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THE POOREST AND HUNGRY Looking Below the Line

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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.

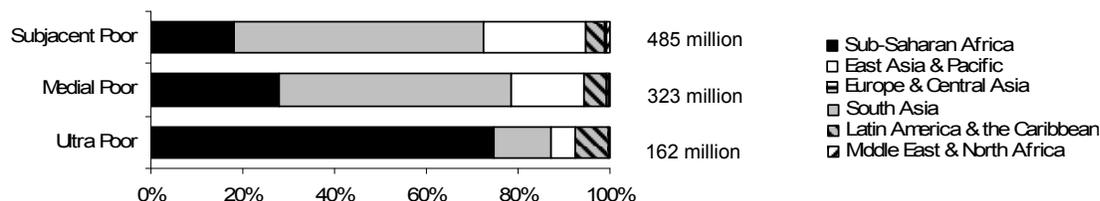
The severity of poverty and the limited progress in reducing it indicate that the poorest in Sub-Saharan Africa may be trapped in poverty; in fact, micro-level evidence of poverty traps has been found for a number of countries in the region (such as Kenya, Madagascar, South Africa, and Côte d'Ivoire). 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

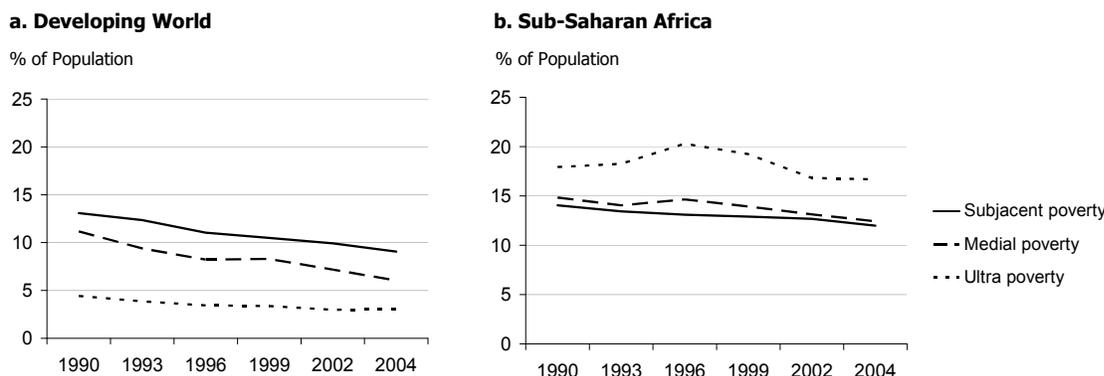
across regions, as Figure 4 indicates for East Asia and the Pacific and Sub-Saharan Africa. In East Asia and the Pacific, growth benefited all groups nearly equally, while in Sub-Saharan Africa, those in ultra poverty are being substantially left behind what little progress toward reducing poverty is 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



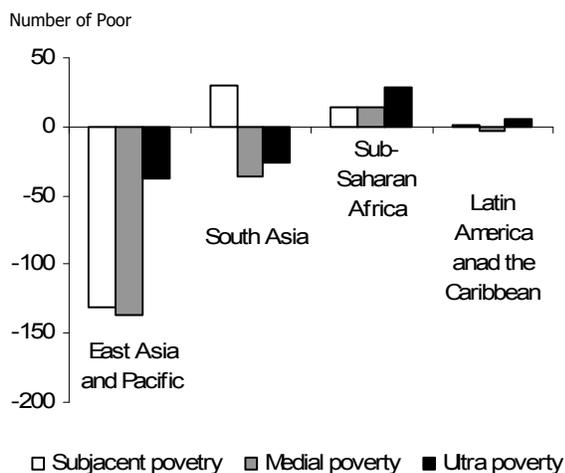
Source: Devised by authors using data from the World Bank's PovcalNet <<http://iresearch.worldbank.org/PovcalNet/jsp/index.jsp>>.

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.

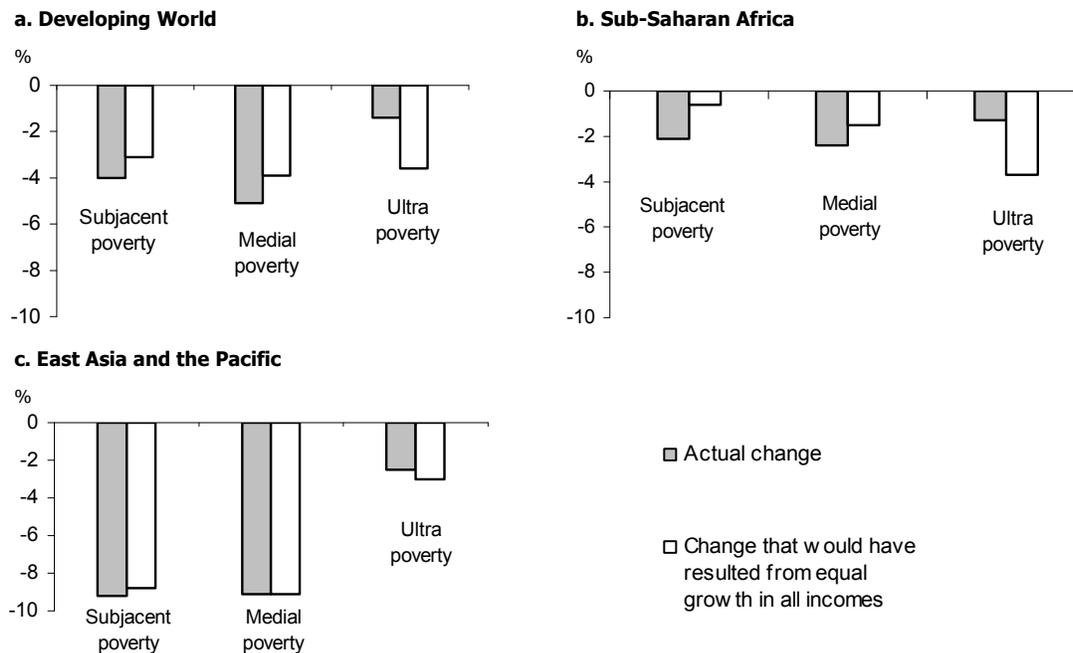
Location of Global Hunger

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.

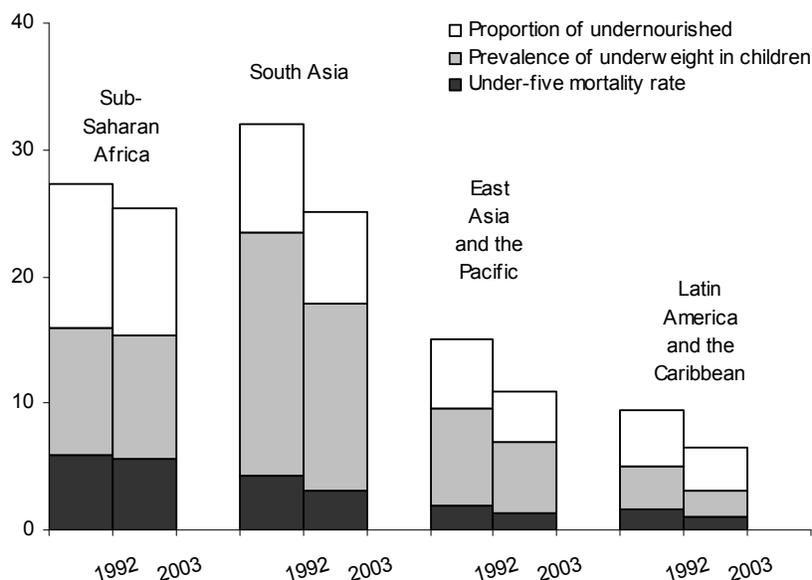
In 1992, South Asia's GHI score was five points higher than Sub-Saharan Africa's, but by 2003, South Asia's regional score had caught up with Sub-Saharan Africa's. Despite the remarkable improvement in child nutritional status in South Asia, however, the region still has the highest prevalence of underweight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