



# Economic Premise

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## When Job Earnings Are behind Poverty Reduction

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*Improvement in labor market conditions has been the main explanation behind many of the poverty success stories observed in the last decade—that is the primary conclusion of an analysis of changes in poverty by income source. Changes in labor earnings were the largest contributor to poverty reduction for a sample of 16 countries where poverty increased substantially. In 10 of these countries, labor income explained more than half of the change in poverty, and in another 4 countries, it accounted for more than 40 percent of the reduction in poverty. A declining dependency rate accounts for over a fifth of the reduction in poverty in 10 out of 16 countries, while transfers and other nonearned incomes account for more than a quarter of the reduction in poverty in 9 of these countries. A further decomposition of the contribution of labor income to poverty reduction in Bangladesh, Peru, and Thailand found that changes in individual characteristics (education, work experience, and region of residence) were important, but that overall, increases in real earnings among the poor matter the most.*

For the first time since the World Bank began monitoring progress against poverty in the late 1980s, 2008 data indicated a decline in both the poverty rate and the number of poor in all regions of the developing world. Moreover, within each region, poverty has fallen over the past decade in the vast majority of countries, whether one uses national or international poverty lines.<sup>1</sup> This progress represents a substantial step in reaching the Millennium Development Goals. According to the latest projections, the goal of halving absolute poverty by 2015 was reached in 2010. Despite this progress, many people remain desperately poor across the world: 1.2 billion people live below the very frugal line of US\$1.25 per day, and 2.4 billion live below the low line of US\$2.50 per day.

In this context, the last decade affords us an opportunity to better understand the most significant factors at work and contributing to the progress in the poverty front. Was the observed reduction in poverty a result of demographic changes

that led to lower dependency ratios? Was poverty reduction the result of higher employment or higher labor force participation? Was it higher labor productivity that led to higher real earnings, or did higher transfers from public or private sources make the difference? Was it the result of changes in the sectoral composition of employment? Were these changes the result of improved human capital (better trained or more experienced workers), or were they the result of changes in the returns to those characteristics?

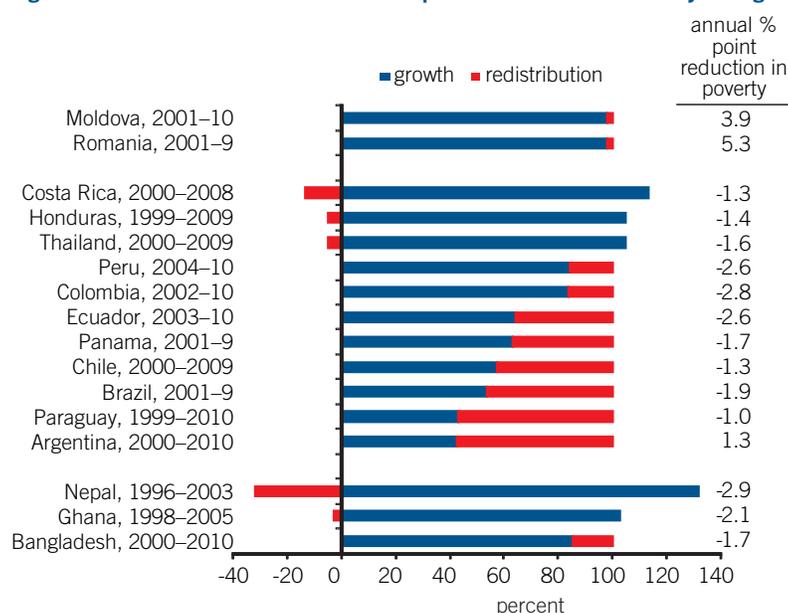
To answer these questions, this note focuses on a subsample of countries where there was a substantial decline in poverty as a way to contribute to the evidence base for policy going forward. For example, in some countries in Latin America, there is debate around the relative roles of better job opportunities and expansion and effectiveness of transfer policies in explaining the observed reductions in poverty and inequality. For instance, Brazil was successful in reducing poverty and

inequality despite modest growth. Was this success due to improved labor market conditions or to more effective social policies? In some South Asian and Eastern European countries, some question whether the reduction in poverty was on account of better job opportunities at home, or due to higher remittances. In East Asia, several countries have seen strong growth, job creation and poverty reduction, but are lately questioning whether social policy should have a stronger focus on redistribution.

## Growth and Poverty Reduction

The links between economic growth and poverty reduction have long been of interest to economists. As detailed in Ferreira (2010), cross-country literature has found considerable evidence that economic growth is strongly and negatively correlated with changes in poverty (Ravallion and Chen 2007). One common way to look at these correlations is the Datt and Ravallion (1992) decomposition, which splits the change in poverty into growth and redistribution components. Using this method, Azevedo et al. (forthcoming) focus on 16 countries with substantial declines in poverty, defined as an average decline in moderate poverty of 1 percentage point per year or more over the last decade. Moderate poverty lines refer to the international poverty line that is closest to the national moderate poverty rate. The conclusion is that growth accounts for most of the reduction in moderate poverty in 14 of the 16 countries over the past decade (figure 1). Redistribution was found to be more important only in the case of Argentina and Paraguay.

**Figure 1. Growth and Redistribution Decomposition of Moderate Poverty Changes**



Source: Azevedo et al. forthcoming.

Note: Consumption-based measures of poverty are used in the case of Bangladesh, Ghana, Nepal, Peru, Thailand, Moldova, and Romania. Income-based measures of poverty are used in the case of Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Honduras, Panama, and Paraguay.

An obvious question is how growth led to poverty reduction and whether changes in redistribution in Latin America were associated with the introduction of public transfers or the result of market forces. To answer this question, analysis was conducted using a method that generates entire counterfactual distributions, allowing a decomposition of the observed poverty changes on account of changes in different sources of income and in individual and household characteristics.<sup>2</sup> In particular, two approaches were used; the first one, adapted from Barros et al. (2006), is a simple accounting approach that quantifies the contributions to household welfare on account of changes in demographics, changes in employment and earnings and changes in nonlabor income, including changes in remittances, public transfers, and other private transfers. The second approach adapts the Bourguignon, Ferreira, and Lustig (2005) methodology and further distinguishes distributional changes on account of changes in endowments or/and returns to those endowments, changes in occupation, location, age and gender structure of the population, along with the nonlabor dimensions mentioned above.<sup>3</sup>

Although these decompositions do not allow for the identification of causal effects, they are useful to focus attention on the elements that are quantitatively more important in describing changes in poverty.<sup>4</sup>

## The Forces behind Poverty Reduction

Behind the changes in growth and redistribution, there are other structural factors that might explain changes in poverty.

**First, demographics.** Declining dependency rates<sup>5</sup> can lead to increases in income and consumption per person. Among the countries considered here, this decline has already started to bear fruit, while at the same time the youth bulge observed in earlier periods has now reached a working age. For example, dependency ratios have declined by about 20 percent in Costa Rica, Honduras, Moldova, and Bangladesh over the last decade.

**Second, growth in labor income.** Labor is the main asset of the poor, as such, and through varied mechanisms, labor incomes are potentially the key factor for moving out of poverty. For most of the countries in the sample used here, both the share of occupied adults per household and household labor income increased. One exception is Romania, which was among the hardest hit countries of the 2008 economic crisis. However, for the other countries, growth in labor income was typically accompanied by employment growth, which in some cases was related to increases in female employment across countries in the sample.<sup>6</sup>

**Third, growth in nonlabor income.** For example, government spending for subsidies and trans-

fers as a share of gross domestic product (GDP) increased more than sevenfold in the case of Ghana, and they increased more than sixfold in the case of Bangladesh. In addition to public sources of transfers, private transfers, in the form of remittances, have also grown strongly. For example, in Nepal, remittances grew by 36 percent per year on average over the decade, while in Honduras they grew by 11 percent per year on average. The question is how important these changes in public and private transfers have been for poverty reduction relative to labor market–related sources.<sup>7</sup>

## Decomposing Poverty Reduction

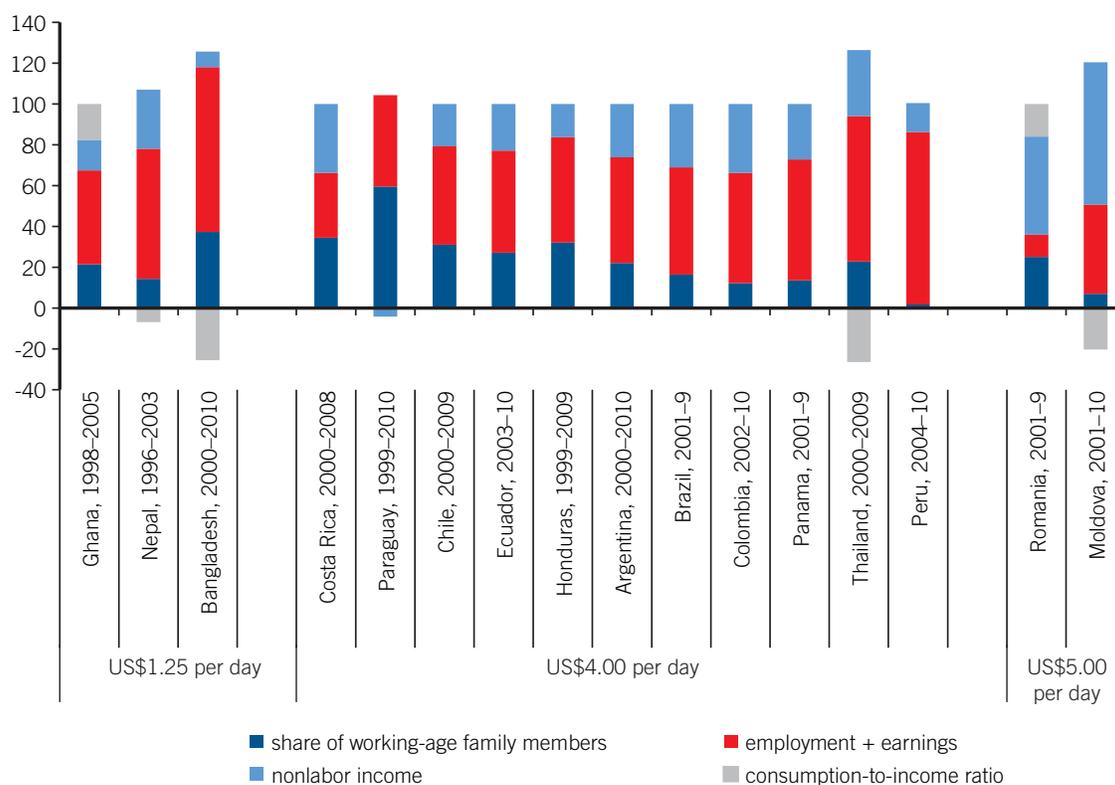
Demographics, labor incomes, public transfers, and remittances—which factor contributed the most to observed short-run reductions in poverty? The key result that emerges is that the most important contributor to the reduction in poverty has been the growth in labor income. In particular, changes in labor income per adult had the largest contributions to changes in moderate poverty (figure 2). In 10 out of 16 countries with substantial poverty declines, labor income explained more than half of the change in moderate poverty, and in another 4 countries, it accounts for more than 40 percent of the reduction in poverty.

Although changes in labor income are the main contributors to changes in poverty in most countries, demographics also matter. In particular, a higher share of working age adults in the household made the largest contribution to poverty reduction in Paraguay and Costa Rica. Changes in the share of adults per household were also relatively important in explaining declines in moderate poverty in Bangladesh, Chile, Ecuador, and Honduras (figure 2).

While public and private transfers were important, they played a relatively smaller role in explaining declines in moderate poverty for most countries in the sample. The exceptions were Romania and Moldova, where transfers contributed relatively more to changes in poverty. In Romania, this was related to changes in transfers and capital income, while in Moldova it was mostly related to the increase in international remittances.

When looking at changes in extreme poverty, measured by a US\$2.5-dollar-a-day poverty line, nonlabor incomes are relatively more important in accounting for changes in poverty.<sup>8</sup> In particular, for some of the middle-income countries in the sample, transfers were especially important in reducing extreme poverty in the cases of Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Romania, and Thailand. This

**Figure 2. Decomposition of Changes in Poverty (percent contribution to the change in moderate poverty)**



Source: Azevedo et al. forthcoming; Inchauste et al. (2012).

Note: “Labor income” refers to the change in employment and earnings per adult; “nonlabor income” refers to transfers, pensions, capital, and other nonlabor income.

Consumption-based measures of poverty are used in the case of Bangladesh, Ghana, Nepal, Peru, Thailand, Moldova, and Romania. Income-based measures of poverty are used in the case of Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Honduras, Panama, and Paraguay.

finding is consistent with the social protection systems in those countries, which are typically targeted to the bottom of the distribution.

### Why Has Labor Income Increased?

The next logical question is what accounts for the increase in labor income for workers in the different parts of the distribution? Was it the result of more people working, or higher earnings per worker? Was it the result of changes in the occupational structure, or changes in the sectoral composition of employment? Were these changes the result of improved human capital characteristics (education or experience), or higher returns to those characteristics? To answer these questions in some detail, Inchauste et al. (2012) focus on Bangladesh, Peru, and Thailand. These three economies experienced fast poverty reduction during the last decade, while moderate national poverty headcount rates in each fell by over 12 percentage points. In each case, growth was very high during the decade, well above 4 percent per year during 2002–8. In Peru and Thailand, there was a sharp deceleration due to the financial crisis in 2009 that rebounded very quickly the following year. In contrast, Bangladesh went through the great crisis unscathed. In all countries, employment and public social transfers increased, as did remittances. There were changes in the occupational structure, with workers moving away from farm and daily work toward salaried employment, to jobs likely to be of higher productivity. There was also a sharp shift in employment away from agriculture and toward the higher productivity manufacturing and service sectors. Moreover, there was an improvement in the educational composition of the workforce over the last 10 years in each of these countries, a result of higher investment in education in previous decades, with a smaller share of the population illiterate by the end of 2010, a higher share of the workforce having completed primary and lower secondary school in Bangladesh and Thailand, and a higher share of the population having completed secondary and tertiary school in Peru and Thailand.

However, specific patterns across the income distribution vary across countries, and the potential role of the different factors in reducing poverty is clearly different. Moreover, the starting points are very different; Bangladesh, despite strong growth, is still a low-income country, with a GDP per capita of US\$1,710, while Peru and Thailand are firmly in the middle-income country ranks, with GDP per capita of US\$10,439 and US\$9,630, respectively (all figures in purchasing power parity [PPP] terms). Peru is already highly urbanized, as opposed to Thailand and Bangladesh, where the share of urban population is still below 30 percent.

To determine which of these changes has been most important in reducing poverty, Inchauste et al. (2012) follow Bourguignon, Ferreira, and Lustig (2005) to account for occupational changes, sectoral and educational shifts, changes

in the returns to characteristics, as well as nonlabor income and other factors. The main result that emerges, consistent with the results in the previous page, is that the largest contributions to poverty reduction in all three countries were labor market–related factors (table 1). Indeed, these contributions to moderate poverty reduction amount to 61 percent in Bangladesh, 75 percent in Peru, and 65 percent in Thailand. Within this, it was the increase in the returns to endowments, rather than changes in these endowments, that explain poverty reduction: returns to land and experience in the case of Bangladesh, returns to land in Peru, and returns to education and experience in Thailand, pointing to an increase in real earnings and higher productivity as the main contributors to poverty reduction in each case. While increases in farm income were mostly responsible for poverty reduction in Bangladesh and Thailand, nonfarm income was mostly responsible in Peru. Finally, a separate analysis focusing on changes in extreme poverty shows that while nonlabor income played an important role in reducing extreme poverty in Thailand and Peru, labor income, either from farm or nonfarm sources, was the main contributor to poverty reduction.<sup>9</sup> Within this, it was increases in the returns to endowments, which can be thought of as increases in the marginal value of work, that made the difference.

### Concluding Remarks

The last decade saw an unprecedented reduction in poverty across the globe, which provides a fantastic opportunity to study the most significant factors that were at work in favor of the poor. In a sample of 16 countries that showed significant declines in poverty, analysis shows that the most important contributor to changes in moderate poverty has been the growth in labor income. While a declining dependency rate has been a significant contribution to poverty reduction, the main source of changes in poverty have been labor market–related factors: the number of occupied adults per household increased, but overall, increases in real earnings among the poor mattered the most.

In Bangladesh, Peru and Thailand, improvement in labor market conditions are the main factors behind the sharp reductions in poverty. The observed growth in incomes of the poor was mainly due to higher returns to endowments signaling an increase in the marginal value of work, either due to increases in productivity and/or higher relative price of labor. In both Bangladesh and Peru, labor incomes of the poor (in agriculture or the less educated) increased faster than for the rest of the population. In contrast, in Thailand, greater educational attainment and higher returns to human capital seem to have boosted the marginal value of work, potentially through productivity increases.

However, when accounting for changes in the extreme poverty headcount (measured by a lower poverty line), the

**Table 1. Contributions to the Change in Poverty Head Count Ratio<sup>a</sup>**

Contribution to national moderate poverty reduction on account of changes in:	Bangladesh, 2000–2010		Peru, 2004–10		Thailand, 2000–2009	
	Percent point change	Share of total change (%)	Percent point change	Share of total change (%)	Percent point change	Share of total change (%)
<i>Nonfarm labor income</i>	-4.56	26	-9.35	58	-3.46	27
Returns to endowments	-3.52	20	-4.93	31	-1.25	10
Occupational choice	-1.61	9	-3.44	21	0.08	-1
Economic sector	-0.48	3	-0.08	1	-1.01	8
Education	-0.55	3	-0.25	2	-1.34	10
Unobservable factors	1.59	-9	-0.65	4	0.06	0
Farm income	-6.02	35	-2.74	17	-4.91	38
Returns to endowments	-6.98	40	-2.04	13	-4.83	38
Occupational choice <sup>b</sup>	0.56	-3	-0.25	2	1.31	-10
Economic sector <sup>b</sup>			-0.14	1	-1.11	9
Education	0.13	-1	-0.08	1	-0.56	4
Unobservable factors	0.26	-2	-0.23	1	0.28	-2
<i>Nonlabor income</i>	1.05	-6	-2.28	14	-5.8	45
of which:						
International transfers	-1.94	11	0.19	-1	-2.19	17
Other transfers	1.68	-9	0.25	-1	-1.12	9
Capital	1.31	-8	-0.58	4	0.02	0
Public transfers	0	0	-1.38	9	-2.51	20
<i>Other</i>	-7.5	43	-0.78	5	2.5	-20
Age/gender	-3.48	20	-1.17	7	-1.18	9
Consumption-to-income ratio	0.93	-5	-1.73	11	3.43	-27
Unexplained	-4.95	29	2.12	-13	0.26	-2
<b>Total</b>	<b>-17.34</b>	<b>100</b>	<b>-16.13</b>	<b>100</b>	<b>-12.84</b>	<b>100</b>

Source: Authors' compilation.

a. Changes in poverty are defined using the national moderate poverty line in each case. In Bangladesh, this line is equivalent to US\$1.08 a day; in Peru, it is equivalent to US\$4.45 on average; and in Thailand, it is equivalent to US\$3.53 on average, all in PPP terms.

b. Refers to the secondary occupation of individuals who work as self-employed agricultural workers.

contribution of transfers was relatively large. It is critical to note that this exercise does not take into account the payoff of increased access to many public services that are not part of household income. It also does not account for the poverty impact of improvements in the quality of public services.

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## Notes

1. For more details on global changes in poverty see Chen and Ravallion (2008) and World Bank (2012).
2. For a recent review, see Essama-Nssah (2012).
3. Both approaches are documented in Inchauste et al. (2012)
4. Panel data that can track the life and labor histories of households over time can be used to answer questions about economic mobility and poverty dynamics. However, panels are often not available with the frequency required. Moreover, panel data are often not representative of the population as a whole; and if they initially are, it is unlikely that over the course of a decade the panel would remain representative of the population. Alternative methods using repeated cross-sections have been used. One approach is to construct pseudo panels, which can delve into some issues of economic mobility (Lanjouw and McKenzie 2011). However, these models are often troubled by their lack of precision and the fact that they often do not measure the contributions of different factors to poverty reduction.
5. That is, an increase in the number of employable adults in the household with respect to the household size.
6. This was true for all Latin American countries in the sample and for Bangladesh (based on Azevedo et al [forthcoming]).
7. Note that both factors could be interdependent, as decisions regarding labor force participation could be influenced

by the availability of public of private transfers. At the same time, transfers might be conditioned on the level of income and employment status of the family members.

8. Results using extreme poverty lines are available upon request.
9. Results using extreme poverty lines are available upon request.

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