

Growth May Be Good for the Poor – But are IMF and World Bank Policies Good for Growth?

A Closer Look at the World Bank's¹ Recent Defense of Its Policies

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"... policy making at the international level has to create space for national development efforts that are divergent in their philosophy and content. Forcing all countries into a single, neoliberal developmental model would be unwise – in light of the potential political backlash from national groups – even if there were serious grounds to believe that the model is economically advantageous. It is absurd when the evidence on the model's economic superiority is itself in doubt."

–Dani Rodrik, *The New Global Economy and Developing Countries: Making Openness Work*

Introduction

In a paper released last March by the World Bank's Development Research Group, Bank economists David Dollar and Aart Kraay confront critics of World Bank/IMF policies with new empirical research on incomes in both developed and less developed countries. The authors conclude that "growth generally does benefit the poor and that anyone who cares about the poor should favor the growth-enhancing policies of good rule of law, fiscal discipline, and openness to international trade."(p. 27)

Despite having been released in only draft form, the paper has gotten a fair bit of media attention. "Globalisation raises incomes, and the poor participate in full," concluded *The Economist*, which also learned from this study that cutting inflation and reducing public spending disproportionately help the poor.³ The paper has been seized upon by those who wish to dismiss critics of IMF/World Bank policies as fundamentally

¹ Dollar, David and Aart Kraay, "Growth Is Good for the Poor". The World Bank Development Research Group, March 2000.

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³ *The Economist*, May 27, 2000. See also, e.g., the *Daily Telegraph* (London) June 9, 2000, p. 35.

misguided or worse.⁴ It is therefore worth taking a closer look at the claims put forth by the Dollar and Kraay paper and the debate to which it has contributed.

Of course the paper's main finding – that there is generally a positive correlation between economic growth and the income of the poor – is no surprise. In fact, it is difficult to imagine who would argue that there were no such correlation.

But the debate joined by Dollar and Kraay misses the most important problem entirely. Economic growth over the last twenty years, the period during which the policies advocated by the authors (and their institution) have been put into place, has been dramatically reduced. It may well be true, as Dr. Dollar argues, that "to ignore the importance of growth-enhancing policies is an injustice to the poor."⁵ But to assume that the World Bank and the IMF have brought "growth-enhancing policies" to their client countries goes against the overwhelming weight of the evidence over the last two decades.

Second, the relationship between economic growth and the income of the poor is not as close as it appears to be from the authors' presentation. The extent to which the poor – or even the majority of the population – share in the gains from economic growth can vary considerably over time and as a result of policy changes. As it turns out, there are plenty of instances in which the poor, and the majority of the population, have been left behind in the era of globalization – even where per capita income has grown.

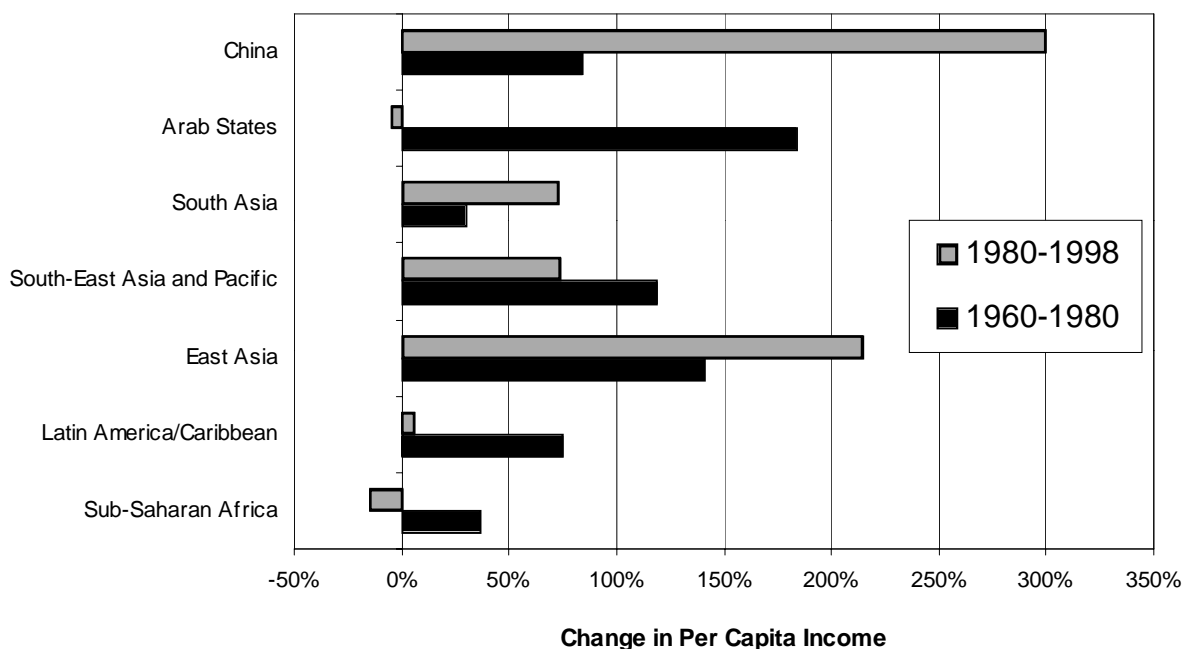
Third, the regressions in Dollar and Kraay's research actually show little or nothing about the relationships between most of the variables examined. Aside from the correlation between economic growth and the income of the poor, almost all of the other tests in the paper are statistically insignificant. Given the large errors in the data (see Appendix B), there is really no conclusion that can be drawn from the failure to find significant results in these tests. For example, we cannot conclude from these tests that there are no significant differences in the relation between growth and the income of the poor between the 1980s and 1990s and previous decades. And there is certainly nothing in the authors' research to support their conclusion that "globalization is good for the poor," (p. 22) or that anti-inflationary policies are "pro-poor."

Finally, the authors' research mirrors what is wrong with the policy of the Bank and the IMF: the attempt to apply universal economic "laws" – concerning trade, capital flows, privatization, the size and scope of government – to the problems of economic development. By any measure of economic performance, the last two decades have shown these rigid applications of orthodox economic theory to be a failure. Rather than defending this record of failure, the Bank and Fund researchers should be trying to discover what has gone wrong. And most importantly, they should allow governments to pursue their own, country-specific paths to growth and development.

⁴ See, e.g., Martin Wolf: "Kicking Down Growth's Ladder: Protesters Against the World Bank and the IMF are in Effect Seeking to Deny the Poor the Benefits of a Liberal World Economy," *Financial Times*, April 12, 2000, p. 23.

⁵ Letter to the *Financial Times*, June 20, 2000.

Figure 1: Change in Per Capita Income in the Developing World: 1960-1980 vs. 1980-1998



Source: UNDP Human Development Reports 1998, 2000.

In Figure 1 we can see the rate of growth of GDP per capita for the various regions of the developing world. If we compare the results since 1980 with the previous two decades, the difference is striking. In every region except East Asia and South Asia, the later period shows remarkably slower growth.

In Latin America, for example, GDP per capita grew by 75 percent from 1960-1980, whereas in the latter period it has only risen 6 percent. For sub-Saharan Africa, GDP per capita grew by 36 percent in the first period, while it has since fallen by 15 percent.

These are enormous differences by any standard of comparison, and represent the loss to an entire generation – of hundreds of millions of people – of any chance of improving its living standards. Even where growth was significant, as in Southeast Asia, it was still better in the earlier period. The exceptions to this trend were East Asia and South Asia, which grew faster from 1980 to 1998 than in the previous period. The East Asian result is due to the quadrupling of GDP, over the latter period, in China (which has 83 percent of the population of East Asia.) The South Asian result is due to faster growth in India (which has three-quarters of the population of South Asia.)

In short, there is no region of the world that the Bank or Fund can point to as having succeeded through adopting the policies that they promote – or in many cases, impose – upon borrowing countries. They are understandably reluctant to claim credit for

China, which maintains a non-convertible currency, state control over its banking system, and other major violations of IMF/Bank prescriptions.⁶ And in both India and China, their opening to trade took place about a decade after the increase in growth began.⁷

One cannot stress too strongly the failure of these policies on the measure of economic growth, even ignoring income distribution. The debate over Dollar and Kraay's paper, for example, has simply assumed – as the authors have – that IMF/Bank policies do promote growth, and the only question is how well the poor have fared under the growth that has resulted from these policies.

This leaves a gaping hole in the debate over the policies of the world's two most powerful financial institutions. It allows the Fund and the Bank to continue imposing a whole cluster of failed policies repeatedly, without their competence or the policies themselves being called into question. When prominent economists such as Jeffrey Sachs or former World Bank Chief Economist Joseph Stiglitz criticize the IMF's macroeconomic policies, or Harvard's Dani Rodrik questions the institutional overreaching on questions of openness, the Fund and the Bank pay no heed. The Fund simply repeats its assertions that it is helping developing countries to maintain macroeconomic stability, and to grow; perhaps it (and the Bank) could do more to fight poverty and protect the environment, but they are "getting the fundamentals right" so that countries will have the options to improve living standards for everyone. But this is exactly what they have not done.

If the IMF and the Bank were simply research institutions, their errors would not be so damaging, since their analyses would compete in the marketplace of ideas and be judged by their success or failure. But in fact they control access to credit for countries with most of the population of the developing world (and transition economies). The Fund acts as gatekeeper: most of the Bank's lending is contingent on Fund approval, and therefore on adherence of the borrowing country to IMF conditions. Most credit from other multilateral institutions (e.g. the Inter-American Development Bank) and even private sources is also contingent on the IMF's seal of approval. As a result of this arrangement, the Fund and the Bank have the power to impose their policies on dozens of governments throughout the world.

It is, of course, difficult to separate out the causal relationships between various economic policies – what has come to be known as "the Washington consensus" – and the dramatically reduced economic growth of the last two decades. Such relationships are not likely to be found in regressions of the type included in the Dollar and Kraay paper, primarily because there is no simple or stable relationship between the policy variables

⁶ Official spokespersons and supporters of IMF and World Bank policies generally point to an individual country over a relatively short period of time, when defending their record. For example, in a *New York Times* article (June 25, 2000, by Joseph Kahn, page 5) then-US Treasury Secretary Larry Summers cited Uganda and Poland as success stories for their economic model. But Uganda, despite seven years of growth, is still 30 percent below its per capita income of 1983. And Poland, as it turns out, is very unrepresentative of the IMF's work in the countries Eastern Europe and the former Soviet Union – most of which are still far below their 1989 levels of income (see below).

⁷ Rodrik, 2000, p. 2-3, 8.

that they examine and the macroeconomic results.⁸ But they can be seen in any number of case and country studies, and although the results vary, the errors are often the same.

For example, since 1997 the IMF and its allied creditors have made serious policy errors that have undoubtedly reduced cumulative economic growth for hundreds of millions of people. In the Asian financial crisis, the Fund's drastically tight monetary policies (interest rates as high as 80 percent in Indonesia) and fiscal austerity deepened the recession and threw tens of millions of people into poverty. Although the regional economy has now recovered, the lost growth and increased poverty is still significant⁹. And Indonesia, the largest of the five crisis countries (including South Korea, Thailand, Malaysia, and the Philippines) with more than 50 percent of their total population, has yet to recover, after a 13.4 percent decline in GDP in 1998.

In Russia in 1998, the IMF insisted on maintaining an overvalued fixed exchange rate, which required raising interest rates as high as 150 percent. These policies not only led to excessive foreign debt burdens, but maintained a speculative bubble in the financial sphere and drained the real economy of investment capital. The overvalued ruble kept imports artificially cheap, hobbling domestic production, and exports overly expensive – until the currency collapsed in August of 1998. The IMF supported a similar policy in Brazil. The government raised interest rates to more than 50 percent and borrowed billions from the Fund in November of 1998 to stabilize its overvalued currency, only to have it collapse just a few months later.

Was growth unnecessarily reduced in these cases by the Fund policy, as Stiglitz,¹⁰ Sachs,¹¹ and others have argued? The answer to any question of this type depends on a counter-factual. Defenders of the status quo argue that all of these cases would have been worse without the IMF's policies.¹² While it is always difficult to say what the counter-factual would have been, there are some strong indications in each of these cases. For example, in Indonesia, the extremely high interest rates failed to prevent the currency from losing more than three-quarters of its value. It is difficult to imagine how much further the currency would have fallen, or how preventing a further slide could be worth the bankruptcies and economic collapse caused by these interest rates.

⁸ For example, Dollar and Kraay find low inflation to be a significant contributor to growth, and to be especially "pro-poor." But it is well known that governments whose economies are already in trouble tend to over-expand their money supply, thus causing inflation; in these cases it is the poor growth performance that leads to inflation, not the other way around. The relation between moderate rates of inflation (under 40 percent) and growth is one of the most heavily researched topics in economics, and most of the studies have been inconclusive (see e.g., Michael Bruno, "Does Inflation Really Lower Growth?" *Finance and Development*, 1995.)

⁹ World Bank, "East Asia: Recovery and Beyond," June 1, 2000.

¹⁰ Joseph Stiglitz, "The Insider: What I learned at the World Economic Crisis," *New Republic*, April 17, 2000.

¹¹ Steven Radelet and Jeffrey Sachs, "The East Asian Financial Crisis: Diagnosis, Remedies, Prospects," Harvard Institute for International Development, April 20, 1998.

¹² Rudi Dornbusch, letter to the *New Republic*, May 29, 2000; Letter from Thomas Dawson, "A Response to an Article in *Barrons*," April 15, 2000, International Monetary Fund (see <http://www.imf.org/external/np/vc/2000/041500.htm>).

We also have the counter-factual of Malaysia, which, rather than use sky-high interest rates to defend its currency, imposed currency controls. In spite of widespread opposition to this move from both multilateral and private foreign creditors, and the lowering of its international credit rating, Malaysia emerged from the crisis with the smallest percentage of lost output among the five countries.¹³

For the interventions in Russia and Brazil, the Fund's argument for sacrificing output in order to defend the currency was that devaluation would lead to runaway inflation. We now know that this argument was wrong. Inflation in Russia for the year following the devaluation (1999) was 36 percent, and was about 25 percent in the first half of 2000. Inflation in Brazil was 8.9 percent for 1999, and was down to 1.4 percent for the first five months of 2000. The Russian devaluation in particular has been helpful in jump-starting its stagnant industrial sector, with manufacturing production increasing by 12.8 percent and the trade surplus increasing tenfold after the collapse of the ruble.

As independent economists have noted for many years,¹⁴ all of these errors are part of a pattern of macroeconomic policies that have a pronounced contractionary bias. Getting rid of a current account deficit by shrinking the domestic economy, for example, is a Fund strategy that has been deployed for decades. So however much "fiscal discipline" and policies that contain inflation may be helpful in some instances, as Dollar and Kraay assert, these medicines are often quite lethal when prescribed inappropriately or in overdose.

There are other problems as well: IMF and World Bank economists do not necessarily know enough about specific country conditions to be making some of the decisions that they make. And they may have multiple objectives that do not necessarily coincide with the interests of borrowing countries. For example, it is now widely recognized that the opening of financial markets in East Asia was the primary cause of the Asian financial crisis, as it led to an enormous build-up of short-term foreign debt relative to reserves. The sudden reversal of capital flows that followed, which amounted to 11 percent of the combined GDP of Indonesia, South Korea, the Philippines, Thailand, and Malaysia, was devastating. The IMF and its patron, the US Treasury Department, promoted this opening of capital markets, and even sought to amend the Fund's charter so as to be able to exert authority over the capital accounts of member countries.¹⁵ But the crisis countries, in particular, had no need for the huge inflows of portfolio investment that ended up destabilizing their economies; they had very high domestic savings rates. As Stiglitz has noted, the push for capital account liberalization may have had more to do with the search by US mutual funds for foreign investment outlets than it did with the needs of borrowing countries.¹⁶

¹³ World Bank, "East Asia: Recovery and Beyond," June 1, 2000.

¹⁴ See, e.g. "The Revival of the Liberal Creed: The IMF, the World Bank, and Inequality in a Globalized Economy" (Lance Taylor and Ute Pieper) in Dean Baker, Gerald Epstein, and Robert Pollin (eds.) *Globalization and Progressive Economic Policy: What are the Real Constraints and Options?*, 1998.

¹⁵ International Monetary Fund, "Communiqué of the Interim Committee of the Board of Governors of the IMF," Press Release Number 97/44, September 21, 1997.

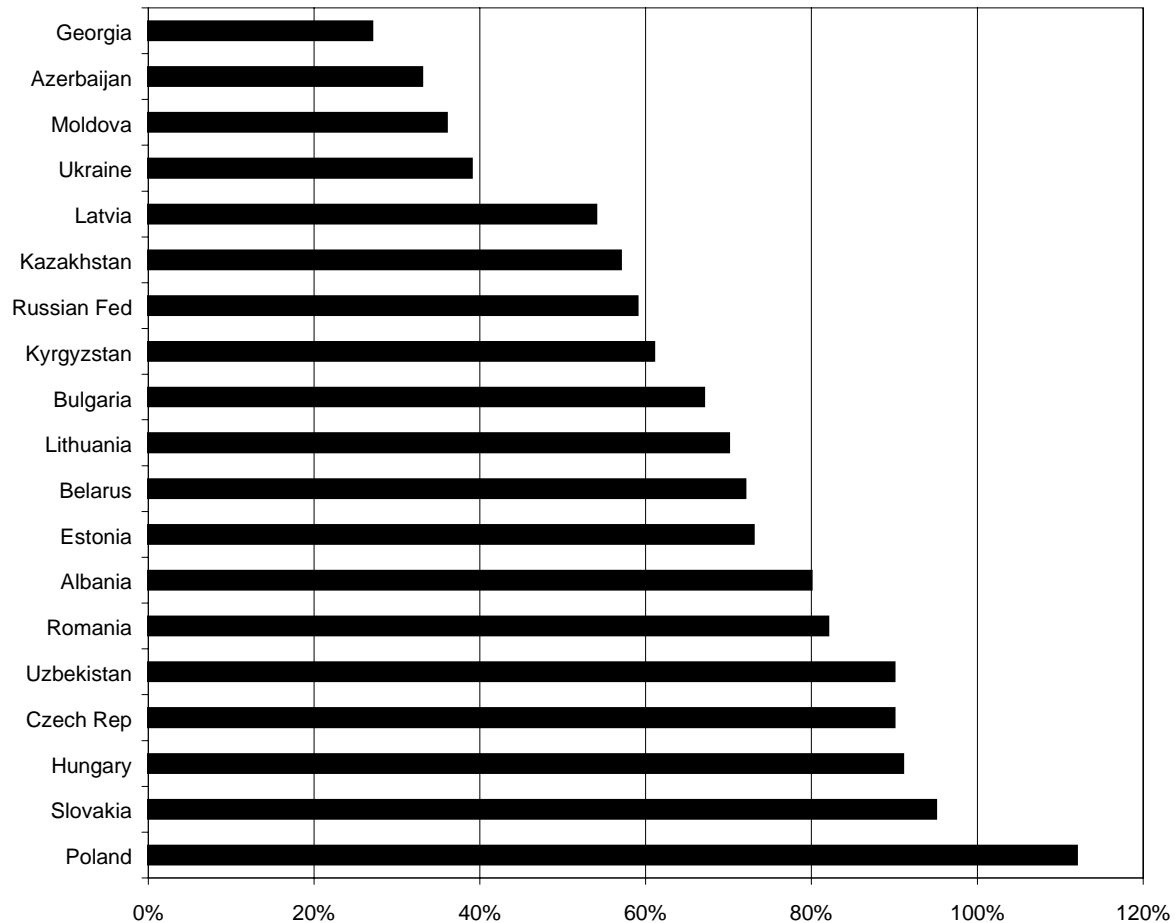
¹⁶ "IMF and World Bank Accountability: Closing the Gap Between Rhetoric and Reality," Panel with Joseph Stiglitz, sponsored by the Heinrich Boll Foundation, June 8, 2000.

Liberalization in the Transition Economies

While inappropriate economic policies may have sharply slowed growth in the less developed countries, and interrupted it in East Asia, their effect on the transition economies of the former Soviet Union and Eastern Europe has been even more drastic.

These countries are not included in the above tables, but they must be counted among the most severe long-term failures of IMF policies. Figure 2 below shows the GDP per capita of nineteen transition economies in 1997. After 8 years, only Poland had caught up with its pre-transition (1989) level of GDP.

Figure 2: Transition Economies: 1997 GDP as a Percentage of 1989 GDP



Source: Stiglitz (1999)

Russia has been perhaps the biggest failure of all, suffering a decline in GDP (over 40 percent) rarely seen in the absence of war or major natural disaster. The number of poor people (living on less than \$4 dollars a day) soared from two million to 60 million by the mid-nineties (Stiglitz 1999, p. 2). Some of the errors made here were specific to transitional economies – most importantly the rapid privatization in the absence of necessary legal and institutional structures, and the enormous destruction of physical and social capital that resulted. But other mistakes were part of the IMF's *modus operandi*: contractionary macroeconomic policies and reckless liberalization of not only trade but the capital account (which combined with the other incentives to de-capitalize existing industries led to enormous flight of capital out of the country). Perhaps most importantly, as Stiglitz has noted, there was "a misunderstanding of the very foundations of a market economy" and "an excessive reliance on textbook models of economics," and in particular, "the neo-classical model." (Stiglitz 1999, p. 5). Stiglitz also shows that part of the problem came from "confusing means with ends: taking, for instance, privatization or the opening of capital accounts as a mark of success rather than means to the more fundamental ends." These criticisms would apply generally to IMF and Bank policies in many developing countries as well.

Growth and Distribution

Figure 3 (see Appendix C), reproduced from Dollar and Kraay, shows the growth in the income of the poorest quintile of the income distribution, plotted against the growth in per capita income. The data includes 236 observations from both developed and less developed countries.

The authors note that "there are 108 episodes in which per capita GDP grew at a rate of at least 2 percent per year: in 102 of these episodes, income of the poor also rose." This statement, quoted by *The Economist* in its laudatory article on the paper, is taken as evidence of a highly stable relationship between the income of the poor and per capita income. But this is actually a much weaker statement than appears at first glance; for the majority of data points do not meet the threshold of 2 percent per capita GDP growth. In other words, this statement really means that when the economy is growing rather rapidly, the income of the poor does rise – but it would indeed be shocking if this were not true.

Among the authors' data, there are 35 episodes where the income of the poor actually fell while per capita income rose, over a period of at least five years.¹⁷ Two of these episodes occurred in the United States: the authors' data show the per capita income of the poor falling from 1979-84, and 1989-94, while per capita income rose. In fact, if we widen our angle to encompass the majority of the labor force, it helps to explain the backlash against globalization – which the authors dismiss as fundamentally misinformed – that has arisen here.

The real median wage in the United States is no higher today than it was in 1973. Real wages for the bottom quintile of the labor force actually dropped by about 9 percent

¹⁷ There are also 5 episodes where the income of the poor fell dramatically more than per capita income.

from 1973 to 1997. Since this has been a period in which the US economy has opened up fairly rapidly – trade as a share of GDP has doubled – it should not be surprising that globalization would be seen by the majority of the population, as well as by labor unions and public interest groups, as a threat to the well being of the less well-off.

Since 1973, per capita income in the US has risen by 70 percent. For the median wage and bottom-quintile wage to actually *fall* during this same period is an economic change of momentous proportions, from the point of view of the majority of Americans. For comparison, during the first half of the post-World War II era, the wages of the bottom three quintiles increased roughly in step with the average (which rose 80 percent from 1946-73). So it is a relatively recent – and historically unprecedented – phenomenon for the majority of the US labor force to be excluded from sharing in the gains from economic growth.

For the United States then, at least, the NGOs that the authors dismiss as misinformed have a very real, and indisputably important economic phenomenon as the basis for their concern. It is difficult to parse out exactly how much of this phenomenon is due to globalization, but economists who have attempted to do so have found a substantial impact. William Cline of the Institute for International Economics estimated that 39 percent of the increase in wage inequality from 1973-93 has resulted from increased trade.¹⁸ This does not include the effect of increasing international investment, which has also put downward pressure on wages.¹⁹

It is not surprising that the process of throwing the US labor force into increasing competition with lower paid workers throughout the world would push wages down in the United States. In fact, this is what would be predicted by standard economic theory.²⁰ But what about the rest of the world? Dollar and Kraay find no significant variation over time, from the 1960s through the 1990s, in the relationship between the income growth of the poor and per capita income growth (pp.4-5; figure 2). But it is very difficult to believe that the United States is completely exceptional in that the slower growth of the last 20 years has been accompanied by worsening inequality.

In Latin America, for example, other research has found that income distribution became more equal in the 1970s and has worsened since then. Table 1 and Figure 4 (in Appendix A) are from the research of Londoño and Székely (1997), for thirteen countries with 83 percent of the population of Latin America and the Caribbean. There is a general pattern of increasing income inequality in the 1980s and 1990s (after decreasing in the 1970s). Eight of the thirteen countries showed worsening inequality in the 1980s and 1990s, while only two showed improvement.

¹⁸ Cline, William, “Trade and Income Distribution,” Washington, DC: Institute for International Economics; 1997.

¹⁹ Bronfenbrenner, Kate, “Final Report: The Effects of Plant Closing or Threat of Plant Closing on the Right of Workers to Organize,” Cornell University; September 1996.

²⁰ The Stolper-Samuelson theorem, which is taught in standard international economics courses, shows that opening to trade would tend to lower the return to the relatively scarce factor of production (for the United States, unskilled labor-- which is typically defined to include the majority of the labor force).

In Russia, the Gini coefficient doubled as the economy crashed during the last decade.²¹

It is possible that these changes do not show up in Dollar and Kraay's regressions because of the poor quality of their data. Appendix B analyzes the data and regression results more closely and points out a number of problems, including some which could bias the results. It is most important to keep in mind that almost all of the statistical tests in the paper, other than those showing a correlation between growth and the per capita income of the poor, yield insignificant results. While it is possible in some circumstances to make inferences from the failure to find significant results, it would not be appropriate to do so when the quality of the data is as poor as it is in this study (see Appendix B).

To take just one example, the composition of households in the bottom quintile may change significantly over the years measured in the sample. For example, in years of economic crisis or contraction in poor countries, some of the poorest people may die. Others who would have married, formed new households, and/or had children will not do so during bad times. Therefore, the bottom quintile measured at year 5 could contain a different mix of households, with a significantly higher average income, than would have been found if the sample at year 1 had been tracked to year 5. (These and other problems of measurement and data are described in detail in Appendix B).

The authors also draw more sweeping conclusions that do not follow from their regression results. For example, they conclude that "globalization is good for the poor" (p. 22) because their regression results show no relationship between openness and the income of the poor; and since they assume that openness increases growth, and growth is good for the poor, it follows that openness is good for the poor. But their regression results did not find that "globalization is good for the poor;" on the contrary, they show no impact of globalization on the poor. Furthermore, the assumption that openness leads to higher growth is itself a matter of controversy within the economic literature. Rodriguez and Rodrik (2000) and Rodrik (2000) have shown that some of the most widely cited studies purporting to show this relationship have used "inappropriate indicators of trade policy, selected to systematically bias the results in favor of showing a statistically and quantitatively significant link between trade liberalization and growth."²²

Dollar and Kraay also do not find any difference between the percentage decline in the income of the poor versus other groups. This, too, may be an artifact of the data (see Appendix B); but even if it were true, it would not mean very much. The poor certainly suffer more when their income falls by the same proportion as the rich, and they have to do without basic necessities such as food or medicine. In many countries the last two decades have also seen cuts in subsidies to items of mass consumption – often promoted by the IMF – that would fall very much disproportionately on the poor, but would not show up in this data set.

²¹ Stiglitz, 1999.

²² Rodrik (2000); Rodriguez and Rodrik (2000). See also Rodrik (1999) for a discussion of the controversy.

There is also an argument to be made that the focus on the bottom quintile is too narrow. In many of the countries in their sample, much more than the bottom quintile is poor. And it may be the middle quintiles that are most immediately hit, for example, by structural adjustment policies or increased openness to trade. The weakening of labor unions and other institutions of civil society may also lead, over time, to a more regressive distribution of income.

Globalization, Economic Development, and "One-Size-Fits-All"

The search for abstract principles about trade and financial openness, private ownership, the size of government, or even inflation – and their role in increasing income is analogous to trying to find a simple relationship between food intake and health in the United States. About half of Americans are overweight; they would probably be healthier with a lower caloric intake. Although even for them, simply eliminating the most nutritious foods from their diet, for example, will not necessarily improve their long-term health. Others are not eating enough – they need more food. Others are eating the wrong foods, and need a more balanced diet to assure adequate nutrition, or less fat to avoid arteriosclerosis. It is difficult to say what a regression of long-term health on caloric intake of individuals in the US would produce – it would probably depend on how the equation was specified. But we could be pretty sure that the results would not be particularly useful to an individual trying to choose a healthy diet. Similarly, research into the advantages of increasing “openness,” regardless of how it is accomplished, is not likely to be useful for policy purposes.

However fruitless such research may be, it has been much more damaging when put into practice. Over the past two and a half decades, attempts to formulate development strategies specific to the needs of individual countries have been supplanted with simple, rigid formulas promoting openness to foreign trade and investment, overly tight monetary policies, and "structural adjustment" policies that often cause unnecessary economic harm. The static gains from comparative advantage, which are relatively very small, have been promoted at the expense of the much larger, dynamic gains that accrue from shifting to higher value-added branches of production. The "fiscal discipline" – and much more harmful, monetary discipline – imposed by markets has been extolled and reinforced. This has been true even when these policies have led to – or exacerbated – economic crises as in the Asian, Brazilian, and Russian cases over the last three years.

The fact that the growth slowdown of the last two decades has coincided with increasing globalization should cause economists who advocate indiscriminate opening to trade and financial flows at least some cause for reflection. This does not mean that there are no gains to be had from increasing trade or foreign investment. But it may mean that some of the development strategies that have proved successful in the past will require a wider range of interventions and flexibility on a number of policies – including trade – than current orthodoxy allows. In an era in which their economic choices have been so restricted and very often, determined by outside agencies, it is not surprising that developing countries have shown dramatically poorer growth performance.²³

²³ Of course this does not explain the slowdown in per capita growth for the developed countries that has taken place since 1980. We would argue that changes in monetary policies by the major central banks are

As each decade passes, the growth of productivity and the development of technology should make it easier for the poorer countries of the world to catch up with the richer ones. Yet there is no such trend, and the last two decades have been lost to most of the developing world, while the transition economies have mostly taken great leaps backward.

To reverse these trends, there will have to be an honest debate over what has gone wrong over the last 20 years. We can only hope that the World Bank will begin to ask these questions, so that it can play a constructive role in finding the answers. And more importantly, that the Bank (and the IMF) will allow borrowing countries to pursue policies that allow for a restoration of past rates of growth, as well as increasing equality.

the primary cause, but that is beyond the scope of this paper. However, this slowdown was a major shock to developing countries most dependent on exports to these markets, and another reason to consider long-term development strategies that would not unnecessarily increase dependence on external demand-- especially demand that is concentrated in one or two foreign markets.

APPENDIX A

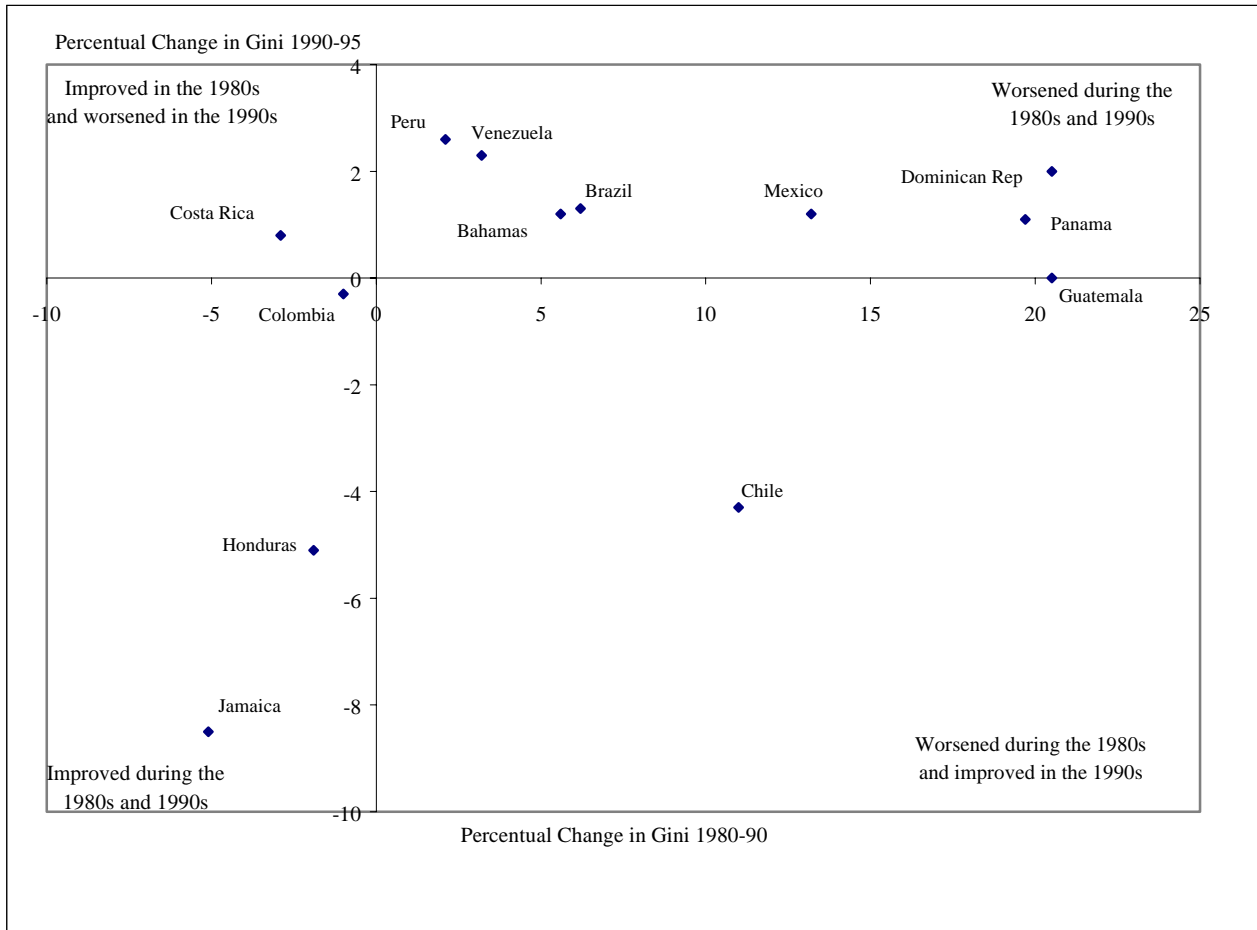
Table 1: Gini Coefficients in 13 Latin American Countries

Country	1970	1980	1989	1990s
Honduras	61.8	61.1	59.9	56.9
Panama	58.4	47.5	56.8	57.4
Mexico	57.9	47.4	53.7	54.2
Colombia	57.3	48.8	48.3	48.2
Brazil	57.1	57.1	60.7	61.4
Guatemala	49.7	49.7	59.9	59.9
Peru	48.5	43	43.7	44.9
Venezuela	48	44.7	46.1	47.1
Chile	47.4	53.1	59	56.5
Bahamas	47.2	42.2	44.5	45
Jamaica	45.6	45.6	43.3	37.9
Costa Rica	44.5	47.5	46.1	46.5
Dominican Rep	42.1	42.1	50.7	51.6
Average	51.2	48.4	51.7	51.3

Source: Londoño, Juan Luis and Miguel Székely (1997). "Persistent Poverty and Excess Inequality: Latin America, 1970-1995." Inter-American Development Bank Working Paper No. 357.

APPENDIX A (Continued)

Figure 4: Change in Inequality by Country in Latin America/Caribbean During 1980-1990 and 1990-1995



Source: Londoño, Juan Luis and Miguel Székely (1997). "Persistent Poverty and Excess Inequality: Latin America, 1970-1995." Inter-American Development Bank Working Paper No. 357.

APPENDIX B

While the summary and conclusions of the Dollar-Kraay (DK) paper make some bold claims, it is important to recognize the limited amount of new evidence that the DK actually adds to the debate over the impact of IMF-World Bank policies on the poor. The table below summarizes the tests that appear in the paper and their results.

Variables tested	Positive Effect	Negative Effect	Insignificant
Effect of Growth on Income of the poor	34****	0	0
Regional Differences in the Relationship Between Growth and Income of the Poor	1	NA	0
Differences Between High and Low Income Countries	0	NA	1
Differences Between Periods of Rapid and Slow Growth	0	NA	1
Differences Between Periods of Positive and Negative Growth	0	NA	1
Differences Between the 1960s and 1970s compared with the 1980s and 1990s	0	NA	1
Openness on Income of the Poor	0	0	6
Openness on Income Growth	0	0	2
Capital Controls on Income of the Poor	0	0	1
Rule of Law on Income of the Poor	0	1*	2
Rule of Law on Income Growth	0	0	1
Inflation on Income of the Poor	0	1*	2
Inflation on Income Growth	0	1**	0
Voice on Income of the Poor	0	0	3
Voice on Income Growth	0	0	1
Government consumption on Income of the Poor	0	0	3

Government consumption on growth	0	1***	0
Social Spending on Income of the Poor	0	1*	1
Primary School Enrollment on Income of the Poor	0	0	3
Primary School Enrollment on Growth	0	0	1

* 10 percent significance level
** 5 percent significance level
*** 1 percent significance level

As can be seen, the vast majority of the tests in the paper are insignificant. Apart from the finding that income of the poor tends to move in the same direction as overall income growth, a result that should not be controversial among economists, only six of thirty-seven tests produced significant results. And in three of the five cases where significance levels can be directly obtained, the tests were only significant at the 10 percent level. Also, in the five cases with significant results, three were found to be insignificant when the test was structured differently.

Insignificant findings can provide information when tests are well structured and the basic data are good. This does not appear to be the case here. There is always going to be a considerable degree of measurement error in measuring the income of the poor, even in the industrialized nations. The amount of error in the measurement is much larger in developing nations where resources for data collection are much more scarce, and the lack of infrastructure makes the process more difficult.

A casual examination of the data suggests that measurement error is a very big problem here. Many of the data points show large changes in the income of the poor that appear implausible on their face. For example, the data show the income of the bottom quintile in Brazil fell by 27.3 percent from 1981 to 1983; in Canada, their income rose by 16.0 percent from 1988 to 1989; and in Colombia it fell by 39 percent between 1970 and 1971. It is easy to pick out other examples of changes that are almost certainly attributable to measurement error rather than an actual change in the income of the poor. The frequency of such implausible changes suggests that the amount of measurement error in this data is very high relative to actual movements in income of the poor. This creates a strong bias against finding statistically significant relationships.

It is worth noting that the paper finds no evidence for an assertion that the authors consider unassailable based on other research – that openness increases growth. This fact should either be viewed as evidence against the claim that openness promotes growth, or as evidence that the quality of the data is so poor that it is not likely to provide a useful test of any propositions examined here.

Apart from the general problem of measurement error, there are measurement problems which are systematic. For example, there is likely to be a very strong selection bias issue. This operates both within countries and across countries. Across countries, those that don't appear in the sample are likely to be disproportionately the countries

which are doing especially poorly. When a nation is facing an economic catastrophe, it is less likely to have the resources to conduct surveys of its population. This could bias the results, if for example, countries that face major economic crises are also ones in which the poor get hurt the most. Since these countries fall out of the sample, the tests in this paper would miss this effect. It is worth noting that only 80 countries have even one five year interval included in this sample, and only 48 have as many as three intervals, so this data set excludes the vast majority of the world's economies over most of the last 45 years.²⁴

The problem within countries is perhaps more serious. The identity of the bottom quintile of households is going to depend in part on economic conditions. If conditions for the poor turn very bad, then many of the households that would have otherwise made up the bottom quintile may not exist. In some cases, young people who may have otherwise married and formed their own household, instead stay with their parents. The same may also be the case with elderly people moving back in with children. Some young families may emigrate and look for jobs in other countries. And, in many cases, some of the poor will die due to bad economic conditions. In short, the bottom 20 percent of households will not be the same group of people under all economic circumstances.

This effect can be large. Suppose that 10 percent of the households who would have comprised the bottom quintile under normal economic conditions don't exist because of factors related to an economic downturn. The sample would instead include the households who would have otherwise been in the 21st and 22nd percentile of the income distribution, as part of the bottom quintile. This would lead to a substantial upward bias in the measure of the income of this group. In the case of the United States, this substitution would increase the reported income of the bottom quintile by approximately 7 percent.²⁵ It would be necessary to examine the pattern of household creation and mortality rates within each country to determine the extent to which economic circumstances affect the composition of households within the nation. Without this information, a test of whether economic crises disproportionately hurt poor households, like the one that appears in the DK paper, does not shed much light on the question.

A second possible source of bias affects the measurement of the impact of inflation on the income of the poor. In most countries, interest will be a significant source of income for wealthy households. In periods of high inflation, the interest paid on bonds and loans will include an inflation premium to compensate for the loss of value of the currency. For example, in the United States in 1980, the interest rate on long-term government bonds crossed 11 percent. However, this was not a great boon to

²⁴ The importance of the omissions can be demonstrated by the fact that of 36 nations listed in the IMF's 1994 internal review of its Enhanced Structural Adjustment Facility (ESAF), only 12 have two data points which allow them to appear in the DK data set for the growth regressions. In one of these cases (Guyana), the first data point is for 1956, so the data does not provide information about the impact of the IMF's structural adjustment programs.

²⁵ In 1996, the average income for the bottom quintile of families in the United States was \$12,234. The income for families at the 20th percentile of families was \$20,132. The situation described in the text would substitute families earning more than \$20,132 for families who earned the average for the quintile as whole, or \$12,234. (This income data appears in Mishel, Bernstein, and Schmitt, 1999.)

bondholders, since the inflation rate for the year was close to 12 percent.²⁶ The real interest rate (the nominal interest rate minus the inflation rate) was actually negative.

This issue can create a problem in the sorts of tests in the DK paper, since the interest income of wealthy households is likely to increase during a period of higher inflation, due to the inflation premium. However, since this money is just compensating them for the loss of real value of their loans, it should not be treated as real income. Unless the survey corrects for this inflation premium, during period of high inflation it will overstate the income going to the wealthy, and correspondingly understate the portion of income going to all other groups.²⁷ This effect would create a bias towards one of the paper's few significant findings, that lower inflation improves the situation of the poor.

Another possible source of bias could explain two of the paper's other significant findings, that government spending and government social spending hurt the poor. Suppose a significant portion of government spending is used to subsidize items that are disproportionately consumed by the poor, such as public transportation or basic grains. If these subsidies are withdrawn as spending is reduced, then the price of these goods would rise. This price rise would be picked up in any standard measure of the inflation rate. But if the poor were disproportionately consuming the goods that were being subsidized (e.g. rice purchases are a larger share of a poor person's income than a wealthy person's income), then the price index would be understating the increase in the poor person's cost-of-living.

This measurement problem can mask the negative impact that some policies might have on the poor. For example, suppose that the government subsidizes rice, and that rice is only consumed by the poor. The elimination of the subsidy could substantially reduce the income of the poor, since they will have to pay more for rice, but this effect will be largely invisible in the data used in the DK paper. The failure to pick up this sort of effect could explain the negative relationship between social spending/social consumption and the income of the poor found in this paper.

The other side of this issue may also create a bias in these results. Countries with larger shares of social spending in total government spending and larger ratios of government spending to GDP are also likely to be countries with higher taxes.²⁸ If the tax system is at least somewhat progressive, then the rich will disproportionately bear this tax burden. DK use a before-tax measure of household income. If the rich are able to increase their before tax income to at least some extent offset the effect of higher taxes, as standard economic would predict, it would be expected that the rich have a larger share of before tax income (and the poor a smaller share) in countries that provide more social

²⁶ Consistent with this scenario, the DK data show the income share of the wealthy rising in the late seventies in the United States, a time when the share of GDP going to profits was at a post-war low.

²⁷ The actual income of the poor could analogously be understated during periods of high inflation, if they typically carry debt denominated in the national currency. In these circumstances, higher inflation would erode the value of their debt, making the poor wealthier in future years.

²⁸ Countries that have a high ratio of social spending to total government spending are likely to have a high ratio of government spending to GDP, unless they have extremely low ratios of non-social government spending to GDP.

services to their population. This result would be reversed if a measure of after-tax income were used.

Measurement error in some of the independent variables may also have led to a bias towards insignificant findings. The values for the variables used were entered based on an average for the previous five years. In some cases this may not be enough time to capture the expected effect. For example, even if increased primary school enrollment has a strong positive effect on income growth and the income of the poor, it is unlikely that this effect would be visible within five years of the increase. Most of the additional students would still be in school.

This problem is even more serious with the "voice" and "rule of law" variables. Only a single value for these variables is entered based on a measure for the late nineties. The tests implicitly assume that for each country, these measures are constant through the period of analysis. This is certainly not an accurate depiction of many countries within this data set, such as Chile, Brazil, South Korea, and Spain, which have all transitioned at least once between dictatorship and democracy. Given the way these variables are entered, it should not be surprising that this paper finds little evidence of a significant positive relationship between these two variables and growth or the income of the poor. This finding contradicts recent research that finds a strong positive relationship between these measures and both per capita GDP and the well-being of the poor.²⁹

One final measurement worth noting is the construction of the openness variable in this paper. The main measure of openness used in this paper is the sum of exports and imports measured in constant dollars, as a share of constant dollar GDP. This measure can give a very misleading picture of the openness of a nation's economy since it is sensitive to the year chosen for the base year. The table below shows the contrasting picture for the United States between this measure of openness (which uses 1996 as the base year) and a measure that uses current dollars:

	Current Dollars (X+M)/GDP	Constant Dollars (X+M)/GDP
1969	10.1	10.1
1979	18.8	13.3
1989	20.0	17.3
1999	24.3	27.2

As can be seen, these measures show a very different path. Using the current dollar measure, the greatest increase in openness, by far, occurred in the seventies. By contrast, the constant dollar shows that most of the increase came in the nineties. The main differences are due to large relative declines in the price of oil and computers. It doesn't seem sensible to argue that the United States economy was less open in 1979 because the price of oil and computers subsequently fell, as the constant dollar measure implies, then it would have been if the price of these goods stayed constant. The better

²⁹ See Kaufmann, D; A. Kraay, and P. Zoido-Lobaton, 2000, "Governance Matters," World Bank Policy Research Working Paper # 2196, www.worldbank.org/wbi/governance.

measure for most purposes would be the current dollar measure, which captures the share of GDP actually entering and leaving the country for trade.³⁰

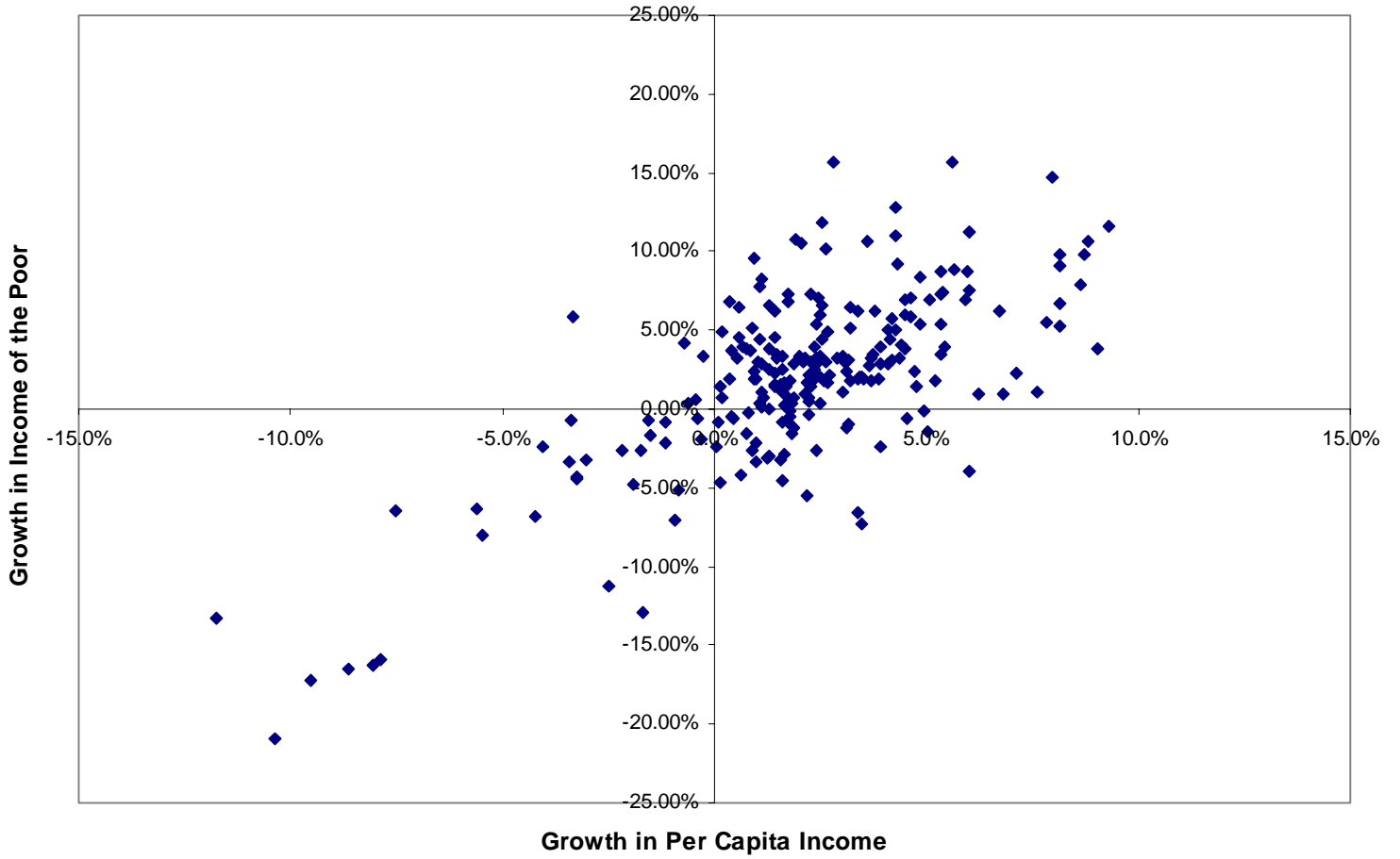
The differences between the constant and current dollar measures may not be as large for other countries as it is for the United States, but the use of an improper measure does increase the probability of obtaining insignificant results. This could help to explain the insignificant relationship the paper finds between openness and GDP growth, and also the insignificant relationship between openness and income of the poor. The mis-specification of the openness variable makes it less likely the tests will reveal the true relationship between openness and these other measures. It is also worth noting that other ratios tested in this paper (government spending/GDP and social spending/government spending) are measured in current dollars. To be consistent, the openness measure should be constructed the same way.

These measurement problems should suggest considerable caution in relying on test results in the DK paper. The poor overall quality of the data produce a strong bias against finding any statistically significant relationships, so the fact that the paper does not find many should not be surprising. Furthermore, there are reasons for believing that the data contains a bias towards overstating the negative relationship between inflation and the income of the poor, and between any form of government spending and income of the poor. It may also contain a bias towards understating the positive impact of some forms of government spending on the income of the poor. Unless these issues can be effectively addressed, the paper's conclusions on these topics should not be accepted.

³⁰ Constant dollar measures are not additive across GDP components, so it is not clear what meaning can even be attached to the ratio of $(X+M)$ to GDP.

APPENDIX C

Figure 3: Annualized Growth in Income of the Poorest Quintile vs. Growth in Per Capita Income



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