

## New ways of looking at inequality and growth

*Contrary to popular belief, economic growth does not systematically increase inequality. But very unequal land distribution does hinder growth. The challenge is to address this problem without undermining investment, which is crucial to growth and to improving the incomes of the poor.*

Research using greatly improved data has drawn some surprising conclusions about the relationship between inequality and growth. Contrary to the famous proposition first put forward by Simon Kuznets in 1955—that the early stages of growth exacerbate inequality—new research shows that growth does not consistently affect inequality either way and that changes in inequality tend to be small. As a result growth almost always improves the incomes of the poor. But while growth does not consistently affect inequality, inequality does affect growth. In general, developing countries with a more equal distribution of assets—especially land—have grown more rapidly than countries with a less equal distribution of assets.

This note explains how the data used to reach these conclusions differ from those used in previous research on these issues, explains the findings, and discusses the implications of these findings for development policy.

### Better data on inequality

Previous empirical work on the relationship between inequality and growth was hampered by inadequate data. Kuznets himself relied on historical data from the first half of the nineteenth century from just three countries (England, Germany, and the United

States). Subsequent research used larger data sets but included many observations of questionable quality—for example, synthetic estimates derived from national accounts data or surveys that covered urban but not rural areas. Some surveys were flawed because they covered only cash income, excluding production for household consumption. To avoid these problems, we set three minimum standards for data quality:

- Observations should be based on surveys
- The surveys should be nationally representative
- The surveys should encompass all important types of income

Applying these tests to existing data sets reveals problems of sufficient magnitude to call into question previous results. For example, data assembled by Shail Jain have been widely used to support the Kuznets hypothesis, but only 61 of 405 observations (15 percent) satisfied our criteria (figure 1). Similarly, of the 55 data points collected by Felix Paukert that have recently been used to demonstrate a negative relationship between initial inequality and subsequent growth, only 18 (33 percent) are of acceptable quality. The data assembled by Gary Fields used standards broadly similar to ours, and 73 of 105 (about 70 percent) meet our quality standards. Yet few of the acceptable observations are from

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Distributions of land and income can be very different

the 1960s, and there are very few comparable observations for a single country over time. Compiling additional high-quality data from other research and official statistical publications greatly expanded the data set; however, we were still left with few observations from the 1960s.

Partly to address this problem, we next compiled data on the distribution of land, which are more readily available and subject to fewer data problems than are income distribution data. We collected 261 observations of acceptable quality from 103 countries, including 73 countries for which we had observations in 1960. Practical advantages aside, we anticipated that land distribution might have a greater impact on future growth than income distribution, for reasons described below.

In measuring income distribution and land distribution we used the Gini coefficient, a 100 point scale in which 1 represents perfect equality and 100 represents absolute inequality (that is, all income or land belongs to a single household). Two characteristics immediately became evident when we compiled the data set. First, distributions of land and income can be very different. For example, India, Indonesia, and the Republic of Korea all have Gini coefficients for the distribution of income in the thirties, but the coefficients for the distribution of land range from 63 for India to 55 for Indonesia to 35 for Korea. This finding suggests that tests of the relationship between initial inequality and subsequent growth may yield different results depending on whether the definition of initial inequality is based on income or land.

Second, measures of inequality differ widely across regions and countries but remain relatively

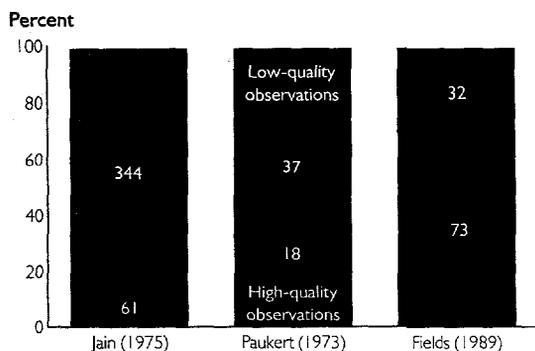
stable within regions and countries over time (figure 2). Income inequality is much greater in Latin America and Sub-Saharan Africa, where Gini coefficients are in the upper forties, than in East and South Asia, where coefficients are in the middle to upper thirties. OECD countries generally have egalitarian distributions of income, with Gini coefficients just above thirty. Income inequality was lowest in Eastern European countries under socialism; the region's Gini coefficients began to rise in 1980. The Gini coefficients for land distribution show similar variations across regions and are even more stable over time.

The new data provide a much improved empirical basis for an investigation of the relationship between growth, inequality, and poverty. We examined two questions: how growth affects inequality and how inequality affects growth.

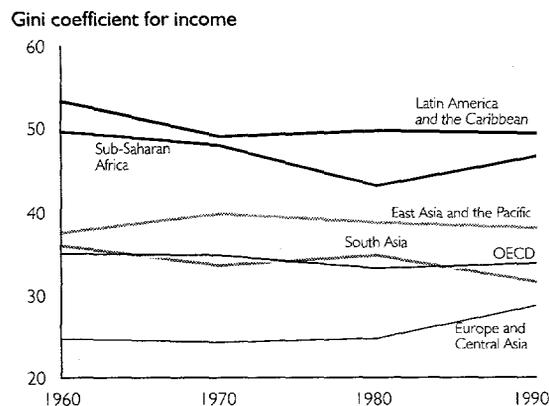
## How does growth affect inequality?

Much of the vast empirical literature on the Kuznets hypothesis was motivated by concern that the poor might lose out from the early stages of development, and many researchers believed that they found evidence that this is the case. Yet the analyses were doubly flawed. In addition to the data quality problems described earlier, the lack of data from the 1960s meant that researchers had to use variations in per capita income across countries to represent increases in per capita income over time within a country.

**Figure 1. Few data sets provide adequate data**



**Figure 2. Income inequality differs across regions but changes little over time**



Source: Authors' calculations.

Using our new data set, it is possible for the first time to test the Kuznets hypothesis within countries over time. We found that growth does not consistently affect equality either way. Of the eighty-eight cases where there was economic growth for a decade, income equality improved slightly in about half the cases and worsened slightly in the other half; changes over time were much smaller than the differences across countries. More important, we found a strong systematic relationship between aggregate growth and growth in the income of the poorest fifth of the population, with this group's income rising in 85 percent of the eighty-eight growth episodes. In general, the higher is the rate of economic growth, the larger is the improvement in the incomes of the poor (figure 3). This finding suggests that even when inequality worsened, its negative effect on the poor was usually outweighed by the positive effect of aggregate growth.

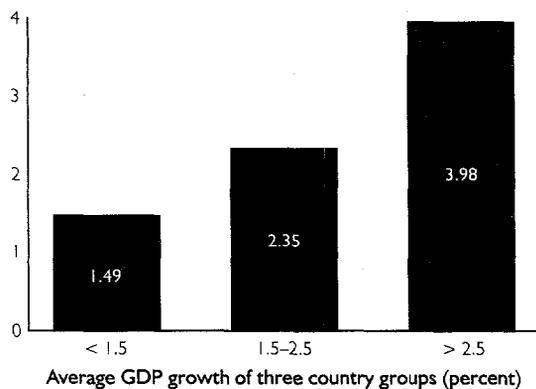
## How does inequality affect growth?

Recent empirical work has suggested a negative association between initial inequality and future growth. If confirmed, this would imply that unequal economies will experience lower rates of growth and, in general, lower rates of poverty reduction. As we have seen, however, the data underlying these results are of questionable quality.

Using the new database, we find that higher inequality in income distribution seems to have

**Figure 3. The faster a country grows, the more the poor benefit**

Percentage change in the income of the poor



Source: Authors' calculations.

no impact on subsequent growth. Higher inequality in land distribution, on the other hand, does result in lower subsequent growth (figure 4). Only two of the fifteen developing countries with a Gini coefficient for land distribution above 70 managed to grow by more than 2.5 percent a year during 1960-92.

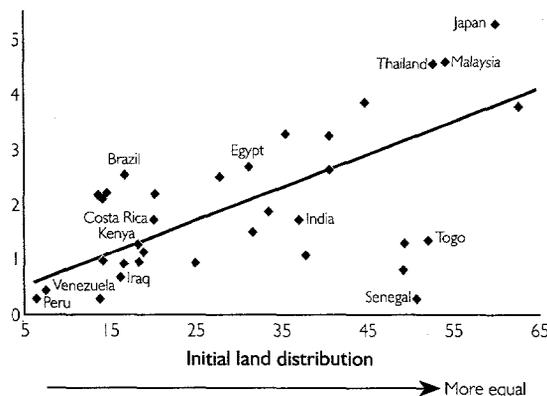
Why is a more equal distribution of land good for growth? One likely explanation involves credit. We know that investment is crucial for growth. The poor often cannot invest because they lack capital and the collateral to borrow. In countries with a very unequal distribution of land, poor people may find it difficult or impossible to invest—even in their own health and education. Two pieces of evidence support this explanation. First, although land distribution is a significant determinant of future growth in developing countries, this is not the case in high-income countries, where there are alternative forms of collateral. Second, among developing countries, the more unequal is the land distribution, the lower is the average educational attainment.

## Redistribution or investment?

These findings present policymakers with a dilemma. On the one hand, since growth benefits the poor and productive investment is necessary for growth, policies that encourage investment are crucial to reducing poverty. On the other hand, growth is constrained by an unequal distribution of land; thus, where land distribution is highly unequal, redistribution also should help reduce poverty.

**Figure 4. Countries with more equal land distribution grow faster**

Average annual growth, 1960-90



Source: Authors' calculations.

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Poverty reduction is better served by increasing investment than by redistributing land

While investment and redistribution need not be mutually exclusive, it is useful to have some sense of how much each can contribute to the reduction of poverty. We investigated this issue by examining how investment and land distribution affect income growth for different income quintiles, especially the poorest fifth. We found that while investment and redistribution are both potentially good for the poor, investment is much more powerful: increasing investment by a standard deviation improves the incomes of the poor by almost twice as much as reducing land inequality by a standard deviation.

What does this mean for policymakers? In countries where land distribution is very unequal, the ideal solution would be land redistribution combined with increased investment. But redistribution that comes at the expense of investment may have a negative overall effect on the poor by reducing growth. Where land redistribution cannot be implemented without negative consequences for investment, a better approach would be to improve poor people's access to productive assets through education, health care, and microcredit schemes.

### Three conclusions

Appropriate data, which are increasingly becoming available, can provide important insights into the dynamics of growth and poverty reduction. These insights have led us to three broad conclusions. First, although policymakers should pay attention to the distributional consequences of different policy options, the fear that economic growth will have a systematically negative effect on the distribution of income is ill-founded. Second, unequal distribution of assets, more than

income, can impede rapid growth, implying that redistributive policies could enhance growth. Third, the potential of redistributive policies to benefit the poor can be realized only if redistribution does not jeopardize productive investment.

—Lyn Squire and Klaus Deininger

### Further reading

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**Prepared for World Bank staff**