

Solutions Manual for
Development Economics: Theory, Empirical Research, and Policy Analysis

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This solutions manual provides answers for selected discussion questions and for all problems in the text. Please do not post these answers on websites available to the general public.

Please send comments, questions and suggestions regarding the text, solutions manual, or PowerPoint presentations to Julie.Schaffner@tufts.edu. I welcome your feedback!

Chapter 1: Introduction

Discussion Question 1: Many development actors have rallied around the United Nations' Millennium Development Goals (MDGs), which are listed in Table 1.4 (see text).

- a. What do the MDGs indicate about the relative emphasis placed by supporters on the following:
 - Income versus nonincome indicators of well-being
 - Well-being improvements for the poor versus the nonpoor
 - Immediate versus longer-term improvements
- b. What might explain the emphasis in the MDGs on defining measureable targets?
- c. The MDGs have little to say about the process or policies through which the targets might be achieved. What are the potential benefits of remaining silent about the processes that will deliver MDG success and the policies development actors should employ in their efforts to achieve the MDGs? Do you see any potential costs? See Collier and Dercon (2006).

[Discussion of the MDGs may be used to get students thinking about the many dimensions of development performance that development objectives might emphasize, and the difference between development objectives (i.e. values and priorities) and development methods (i.e. policies and approaches that might be used to achieve the objectives).]

a. The MDGs seems to place strong emphasis on income, education and health as important for well-being, and to place strong emphasis on improvements for people living on less than \$1.25/day relative to people who are less poor (but still very poor by developed country standards) and the non-poor. The goals seemed to emphasize short- and medium-run improvements over longer-term improvement, because they set targets for 2015.

b. An emphasis on measurable targets might have several purposes. It might help focus efforts on successful outputs rather than on quantities of "inputs" to development efforts, thereby increasing interest in monitoring, evaluation, effectiveness, midcourse corrections, and re-design. It might also help focus diverse actors' attention on similar objectives, possibly aiding cooperation.

c. Focusing primarily on objectives rather than methods has the advantage of leaving the development community free to search for the best ways to achieve the objectives (perhaps acknowledging that there is no consensus about how best to do this). A possible cost of saying little about methods, pointed out by Collier and Dercon (2006), is that it might lead some development actors to pursue the objectives in the most direct and obvious ways, which need not, ultimately, be the most effective ways. For example, development actors might attempt to achieve the first goal only in the most direct way – by giving cash to poor households – instead of also trying to raise the incomes of the poor indirectly by, for example, strengthening property rights (thereby possibly encouraging investment and increasing the demand for low-skill labor in a long-lasting way).

Notice also that the quantitative targets (right column of Table 1.4) are neither pure statements of objective nor precise and complete statements about policy. For example, the third target is

to ensure that all boys and girls complete a full course of primary education. This reflects the value that everyone should have a real opportunity for primary education, and perhaps the belief that education is useful for sustained improvements in income and well-being, but it also implies the belief that policymakers should work toward the goal of expanding education by concentrating on efforts to get all children into school and to get them to remain in school through the official number of years of primary school. Unfortunately, the experience of the last 15 years is that even great success in getting all kids into and through primary school doesn't mean they obtain real primary education. The quality of teaching and learning has plummeted and many children leave primary school without even becoming literate.

The Collier and Dercon (2006) piece raises other provocative discussion questions, such as: Does the international community's push to focus on absolute poverty reduction in developing countries have normative justification, given that it seems to override the social choices of democratically elected governments in developing countries?

Chapter 2: Well-Being

Discussion Question 3: Consider two approaches for assessing household living standards and well-being. The first involves selecting a random sample of households within a region and using long, detailed questionnaires to elicit comprehensive information about income, consumption, and living standards more generally. The second involves a very short questionnaire that is administered to every household in a community, which includes only questions that are easy to answer and may be used to construct simple indices of households' living standards (e.g., questions about how many rooms respondents' homes have and whether the household head is literate). For what purposes is each method best suited? (Purposes might include identification of regions that merit priority in poverty reduction efforts, academic research on poverty, and assessment of eligibility for an emergency cash transfer program.) How could analysis of the results of the first approach be used to give practical guidance regarding the design of the second approach?

Long questionnaires administered to random samples of the population could be useful for identifying which regions are poorer than others. The long questionnaires allow reasonably accurate measurement of good well-being indicators (e.g. consumption expenditure per capita) and the random samples might allow good inferences about regional poverty rates without the expense of a full census. Data from long questionnaires and random samples might also allow economists to study the determinants of poverty and the effectiveness of various policies for reducing poverty.

Short questionnaires administered to everyone in a community, by contrast, might be useful as part of a proxy means test when implementing a targeted poverty reduction program.

Analysis of the first kind of data might allow researchers to construct a good short questionnaire to use in proxy means testing. With a random sample of answers to a long questionnaire that includes both good measures of consumption expenditure per capita and a variety of shorter questions, researchers could identify a set of simple questions that together are good predictors of per capita consumption expenditure and poverty levels. They could also produce an equation or rule for taking the answers to the simple questions and using them to determine whether a household is probably poor or not by a more accurate measure. Practitioners could then collect data only on the easier questions, and use the rule or equation to determine who is poor (and thereby eligible for the program by the proxy means test).

Problem 1: Suppose we know that a policy did not produce any change in a household's real per capita consumption expenditure. List at least five ways the policy might nonetheless have improved the household's well-being. That is, suggest at least five stories regarding how the household's circumstances might have changed, and how the household responded to those changes, that are consistent with the household's well-being rising even while its per capita consumption expenditure remains constant.

Good answers to this question reflect the use of the analytical framework of Chapter 2, and point clearly to changes that would raise well-being even **while not raising consumption expenditure**. Answers such as "receiving access to a better agricultural technology" (without

some sort of qualification) are off track, because the most obvious way through which such a change would raise well-being is by increasing income and consumption expenditure.

Here are some possible answers:

- The policy may have increased income (by providing a cash transfer or information about a new agricultural technology, or through many other types of intervention), but the additional income was put into saving rather than consumption expenditure.
- It may have improved the profitability of income generating opportunities, but the household took advantage of the opportunity to work less and earn the same income – enjoying more non-work time. We might see this in:
 - more leisure
 - children going to school rather than working
- It may have improved the household’s current well-being along non-income dimensions such as
 - reduced pollution
 - better health
- It may have reduced the household’s exposure to future risk or fluctuations, or improved the household’s ability to cope with risk and fluctuations (without changing current income), by creating
 - infrastructure that reduces flood risk
 - a public works program that households can access in the future if they need it
 - improved access to credit that households could use to smooth consumption in the future
 - new opportunities to purchase insurance
- It may have improved the household’s investment opportunities or ability to take up investment opportunities, for example through
 - improved access to school for children

Problem 2: Suppose you are attempting to choose a measure of living standards for use in determining which households most need assistance. Discuss the relative merits of the following possible measures of living standards:

- Real income per capita within the household over the last two weeks
- Real income per capita within the household over the last 12 months
- Real consumption expenditure per capita over the last month
- Per capita meat consumption over the last month
- Indicators of whether a household has a dirt floor, uses water from an improved source, and sends children to school
- Individual measures of height (for age), weight (for age), and recent illness

Measure	Strengths	Weaknesses
Real income per capita within the household over the last two weeks	<ul style="list-style-type: none"> • This is a summary measure of a household’s ability to purchase goods and services that is adjusted at least crudely for variation in need across 	<ul style="list-style-type: none"> • It is not sensitive to variation in households’ capacity to obtain goods and services that are not sold in well-functioning markets (e.g.

	households.	<p>health care).</p> <ul style="list-style-type: none"> • It does not account for the hours of work required to obtain the given level of income. • It adjusts for differences in need only imperfectly. It adjusts for differences in numbers of household members but not, for example, in their health-related needs. • When measured over just two weeks, it may provide a poor measure of the household's usual capacity to purchase goods and services, because income fluctuates and households may be able to smooth consumption. • It is insensitive to differences in households' prospects regarding future income and consumption. • It is a household-level measure that does not allow study of the distribution of well-being within the household. • It is costly and difficult to measure.
Real income per capita within the household over last 12 months	<ul style="list-style-type: none"> • If measured well, it provides an even better measure of per capita capacity to purchase goods and services than the previous measure, because it is less subject to fluctuations across months or seasons. 	<ul style="list-style-type: none"> • It has the same weaknesses as above. • It may also fail to identify households that suffer severe deprivation for short periods within a year. • It is difficult to measure accurately, because people have limited recall capacities.
Real consumption expenditure over the last month	<ul style="list-style-type: none"> • Like income per capita, it is a good summary measure of a household's capacity to purchase goods and services. • It is even better than income per capita measured over a short recall period if people can smooth consumption, because it may fluctuate much less than income from month to month. • Often it is thought to be measured more accurately than 	<ul style="list-style-type: none"> • It has similar weaknesses as for the first measure. • It fails to register improvement when households use rising income to increase saving and investment rather than consumption.

	income.	
Per capita meat consumption over the last month	<ul style="list-style-type: none"> • If meat consumption is a steady fraction of income or consumption expenditure, then it would have comparable strengths to those measures. • It also has the merit of measuring a living standard of direct interest to policymakers concerned about nutrition. • It is easier to measure than total consumption expenditure. 	<ul style="list-style-type: none"> • Because meat is a luxury, meat consumption may fluctuate more than total consumption expenditure. Meat consumption over a short period may, therefore, give a poor indication of usual living standards. • Some households may choose not to eat meat for religious or cultural reasons; a meat consumption measure might understate their level of well-being.
Indicators of whether a household has a dirt floor, uses water from an improved source, and sends children to school	<ul style="list-style-type: none"> • These measures may do a better job than income or consumption expenditure at measuring households' living standards along very important dimensions. • To the extent they reflect assets rather than income, they may also have more to say about likely future well-being than a current income measure. • They are easier to measure than income or consumption expenditure. 	<ul style="list-style-type: none"> • They are hard to aggregate into a single index for identifying who is deprived. • Again, people with similar capacity to obtain goods and services may choose not to acquire some of these things because of differences in preferences.
Individual measures of height (for age), weight (for age) and recent illness.	<ul style="list-style-type: none"> • These measures shed light on health, which is of direct interest in the assessment of well-being. • They allow study of the comparative well-being of men/women, young/old within households (unlike all the other measures mentioned above). • Because they reflect health assets, they shed light on future prospects as well as the current well-being. 	<ul style="list-style-type: none"> • They may not vary even when non-health dimensions of living standards vary a great deal.

