

WP 99-14

July 1999

Working Paper

Department of Agricultural, Resource, and Managerial Economics
Cornell University, Ithaca, New York 14853-7801 USA

Why is Inequality Back on the Agenda?

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By

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June 10, 1999

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ABSTRACT

This paper investigates the reasons why inequality, and distribution more generally, have come to the fore in the development discourse at the turn of the century, after a period of relative neglect in the 1980s. The paper considers, in particular the analysis of (a) efficiency and equity, (b) growth and distribution, (c) recent changes in inequality, (d) recent work on the complex patterns of inequality change in developing countries, and (e) inequality between countries. All of these different strands of analyses have ensured that inequality will be prominent on the development agenda in the decade to come.

JEL Classification: I3 Welfare and Poverty; O1: Economic Development; O4: Economic Growth; O57: Comparative Studies of Countries;

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1. INTRODUCTION

At the turn of the century discussion of inequality, and distribution more generally, has come to the fore in the development discourse, after a period of relative neglect in the 1980s. This is true not just of the development discourse, but the discourse on economic policy more generally. Atkinson (1997) writes of “Bringing Income Distribution in from the Cold.” A Handbook on Income Distribution, the first ever, will come out this year. In their introduction to this volume, Atkinson and Bourguignon (1998) write: “There was a time in the postwar period when interest in the distribution of income had almost vanished....Today, the position is different.”

The object of this paper is to trace some of the contours of this resurgence of interest in distribution in the development discourse. In Section 2 we argue that the profession wide debate on the separation of efficiency and equity has had its impact on the development literature, where the analysis now focuses on whether and under what conditions they are substitutes or complements. Section 3 turns to the role of the Kuznets curve in the rise and fall of interest in distribution. Section 4 looks at changes in inequality between the 1980s and the 1990s to see if the resurgence of interest in inequality can be found in these facts. Section 5 introduces a literature and a type of analysis which is going to become common in the development literature as more household surveys become available—analysis which highlights the complex micro-patterns of distributional change in developing countries, even when overall indices of inequality do not change very much. Section 6 considers the question of inequality between countries. Section 7 concludes the paper by noting that the trends we have identified look set to keep inequality at the forefront of the development agenda in the years to come.

2. EFFICIENCY AND EQUITY

One strand of literature which speaks to the question of why inequality is now back on the agenda, is welfare economics. The fundamental theorems of welfare economics give precise form to Adam Smith's invisible hand. The first theorem says that any equilibrium in competitive markets is Pareto efficient; the second that, under certain conditions, any Pareto efficient allocation can be attained as a competitive equilibrium. There is thus a tight connection between market equilibrium allocations and efficiency. But what about distribution? One of the conditions for the second theorem is the availability of lump sum transfers through which endowments can be redistributed. Since any Pareto efficient outcome can be described as an equilibrium of perfectly competitive markets, these outcomes can be egalitarian or non-egalitarian ones. The key point is that, within this framework, efficiency and equity are separable. The policy counterpart of this intellectual framework was present, for example, in arguments to redistribute via assets while keeping markets as free and as competitive as possible. A lucid account of this debate is to be found in Meade (1964).

The framework developed by Arrow and Debreu and their followers, which describes the precise conditions under which the invisible hand did its work, was refined and sharpened in the first decades after the war. But such precision only served to highlight the severity of the conditions required—no increasing returns, no monopolies, a complete set of markets for present and future goods, complete insurance markets, fully available and symmetric information, lump sum transfer instruments, etc. In the 1970s and the 1980s, the reaction set in and a number of economists began relaxing these assumptions. For example, Joseph Stiglitz, George Akerlof, Michael Spence and others took the implications of imperfect information head on. This line of research questioned the efficiency of market equilibrium. Greenwald and Stiglitz (1986), for example, showed that in the presence of imperfect information the competitive equilibrium was not even constrained Pareto efficient.

Much of the literature in this vein is devoted to showing features of equilibria under conditions that approximate reality better than the Arrow-Debreu model, or demonstrating inefficiency of market equilibria. However, there is one strand which is particularly relevant for us. This focuses on the separation of efficiency and equity and shows that, once the Arrow-Debreu conditions are relaxed, there is no such separation. With imperfect information, lump sum redistribution of endowments have the capacity to improve efficiency (in the sense of making at least one person better off without making anyone else worse off) under certain conditions, or worsen it under others (Hoff 1994). In the absence of lump sum instruments, market interventions may reduce efficiency, but improve equity. In any event, whether they are substitutes or complements, efficiency and equity have to be taken together—they are not separable.

This non-separability has been analyzed in detail in a growing number of contributions and we note some strands in the literature. One strand goes back to the Noble prize winning paper of Mirrlees (1971), where lack of lump sum transfers instruments makes equity and efficiency substitutes. Mirrlees (1971) models the classic conflict between progressive income taxation and the incentives to provide effort. He shows that the resolution depends on a combination of the degree of egalitarianism and the characteristics of labor supply. The large literature which followed Mirrlees's contribution (see the appreciation in Dixit and Besley 1997) helped us understand better the nature of this tradeoff.

Yet another strand in the literature emphasizes the complementarity between equity and efficiency. Boadway and Keen (1999) survey the literature and provide an excellent account of the underlying economics in the following illustration from capital markets:

“Lenders’ informationally-constrained responses to the possibilities that borrowers will default on their loans or simply abscond with the funds, are likely to lead to levels of investment that depart from the first best. Differing models give different predictions as to whether there will be under- or over- investment: lenders may ration

investments below the first best, for example, or borrowers may borrow excessively to take advantage of being able to default if things go badly. In either event, however, a redistribution of wealth towards borrowers is likely to move investment closer to the first best, so increasing aggregate income: incentive problems will be mitigated in so far as greater wealth enables (or obliges) investors to rely more heavily on their own funds rather than borrowed funds tainted with the lender's mistrust."

Bardhan, Bowles and Gintis (1999) also review and elaborate on a large and growing literature in this vein, looking explicitly at other issues such as common property resource problems, and socially optimal levels of risk taking. They find complementarities as well as tradeoffs, but end with the basic conclusion that distribution and efficiency are inextricable. Aghion, Caroli and García-Peñalosa (1999) also review the literature and on balance find more evidence for a positive relationship between equality and growth.

Once the conditions giving rise to the separability of efficiency and equity are abandoned, much depends on the detail of the situation at hand, and very different results can be obtained with different specifications. To illustrate this, consider a famous debate of the 1980s, that on "Adjustment and Equity", and let us focus on Africa. It will be recalled that the macro shocks of the late 1970s revealed major weaknesses in African economies, particularly on the trade front. Dramatically overvalued exchange rates and a plethora of trade controls, it was argued, were highly inefficient distortions which needed to be removed during the process of stabilization and adjustment. But what about the ditributional consequences of this adjustment (setting to one side the stabilization phase)?

It was argued by some that these consequences would be benign. One such argument is to be found in Kanbur (1987). The analysis proceeds from a stylized characterization of the adjustment as increasing the returns to activities producing internationally tradable goods and services relative to activities producing non-tradable goods and services. The issue then became who (in the short run) derived their income

primarily from the tradable sector and which factor (in the long run) was used more intensively in this sector. Empirical evidence (Kanbur 1990) was used to argue that on both these counts the outcomes were likely to be more equitable than the status quo—essentially, households engaged in the tradable sector (for example, small holder, export cash crop farmers in West Africa) were poorer on average than those in the more urbanized non-tradable sector.

All of this was analysis of distribution at the household level—mainstream economic analysis, and empirical data collection, rarely went into intrahousehold issues in the mid 1980s. However, during the last fifteen years there has been considerable work on gender division within the household (for a review, see Alderman, Chiappori, Haddad, Hoddinott and Kanbur 1995). Following on from the pioneering work of Sen (1983), intrahousehold inequality is treated much more systematically now in the mainstream development economics literature. For example, Haddad and Kanbur (1990) showed how taking this into account can dramatically alter the measurement of inequality and poverty. Moreover, an intrahousehold and gender perspective also may change the analysis of adjustment and equity. For example, if there is gender segmentation in production, if there is not complete pooling of household resources, and if women derive their income primarily from non-tradable goods and services, then the sort of adjustment analyzed above may well worsen distribution by negatively affecting women compared to men (Kanbur and Haddad 1994) and this may well explain why some of the most vocal complaints against “adjustment” have come from Women’s groups in developing countries.

To summarize, our argument is that one of the reasons inequality is back on the agenda is that the last two decades have culminated in a triumph of the imperfect information and imperfect markets perspective in mainstream economics. As noted above, one consequence of this is that distribution becomes an integral part of the overall analysis of economic performance, not an add-on to be considered once efficiency has been established. But what it also means is that a detailed, case by case, analysis is needed to determine whether distribution and allocative efficiency are substitutes or

complements. Either way, it puts inequality back on the agenda of the development discourse.

3. GROWTH AND DISTRIBUTION

A second strand of the literature we would like to refer to, one which is more directly related to the development economics literature, is that on growth and distribution. This literature has gone through interesting cycles in the post war period (see Kanbur 1998). Immediately before and after the second world war, the concern was with demand management and then with overall growth. Thus, for example, Rosenstein-Rodan's (1943) analysis of development problems focuses entirely on industrialization and growth, not on the distribution of this growth. The development and growth models of that time (Mahalanobis 1963) mostly have this characteristic. However, by the mid 1950s a change was already taking place, as evidenced in the classic contributions of Lewis (1954) and Kuznets (1955). As the opening sections of Lewis's Nobel prize winning paper make clear, he self-consciously saw himself as reviving a "classical tradition" which he lamented had fallen into disuse, where growth and distribution were organically connected—the evolution of one was intimately tied to the evolution of the other (as Ricardo noted—"To determine the laws which regulate this distribution is the principal problem in political economy"). The distribution Lewis emphasized, true to his classical *inspiration*, was that between capital and labor, and he showed how this distribution affected savings, accumulation of capital and hence growth.

Kuznets's (1955) celebrated paper was concerned with the personal distribution of income and launched the famous inverted U hypothesis—as development proceeds and per capita income increases, inequality first increases and then decreases. The simple model of intersectoral population shifts can be elaborated upon (see Anand and Kanbur 1993a), but the basic point is that growth and equity were no longer independent in this model—they were substitutes to start with, and then complements once the turning point of the inverted-U was reached. In a widely cited paper, Ahluwalia (1976) claimed moreover to have empirical support for the inverted-U using data on a cross section of

developing and developed countries. It is interesting to see the widely differing policy conclusions that could be drawn from this framework. To some, the relationship meant that there was sharp conflict between growth and equity (Fishlow 1972), something to be managed. To others, the eventual turning point counseled fast growth—to get over the hump and into the decreasing inequality range as quickly as possible. But notice that for both positions, growth and distribution were inseparably joined. The need to manage the distributional consequences of growth is aptly illustrated in the title of the book which many would argue to be the culmination of this strand of thinking, “Redistribution with Growth,” (Chenery, Ahluwalia, Bell, Duloy, Jolly 1974).

And yet, in the 1980s the pendulum swung again, and growth and distribution were separated from each other. But the literature in this phase was different in kind to that of the immediate post war period. One of the main reasons was that empirical support for the Kuznets relationship proved to be weak. Using the very same data set on which Ahluwalia (1976) was based, Anand and Kanbur (1993b) argued that there was in fact no empirical relationship to be seen once a clean data set and appropriate econometric techniques were applied. This finding has now been confirmed by researchers on a greatly expanded data set compiled by Deininger and Squire (1996). In fact, Li, Squire and Zou (1998) argue that inequality does not change very much at all in countries over time (and a fortiori, since per capita incomes do change considerably, there is no systematic relationship between inequality and per capita income for countries over time).

It is interesting to focus for a moment on what policy implications might be drawn from the new conventional wisdom that inequality does not change very much as per capita income increases. One example of such a policy inference is in World Bank (1998):

“One study examined trends in the distribution of income for 45 countries for which high quality household income or expenditure data are available over time (Li, Squire and Zou 1998). In 29 countries there has been no trend in either direction. The

remaining 16 countries are divided: 8 have shown rising inequality, 8 declining. If income distribution does not change much over time, the gains in per capita income will affect different segments of society to about the same degree. Thus, in countries with rapid growth, incomes of the poorest will rise rapidly and the incidence of poverty will decline. But in countries with no per capita growth and a stable income distribution, there will be no poverty reduction.”

It is worth examining this logic closely. What it seems to be saying is that going for growth can be pursued without fear of increased inequality because there is no systematic relationship between inequality change and growth. But the latter is a statement about a reduced form relationship between per capita income and income distribution, and that too about lack of correlation on average (Bruno, Ravallion and Squire 1998, warn that the average can and does hide large differences between countries). In any event, the reduced form relationship cannot give policy guidance since the instruments which influence growth may also influence distribution. Of course there is a combination of policy instruments that could replicate the “growth but no distribution change” scenario seen in the outcomes for various countries. But what is that combination? To this question, such analysis cannot give an answer. In fact, it can be argued that such analysis is dangerous because it leads to an easy leap to a stylized assumption that, since growth is distribution neutral in the reduced form, the same is true in the structural form. In other words, those policy instruments which lead to growth are also distribution neutral. Recent work by Lundberg and Squire (1999) shows how individual policy instruments can be highly distributionally non-neutral, even though some combination of them could of course lead to distribution neutral growth.²

There is another type of analysis which risks falling into a similar trap, and this is the “decomposition” of poverty change into a “growth” component and a redistribution component. The analytics of this are laid in Datt and Ravallion, 1992 (see also Ravallion 1999, for a comparison with Kakwani 1994). The exercise is conducted as follows. We

² See also the recent work of Gallup, Radelet and Warner (1999) for a more structural approach to distributional change.

have two income distributions, say for periods t and $t+1$. These will differ, in general, in their means and in their inequality. They will also, in general, have different values of any given poverty index (like the head count ratio), $P(t)$ and $P(t+1)$. The exercise then constructs a synthetic intermediate distribution $*$ which has the mean of the $t+1$ distribution but the spread of the t distribution (there are different technical ways of doing this, and there are issues of “path dependence” and the “residual” but the basic idea should be clear). This synthetic distribution $*$ also has a poverty number $P(*)$ associated with it. Then, the change from $P(t)$ to $P(*)$ is referred to as the “growth component” of the overall poverty change between the two periods, and the change from $P(*)$ to $P(t+1)$ as the “redistribution component”. Typically, the first component accounts for as much as 80% of the overall change.

Now, the above calculations are perfectly acceptable as an accounting exercise—they represent an interesting initial way of organizing and presenting the evolution of income distribution. But their cutting power, and their potential danger, in policy analysis comes from a leap to an implicit separability of policy instruments between the two components—that, somehow, the growth component could be accomplished throughout a set of policy instruments independently of the redistribution component. Careful researchers warn against going beyond the accounting nature of the exercise (Ravallion 1999), but there is a danger of an easy slip into a classification of policy instruments into “growth” instruments (lower tariffs, higher FDI, privatizing SOEs) and “redistribution” instruments (food subsidies, labor based public works, progressive taxation). And yet, it is now clear that there is no justification in economic theory for such a separation. Moreover, it should be clear that many if not most individual policy instruments have both growth and distributional consequences (see Lundberg and Squire 1999, for evidence on this front). Of course, there are combinations of instruments which can produce distribution neutral growth, but to find out this combination (which will vary from case to case) requires, among other things, a distribution sensitive analysis of each of the instruments.

Finally, a large and growing literature in the last decade and a half has explored the connections between growth and distribution through an investigation of a possible causal link between initial inequality and subsequent growth. This literature has brought together recently developed models of endogenous growth, with an earlier generation of models of credit and other market failures, and also incorporated insights of the new political economy. This is a large literature (see Aghion, Caroli, García-Peñalosa 1999, Benabou 1996, Bruno, Ravallion, and Squire 1998, Kanbur 1998, Ravallion 1997), but some flavor of it can be found in Alesina and Rodrik (1994), for example. Here output depends on capital, labor and a public good. The public good is financed through a proportional tax and, given the endogenous growth specification, steady state growth depends on this tax rate. Individuals differ in their endowments and hence have different interests—the common tax rate delivers a common benefit through expenditure on the public good, but its costs are paid for by those with higher endowments. These differing interests will be resolved through the political economy institutions. With majority voting the median voter theorem can be invoked under certain conditions—as the ratio of median to mean wealth rises, that is as the measure of inequality decreases, the voted for tax rate will be lower and hence growth rate will be higher. It has to be said that the jury is still out on whether empirically there is a positive or negative causal link from inequality to growth (Fishlow 1995 and Forbes 1998). Ros (1998), for example, argues that different types of inequality (for example, wage inequality versus asset inequality) affect growth differently and reduced-form regressions cannot capture these differences. What is clear, however, is that the assumption of independence between growth and distribution needs to be questioned seriously.

In the growth and distribution literature, much has been made of the empirical regularity of a lack of systematic correlation between per capita income and inequality at the aggregate level, which is sometimes used as the basis for separating out growth and redistribution in policy discourse. But, as we have argued, such reduced form relationships have little to say on policy instruments, and what is needed is empirical work on the distributional consequences of specific policy instruments. Such work is now under way and it will be illustrated with specific country studies in Section 5. The key

then is to find combinations of instruments that will deliver both growth and equity and, in this task, inequality is clearly back on the agenda.³

4. RECENT CHANGES IN INCOME INEQUALITY

Can at least some of the recent revival of interest in distribution be attributed to the brute facts of inequality change between the last two decades? In table 1 we can observe the Gini coefficients for all countries for which “reliable” data points spanning the last decade are available.⁴ One result that becomes immediately apparent is that, while rising inequality is by no means the norm, there have been very sharp upward movements in a number of countries. In eleven countries shown in the table, the Gini coefficient has increased between five and nine percentage points; in seven countries, between ten and nineteen percentage points; and in two countries, by more than twenty (!) percentage points. These changes occurred in a span of a decade or less. Clearly, monitoring the evolution of the Gini coefficient is no longer as unexciting as “watching the grass grow.”⁵

While it is true that practically all of the large increases (5 percentage points or more) occurred in transition economies, upward movements are witnessed in countries with very different structural characteristics. Inequality has risen in countries that were traditionally more egalitarian (Thailand, for example) or very unequal (Mexico, for example); in advanced nations (the United States and the UK, for example) and in poor countries alike (Panama and Ethiopia, for example); and, in long-standing market economies (Hong Kong, for example) or countries in transition (China and Russia, for example). The other important fact is that there is no systematic relationship between the evolution of inequality and growth performance: output growth was positive in 16 of the

³ See, for example, Birdsall, Ross and Sabot (1995).

⁴ We put “reliable” in quotations because, in general, available inequality measures for a particular country do not necessarily provide an accurate description of the country’s degree of inequality. One source of the problem is the underreporting of income (and expenditures) that occurs more frequently at the lower and higher ends of the income spectrum. As a result, an inequality measure for the same country, using the same survey and for the same year can vary by several percentage points depending on whether the data on income was corrected for underreporting and on the method followed to do the correction. For an illustration of this see Lustig and Szekely’s (1998) paper on Mexico.

37 countries where inequality increased and in 9 of the 14 countries where inequality declined. Inequality has risen in both expanding economies (for example, Australia) and stagnant ones (for example, Lithuania). As shown in Figure 1, there is no systematic relationship between trends in inequality and growth.

Observers and analysts have attempted to explain the increases in inequality as stemming from the same global forces of skilled-biased technological change and, particularly for the higher income countries, of increased trade with cheap countries whose abundant factor is unskilled (cheap) labor. However, an equally important result observed in table 1 is that for a very large number of equally diverse countries inequality has remained practically unchanged (Colombia, India, Japan, Morocco, and Sweden, for example) and it has even fallen in a few (for example, Bangladesh, Canada, Honduras and Tunisia). What accounts for the difference in outcomes?

A. B. Atkinson (1998) addresses this question for the case of advanced industrialized countries. Noting that the latter featured a divergent pattern in income inequality during the 1980s and early 1990s, he posits that in addition to differences in government policies, social norms may have played a role.⁶ While the Gini coefficient rose by more than 40 percent in the U.K., over 10 percent in Japan and Germany (in the early nineties), and close to 10 percent in the United States, it fell slightly for Canada, and more pronouncedly for Italy, and, particularly, France.⁷ One fact in support of this sociological theory of the determination of labor remuneration is that all the countries (in Atkinson's study) for which the Gini rose were governed by center-right or outward rightwing governments while those for which the Gini declined were governed by center-left social democratic government. The question that remains is the nature of the causality. Did countries with more egalitarian social norms vote for more leftist

⁵ To quote Henry Aaron (1978).

⁶ It is better to not refer to them as OECD countries since the "club" now includes NIC's such as Mexico, South Korea and Turkey.

⁷ France is quite remarkable in this respect. With a Gini of Latin American standards—that is, close to .5--in the early 1960s, it fell to .35 in the mid-1980s and it continued to decline afterwards through the end of the decade. Data for the 1990s, however, is not available.

governments? Or, once the more right-wing governments were voted in, did inequality increase as a result of the influence on social norms by non-egalitarian leaders?

In the case of the transition economies of Eastern Europe and the former Soviet Union, it is conceivable that government policy made an important difference. One interesting fact is that in three out of the only four countries where income inequality practically did not change between the period right before and the years immediately after the dismantling of the Communist regime, the governments pursued what Milanovic (1998) called "populist" policies. In Hungary, Poland and Slovenia, the Gini for 1993-95 hovered around levels below .25, and they are among the most egalitarian countries of the previous Soviet bloc.⁸ In these countries wages, cash social transfers and non-wage private income rose. Furthermore, while wage inequality contributed to increase inequality, the cash social transfers were equalizing. Milanovic argues that in those countries the governments attempted to cushion the population from the sharp contractions in GDP. On the other end, the countries that saw the sharpest increases in inequality such as Russia and the Ukraine were under governments which Milanovic calls "non-compensators."⁹ Nonetheless, it is important to note that not all countries with such governments experienced the sharp increases in inequality observed in those two.

In the end, the answer to the question of why outcomes are so different in countries that in appearance have similar structural characteristics and are subject to similar global forces may lie in the following explanation. The size distribution of income is the result of a number of complex forces which sometimes move in the same direction but sometimes countervail each other even to the point that their effects cancel each other out. Some of these forces stem from the evolution of the distribution of endowments and their market returns; the latter, in turn, are affected by trends in technology, openness, and decisions affecting the rate of labor market participation and occupational choice. Other forces are related to family formation decisions such as the choice of partner and the number of children. Yet other forces are related to tax and transfer policy and how it

⁸ Inequality in Poland began to rise after 1992 which is why Poland appears among the countries with rising inequality in table 2.

affects after-tax income levels (or what is sometimes called “unearned” income). A closer examination at these various forces and how they reinforce or counteract each other shall be the topic of our next section.

5. THE COMPLEX PATTERNS OF INEQUALITY CHANGE

We wish to argue that one of the reasons why inequality is back on the agenda is that in recent years, based on increasingly more widely available time series of household surveys for developing countries, analysts have gone beneath the surface of the overall Gini coefficient to explore the micro structures of inequality evolution. Such detailed investigations have revealed interesting insights into income distribution processes, and have raised issues about alternative entry points for policy. In this section we illustrate these new developments with specific case studies.

In what follows we shall highlight how changes in returns, endowments, preferences and policy may contribute to the evolution of the size distribution of income by drawing on three case studies: Brazil, Mexico and Taiwan. All three studies use the micro-simulation decomposition methodology proposed by Bourguignon, Fournier and Gurgand (1998) for Taiwan. Briefly, this methodology decomposes the observed trends in the distribution of income in returns or price effects, endowment effects, labor participation and occupational choice effects, and --whenever data permits-- unearned income effects. Its advantage over other existing decomposition methodologies is that it allows one to simulate changes on the entire distribution. Second, it provides a much richer texture of the forces behind observed trends in inequality than the standard group decomposition or decomposition by source exercises.¹⁰

BRAZIL

Using the Theil index, Ferreira and Paes de Barros (1998) find that household per capita income inequality in urban Brazil fell from 0.88 in 1976 to 0.68 in 1996 (the Gini

⁹ For work on Russia see also Commander and Lee (1998).

¹⁰ For a detailed description of this method and its application see the proposal by Bourguignon, Ferreira and Lustig (1997).

fell from 0.62 to 0.59 over the same period). However, the authors found that - controlling for age and gender - the earnings-education profile for both wage-earners and self-employed workers became substantially more convex over that period, implying an increase in the returns to education over most pairwise comparisons. This places Brazil in the same category as many other places -including Taiwan and Mexico - where steeper returns to education were also observed. The returns to experience (measured by age) were essentially unchanged. There was a reduction in the gender earnings gap (as measured by the 'returns to being male') for both types of worker, but simulations indicate that this effect was not sufficient to outweigh the dispersion-increasing effect of a steeper earnings-education profile. Overall, then, the returns or price effects were unequalizing.

How can this be reconciled with the decline in inequality actually observed? Applying the Bourguignon, Ferreira and Lustig (1999) methodology, the authors find that there are three **main** equalizing factors at work in Brazil over the period which, together, more than offset the unequalizing effect of increasing returns to education. The first was changes in the educational composition of the population. As the average years of schooling of Brazilians rose from 3.8 to 5.9 over the period, the simulated effect of changes in educational endowments on both the individual earnings distribution and on that of household per capita incomes was equalizing. The second effect was demographic in nature, and can be seen - at least in part - as a secondary effect of the rightward shift in the distribution of education: higher levels of schooling (particularly for women) contributed to a noticeable reduction in family sizes (largely through a decline in the number of children). The average household size declined from 4.3 to 3.5 persons, and the dependency ratio also fell. This decline was more pronounced for poorer households, leading to a disproportionate relative increase in their per capita incomes and a reduction in inequality.

The third effect was a reduction in the variance of returns to 'unobserved' characteristics, which include skills unrelated to education, regional location, race, and the firm size in which one works. This effect suggests a reduction in the degree of

segmentation in the Brazilian labor market during the 1976 to 1996 period, as well as a possible decline in regional inequalities. These trends are compatible with some of the earlier evidence from both static and dynamic decompositions of scalar inequality measures, reported by Ferreira and Litchfield (1998). They also highlight the continuing importance of investigating the evolution of discrimination and segmentation in the Brazilian labor market in a more systematic way.

MEXICO

Income inequality in Mexico rose sharply between 1984 and 1994: the Gini coefficient increased from .491 to .549, respectively.¹¹ As the Lorenz curves present no crossings, the increase is unambiguous.¹² Applying the micro-simulation decomposition methodology referred to above, Bouillon, Legovini and Lustig (1998) attempt to identify which factors lie behind the rise in inequality using a reduced-form household income regression model. The results of this exercise revealed that the widening gap in the “returns” to education explain close to fifty percent of the observed increase in inequality, while the “returns” to regional location around 24 percent with the South alone accounting for 15 percent of the latter.¹³ Hence, most of the rising inequality in Mexico should be ascribed to increasing disparities in returns. Endowment effects—that is, the distribution of skills, etc.—account for about a fourth of the increase in inequality. In contrast to the case of Brazil (above) and Taiwan (below), the unequalizing effect of the widening gap in the returns to skill was not compensated by a more equal distribution of (observable and unobservable) skills.

Several explanations have been put forward to account for the observed sharp increase in the returns to education. One revolves around institutional changes in the labor market such as reductions in the minimum wage, the decreasing strength of trade unions, and the declining share of state-owned enterprises. However, the distribution of

¹¹ Bouillon, Legovini and Lustig (1999), Figure 1. The rise in inequality is robust to the inequality measure and to adjustments to income to account for economies of scale in the household and underreporting.

¹² Lustig and Szekely (1998).

¹³ Because the decomposition method is applied to a reduced form household income model, strictly speaking the estimated coefficients are not returns. They capture not only the market returns to the

the real wages, for example, does not reveal any truncation around the minimum wage, which suggests that the latter was not binding during the period under consideration.¹⁴ In addition, there is no evidence that the distribution of union wages is significantly different from non-union wages, once differences in education levels are accounted for. However, the average wages for unionized workers relative to those for non-unionized workers declined over the period¹⁵, a trend that should make the distribution of wage income more equal.

The other explanation for the rising returns to education is that the demand for labor has become more skill-biased. Using Mexico's employment surveys, Cragg and Epelbaum (1995) concluded that the increase in wage inequality can be attributed to the rapid increase in wages for more educated and experienced workers, while the wage increase was minimal among less skilled workers. The authors concluded that this trend is caused by a shift in demand, skewed in favor of higher skills more than a uniform increase in demand faced with different elasticities of labor supply by skill.

The skill(education)-biased shift in demand for labor could be the result of several factors. Two in particular have been analyzed in the literature: trade liberalization and technical change. Hanson and Harrison (1995), for example, found that 23 percent of the increase in relative wages for skilled workers during the period 1986-1990 could be attributed to the reduction in tariffs and the elimination of import license requirements. Revenga (1995) finds that reductions in import quota coverage and tariff levels were associated with moderate falls in firm-level employment. Revenga's analysis suggests that there has been a slight shift in the skill mix in favor of skilled labor (non-production workers in her sample). It also indicates that employment and wages for unskilled labor (production workers in her sample) are significantly more responsive to reductions in protection levels, which the author attributes to the fact that unskilled workers were more heavily concentrated in industries that underwent large reductions in protection.

corresponding characteristics but also a whole range of endogenous decisions such as labor force participation and occupational choice.

¹⁴ Láchler (1997), p. 7.

¹⁵ OECD Economic Surveys 1996-1997: Mexico

Tan and Batra (1997) find that investments in technology as measured by investments in research and development and labor training, as well as export-orientation have a large impact on the size-wage distributions for skilled workers and a relatively smaller effect on wages paid to the unskilled. For them, this asymmetric impact of technology is consistent with skill-biased technical change. This view is supported by the fact that there is evidence that in Mexico foreign-owned exporting enterprises, which operate in the most export-oriented sectors, and those that use technology of other enterprises pay higher wages to skilled workers. As these enterprises are in a more favorable competitive position in the world economy, they have potential to increase production and increase in numbers as the integration process progresses and consolidates, especially in connection with the Free Trade Agreement. Even if Mexico invests in educational and training institutions, it may not be able to do it at a pace sufficiently rapid to counter the trends in labor demand. Demand and remuneration for skilled workers might thus continue to rise, and accordingly, the wage gap between skilled and unskilled labor might widen even further.

TAIWAN

Taiwan is noted for having a low and stable level of inequality. The Gini coefficient, for example, hovered around .30 for approximately the past thirty years. A closer look at the evolution of income distribution, however, reveals that this is by no means the result of the absence of changes in earning patterns, demographic structure, or labor choices. On the contrary, it is the outcome of a number of complex forces with often opposing effects but which ended up compensating each other to the point that the net effect was almost imperceptible.¹⁶

While it is true that overall inequality practically did not change, the distribution of primary (before taxes and transfers) adult equivalent income became more unequal, implying that government policy was effective at countervailing other forces. On the

¹⁶ The results discussed here are from the study of Bourguignon, Fournier and Gurgand (1998).

other hand, the distribution of income of individual earnings became more equal. Does this mean that Taiwan was spared from the widening gap in returns to education observed in many other countries? If not, what forces operated to compensate what in other countries has been at the bottom of rising overall inequality? What factors have been at play to make the distribution of primary income more unequal in spite of lower earnings inequality?

In their study, Bourguignon, Fournier and Gurgand (1998) find that Taiwan has experienced the same trend in rising returns to education at the higher end relative to other levels as it has been for countries throughout the world. Interestingly, this occurred despite of the incredibly rapid expansion in the supply of labor with more years of education. For example, average years of schooling in Taiwan increased from 6 to 9.5 years between 1970 and 1995. However, the unequalizing effect on the distribution of earnings implied by higher returns to education was more than offset by three other factors in order of importance: i. a decline in the variance of unobserved characteristics; ii. a change in the level and distribution of schooling among wage earners; and, iii. the fact that more women chose to participate in the labor force and some men dropped out. Because of the initial gap in earnings between men and women, these changes in labor force participation were equalizing. The net result of all these forces was a lower inequality in the distribution of individual earnings.

At the level of the household—that is, when earners were paired with other earners, or earnings were paired with other sources of income--the result was that overall primary (adult equivalent) income inequality increased over time. One interesting observation is that changes in labor force participation and occupational choice were *unequalizing*. This is the result of two phenomena. First, the negative effect of the husband's income on married women's participation in the labor force weakened over time: that is, more women married to higher income earners chose to participate in the labor force compared to the past. Also, while the fact that women entering the labor force were more educated had an equalizing effect on the distribution of earnings, this trend made the distribution of household income more unequal at the level of the household.

This is so because better educated women tend to live in households with higher incomes to begin with. On the other hand, the equalizing effect of the expansion of education was weaker at the household level because of its negative impact on labor force participation of younger cohorts, particularly those coming from the lower end of the income spectrum.

What the three studies reveal is that behind apparently straightforward trends, there are major structural forces at play. Some of these forces can be directly affected by policy, such as the average schooling and the distribution of the stock education—but it takes time---. Other forces are strictly market outcomes or stem from individual preferences in terms of labor force participation and the choice of partner or the number and spacing of children. The influence of policy measures on the latter is likely to be more ambiguous. Finally, it is important to mention once more that as the case of Taiwan has shown, tax and transfer policies can counteract the observed increases in primary income inequality.

6. INEQUALITY BETWEEN COUNTRIES

The final reason we consider for why inequality is back on the agenda is the evolution of inequality between countries. At a very simple level, in table 2 we present the coefficient of variation of per capita GDP across countries since 1980. By this measure it can be observed that inequality across nations has been steadily on the rise. Milanovic (1999) also finds that world Gini coefficient rose from 62.8 to 66.7 between 1988 and 1993 and that the bulk of the increase has been accounted by the “between-country” component. This widening gap, seen in the historical context, has led to a burgeoning literature which has, at least indirectly, put inequality back on the agenda.

If the world behaved as predicted by the simple neoclassical growth model, the per capita incomes of countries with the same preferences (that is saving rate), technologies, government policies, and population growth, would eventually converge. This framework implies that the differences in the countries’ income per capita could be

explained in full by differences in steady state income per capita and by how far they are from their steady state equilibrium. Initial conditions do not matter and transitory shocks do not alter the long run equilibrium. If, on the other hand, the world is characterized by multiple, locally stable, equilibria, convergence may not ensue. Different initial conditions or transitory shocks could push countries with even the same preferences, technologies, etc., into permanently different long term equilibria.

Whichever model is correct, the question is why are some countries kept in the low-income club, and can something be done to reverse this? Although no clear consensus has emerged whether conditional convergence is validated by the empirical analysis, there is enough evidence in support of the view that the world seems to be converging towards two clubs: the rich and the poor countries.¹⁷ More precisely, a sort of conditional convergence—that is, an inverse relationship between output per capita growth and income per capita level—appears to apply to countries with incomes per worker above the world average. In contrast, those on the opposite end of the spectrum seem caught in a “poverty trap.” Historically, there has been massive divergence in absolute and relative per capita incomes with steady and nearly equal growth rates for the leaders in the long run while the currently poor countries always had low growth rates.¹⁸ This phenomenon explains the difficulty of finding strong tendencies towards divergence or convergence for the whole sample of countries.¹⁹

A number of explanations have been put forward in the literature as to why slow growth can persist at low income levels. In the extensions of the simple neoclassical framework this could reflect differences in steady state equilibrium resulting from low investments in human capital and political instability.²⁰ It could also be the result of a protracted transition due to a series of large adverse external shocks. Ros (1998) tries to

¹⁷ On the formation of a two-club world see Quah (1993), Ros (1998).

¹⁸ Pritchett (1997).

¹⁹ Of course, the observed patterns in the relationship between growth and income per capita may be reflecting gaps across countries in their position vis-à-vis their steady state. The simple neoclassical framework is perfectly consistent with a country which is closer to its low steady state income per capita level may grow more slowly than a richer country which is much further away from its steady state equilibrium.

²⁰ Barro (1991, 1997); Mankiw, Romer and Weil (1992).

address this issue by grouping the sample of countries used in Mankiw, Romer and Weil (1992) in growth performance categories, and estimating their steady state incomes per capita. Subsequently, the relative position of countries in their steady states is compared with the actual income gaps. Since the former are much narrower than the latter, the differences would seem to arise from the fact that poorer countries are further away from their steady state. However, this would imply—according to the neoclassical model—that the poorer countries should be growing faster, something that is not validated by their actual performance. (Ros 1998)

Although this exercise is not conclusive, it does support the view that economic growth may be better characterized by multiple equilibria: that is, a world where initial conditions matter and transitional shocks have long-run implications. In such a world, poverty traps stem from countries being pushed—by either initial conditions or shocks—into a low-level equilibrium. In the development literature, particularly in the early one, several simple models of low-level equilibrium traps were put forward. One is the insufficient savings theory first introduced by Leibenstein (1957) and subsequently formalized by King and Rebelo (1993). The scenario predicted by this approach is that at low levels of the capital-labor ratio income per capita is barely enough for subsistence, and savings fall below depreciation. The country is “stuck” in a low-level equilibrium trap. Thus, although the country may be filled with good investment opportunities, it is too poor to take advantage of them. Foreign investment or foreign aid would take care of such a problem, though. The only factor that could counter this, then, would be political risk (detering private capital flows) or international misbehavior (detering foreign aid). As mentioned above, Barro (1991, 1997) finds that when in addition to controlling for human capital differences, one controls for the role of political risk, convergence—albeit slow—seems to ensue. Ros (1998), however, finds an interesting result: if countries are classified by income level, at the low end of the spectrum, differences in the rule of law index (used by Barro) appear too small compared with the large differences in growth rates observed among the countries in this group.

There are many ways in which the debate on the seemingly inexorable growth of inequality between countries is impinging on the development discourse. In fact, the multiple equilibria and club convergence perspectives do have strong implication for policy. The club convergence view gives credence to the view that policy matters, that a country's evolution is not preordained but can be altered by intervention—which leads to the far from resolved debate on what exactly these interventions ought to be. In so far as initial conditions include low levels of physical and human capital, these perspective also support the arguments for foreign aid to help poor countries break out of their low level traps.

The most recent literature on aid, however, has thrown doubts on the historical record of aid in actually helping poorer countries to grow. Burnside and Dollar (1997) and World Bank (1998), and a host of other recent writings (for example Kanbur 1999) point to the dismal record of aid in breaking the poverty traps identified in the growth literature. The reason, it would seem, is that resources by themselves are not enough. How they are used is crucial. Burnside and Dollar (1997) show that aid promotes growth only when it flows into “good” policy environments—otherwise, it is at best ineffective. This is, in fact, the empirical counterpart to the general theoretical proposition that in a second best world simply expanding the resource base may in fact do no good or may even immiserize a society. What matters, primarily, is domestic policy—and recall the complementarity between redistribution and efficiency in this case. Thus the evolution of inequality between nations is not independent of the inequality within each nation.

7. CONCLUSION

It could of course be argued that inequality never went away—it was always on the agenda in some form or another. The untidy way in which academic analysis advances means that one can always find discussion of a topic during the period it is claimed to have fallen off the radar screen. However, we believe that the turn of the century has seen a resurgence of interest in inequality, and distribution more generally.

This resurgence is the culmination of several trends in the analytical, empirical and policy literature.

First, the separation of distribution and allocative efficiency, an immediate implication of post war attempts to formalize Adam Smith's invisible hand, no longer holds sway. As the real world features of imperfect information and imperfect markets have been recognized and incorporated into the analytical framework, a more complicated terrain has emerged where equity and efficiency are integrally connected, and detailed analysis is required to discover these connections.

Second, the empirical regularities between inequality and growth are increasingly being seen for what they are—regularities which have little in the way of specific policy implications. The current consensus is that there is no systematic empirical relationship between inequality and growth—but this type of “separation” only has policy implications if it is further assumed that there are separable sets of “growth” and “redistribution” policy instruments. Once specific policy instruments are considered, and this is what policy makers are interested in, inequality is back on the agenda.

Third, aggregate measures of inequality have changed dramatically for some countries in the last decade. This has brought inequality back on the agenda for these countries, of course, but also more generally in terms of the implications for other countries. Now, it is true that inequality has not changed much for other countries, or has in fact declined in some. At the very least, however, there is the issue of why countries facing broadly similar global circumstances have had such widely different experiences on inequality change. What is it about the domestic circumstances that have led to these divergences of outcome? Such a question puts inequality back on the agenda.

Fourth, whether aggregate inequality changed or not, recent empirical work is showing how the evolution of overall inequality is the outcome of a complex pattern of forces beneath the surface. These include the evolution of markets, assets and institutions, overlaid on basic demographic shifts. Understanding these forces is the real challenge

which takes us beyond the simple lack of a correlation between aggregate inequality and per capita income. It requires new techniques and opens up new avenues of policy analysis.

Fifth, global divergence has put the issue of inequality between nations back on the agenda. In the last decade this has led to a rich literature on what determines relative growth rates and whether growing inequality between nations is inevitable. This debate is also linked to the role of foreign aid in overcoming the poverty traps which the literature has identified.

The five strands of the literature we have identified look set to define the research and policy agenda in the first decade of the next century. They have already led to fruitful insights and significant policy implications, even beyond the realm of distributional analysis. Yes, inequality is definitely back on the agenda.

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Figure 1

TABLE 1
COMPARING THE AVERAGE GINI COEFFICIENT FOR THE 80s AND THE 90s

| Countries for which the average of the Gini coefficient of the 90s is greater than that of the 80s (Inequality increased) | | | | | | Countries for which the average of the Gini coefficient of the 90s is lower than that of the 80s (Inequality decreased) | | | | | | | |
|---|-------|-------|----------|----------|------------|---|-------------|-------|-------|----------|----------|------------|--------------|
| Country (1) | 80s | 90s | Welf (2) | Unit (3) | Source (4) | GDP p.o. (5) | Country (1) | 80s | 90s | Welf (2) | Unit (3) | Source (4) | GDP p.o. (5) |
| Australia | 29.73 | 31.70 | I | P | LIS | + | Bahamas | 44.42 | 42.99 | I | H | D/S | - |
| Belarus* | 23.00 | 28.00 | I | P | M | - | Bangladesh | 36.86 | 34.67 | I | P | D/S | + |
| Brazil | 57.64 | 60.90 | I | P | L/S | - | Canada | 31.54 | 27.61 | I | H | D/S | + |
| Bulgaria** | 23.00 | 34.00 | I | P | M | + | Finland | 30.30 | 26.11 | I | H | D/S | + |
| China* | 30.41 | 35.03 | I | P | D/S | + | Ghana | 36.32 | 33.94 | E | P | D/S | - |
| Czech Rep* | 19.00 | 27.00 | I | P | M | - | Honduras | 59.90 | 55.53 | I | P | L/S | - |
| Czechoslovakia | 21.13 | 24.56 | I | P | D/S | - | Indonesia | 33.44 | 32.39 | E | P | D/S | + |
| Denmark | 32.07 | 33.20 | I | H | D/S | + | Italy | 33.42 | 32.19 | I | H | D/S | + |
| Dominican Rep. | 46.68 | 49.00 | I | P | D/S | + | Jamaica | 43.35 | 39.83 | E | P | D/S | + |
| Estonia** | 23.00 | 35.00 | I | P | M | - | Mauritius | 39.37 | 38.69 | E | P | D/S | + |
| Ethiopia | 41.00 | 44.50 | E | P | WB | + | Philippines | 46.08 | 45.00 | I | H | D/S | - |
| Finland | 20.70 | 22.30 | ID | P | LIS | + | Slovak | 20.00 | 19.00 | I | P | M | - |
| Hong Kong | 41.49 | 45.00 | I | H | D/S | + | Spain | 32.10 | 30.60 | ID | P | LIS | + |
| Hungary | 21.00 | 23.00 | I | P | M | + | Tunisia | 43.00 | 40.24 | E | P | D/S | + |
| Jordan | 38.45 | 40.66 | E | P | D/S | - | | | | | | | |
| Kazakhstan* | 26.00 | 33.00 | I | P | M | - | | | | | | | |
| Kyrgyz Rep.** | 26.00 | 55.00 | I | P | M | - | | | | | | | |
| Latvia** | 23.00 | 31.00 | I | P | M | - | | | | | | | |
| Lithuania** | 23.00 | 37.00 | I | P | M | - | | | | | | | |
| Mexico | 44.93 | 47.60 | I | P | L/S | + | | | | | | | |
| Moldova** | 24.00 | 36.00 | I | P | M | - | | | | | | | |
| Nigeria | 37.02 | 39.31 | E | P | D/S | + | | | | | | | |
| New Zealand* | 35.31 | 40.21 | I | H | D/S | + | | | | | | | |
| Norway | 31.69 | 33.31 | I | H | D/S | + | | | | | | | |
| Panama* | 52.10 | 57.40 | I | P | L/S | - | | | | | | | |
| Peru | 42.75 | 44.87 | E | P | D/S | - | | | | | | | |
| Poland | 24.59 | 26.26 | I | P | D/S | - | | | | | | | |
| Romania* | 23.00 | 29.00 | I | P | M | - | | | | | | | |
| Russia*** | 24.00 | 48.00 | I | P | M | - | | | | | | | |
| Slovenia | 22.00 | 25.00 | I | P | M | - | | | | | | | |
| Taiwan | 29.05 | 30.54 | I | P | D/S | - | | | | | | | |
| Thailand | 47.27 | 51.78 | I | P | WB | + | | | | | | | |
| Turkmenistan** | 26.00 | 36.00 | I | P | M | - | | | | | | | |
| UK* | 27.32 | 32.35 | I | Pe | D/S | + | | | | | | | |
| Ukraine*** | 23.00 | 47.00 | I | P | M | - | | | | | | | |
| USA | 32.50 | 35.55 | ID | P | LIS | + | | | | | | | |
| Uzbekistan* | 26.00 | 33.00 | I | P | M | - | | | | | | | |

| Countries for which the average of the Gini coefficient of the 90s is approximately equal to that of the 80s (Inequality has not changed) (6) | | | | | | |
|---|-------|-------|----------|----------|------------|--------------|
| Country (1) | 80s | 90s | Welf (2) | Unit (3) | Source (4) | GDP p.o. (5) |
| Belgium | 26.43 | 26.92 | I | H | D/S | + |
| Chile | 55.55 | 56.49 | I | P | D/S | + |
| Colombia | 48.30 | 49.25 | I | P | L/S | + |
| Costa Rica | 46.26 | 46.83 | I | P | L/S | + |
| India | 31.45 | 31.41 | E | P | D/S | + |
| Israel | 30.90 | 30.50 | ID | P | LIS | + |
| Japan | 35.20 | 35.00 | I | H | D/S | + |
| Lesotho | 58.02 | 57.00 | E | P | D/S | + |
| Luxembourg | 23.80 | 23.70 | ID | P | LIS | + |
| Morocco | 39.19 | 39.20 | E | P | D/S | + |
| Netherlands | 27.50 | 27.20 | ID | P | LIS | + |
| Portugal | 36.80 | 36.20 | I | H | D/S | + |
| Sweden | 31.74 | 32.46 | I | H | D/S | + |
| Venezuela | 46.02 | 46.33 | I | P | L/S | - |
| Yugoslavia | 32.74 | 31.88 | I | P | D/S | - |

Notes:

(1) Changes: *Between 5 and 9 points; **between 10 and 19 points; ***20 points or more.

(2) Welf: Whether the Gini coefficient is calculated based on income or expenditure (I = Income, E = expenditure).
ID = Disposable Income (LIS own definition).(3) Unit: Whether the base unit is the person or the household.
H = household equivalent (households are weighted by the number of persons).
Pe = Person equivalent (in addition to H, the effective number of members in the household is assumed to be the square root of the actual members).
P = by individual.
M = by household.

(4) Sources:

D/S: Deininger and Squire.
L/S: Luxembourg Income Study.
L/S: Londono and Szekely.
M: Milanovic.
L/S: Lustig and Szekely.
WB: World Bank.

(5) Yearly average change in GDP per capita (constant PPP 1987 US\$). Growth refers to the period between the first and the last available Gini estimates: "+" income growth; "-" income decline; - data not available.

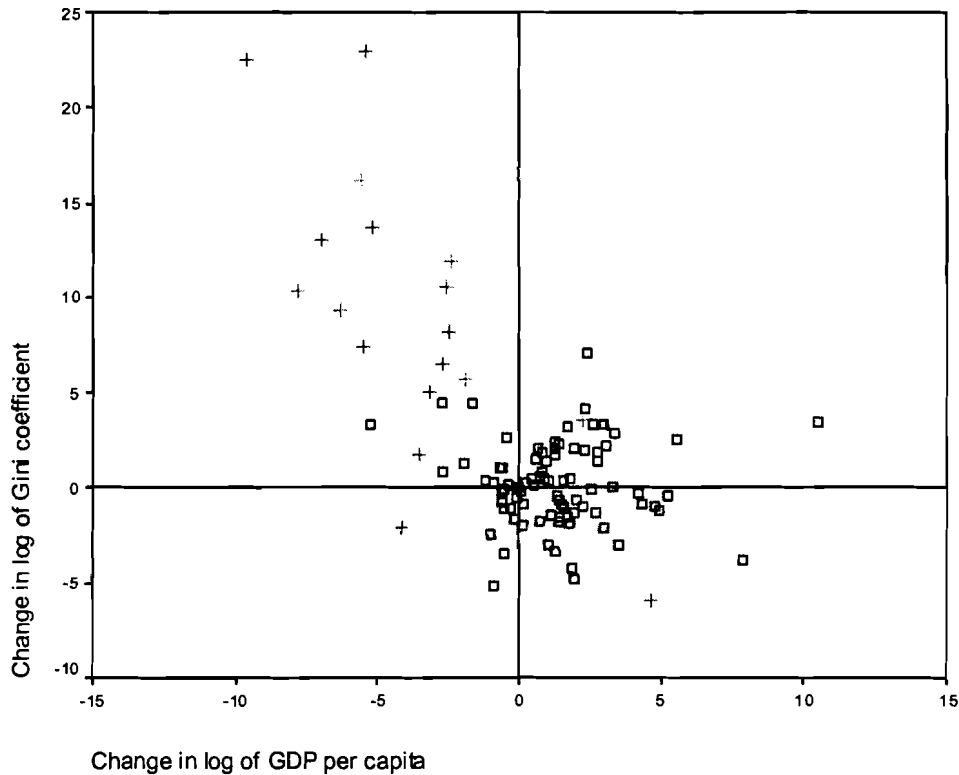
(6) Not change indicates that the variation in the Gini coefficient was less than 1.00 in either direction.

TABLE 2:
COEFFICIENT OF VARIATION OF GDP PER CAPITA

| Year | Coefficient of Variation |
|---------|--------------------------|
| 1980 | 0.7575 |
| 1985 | 0.7867 |
| 1990 | 0.8083 |
| 1995 | 0.8291 |
| 1996 | 0.8294 |
| The 80s | 0.7789 |
| The 90s | 0.8210 |

Note: The total number of countries included in the calculations is 61.

Figure 1



- Notes:** (1) Modeled after figure from Ravallion, Martin and S. Chen (1997). "What Can New Survey Data Tell Us about Recent Changes in Distribution and Poverty?" *The World Bank Economic Review* 11 (May): 357-82. This includes new data points available since the latter publication.
 (2) Points marked with "+" represent data from economies in transition.
 (3) The figure is based on 103 non-overlapping observations for over 80 countries spanning from the late 1970s to 1996.
 (4) The fitted regression line was estimated excluding the former Soviet republics and the countries of Eastern Europe.

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