Draft

Notes on Tackling Poverty

Jonathan Haughton & Shahidur Khandker
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Learning Objectives

After reading the *Notes on Tackling Poverty*, you should be able to

1. Outline the components of a poverty profile
2. Use ADePT to construct tables for poverty assessments
3. Summarize the main challenges faced by policies aimed at helping the poor, in
    a. Education
    b. Health
    c. Nutrition
    d. Microfinance
    e. Employment guarantee schemes
    f. Insurance
4. Explain how to address the challenge of targeting the poor, using the example of social protection schemes in Indonesia
5. Describe how to measure tax and spending incidence, and explain how this may be used to design pro-poor tax and spending structures

Introduction: Creating Poverty Profiles

Much of the course has been spent examining some of the more technical issues related to the measurement of poverty. In these notes we ask how one can move from measurement to analysis and eventually to designing and testing practical measures that may help reduce poverty.

A good place to begin is with a poverty profile, which is simply a systematic attempt to determine who the poor are, where they live, and what their main characteristics are – such as level of education, family size, age, and so on. The profile, which is necessarily data-intensive, is the essential starting point for Poverty Reduction Strategy Papers, which the World Bank expects countries to produce as part of an effort to think systematically about how to reduce poverty.

The World Bank undertakes about 15 poverty assessments annually. In order to make it easier to create the tables and graphs that are routinely needed for these, and to ensure a degree of quality control, it has created an application call ADePT. Although the app is large, version 5.4 is easy enough to download and use: given household survey data, ADePT can produce a wide array of output, which it puts into an Excel workbook. To illustrate ADePT at work, we loaded data from the Vietnam Urban Poverty Survey of 2009 (Loan et al. 2010), assumed a poverty line of 10,000 dong per person per day (about US$ 0.50 using the current exchange rate), and generated over 40 tables and figures – all in less than half an hour! We present two tables and a graph that result from this exercise.

Table 1: Headcount Ratio by Household Head's Characteristics

	Poverty Headcount Rate	Distribution of the Poor	Distribution of Population
	Data1	Data1	Data1
Poverty line = 10.0			
Gender of the household head			
Male	9.1	59.5	61.1
Female	9.7	40.5	38.9
household head's age			
6-14	47.9	0.1	0.0
15-19	20.2	3.1	1.4
20-24	13.6	5.0	3.4
25-29	9.8	7.5	7.1
30-34	9.5	11.3	11.1
35-39	10.2	13.9	12.8
40-44	7.2	8.8	11.4
45-49	7.1	9.7	12.8
50-54	5.0	5.9	11.1
55-59	5.1	4.4	8.2
60-64	14.4	9.4	6.1
65+	13.4	20.9	14.6
Education of the household head			
0	37.2	13.5	3.4
3	15.1	13.7	8.5
5	12.2	24.4	18.7
9	10.8	32.7	28.2
12	5.6	14.1	23.5
14	0.2	0.0	1.6
16	1.1	1.7	14.4
18	0.0	0.0	1.1
20	0.0	0.0	0.5
Total	9.3	100.0	100.0

Table 1 shows the headcount poverty rate overall for urban Vietnam for 2009 (9.3%), and then breaks this down by the gender, age, and education of the head of household. As one would expect, the poverty rate is very small for those with a high school education or more; it is also relatively small for households where the head is in his or her fifties.

The next example of ADePT output, again from the Vietnam Urban Poverty Survey of 2009, shows (in Table 2) how the probability of being poor changes when an independent variable changes, based on a previous regression analysis (whose results are not shown here). So, for instance, a household whose head has 16 years of education is 97% less likely to be poor than someone who has no education.

Table 2: Changes in the Probability of Being in Poverty (percent)

	Urban	Rural
Demographic event, child born in the family:		
Change from having no children 0-6 years old to having 1 child	42.9	31.9
Change from having no children 0-6 years old to having 2 children	85.7	59.2
Gender of the household head		
Male	(base)	(base)
Female	-1.5	-21.5
Education of the household head		
0	(base)	(base)
3	-29.8	-15.2
5	-46.4	-38.3
9	-60.6	-48.8
12	-78.1	-68.0
14	-90.2	-91.7
16	-97.1	-94.3
18	-99.0	-99.5
20	-97.8	-89.5

The graph in Figure 1, also produced by ADePT, is a poverty incidence curve; as we move the poverty line from left to right, the vertical axis shows the proportion of people who would be poor. This is the same as a density function for income per capita.

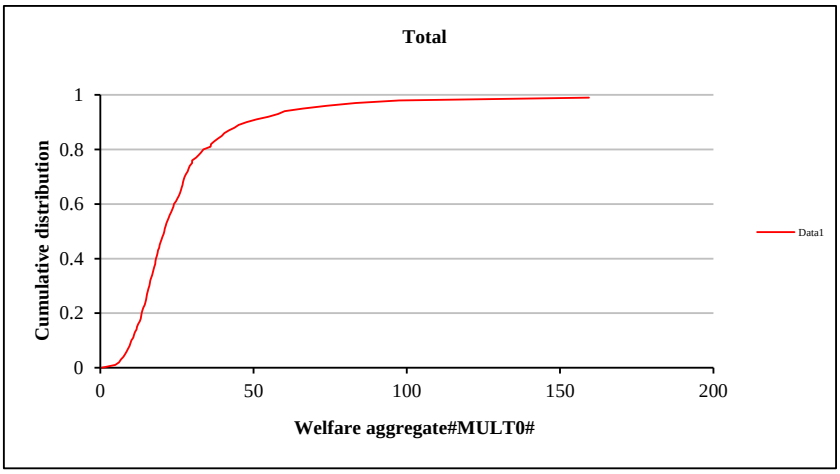

Figure 1. Poverty Incidence Curve, Urban Vietnam, 2009

The key point here is that if one needs to undertake a poverty assessment, and have survey data, it is an excellent idea to get started with ADePT; we can then refine our analysis, based on the initial pass at the data.

Putting Poverty Assessments to Work: MKUKUTA in Tanzania

How does one put a poverty assessment to work? Take the example of Tanzania, which developed a national strategy for growth and poverty reduction covering the period from 2005 through 2010, and has produced annual implementation reports since then (Tanzania 2005). Central to the country's strategy is an emphasis on economic growth, which in turn called for sound macroeconomic management, modest inflation, and fiscal discipline. A second priority was to improve the quality of life and of social well-being, including raising the access to and quality of education and health care. And the third prong of the MKUKUTA strategy was to provide greater accountability in government, both to create a greater sense of popular empowerment, but also as a counterweight to corruption.

The strategy was somewhat lacking in specific goals, but recognized that progress would need to be founded on better data and analysis, and included two national surveys in 2007 as part of the monitoring efforts. The annual growth of real GDP per capita averaged 3.8% during the 2005-2010 period, compared to 1.5% p.a. over the previous decade and a half, and between 2000 and 2007 the headcount poverty rate fell from 85% to 68%, using the World Bank's $1.25-a-day standard. These

improvements cannot be attributed simply to the fact that Tanzania articulated a strategy for reducing poverty, but they do reflect a process that may have been facilitated by systematic attention to the need to address widespread poverty.

Poor Economics

The importance of rooting policies and programs in evidence now pervades thinking on economic development, as one tries to move beyond the simple cries of supply siders ("more aid!") or demand wallahs ("aid doesn't work!"). The workhorse of the new approach is the use of randomized controlled trials (RCTs) – for instance, to measure whether school materials such as flipcharts actually improve educational outcomes.

RCTs are not always possible, especially in evaluating macroeconomic policies, and they are rarely very compelling outside the specific context in which the data were collected, but the hope is that if they are done often enough, it will be possible to accumulate a wealth of evidence that can inform decisions in practice. Two excellent recent books – Abhijit Banerjee and Esther Duflo's *Poor Economics*, and Dean Karlan and Jacob Appel's *Beyond Good Intentions* – summarize most of what we have learned over the past decade or two from randomized and other quasi-experimental trials in developing countries. We summarize some of their more interesting findings and conclusions in the next six sub-headings.

Education

Few would contest the general proposition that more education is associated with higher earnings. But this leaves most of the practical questions unanswered. It is helpful to build more schools? Certainly this is associated with higher enrolment rates; for instance, in Sub-Saharan Africa, primary enrolment rates rose from 54% to 70% between 1999 and 2006. But more interestingly, Esther Duflo (2001) found that Indonesia's school building program in the 1970s not only led to higher enrolments, but also to higher wages subsequently.

Yet an increased supply of schools may not be enough. For instance, there is enough capacity in schools in rural Mexico, but many children used to drop out prematurely. The *Progresa* program, now called *Oportunidades*, provides cash to mothers conditional on their children attending school, and this nudge

has helped raise attendance. More surprisingly, unconditional cash transfers have had an equally strong effect in Malawi, so conditionality may not always be necessary, just sufficient resources to allow children to attend school.

The biggest challenge now may be how to improve the quality of schooling, and this is a fertile area for future experimentation. To what extent should schools be private? When does after-school tutoring help? What materials work best? How does one reduce teacher absenteeism? Should pupils be tracked? Do parents need more information about the value of education? When does computer-assisted learning help? We still don't fully know the answers to these questions, but they are practical and relevant, and probably the answers are fairly specific to a given country at a given time.

Health

Good health is both something of value in its own right, and is necessary for productive work. Yet there seem to be a number of things that households could do to improve their health quite cheaply – the low-hanging fruit – but don't get done. For instance, unless bed nets are very inexpensive, many households will not use them, despite their effectiveness in reducing the incidence of malaria. Or again, oral rehydration remedies are cheap by any standard, but a million and a half children die of diarrhea every year even though many of these deaths could have been prevented. Chlorination, which makes water safe to drink, is also cheap, but rarely done at the household level.

Perhaps the benefits are hard to see, or smaller than we think; perhaps the benefits are too far into the future, and families desperately need the money now for other things; perhaps many of the benefits accrue to others. It would seem that many households would benefit from a nudge, and perhaps some subsidy, to improve their health, but here too some experimentation is needed. An interesting example is the *piso firme* program in Mexico, which provided free ready-to-spread concrete to households with dirt floors, and had a measurable effect in improving child health and education (Cattaneo et al. 2007).

Nutrition

Until relatively recently, there was a widespread concern that most of the world's poor were simply not getting enough to eat. This view is changing: in 1983, 17% of those in surveyed in India said they did not

have enough food, but by 2004 this proportion had fallen to just 2%. In a recent experiment in China, Jensen and Miller (2007) subsidized the staple food, and the result was that *less* of the staple was bought, as households in effect cashed in the subsidy and used it for other purposes, including better-quality food.

Banerjee and Duflo argue that more attention now needs to be given to micronutrients, including iodine and iron, and to nutrition-related interventions such as deworming. It may be that the long-term effects of micronutrients are hard to see, and that this calls for public action.

Microfinance

In 2006, Muhammad Yunus and the Grameen Bank won the Nobel Peace Prize for their work on microfinance in Bangladesh. Microcredit consists of lending small amounts to very poor people; microfinance is a broader term that includes providing other financial services, such as deposits. The promise of microfinance is that it provides the poor with a pathway out of poverty.

Microloans are inherently expensive; the fixed lending costs are spread over a small amount of principal, and the risks of lending to the very poor are substantial, particularly as most have no collateral. Many micro lenders lend to groups rather than individuals, but this is limiting for ambitious individuals. And many poor people are not keen to borrow, or cannot easily put short-term loans to productive use.

In short, one must be careful not to oversell microfinance. But it does have a role. For instance, Pitt and Khandker (xxx) find that Grameen Bank loans lead to higher welfare; and Duflo et al. (2013), in a randomized controlled trial, find that Spandana lending in Hyderabad has had at best a modest effect in encouraging entrepreneurship.

Employment guarantees

In times of disaster, poor people may need relief. This is how the Maharashtra employment guarantee scheme began in 1965: it guaranteed low-wage manual work to anyone who wanted it. Such a program is self-targeting in that only those who are in serious need will enroll. The Maharashtra scheme did not do much to reduce the headcount poverty rate – the wages paid were too low for that – but it did

reduce the severity of poverty (Shah and Mehta 2008). Since 2005 India has had a national rural employment guarantee scheme, which reaches over 40 million households, but it is controversial: the wage paid is relatively high, so the number of workdays is limited (to no more than 100 per household per year) and many not-so-poor individuals sign up; there are also concerns about corruption.

Workfare programs of this nature can be useful. In a rigorous evaluation of the 1997 Trabajar II program in Argentina, Jalan and Ravallion (1999) found that four-fifth of the beneficiaries came from the poorest quintile of the income distribution; and the program raised incomes by half as much as the gross wages it paid, which means it did not simply substitute for existing sources of income.

Insurance

Many observers wonder why poor people buy so little insurance, whether against a crop failure, an illness, or old age. For instance, a recent study shows that fewer than 20% of households in the Indian state of Gujarat and Andhra Pradesh bought even minimal crop insurance.

Part of the explanation is that insurance is always difficult to provide: adverse selection means that only the riskiest cases sign up for insurance (unless it is mandatory); and moral hazard means that those who have insurance may change their behavior, for instance by not protecting their crops as carefully. As a result, private insurance can be too expensive to be attractive.

Such concerns apply everywhere, but there may be other challenges in developing countries, such as a poor understanding, by households, of what insurance really involves; limited trust in the insurance providers; and time inconsistency, so even the recognition that insurance might be useful is not enough to offset the pain of paying for it now. This means that government may need to step in when there is a disaster, but of course this leaves even less of a reason for buying insurance.

Designing Social Protection: The Case of Indonesia

One of the biggest challenges in tackling poverty is putting in place a structure of social protection. This is essentially unaffordable in a truly poor country, but becomes a realistic option once countries reach middle-income status. Indonesia finds itself in this situation: 12% of its population is poor (using the

national poverty line), a further 70 million are close to the poverty line, and inequality has been rising over the past several years (Widianto 2013; see too Cornwell and Anas 2013). Since the Asian Financial Crisis of 1997, Indonesia has addressed poverty by providing food, workfare, and access to health care, by expanding education, and by advancing credit to small enterprises (Basri and Papanek 2010). Now that half the population is urbanized, these efforts are no longer seen as sufficient.

So over the years Indonesia has put in place a number of programs that are geared toward the poor, including grants of rice, scholarships, subsidized health care, conditional and unconditional cash transfers, and a workfare program. The elements of these programs are summarized in Table 3.

Unfortunately, these programs are poorly coordinated and are run by different agencies, and some poor households fall between the cracks. They are also poorly targeted, as Table 3 makes clear, with only about a quarter of the benefits from any of the programs going to the poor.

Table 3. Social Protection Programs in Indonesia

Program	Budget, c. 2009 Rupiah, trn	Coverage % of population	Political support	% of benefits going to poor
Rice for the poor (RASKIN)	13	25%	High	21%
Scholarships (BSM)	19	To rise to 25%	High	17% (operations)
Social health assistance for the poor (JAMKESMAS)	5	35%		22-24%
Unconditional cash transfers (BLT)	14		Low	26%
Conditional cash transfers (PKH)	1	1%; to rise to 5%	Moderate	
Cash for work (PNPM)			High	
Guaranteed loans for micro, small, & medium enterprises (KUR)				

Sources: World Bank 2008; Widianto 2013.

In response, the country has set up a National Team for the Acceleration of Poverty Reduction (TNP2K) that reports to the Vice President. The biggest challenge facing TNP2K in creating a coherent social safety net is that of better targeting the poor. Means testing based on income would require enormous amounts of household-level data, and is not feasible. There are other possible approaches – providing support only to poor areas, or asking villagers to identify which of their neighbors are poor, or targeting the old or visibly infirm. The workfare program (PNPM) is self-targeting – similar to the Maharashtra case, of which more below – and cooking gas is available free, but only in 3-kilo bottles, so in practice only poor households bother to take advantage of this benefit. One other possibility would be to use

conditional cash transfers, as done successfully in Mexico (Schultz 2001), Brazil, and Bangladesh (Huq 2013).

The TNP2K team has set up an elaborate statistically-based system for identifying which households are poor. First they use poverty mapping – which weds survey to census data – to identify the poor parts of the country, and they focus on these areas. Then they estimate a model of income for each of 500 districts, where the independent variables include information on the household's assets, size, education, work status, and housing. Given detailed information on these independent variables, it is possible to predict who is poor; this is thus a method of proxy means testing, and the database covers 43% of all the households in Indonesia, a country with 240 million people. The TNP2K team then issues cards to those who are identified as poor, and has set up a system that allows for appeals, and for updating the list of poor people. The next step will be for the card to give households access to the elements of social protection, including rice, health care, and education.

Modeling household spending

There are many possible ways to model household spending. Table 4 provides an example of a straightforward model of household spending for the Cote d'Ivoire in 1985. There are separate regressions for urban and rural households, and it is clear that education and household assets are important predictors of spending. The Indonesian method for identifying the poor uses regressions such as these. The main advantage is that one can identify the poor based on a number of easy-to-measure variables, which is far cheaper than trying to measure income (or spending) for every single household.

On the other hand, Ravallion (1996) is doubtful that rapid-appraisal methods such as these will generate accurate predictions of who is poor; the performance of such a model using data from the 1993 Jamaica Survey of Living Conditions was disappointing, as it correctly classified only half of those who were in the lowest quintile.

Table 4. Determinants of Household Spending Levels in Côte d'Ivoire, 1985

	Urban		Rural	
	Coefficient	t-statistic	Coefficient	t-statistic
Dependent variable: ln(expenditure/capita)				
Educational level of most educated male				
Elementary	0.38	5.3	0.04	0.6
Junior secondary	0.62	8.6	0.08	0.9
Senior secondary	0.80	9.6	0.05	0.4
University	0.93	9.4		
Educational level of most educated female				
Elementary	0.11	1.7	0.07	1.0
Junior secondary	0.24	3.1	0.27	2.2
Senior secondary	0.34	4.1		
University	0.52	4.1		
Value of selected household assets				
Home	0.06	5.3		
Business assets	0.04	3.3	0.16	4.9
Savings	0.08	4.7		
Hectares of agriculture land				
Cocoa trees			0.17	4.3
Coffee trees			0.04	1.3
Distance to nearest paved road			–0.04	–2.9
Distance to nearest market			–0.09	–3.3
Unskilled wage			0.37	6.4

Source: Glewwe (1990).

Tax and Expenditure Incidence

Even if a country cannot yet afford much of a social safety net, it can at least weigh the effects of its tax and spending decisions on the poor. Here we consider some practical examples, starting with fuel subsidies, and then taxes and overall spending separately, before considering the net effects.

Fuel subsidies

A number of countries subsidize fuel and electricity, including Indonesia, but also Bolivia, Egypt, and Yemen. The usual justification for such subsidies is that they help the poor. To the extent that the poor consume gasoline and electricity, or items that have to be transported, then they do indeed benefit from such subsidies.

However, fuel subsidies are a very inefficient vehicle for supporting the poor. In Indonesia, 23% of government revenue, equivalent to 3.7% of GDP in 2012, went to fuel subsidies. Not only does this crowd out other government spending, but it makes it difficult to maintain fiscal discipline, and leads to wastefully high spending on energy. But the biggest problem, from a poverty reduction standpoint, is that the vast bulk of the subsidies go to the non-poor, as Tables 4 and 5 show.

These two tables are from an IMF-supported study of fuel subsidies (Granado, Coady, and Gillingham 2010; Coady et al. 2006), and are based on information from about twenty countries that subsidize fuel. Table 5 shows that a US$ 0.25/liter subsidy in the price of fuel would lower the cost of living by about

Table 5. Composition of Total Impact of Fuel Subsidies by Consumption Quintile (% of total household consumption)

	Consumption Qunitiles					
	Bottom	2	3	4	Top	All households
Total Impact	6.4	6.2	6.2	6.3	6.4	6.2
Direct Impact	2.8	2.7	2.7	2.8	2.9	2.8
Gasoline	0.1	0.2	0.3	0.4	0.7	0.3
Kerosene	1.7	1.3	1.2	1.0	0.6	1.1
LPG	0.3	0.3	0.3	0.3	0.4	0.3
Electricity	0.8	0.9	1.0	1.1	1.2	1.1
Indirect Impact	3.6	3.5	3.5	3.5	3.5	3.3

Source: Authors' computations based on country reviews.

Note: Impacts are averages of percentage impacts across all country studies based on a $0.25 per liter increase in fuel prices.

Table 6. Distribution of Subsidy Benefits by Consumption Quintile (%)

	Consumption Quintiles					
	Bottom	2	3	4	Top	All households
Total Impact	7.1	11.4	16.2	22.5	42.8	100.0
Total Direct Impact	7.1	10.7	14.0	19.9	47.6	100.0
Gasoline	3.0	5.7	9.7	19.4	61.3	100.0
Kerosene	19.0	19.7	20.6	20.1	20.6	100.0
LPG	3.8	7.6	12.6	20.8	53.8	100.0
Indirect Impact	7.3	11.7	16.3	22.6	42.0	100.0

Source: Authors' computations based on country reviews.

Note: Impacts are averages across all country studies.

6% for all quintiles; about half of this impact is direct, while the remainder works indirectly through the cost of transporting goods. However, almost 43% of the benefits would accrue to the top quintile, and just 7% to the bottom quintile, as Table 6 shows, which is why these subsidies are so poorly targeted to the poor.

If fuel subsidies are such an inefficient vehicle for helping the poor, why do they persist? One reason is that the benefits do flow to the better-off, who are politically influential. In Indonesia, as elsewhere, a reduction in fuel subsidies, with the associated rise in the price of fuel, would, as a matter of practical politics, have to be accompanied by alternative measures for helping the poor.

Tax incidence

We now turn to the incidence of taxation (see too Haughton and Khandker 2009). Based on household survey data for Peru for 2000, one can infer how much tax each household has to pay (Haughton 2005). Most taxes, such as excises on cigarettes or the value-added tax, are based on the level and pattern of spending; with this information we can impute the amount of spending on taxes, and express it as a proportion of total household spending or income.

The top panel in Figure 2 shows imputed taxes paid as a proportion of total spending, for expenditure per capita deciles. As spending rises, so does the proportion paid as tax, and so by this measure taxes in Peru are progressive. However if we express tax as a proportion of income, and graph this by income per capita decile, we get the bottom panel, which shows taxes in Peru to be regressive. The apparent contradiction arises because income and spending are not very closely correlated (in Peru), and we return to this problem below.

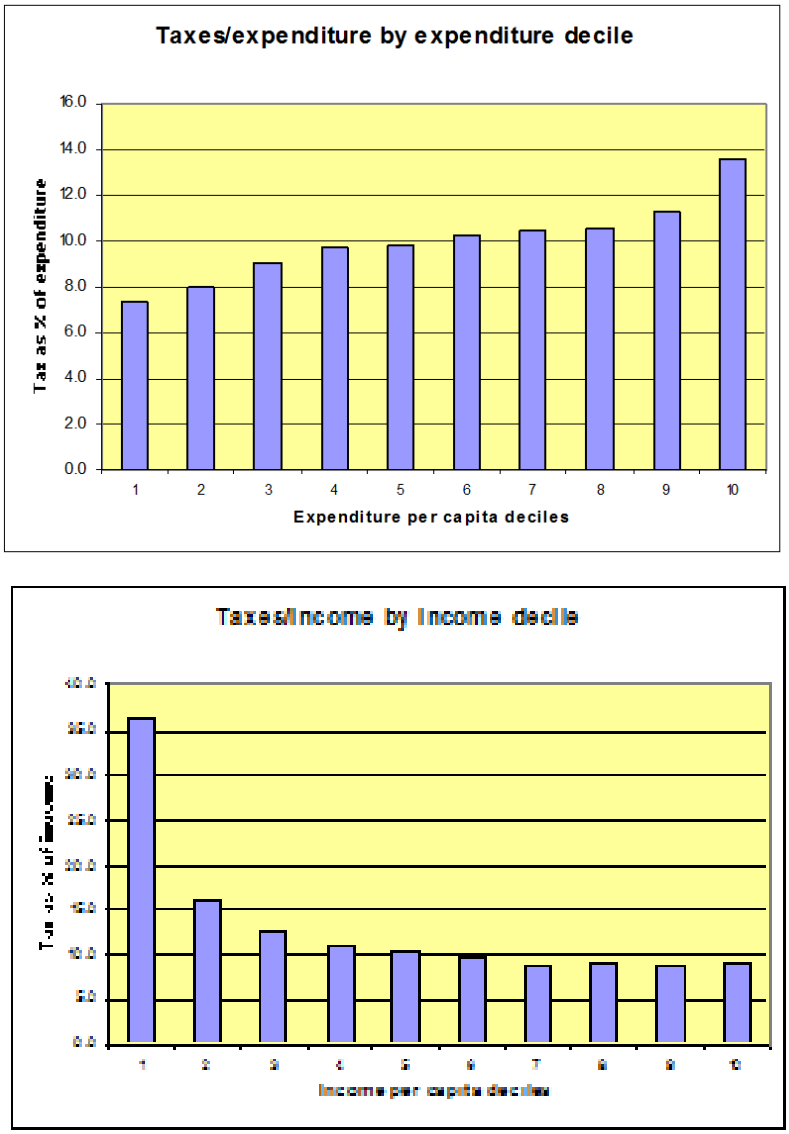

Figure 2. Taxes as a proportion of expenditure (top) or income (bottom), by decile, Peru 2000

Expenditure incidence

Figure 3 shows the incidence of spending on education in Peru for 2000, and illustrates the approach that is typically taken to measuring expenditure incidence. We assume that the benefits accrue in proportion to the number of children who are in public schools at different levels (e.g. primary, secondary, and so on). The top-left panel shows that as expenditure per capita rises, government spending on education represents a smaller and smaller proportion of household spending, and in this sense is progressive. The situation is reversed when we sort households by income (not spending) per capita, as in the top center graph. The remaining panels show spending on pre-K, primary education,

secondary education, and higher education, relative to expenditure per capita. Here, spending on primary education is progressive, but spending on higher education is regressive, in the sense that it mainly accrues to the children of richer households.

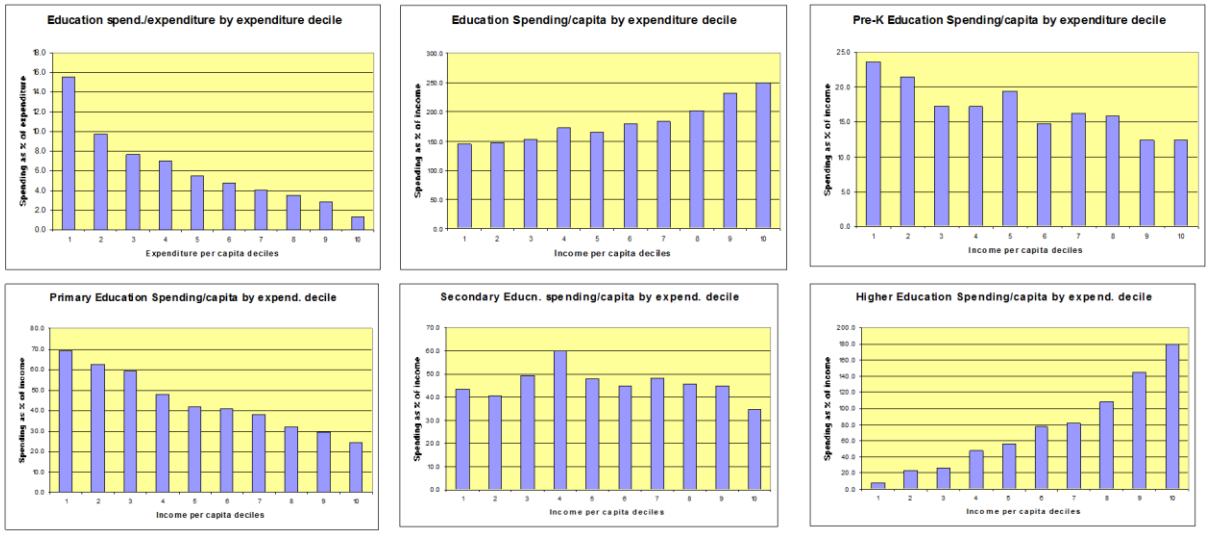

Figure 3. The incidence of state spending on education, Peru 2000

The Peruvian case is not an anomaly, as Table 7 shows.. In the 1990s, in the countries of Sub-Saharan Africa, spending on primary education went at least proportionally to poor households, but the great bulk of public spending on higher education went to those in the top quintile.

Table 7. Benefit Incidence of Public Spending on Education in Selected African Countries

	Quintile shares of total spending								Total subsidy as share of household expenditure	
	Primary		Secondary		Tertiary		Total			
	Poorest	Richest	Poorest	Richest	Poorest	Richest	Poorest	Richest	Poorest	Richest
Côte d'Ivoire, 1995	19	14	7	37	12	71	13	35	12.5	4.6
Ghana, 1992	22	14	15	19	6	45	16	21	13.4	3.1
Guinea, 1994	11	21	4	39	1	65	5	44		
Kenya, 1992	22	15	7	30	2	44	17	21	27.8	1.9
Malawi, 1994	20	16	9	40	1	59	16	25	2.3	1.4
Madagascar, 1993	17	14	2	41	0	89	8	41	7.2	3.4
South Africa, 1994	19	28	11	39	6	47	14	35	42.1	5.1
Tanzania, 1993/94	20	19	8	34	0	100	14	37		
Uganda, 1992	19	18	4	49	66	47	13	32	4.3	1.5

Source: Castro-Leal et al. 1999, 64.

Governments spend on more than just education. Some of their spending – on the military, for instance – cannot be allocated to households in the same way as we did for education. However, social subsidies flow more or less directly to households, and so we may determine the incidence of this spending too. In Peru, the main social subsidies in 2000 consisted of school meals, milk for pregnant and lactating mothers, food support, and school books and materials. The distribution of these subsidies is set out in Figure 4, by expenditure per capita decile (left panel) and income per capita decile (right panel). By any standard, these subsidies are progressive, in that they are relatively more important for the poor than the rich.

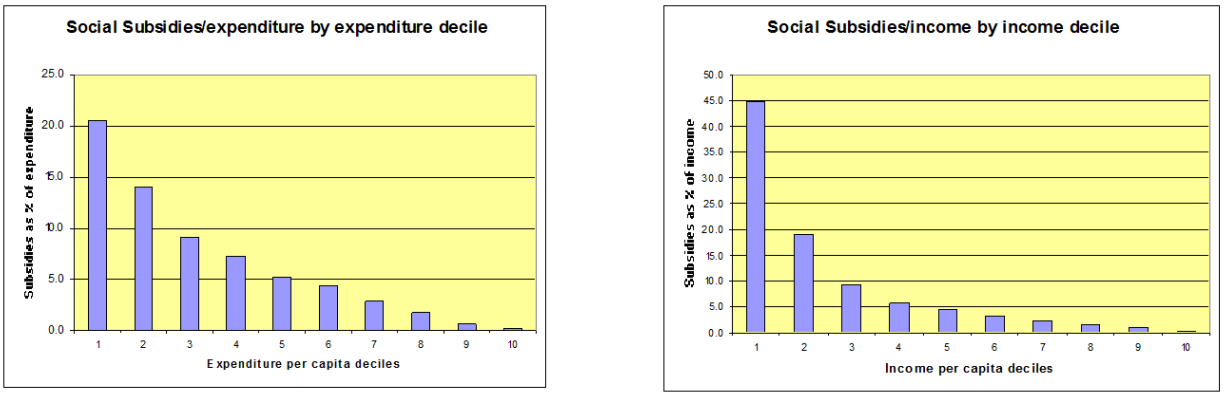

Figure 4. Distribution of Social Subsidies, Peru, 2000

Although it is interesting to look at the incidence of taxes and of spending separately, it is probably more relevant to combine the two, as shown in Figure 5 for Peru in 2000. The net effect is that the system benefits the poor on average – a bar below the line means a negative net tax, which says that taxes paid are less than the benefits received – while the rich are net payers. Thus the tax-expenditure system is progressive overall. We note in passing that not all taxes or spending can be included in an exercise of this nature, and the results are only as good as the sometimes-sweeping assumptions that we have to make about who really bears the burden of taxation.

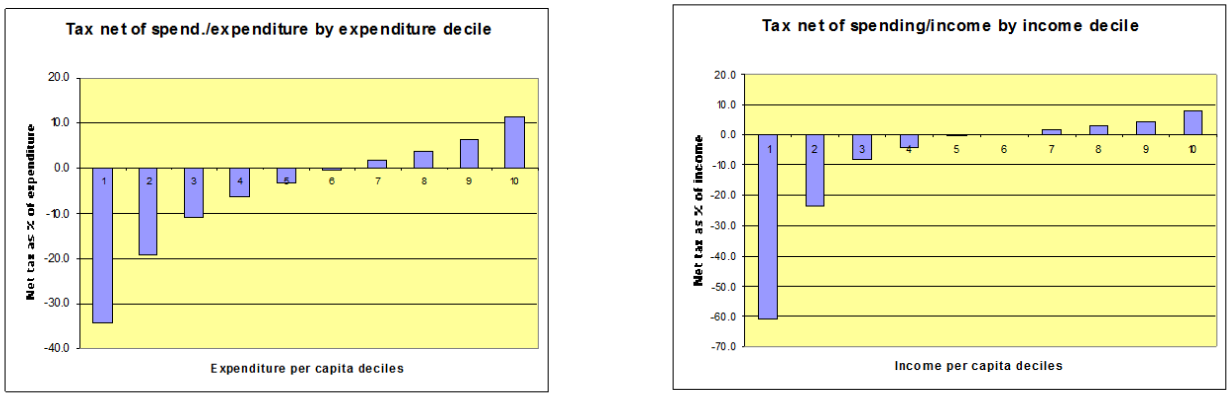

Figure 5. Distribution of Taxes Net of Social Spending, Peru, 2000

Even if a tax-expenditure system is regressive, changes in taxes might be progressive, especially when the associate changes in spending are also taken into account. This requires us to look at *marginal incidence*, where we ask what the net burden is of a combination of a change in a tax and in the associate spending. For Peru in 2000, suppose the VAT were raised from 18% to 19%. A regression exercise found that, at the margin, 8% of extra spending would go to education, 7% to health, and 28% to social subsidies; the remaining 58% of incremental spending cannot easily be associated with individual households.

If these assumptions are correct, we get the effects shown in Figure 6. The *net changes* are shown in first for expenditure per capita deciles, and then for income per capita deciles. The story is the same: a higher VAT, given our assumptions about associated spending, would benefit the poor and put more

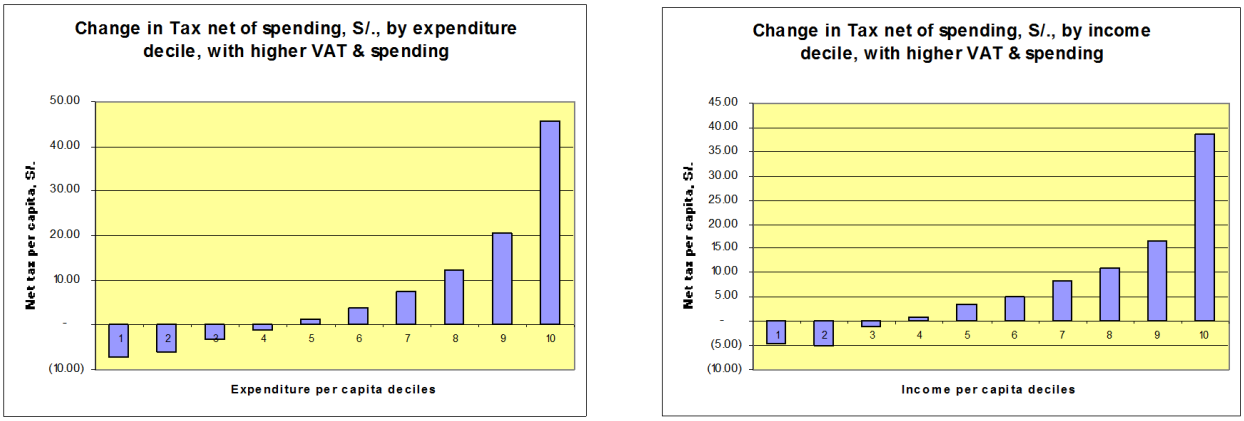

Figure 6. The Net Effects of a One Percentage Point Increase in VAT, with Associate Changes in Social Spending, Peru, 2000

burden on the rich. It would be helpful to undertaken exercises such as this one for more countries, although the experience of Peru is probably fairly typical in this respect.

Conclusion

An enormous among of thought has gone into trying to figure out how best to reduce poverty. We have seen that economic growth is essential, but in all countries, rising affluence has also been associated with an expanding number of measures to ensure that the poor are not left behind – improvements in education, in the coverage of health care, in the creation of a social safety net. Thanks in part to the results of an increasing number of rigorous evaluations, including randomized controlled trials, we are increasingly understanding what potentially works well, and what does not, in such programs. The details matter, and this requires local knowledge and local experimentation, which we encourage you to develop!

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