

Economic Growth and Development: Perspectives for Policymakers

A Summary of the 2006 Philadelphia Fed Policy Forum

BY LORETTA J. MESTER

“Economic Growth and Development: Perspectives for Policymakers” was the topic of our sixth annual Philadelphia Fed Policy Forum held on December 1, 2006. This event, sponsored by the Bank’s Research Department, brought together economic scholars, policymakers, and market economists to discuss and debate the drivers of economic development worldwide and the effectiveness of policies to improve growth and reduce poverty. Our hope is that the 2006 Policy Forum will serve as a catalyst for both greater understanding of and further research on the important topic of international economic development.

Most economists agree that economic growth is the driver of a country’s standard of living. But what drives economic growth? What programs and policies are effective at promoting economic development and the reduction of poverty and how is effectiveness best determined? Have there been unforeseen consequences of policies that we need to bear in mind when designing new programs? These were some of the questions addressed in the 2006 Policy Forum.



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www.philadelphiafed.org/econ/br/index.html.

Charles Plosser, president of the Federal Reserve Bank of Philadelphia, provided opening remarks. He pointed out that while the developed world has spent trillions of dollars promoting development around the world, the track record has not been entirely positive. In his view, it is important that we recognize and learn from past mistakes, and this means taking a step back to look at the long-run economic impacts of different types of programs. It also means tackling challenging and sometimes controversial issues like corruption, foreign aid, and trade. These were among the topics addressed the rest of the day.

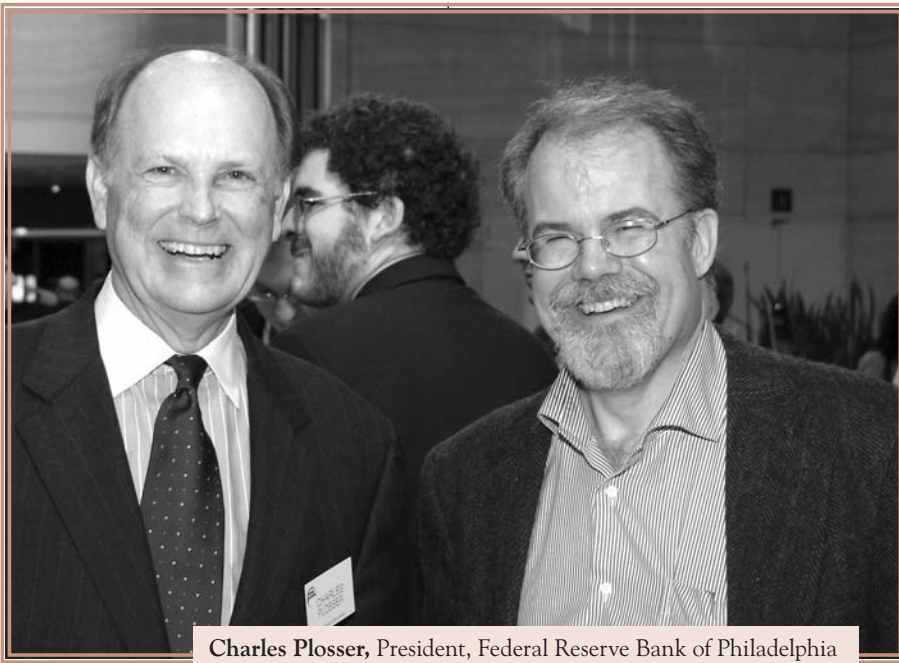
ECONOMIC GROWTH AND DEVELOPMENT: AN OVERVIEW OF ISSUES AND EVIDENCE¹

Roberto Zaghera, of the World Bank, began the first session with an

overview of a World Bank study on development lessons from the 1990s and their implications.² In the late 1980s and early 1990s, the World Bank had a sense that to spur economic growth, all governments need do is implement the so-called Washington consensus of financial and trade liberalization, macroeconomic stability, and privatization. However, as the 1990s unfolded, the effectiveness of these policies began to be questioned as countries thought to have improved their policies still suffered from low growth rates. Indeed, although policies improved in the 1980s and 1990s, growth performance was lower than in the 1960s and 1970s. There appeared to be no set formula for success. China and India, which remained relatively closed economies with large public sectors, grew much faster than countries like Brazil, Argentina, and Chile, which had liberalized much faster. The length and depth of the recession in Russia and other countries of the former Soviet Union surprised many, given the improvement in the economic policy regime. Several countries, including those in East Asia, Brazil, and Argentina, experienced financial crises. It appeared that improvements in policy did not necessarily lead to improvements in economic performance, leading the World Bank to conclude that growth

¹ Many of the presentations reviewed here and background papers are available on our website at www.philadelphiafed.org/econ/conf/forum2006/program.html.

² The World Bank, *Economic Growth in the 1990s: Learning from a Decade of Reform* (The World Bank, April 2005).



Charles Plosser, President, Federal Reserve Bank of Philadelphia
William Easterly, New York University

processes are much more complex than it had earlier thought. In addition, since the models underlying certain economic systems are unknown, the response functions to certain policy actions were not necessarily what one expected. The World Bank concluded that there typically needs to be a lot of learning by doing and experimentation until effective policies are implemented.

The World Bank's systematic study of the 1990s combined information from empirical analyses and from practitioners in the field. The study suggests that institutions and history matter and that no two successful outcomes are necessarily alike. Among the study's many lessons is that *how* macroeconomic stability is achieved is as important as stability itself. As Zaghera pointed out, when fiscal deficits are reduced by curtailing investment in infrastructure, there is a clear tradeoff between stability achieved in the short run and long-term economic growth. Another lesson is that trade reforms are not

a panacea. They typically require complementary reforms, e.g., exchange rate policies and trade logistics, to be effective, and the gains from trade reforms are not necessarily shared with the poor – income inequality remains an issue. This lesson was also emphasized later in the day by speakers Dani Rodrik and Ann Harrison. A third lesson is that policies should not merely focus on achieving the efficient use of resources (a static concept) but also on expanding productive capacity (a dynamic concept). Based on the study's revelation of the complexity of the issues surrounding effective growth policies, the World Bank in partnership with other international agencies and private foundations has established an independent commission on growth and development, chaired by Nobel laureate Michael Spence. Zaghera explained that the commission brings together top academic researchers and practitioners, so that the best empirical and analytical thinking on economic growth and development can be

coupled with experience in the field to inform policymaking.

Xavier Sala-i-Martin, of Columbia University, continued the discussion, focusing on the consequences of economic growth for the distribution of income, in particular, the level of poverty, i.e., the percentage of people below a certain income threshold, and the degree of income inequality, i.e., dispersion in income levels. Sala-i-Martin pointed out that the national income data for countries indicate that growth of per capita income worldwide has been increasing for the last two centuries and accelerating since 1970, while it has also diverged across countries. The economies of poor countries have tended to grow slower than those of rich countries, so-called β -divergence. In addition, measures of cross-country income dispersion, e.g., the variance of log income, have been rising, so-called σ -divergence. But these results are based on country-level income data and not on the income levels of individuals – they essentially treat every country as a single observation and thus give a low weight to individuals in high-population countries like China, compared to those in low-population countries like Lesotho. The country-level distribution has little to say about the welfare of individuals. Weighting country-level per capita income by population goes part of the way toward uncovering the worldwide income distribution of individuals but not all the way, since it still assumes that everyone within a country earns the same level of income. Unfortunately, individual-level income data are not available in the national income accounts of countries. Sala-i-Martin explained his method of constructing the distribution of income across individuals for each country. He sets the mean of the distribution for each country at its per capita income level as calculated from the country's national

income accounts data and then he derives a measure of dispersion around this mean based on survey data on individuals collected from a variety of sources. These calculations involve a number of approximations. From there, individual-level income distributions can be calculated based on parametric or nonparametric methods, which yield similar results.³

In China, income inequality across individuals has increased greatly over the past three decades: The rich are getting richer at a much faster pace than the incomes of the poor are rising. But the number of people below the poverty line – which the World Bank defines at about \$1 per day – has also declined very quickly. In other countries, while economic growth has shifted the income distribution to the right, it is less clear how income dispersion has changed over time. In India, the level of dispersion hasn't changed; in the U.S., income inequality has risen. Many countries in Africa, including Nigeria, the most populated country in Africa, have experienced negative growth, so their income distributions have shifted to the left and there has been an explosion in poverty levels. At the same time, the right-hand side of the distribution is moving to the right – higher income individuals are getting richer. Sala-i-Martin suggests that these people, who tend to have the political power, may have less incentive to implement any reforms.

When the income distributions across individuals for each country are aggregated into a distribution for the world, one finds that conclusions about changes in the level of poverty and income inequality are quite differ-

ent from the ones based on the world distribution of per capita income across countries. Sala-i-Martin finds that between 1970 and 2000, the percentage of people living in poverty has fallen (from about 15 percent to 6 percent, using the \$1 per day definition of the poverty level). And the number, rather than the percentage, of people in the world living in poverty has declined since 1978. This decline in poverty has been seen in each region of the world except Africa. In 1970, three-quarters of the world's poor were in Asia; today, the majority of the poor are in Africa.

The distribution of income across individuals in the world indicates that inequality across individuals has actually fallen since the 1970s. This has occurred even though within countries, income inequality across individuals has risen and per capita income across countries has diverged. This seeming contradiction is reconciled by recognizing that global inequality is the sum of within-country inequality and cross-country inequality, which is not the inequality in per capita income across countries but the inequality across individuals that would exist in the world if all citizens within each country had the same level of income but there were different per capita levels of income across countries. This cross-country inequality has fallen (and more than enough to offset the rise in within-country inequality) because the incomes of poor people in Asia have risen at

a faster rate than the incomes of rich people in the OECD countries, and these poor constitute a large population. Once the incomes of these poor people catch up, Sala-i-Martin expects inequality to resume increasing, unless economic growth in Africa picks up and raises the income of the poor in those countries. Indeed, his results show that cross-country inequality explains more of the inequality across individuals than within-country inequality, suggesting that aggregate economic growth in poor countries would be not only the way to reduce poverty but also the way to reduce inequality across individuals.

POLICY RESPONSES: TRADE AND FOREIGN CREDIT

Our second session turned to two policy initiatives: trade and foreign credit. **Elhanan Helpman**, of Harvard University, outlined some of the advances that have been made in understanding how production is organized across countries, including



Elhanan Helpman, Harvard University
Roberto Zaghera, The World Bank

³ See Xavier Sala-i-Martin, "The World Distribution of Income: Falling Poverty and ...Convergence, Period," *Quarterly Journal of Economics* (May 2006), pp. 351-97.

recent research on international trade and foreign direct investment.⁴ Globalization has led to new patterns of world specialization. Traditional explanations of international trade emphasized differences across countries in technology and factor endowments. In the 1980s, economists enhanced their explanations based on scale economies in production and monopolistic competition, which helped explain why a lot of trade takes place among countries that are more similar than different, something that could not be explained by earlier theories. In the last few years, elements of within-industry heterogeneity, the global sourcing strategies of firms, and the importance of institutions have been incorporated into the theory. Traditionally, foreign direct investment has been classified into two types: horizontal and vertical. Horizontal foreign direct investment involves firms' building a plant in a foreign country to produce products to sell in that market. Vertical foreign direct investment involves firms' investing in low-cost countries to produce intermediate inputs that are not necessarily used in products sold to the host country. But the integration strategies of multinational corporations have become more complex, requiring a more complex theory to explain the observed global sourcing strategies of firms.

As Helpman explained, the international organization of production can be described along two dimensions. The industry can vertically integrate all of its production in a single entity or it can outsource some of its production. It can locate its production activities (and its outsourced activities) at home or abroad. Industries

⁴For further discussion, see Elhanan Helpman, "Trade, FDI, and the Organization of Firms," *Journal of Economic Literature*, 44 (September 2006), pp. 589-630.

that choose to be vertically integrated in a foreign country are essentially engaging in foreign direct investment. Thus, there will be inter-industry differences in foreign direct investment levels. The theory also suggests that there will be intra-industry differences. High-productivity firms tend to be the exporters because they are the firms that can cover the fixed costs of operating in foreign markets.

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This analysis suggests that trade liberalization will have important effects not only across industries but within industries. In particular, opening trade pushes the low-productivity firms out of the industry and reallocates production to the high-productivity firms. As a result, it raises the average productivity of the industries involved. The theory suggests that trade liberalization will also affect domestic firms' rate of technology adoption and that the choice of whether to export or to engage in foreign direct investment depends not only on the average productivity in the industry but also on how productivity is distributed across firms. As Helpman explained, this means one cannot think about different sources of comparative advantage independently from one another. For example, comparative advantage that comes from endowments will induce different productivity levels in different industries, which is another source of comparative advantage. Financial institutions, the quality of the legal system in enforcing contracts, and labor market institutions (such as hiring and firing costs) are other

sources of comparative advantage. Studies have shown that each of these has a distinct and important impact on the structure of trade, comparable in size to other determinants of trade flows, such as tariffs. Helpman concludes that the advances in the theory of trade suggest that it can no longer be viewed as merely a sectoral adjustment; rather, it has important implications for the patterns of productivity

within and across industries and, therefore, for economic growth.

William Easterly, of New York University, drew on his recently published book to discuss the impact of foreign aid on world poverty.⁵ Although many policymakers and institutions over many years have called for a "big push" of foreign aid to rid the world poverty, Easterly is highly skeptical of this planners' approach. First, there is no evidence that poor countries are in a so-called poverty trap. The poorest countries are no more likely than others to have zero per capita growth or to have growth levels that would make them fall further behind the richest countries in terms of income. Moreover, there is no evidence that foreign aid raises growth to escape a poverty trap, even if one existed. Foreign aid has increased significantly, especially in the last decade, but poverty remains. Empirical studies,

⁵William Easterly, *The White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good* (Penguin Group [USA], March 2006).

which have used sophisticated econometrics to deal with issues of adverse selection and reverse causality, have concluded that foreign aid has not increased economic growth rates. The quarter of countries with the highest average aid over the last 42 years (which accounted for about 16 percent of world GDP each year) have had per capita income growth of only about 0.4 percent per year. Africa has received \$568 billion (in today's dollars) in aid over the last 42 years and zero rise in living standards.

One difficulty with the planners' approach to end world poverty is that it typically has poorly designed incentives. Many different agencies are involved, and they are all collectively responsible for the plan to end world poverty. Also, they are trying to achieve multiple goals. Easterly pointed out that the United Nations millennium development goals include 54 different targets for reducing poverty by 2015. This design creates free rider and collective action problems, where ultimate responsibility is not effectively assigned and it is difficult to hold any individual accountable for any one result.

Easterly believes a more promising approach is one he calls the searchers' approach to foreign aid. He believes foreign aid could do a lot more if it concentrated on specific, less grandiose outcomes – marginal steps that help individuals rather than plans to achieve overall growth or development. These steps would be found by “searchers,” analogous to entrepreneurs in private markets. Examples include micro-credit programs, for which Mohammad Yunus, the founder of Grameen Bank, won the Nobel Peace Prize in 2006, or the Progres-Oportunidades program, an incentive-based health, nutrition, and education program for the poor in Mexico, designed by Santiago Levy. While these types of programs are

too small to achieve overall development, they confer real benefits to poor people, and in Easterly's view, that's all one should ask of foreign aid. Also, advances in development economics, such as systematic randomized controlled trials, have made the evaluation of which programs work and which don't work more reliable, which has made it easier to determine where aid can be effective.

Easterly ended his presentation with two principles for solving the foreign aid problem. First, when something doesn't work, discontinue it, and when something does work, do more of it. Although this principle seems obvious, Easterly says it is being violated repeatedly in foreign aid programs.

The decline in borrowing costs since the 1980s has expanded businesses' access to credit, thereby making their investment spending less dependent on internal cash flows.

Second, to induce the right incentives, individual aid programs should be independently evaluated, and pragmatic searchers who find things that work should be rewarded. This could go a long way to help ensuring that aid finally does reach the world's poor.

FINANCIAL MARKETS AND GROWTH

The afternoon sessions addressed how financial markets, financial institutions, and other institutions can either help or hinder growth, poverty, and inequality of income. The first of these two sessions examined the role of financial systems in economic development. **Jeffrey Lacker**, president of the Federal Reserve Bank of Richmond, discussed one aspect of financial system design, namely, the role of regulation in financial markets that

are innovating and the contributions innovations can make to economic growth and well being. He focused on those innovations that have been particularly striking in the U.S. over the last few decades, in the belief that the U.S. experience would be relevant to policymakers in the developing world.

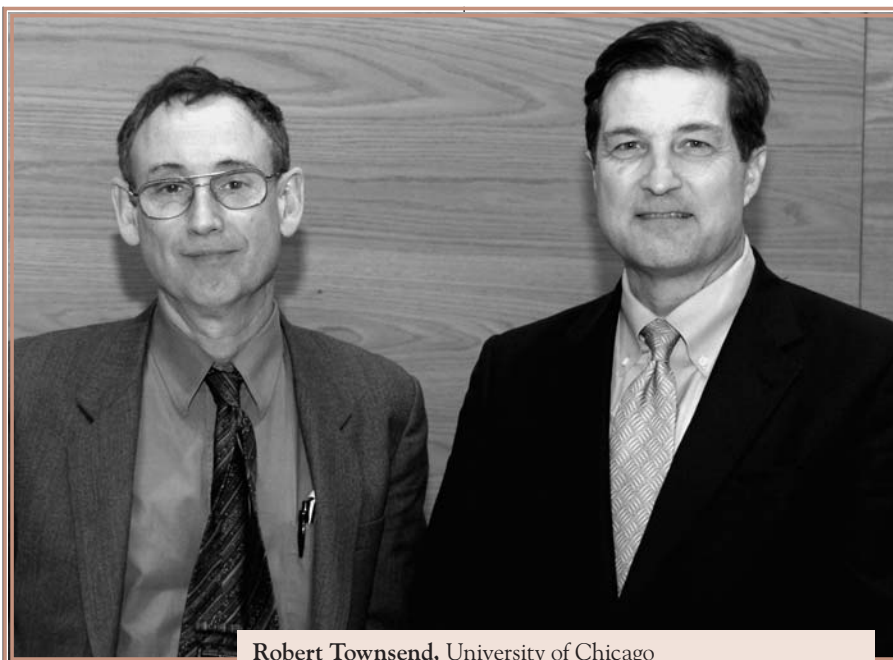
Lacker believes that financial innovation has resulted in important economic benefits. A major recent change in financial arrangements is the way financial markets allocate risks – risks are now more divisible and tradable. Borrowing costs have fallen, and consumers and businesses now have more opportunities in credit markets at better terms. Some of the innovations include unsecured credit

for households, home equity lending, securitization, financial derivatives, swaps, loan sales, and credit derivatives. The increase in household borrowing and the decline in savings since the 1980s suggest that households have substituted credit for savings as their method for smoothing income shocks. The decline in borrowing costs since the 1980s has expanded businesses' access to credit, thereby making their investment spending less dependent on internal cash flows. Lacker posits that in this way, financial innovation could have been one of the drivers of the general decline in macroeconomic volatility since the late 1980s, the so-called great moderation.

At the same time, concerns have been raised that financial innovation might be having an opposing effect by increasing financial fragility. While

innovation has made risks more divisible and therefore easier to allocate more broadly, it has also made it easier to concentrate risk. It is now easier for entities to accumulate large risk exposures and harder for counterparties to evaluate them. For example, hedge funds arbitrage away price misalignments by taking large positions in a narrow set of claims, thereby accumulating substantial risk exposures. They are able to do so because they are relatively free from the government regulation facing other financial firms, such as commercial banks. But if financial innovation has increased the possibility of systemic risk, how should policymakers respond to the risks associated with the financial activities of less-regulated intermediaries?

The answer depends on the rationale for government regulation of the financial system. Lacker pointed out two general views of regulation. According to one view, the main motivation for regulating financial intermediaries is the government safety net. Since the safety net has the potential to distort risk-taking incentives of the protected institutions, supervisory oversight is needed for institutions that receive safety-net support (but not for those that don't). According to the other view, the main motivation for regulating financial intermediaries is that there are inherent market failures in financial markets that lead to some risks, especially systemic risks, being mispriced. Government supervision helps to ameliorate systemic risk. Under this second view, financial innovation would necessitate expanding government regulation because innovation increases the potential for systemic risk. Lacker is skeptical of this second view, since he is skeptical of the extent of inherent market failures in financial markets. He acknowledges that markets are complex and evolving, and thus measuring and assessing risk are



Robert Townsend, University of Chicago
Jeffrey Lacker, President, Federal Reserve Bank of Richmond

complex as well. Hence, mistakes will happen, resulting in significant losses to some market participants. But he argues that these are not market failures.

In Lacker's view, it is important to remember that reducing constraints and allowing institutions the freedom to produce new products can convey important benefits. He believes the portion of the financial sector that is regulated primarily via market discipline, as opposed to government regulation, has proved to be a useful testing ground for new financial products. Supervisors must have a good understanding of emerging financial products and practices both in banks and in the unregulated financial sector in order to evaluate banks' risk management practices. When innovation occurs outside the government-regulated financial sector, regulators' main concern should be with interactions between the regulated and unregulated sectors – e.g., strengthening banks' counterparty risk management practices and settlement infrastructures and being aware of how innovations may change the way exposures can

flow back into the banking sector. Lacker believes that regulators should avoid extending constraints motivated by safety-net considerations to institutions that do not receive safety-net support and should avoid extending the safety net to institutions now controlled mainly through market discipline.

Robert Townsend, of the University of Chicago, discussed his research agenda on evaluating the relationship between the design of financial systems in developing economies and economic development. The work involves applied general equilibrium theory, which suggests that the whole may be greater than the sum of the parts. It combines micro and macro data, and theory with empirics, making the approach taken in this research relatively rare in the field of development economics. The research suggests that changes in financial policy have disparate impacts on the various entities in the economy and on growth, inequality, and poverty. Townsend has used this approach to analyze the Thai economy, but he says the algorithm can and should be

applied to other economies.⁶

There are many anomalies in the Thai economy that deviate from the benchmark neoclassical economy with perfect markets and institutions. For example, initial wealth facilitates entry into business and facilitates investment for those in business. Many households appear to be constrained in occupation choice, which is symptomatic of imperfect information, and poorer households and businesses are vulnerable to variation in income and cash flow, making their consumption and investment quite variable. There appears to be less risk-sharing across households than would be the case in the benchmark economy. This opens up the possibility for policy intervention – but does not necessarily imply that it will help. Thailand did introduce several programs.

Econometric methods can be used to evaluate the impact of particular types of financial institutions and programs on households and businesses. For example, Thailand's micro-credit program provided around \$25,000 to about 72,000 villages in Thailand. Because the size of the villages varies, the per capita treatment varied, and this variation can be used to help evaluate the impact. Townsend and co-authors found that the micro-credit program has led to increases in the levels of consumption, agricultural investment, and total borrowing, at the same time both raising default rates and lowering savings rates; the Bank for Agriculture and Agricultural Cooperatives' debt moratorium program, which allowed farmers to defer or reduce payment of loans in bad years, had a neutral if not negative impact.

Townsend provided a summary of

⁶For more information on Townsend's Thailand project, see the many publications, databases, and models available on his website at www.spc.uchicago.edu/users/robt/.

macroeconomic development in Thailand. Thailand's overall growth rate has been relatively high for the past 50 years, save for the sharp downturn in 1997 because of the financial crisis. There has been a long-term trend toward industrialization, with lower family size and increased longevity. Income inequality had been increasing over this period, but since 1992, inequality has begun to decline. There are few poor people, and poverty has become a more transient phenomenon for people. The financial system has deepened, and foreign capital has been invested in the country.

Townsend noted that in measuring the economies of developing countries, including Thailand, it is important to recognize that households are producers as well as consumers. The typical national income accounts are based on corporate financial accounts and thus fail to recognize the importance of nonfarm proprietary income, which is large relative to corporate profits in developing economies. Hence, to do a proper evaluation, Townsend and co-authors constructed income accounts by hand with income, cash flow, and balance-sheet data from 700 Thai households.

Townsend's research establishes that a more developed financial system is correlated with and causally related to economic growth and reduction of poverty, but it has mixed consequences for the distribution of income. Increased

access and use of the formal financial system by the population enhances the growth of total factor productivity. According to Townsend's work, financial liberalization that facilitates access to intermediaries and weakens wealth constraints especially benefits the talented poor in the population. Increasing collateral and offering more generous credit limits appear to be more effective than interest rate subsidies. However, existing firms that use unskilled labor would tend to lose from financial liberalization. Townsend's research also indicates that the growth gains derive mainly from liberalization of the domestic financial system; increased availability of capital via foreign investment appears to have had small effects. The basic conclusion of the research is that financial systems and their evolution do matter not only for growth rates and poverty but also for the distribution of income, business formation, and investment.



Dani Rodrik, Kennedy School of Government, Harvard University



Ross Levine, Brown University

INSTITUTIONAL ARRANGEMENTS AND ECONOMIC GROWTH AND DEVELOPMENT

Our final session expanded further on the role of institutions in fostering economic growth. **Dani Rodrik**, of the Kennedy School of Government, Harvard University, began his discussion by pointing out some of the ideas most economists agree on, some of which were cited in the earlier sessions. Most economists recognize the importance of economic growth in reducing poverty in the developing world, of domestic policy choices in determining economic outcomes in poor nations, and of market-friendly, fiscally responsible policies in generating economic growth. The challenge has been to translate these principles into effective policies.⁷ Indeed, in Rodrik's view, the paradox is that the past quarter of a century has seen an increase in economic growth and a reduction in poverty in much of the world, while the standard policy agenda has been a failure. Countries that adopted the standard reforms have done poorly

relative to other countries and also relative to their own past performance. This echoed a point made by Zagha in the morning session.

In Rodrik's view the lesson is that the general principles of good policy do not map into specific policies. To devise effective policies, policymakers must do a lot of context-specific analysis,

and in many cases, this will result in policies that appear to be somewhat unusual or heterodox but that are in the service of orthodox policy goals. It is easier to specify the functions that good institutional arrangements perform than to specify the form they must take. For example, successful countries have, among other things, provided effective protection of property rights and contract enforcement, maintained macroeconomic stability, sought to integrate into the world economy via trade and investment, and provided effective prudential regulation of financial intermediaries. However, these do not translate directly into a unique set of policies. Indeed, as Rodrik discussed, China was able to become one of the fastest growing economies by following a strategy that

⁷ See Dani Rodrik, "Goodbye Washington Consensus, Hello Washington Confusion? A Review of the World Bank's Economic Growth in the 1990s: Learning from a Decade of Reform," *Journal of Economic Literature*, 44:4 (December 2006) pp. 973-87; and Dani Rodrik, "Growth Strategies," in P. Aghion and S. Durlauf, eds., *Handbook of Economic Growth*, Vol. 1A (North-Holland, 2005).

targeted one binding constraint at a time – agriculture, then industry, then foreign trade, now finance – rather than trying to reform all sectors at the same time.

Rodrik said he was not advocating that other countries adopt the reforms China enacted but rather the approach. He ended his presentation with some general lessons to be taken from the policy experience over the past quarter of a century. First, binding constraints differ across countries and across time, and there is ample evidence that different approaches can lead to higher growth. For example, in some countries, the financial system is the binding constraint – there are many potentially high-return projects but not enough credit to finance them. In other countries, there is enough credit, but there are not enough high-return projects. These groups of countries would necessitate different types of reforms. Reforms have to be well-targeted to work within the political and other constraints in a country. This was a point also endorsed by Zagha in the morning session. Finally, the process must be ongoing. Institutions must be continually strengthened, and binding constraints that arise later must be addressed. A once-and-for-all reform may ignite growth but is unlikely to sustain it.

Ross Levine, of Brown University, elaborated on the role of the financial system in reducing poverty. In his view, much of the world has financial system policies that limit the poor's access to the financial system, and this harms the financial system's ability to improve the welfare of the poor. A large body of research suggests that a well-functioning financial system — one that seeks out entrepreneurs and projects, finances those with the highest expected returns, and monitors those investments — helps improve economic growth by improving capital

allocation.⁸ Note that this type of financial system does not advocate equality of outcomes, but it does tend to equalize opportunities. But does a well-functioning financial system help the poor? Does it help the poor disproportionately compared to the rich in society? The research suggests the answer is yes. Across many countries and over a long period (1960-2001), there is a strong positive relationship between the level of private credit as a share of GDP (a measure of financial development) and the growth of income of the poorest 20 percent of the population, controlling for average economic growth in the country and other country traits.⁹ The research also suggests that financial development is associated with lower income inequality. Even in the United States, evidence shows that improved efficiency of the banking systems within individual states was associated with faster state economic growth, and deregulation of branching restrictions across states had a positive impact on growth; and while it did not reverse the trend toward greater inequality, it reduced the level of inequality.

⁸ See Asli Demirguc-Kunt and Ross Levine, eds., *Financial Structure and Economic Growth: A Cross-Country Comparison of Banks, Markets, and Development* (The MIT Press, 2001); and Thorsten Beck, Asli Demirguc-Kunt, and Ross Levine, "Finance, Inequality, and Poverty: Cross-Country Evidence," *Journal of Economic Growth*, 12 (March 2007), pp. 27-49.

⁹ The relationship is still positive, but it is weaker for the destitute, i.e., the fraction of the population living on less than \$1 per day.

Financial development stands out in this respect. Other government policies have been shown to have less or even a negative impact on growth and poverty. For example, government-owned banks and government loan programs for small and medium enterprises haven't been shown to reduce poverty or income inequality.



Ann Harrison, University of California at Berkeley

Levine concluded by suggesting that given the bulk of the evidence, it was time for the international policy arena to rethink the potentially large role finance can play in the fight against poverty.

Ann Harrison, of the University of California at Berkeley, our final speaker, addressed the important issue of the relationship between globalization and poverty. Almost all measures of globalization have increased over the past 40 years: Tariffs have fallen, and capital flows, foreign investment, and trade flows across countries have increased. At the same time, while

the number of people worldwide living in poverty is still quite high, the number has fallen. In 1980, 40 percent of people were living on less than \$1 per day; by 2000, this number had fallen to 20 percent. This raises two questions: Can globalization be used as a strategy to reduce poverty, and – an increasingly important issue – how has globalization contributed to income inequality?

Researchers addressed these questions in a study directed by Harrison.¹⁰ The results of the study question the existing orthodox trade perspective. The researchers' findings include: (1) greater openness to trade is associated with *higher* inequality in poor countries; (2) financial integration is associated with *higher* consumption volatility in the less financially developed, very poor countries; (3) agricultural support in rich countries *helps* in poor countries because most poor countries are net food importers and

so benefit from being able to import food at a lower price; and (4) there does not appear to be a robust direct relationship between openness and reduction of poverty. None of these is the expected result. For example, from an orthodox trade perspective, greater openness to trade might be expected to raise the income of countries with a comparative advantage at producing

¹⁰ See Ann Harrison, ed., *Globalization and Poverty*, National Bureau of Economic Research Conference Report (University of Chicago Press, Fall 2006).

goods with unskilled workers, but the opposite appears to be true. Similarly, one might expect that financial integration might enable countries to smooth consumption more, not less. Harrison posits that one reason there doesn't seem to be a robust relationship between globalization and reduction in poverty in the aggregate data is that while opening up trade results in higher growth, it also leads to more inequality. Another possibility is that the aggregate data are just too noisy to uncover the relationship if it exists.

Thus, Harrison turns to country case studies to address the question. She emphasized the importance of looking at household data, since there is a large amount of heterogeneity among the poor in response to globalization. The importance of heterogeneity was discussed by both Helpman and Townsend earlier during the Policy Forum. The research results suggest that the poor in expanding sectors do gain when globalization increases; however, the poor in previously protected sectors lose. The standard trade models would suggest that opening up to trade countries that have a

comparative advantage in producing goods with poor, unskilled workers would benefit the workers in those countries, since they would be able to export more goods. However, the standard model assumes that workers can instantaneously relocate to export-oriented sectors, and the individual country data suggest that workers cannot easily relocate to the expanding sectors. Also, poorer countries tend to have more protectionism on sectors that use unskilled workers, and the exporting firms tend to use skilled labor even in countries that have a lot of unskilled labor. Thus, the traditional models do not capture the situation in poor nations. These results suggest that bundling trade reforms with other complementary policies is needed in order to make globalization effective at reducing poverty. For example, improving the infrastructure, technology, and credit markets that inhibit moving the production of unskilled workers to world markets would be a complementary policy to help reduce poverty as trade is opened. Carefully targeted income support to those workers adversely affected by trade reform is

another example of a complementary policy that can help ensure that globalization leads to reduced poverty and benefits for all.

SUMMARY

The 2006 Policy Forum generated lively discussion among the program speakers and audience on the challenges facing the world in reducing poverty. Recent research has helped identify policies that are potentially more effective and others that are less effective. The research suggests that most policies create both winners and losers, and to be effective at reducing poverty, policies must recognize this fact. Forum participants discussed the importance of economic growth, institutions, globalization, and financial market development in reducing poverty and income inequality. In many cases, the results of the research question the orthodox view. This underscores the value of continued rigorous economic modeling and empirical research in developing policies to further reduce the still large number of people who are living in poverty worldwide. 