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Economic Growth, Inequality and Poverty: Estimating the Growth Elasticity of Poverty

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Summary. — This paper uses a new data set of 126 intervals from 60 developing countries to analyze the growth elasticity of poverty, that is, how much does poverty decline in percentage terms with a given percentage rise in economic growth. The data set is both broader in coverage and more selective in terms of quality controls than those used in the past. The study finds that while economic growth does reduce poverty in developing countries, the rate of poverty reduction depends very much on how economic growth is defined. Controlling for changes in income inequality, when economic growth is measured by changes in survey mean income (consumption), the growth elasticity of poverty (excluding Eastern Europe and Central Asia) is −2.79; that is, a 10% increase in the survey mean will reduce poverty ($1.00/person/day) by 27.9%. But, when growth is measured by changes in GDP per capita, the growth elasticity of poverty is a statistically insignificant −2.27, which is lower than has previously been estimated.

Key words — poverty, inequality, economic growth, growth elasticity of poverty

1. INTRODUCTION

Most economists and policy makers would now agree that economic growth—in the sense of rising per capita incomes or expenditures—reduces poverty in the developing world. The key policy question then becomes: to what extent does economic growth reduce poverty, that is, how much does a given rate of economic growth reduce poverty? Expressed in more technical terms, the question is: what is the "growth elasticity of poverty," that is, how much will poverty decline in percentage terms with a given percentage rise in economic growth?

During the 1990s the growth elasticity of poverty was usually estimated to be between −2.0 and −3.0 (Adams, 2003; Bruno, Ravallion, & Squire, 1998; Ravallion & Chen, 1997). This means that a 10% increase in economic growth (however measured) will lead to a 20–30% decrease in poverty (however measured). In other words, in a large enough selection of developing countries in which exactly half of the population lives in poverty, a 10% increase in economic growth will reduce the proportion of the poor population to between 35% and 40%.

New estimates made by Bhalla (2002) suggest, however, that these growth elasticities of poverty are too low, and that the "correct" growth elasticity of poverty should be about −5.0 (Table 10.2). In other words, in a large selection of developing countries, the same 10% increase in economic growth will reduce the percentage of the poor to about 25%, rather than to between 35% and 40%.

The difference between these "traditional" and "new" estimates of the growth elasticity of poverty is neither trivial nor academic. Many international agencies—such as the World Bank—and governmental organizations—such as the United States Agency for International Development (USAID)—spend much time and energy trying to calculate the number of poor people in the developing world. When projected into the future, all of these calculations hinge on the central question: how much does the number of poor people decline with a given rate of economic growth? Thus, using the lower, "traditional" growth elasticities of poverty, the World Bank (1999) recently estimated that there were 1.15 billion people living

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under the international poverty standard of $1.00 per person per day, while Bhalla (2002, p. 202), using the "new," higher growth elasticities of poverty found that less than one-third that number of people—450 million—were living under that poverty standard.

The purpose of this study is neither to analyze the number of poor people living in the developing world nor to pinpoint the various technical ways in which the "traditional" and "new" estimates of the growth elasticity of poverty differ. Rather the goal of this study is more straightforward, namely, to show how estimates of the growth elasticity of poverty are sensitive to the measure of economic growth being used. In the past, most traditional estimates of the growth elasticity of poverty have used changes in mean income (consumption) as calculated from household budget surveys as their yardstick of economic growth. There are, however, other (more popular) measures of economic growth—such as changes in GDP per capita—which can be used to calculate economic growth. Most policymakers certainly think of economic growth in terms of GDP per capita, and studies in the economic growth literature invariably use GDP per capita as the standard measure of growth. In this context, one of the basic challenges of Bhalla's work (2002) is that it questions the validity of using changes in survey mean income (consumption) to calculate economic growth. Bhalla's work instead emphasizes the need to use national accounts data (the source of GDP per capita figures) to calculate economic growth. The core of Bhalla's argument is that using the survey mean as the measure of growth has the effect of seriously underestimating the growth elasticity of poverty in the developing world.

The contribution of this study is twofold. First, it constructs a new data set based on the latest household survey data to pinpoint the effect of economic growth on poverty in the developing world. This data set is new because it is both broader and more selective than those used in the past: it is broader in the sense of including more countries and time spans than used by Ravallion and Chen (1997) and others, and it is more selective in the sense of applying quality filters to the heterogeneous mix of primary and secondary data sources used by Bhalla (2002). [1] Second, the paper uses two different measures of economic growth—growth as measured by the changes in the survey mean and growth as measured by changes in GDP per capita—in analyzing the effect of growth on poverty. Since these two measures differ with respect to both the levels and rates of recorded economic growth, they also generate different estimates of the growth elasticity of poverty.

There are several possible ways for this study to proceed in using this new data set and these two measures of economic growth. On the one hand, it is possible to proceed directly to an explanation of the data set and the calculation of the relevant growth elasticities of poverty. But, this approach seems a bit too simplistic, both because of the large amount that has already been written on the growth-poverty relationship as well as the fact that the impact of economic growth on poverty depends to a large extent on how income distribution changes over time. In other words, the growth elasticity of poverty in any particular country depends greatly on the level of initial income inequality in that country. This makes it important to take a broader approach and explore the links between economic growth, poverty and income inequality.

Mindful of these issues, this paper adopts a more general approach to investigating the growth elasticity of poverty. It proceeds as follows. To set the stage, Section 2 reviews recent analytical arguments regarding the relationship between economic growth, poverty and income distribution. Section 3 then presents the new household data set, which contains detailed growth, poverty and inequality data for 60 low- and middle-income countries of the developing world. Section 4 discusses econometric methods for estimating the growth elasticity of poverty, and Section 5 describes the main findings of the new data set. The next two sections of the paper use the new data to analyze the relationship between growth and income distribution (Section 6) and to estimate the growth elasticity of poverty (Section 7) in the developing countries of the world. The final section, Section 8, summarizes.

2. THE DEBATE ABOUT ECONOMIC GROWTH, POVERTY AND INCOME DISTRIBUTION

In the past, some observers have argued that economic growth tends to increase—rather than reduce—poverty in the developing world. For instance, in 1974 Chenery, Ahluwalia, Bell, Duloy, and Jolly published an influential book