-grown" school feeding programs that obtain food from local sources are now being considered in many countries. However, this approach faces other significant challenges, such as maintaining a reliable food source and developing systems to fortify the food with micronutrients as needed.

Another approach to measuring the cost-effectiveness of FFE programs is to conduct side-by-side field experiments with alternative programs. Little research of this type has been undertaken. One exception is a randomized field experiment from the Philippines that compares the education impact of in-school meals to programs that provide teaching materials or foster parent–teacher communication, or both. The program that combined teaching materials with improved parent-teacher communication was most cost-effective, though this study is hampered by a small sample and only limited measures of education outcomes. To make this comparison more accurate, only part of the cost of the FFE program should have been attributed to the education outcomes in the cost-effectiveness measures, since school-based education interventions do not typically affect nutrition. Still, this type of side-by-side field experiment provides some of the best evidence of relative cost-effectiveness. Given the current level of expenditure on FFE programs and the tenor of the debate on their effectiveness, more careful evaluation studies are needed.

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