

**Promoting Global Economic Growth:
The Productivity Challenge**

By

Randall S. Kroszner

Professor, University of Chicago, Graduate School of Business

Former Member, Council of Economic Advisers

Revised: July 2003

Contact information: University of Chicago, Graduate School of Business, 1101 East 58th Street, Chicago, IL 60637; Tel: 1-773-702-8779; Email: randy.kroszner@gsb.uchicago.edu

Executive Summary: Promoting Global Economic Growth –The Productivity Challenge

Recent research has shown that well-designed economic policy is a prerequisite for productivity growth, the key source of higher living standards in the long run. Evidence suggests that pro-growth policy has played a large part in America's recent productivity revival. An OECD study shows that US multifactor productivity has risen about one percentage point since 1995, while productivity growth has fallen in other major countries.

Innovations in information technology (IT) have spurred productivity growth, but technological growth alone does not explain performance. Because IT flows freely, US strength must stem at least partly from policies that allow firms to use new technology most effectively. The key policy challenge is to provide an economic policy environment that permits sufficient flexibility so that firms and entrepreneurs can exploit the full potential range of innovations that new technology makes possible. In addition, maintaining competitive pressure throughout the American economy is necessary to provide firms and entrepreneurs with the incentives to explore the innovation potential of new technologies. A recent study found that two-thirds of the increase in productivity growth since 1995 was due to the innovative *use* of IT. Only one-third was due to total factor productivity growth in IT *producing* industries.

Policy thus should promote firm-level and market-wide transformations that drive productivity growth. A pro-growth agenda has four broad themes:

- Remove barriers to competition and allow markets to allocate resources

Barriers to international trade harm competition. Extensive empirical work shows that freer trade increases competitive pressure, productivity, and ultimately economic growth. Governments can also enhance competition by reducing regulations on domestic firms. Undue regulations limit business formation and entry in a number of countries, constraining domestic competition. Additionally, labor market restrictions can translate to lower productivity. An OECD study found that stronger employment protection laws had a negative relationship on technology growth-rate improvement over the past two decades.

- Promote private ownership with well-defined and well-protected property rights.

Studies show that privatization has improved firm-level performance. Governments should protect private ownership with adequate property rights and legal safeguards. Property rights in a country's financial system play an important role. Recent research confirms that well-functioning financial systems lead directly to economic growth.

- Create transparent and effective corporate governance arrangements.

A country's system of corporate governance protects property rights by providing checks and balances on the managers of firms. When corporate governance institutions are functioning properly, shareholders exert ultimate control over the firm, and the drive to maximize shareholder value raises productivity levels.

- Maintain macroeconomic stability with clear relative prices and low taxes.

Macroeconomic policy ensures a stable aggregate economic environment to foster productivity growth. Low inflation is an important policy component to limiting inflationary distortions. Fiscally, spending restraint is important to reduce tax-induced distortion and create fewer wedges between private and social investment return.

New economic policies under consideration would benefit from an explicit analysis and evaluation of their growth consequences, much like individual regulations being subject to cost-benefit analysis. Viewed in this way, a "pro-growth agenda" allows countries to profit as much as possible from the technological improvements that are transforming our world.

Promoting Global Economic Growth: The Productivity Challenge

Randall S. Kroszner

Exploring growth

This is an exciting time in economic policy making. Thanks to recent research both inside and outside academia, policy makers have a clearer roadmap to follow when working to improve long-run growth. The main message of this research is that growth does not fall like manna from heaven. Well-designed economic policy is a prerequisite for productivity growth, which is the key source of higher living standards in the long run.

Why should all countries make growth their top economic priority? To start with, consider the potential gains for countries that have only recently embraced the market model. The challenge for these countries is to close the 'productivity gap', so that their economies can deliver the higher living standards of the traditionally capitalist countries. The policies advocated in the pro-growth agenda will help these countries move to the productivity frontier as quickly as possible.

For developed countries, operating much closer to the productivity frontier, the challenge is slightly different. For these countries, a pro-growth agenda will ensure that their productivity frontiers grow as quickly as possible, because only productivity growth can deliver sustained increases in long-run living standards. Growing evidence suggests that the pro-growth orientation of American policy has played a large part in the recent increase in US productivity growth. From 1973 to 1995, US labour productivity grew at a rate that implied a doubling of living standards every two generations. Since 1995, however, US productivity growth has staged a stunning revival. Productivity is now growing at a rate that implies a doubling of living standards in every single generation.

A substantial amount of research suggests that the US productivity revival has much to do with the rapid progress made in information technology (IT) over the past several years (Oliner and Sichel 2002; Jorgenson et al. 2002). One might conclude from this that government policies can have little impact on productivity, unless policy influences the speed of technological progress. I take the opposite view. While the rate of technological progress may be outside the direct control of government, the ability of an economy to benefit from technological progress is not. Table 1, drawn from a recent OECD study, shows that while the growth rate of multifactor productivity in the United States has risen by about a percentage point since 1995, productivity growth has fallen in many other major countries. This is true even though technology generally flows freely around the world. If productivity growth was simply a matter of installing ever-more-powerful computers, or reading ever-more-advanced technical manuals, why have all countries not enjoyed the same productivity revival as the United States?

It must be that technological growth is not the whole story –flexibility at the firm level and competitive pressure throughout the economy also play their roles. Businesses must be flexible enough to have the initiative to adopt new technologies and then to transform themselves in ways that allow technology-intensive investment to have the highest possible effect on productivity growth. The economy also must be competitive enough to allow useful innovations at some firms to be transmitted throughout the industry by market pressure. A recent study

found that two-thirds of the increase in productivity growth since 1995 was due to the innovative use of IT, not due to higher productivity in IT itself (Jorgenson et al. 2002).

Table 1: Multifactor productivity growth in selected countries

Country	1990-94	1995-99	Change
USA	0.3% per year	1.3% per year	+1.0% per year
France	0.6	0.8	+0.2
Italy	1.7	0.1	-1.6
Germany	1.6	0.8	-0.8
Canada	1.5	1.1	-0.4
Japan	0.7	0.5	-0.2
Australia	1.8	2.0	0.2

Source: A. Colecchia and P. Schreyer, 'The impact of information and communications technologies on output growth,' STI Working Paper 2001/07, OECD, Paris, quoted in 'Measuring Productivity,' by P. Schreyer and D. Pilat, OECD Economic Studies No. 33, 2001/11. MFP growth rates from 1990-94 are inferred from growth rates from 1990-99 and 1995-95, which are given in the original source.

As an example, consider the case of US retail trade. To be sure, firms in this industry invested heavily in information technology in the late 1990s. Yet they did not become more productive simply by buying faster computers and returning to business as usual. As discussed in a recent in-depth study by McKinsey & Co., IT investments were combined with a host of changes in business practices to raise productivity. Perhaps the best example is the use of IT to improve the links in the supply chain from vendor to retailer, in order to create a 'glass pipeline' through which retailers' orders can be monitored as they progress (McKinsey 2002b). Other IT-enhanced changes in business practice involve the forecasting of demand, which helps ensure proper staffing and inventory levels. Still other innovations, such as the efficient 'big-box' format for retail store layouts, had little to do with IT, but raised productivity nonetheless.

Competitive pressure caused innovations at some leading firms to be transmitted to the industry as a whole. Work by McKinsey researchers has shown that many innovations were first put in place at large retail establishments. But due to the pro-competitive policies in place in the United States, the productivity increase in US retailing did not begin and end at these stores. On the contrary, as these innovations allowed a leading retailer to lower prices, other stores were forced to follow suit or suffer the consequences.

The experience of US retail trade is not unique. In other industries, and at other times, American businesses and workers have had to be flexible in order to allow technological change to raise productivity. In the early twentieth century, for example, the electric motor did not substantially raise manufacturing productivity until firms realized that electricity allowed them to rethink the layout of their factories. Rather than building a many-storied factory around a

centralized power source, a firm could disperse electric motors around a single-story plant. Workers then could use specialized tools to undertake new activities. This allowed the firm to optimize on material handling, change production lines more easily, and perform maintenance on individual sections of the plant without idling production throughout the facility (David 1990).

In more recent times, US workers outside of retailing have also had to learn to adapt to new practices in order to profit from IT investment. Erik Brynjolfsson and Lorin Hitt provide the interesting example of a medical products company that recently made a large investment in computer integrated manufacturing. The flexibility gained by this investment necessitated a host of other changes in business practice, such as the elimination of piece rates, the encouragement of workers to stop the production line if it was not running at full speed, and a reduction in management layers. Unfortunately, the company's employees had trouble adjusting to the new world of computer-integrated production – and the new technology was so flexible that employees were soon running it like the old technology. The firm decided to re-introduce the technology in a completely new site, run by selected younger employees that were less wedded to old methods. After awhile, productivity rose so much that the firm painted the windows of this site black, so that competitors could not see how the new system worked (Brynjolfsson and Hitt 2000).

Promoting economic growth

The fact that the American productivity revival is not just a matter of applying improved information technology illustrates the impact that a nation's competitive environment can have on productivity performance. The key question for policy makers is whether their policies promote or discourage the firm-level transformations that ultimately drive productivity growth.

A pro-growth agenda has four broad themes:

- Governments should remove barriers to competition and allow markets to allocate resources both within and across national borders.
- Production should be placed in the hands of private owners with well-defined and well-protected property rights.
- Corporate governance arrangements must be transparent and effective, so that market discipline operates even when corporate ownership and corporate control are in separate hands.
- The macroeconomic environment faced by private decision-makers must be stable, with clear relative price signals and low non-distortionary taxes.

Remove barriers to competition

Some of the most costly barriers to competition are those which reduce trade across national borders. The theoretical 'comparative advantage' arguments in favour of free trade have been familiar since the days of Adam Smith and David Ricardo. More recent, however, has been the large amount of empirical work that illustrates how much countries gain when they lower trade barriers. One study showed that in the 1970s and 1980s, open economies grew about 2.5 per cent faster, on average, than more closed economies (Sachs and Warner 1995). Another study showed that raising a country's trade-to-GDP ratio by 1 percentage point raised income per capita by 2 per cent or more (Frankel and Romer 1999). Moreover, if the free-trade agenda were adopted

world wide, developing countries would profit enormously. Studies have shown that developing countries would gain from USD 108 billion to USD 155 billion from a complete liberalization of trade (International Monetary Fund 2001; Francois 2000). These gains would equal about 3.1 per cent of developing countries' GDP – about three times what they receive each year in aid.

Some of these gains from trade flow from comparative advantage, as trade encourages each country to specialize in what it does best. Even when a country competes directly with another country in a particular market, there is also a role for trade to boost productivity by enhancing competitive pressure on domestic firms. Foreign competition has long been considered a key force behind improvements among US automakers following the oil shocks of the 1970s. Recent research has showed that this force has operated in other countries as well. One study found compelling evidence that Japanese firms with the most exposure to international trade in the 1980s were also the most productive, even though domestic competition in some non-trading sectors in Japan is intense (Baily and Gersbach 1995). Productivity growth has also been especially pronounced in many countries that have liberalized their trading regimes. Establishment-level data from Chilean manufacturers shows that the sectors with the most exposure to international trade enjoyed the largest improvement in productivity after Chile's trade barriers fell dramatically in the late 1970s (Pavcnik 2002). Similar effects of international competition on productivity have also been found after trade liberalizations in Turkey (Levinsohn 1993) and Italy (Bottasso and Sembenelli 2001).

The fact that both the United States and its trading partners benefit when trade is expanded is a prime reason why the Bush Administration pushed so hard for Trade Promotion Authority (TPA), which was finally reinstated in 2002 after an eight-year hiatus. TPA requires Congress to vote up or down on specific trade pacts without the chance to offer amendments to the final package. This greatly increases our credibility in trade negotiations. The United States is, at the time of writing, finalizing bilateral trade pacts with Singapore and Chile, and we hope to conclude many more free trade pacts in the future.

Lowering trade barriers is not the only way that governments can enhance competition. Another is to reduce the regulations that can strangle growth in domestic firms. In some cases, domestic competition is constrained because small producers in an 'informal' sector are unable to meet the regulatory burden imposed by the official business registration process. As a result, these informal producers are unable to raise capital and expand, limiting their competitive pressure on larger 'legitimate' producers. They are also prevented from entering the world market and profiting from international trade.

A famous initial study by Hernando de Soto (1989) documented the huge informal sector in Peru, where about half of all workers were employed outside the formal business sector. Due in part to onerous registration fees and other entry requirements, members of the informal sector had to build their homes, sell their wares and otherwise conduct business outside the 'regular' economy. Subsequent research has shown that undue entry restrictions continue to limit business formation in a number of countries as well. One study of 85 countries shows that as of the late 1990s, an Italian entrepreneur needed to complete 16 separate procedures, which took at least 62 business days and cost USD 3 946 in government fees. Entrepreneurs in Mozambique needed to complete 19 different procedures, pay USD 256 in fees, and wait at least 149 business days to acquire the necessary permits. By contrast, in Canada, an entrepreneur could finish the process in roughly two days by paying USD 280 in government fees and completing only two procedures. (Djankov et al. 2002.) Lowering these barriers to entry will spur investment. A recent study of

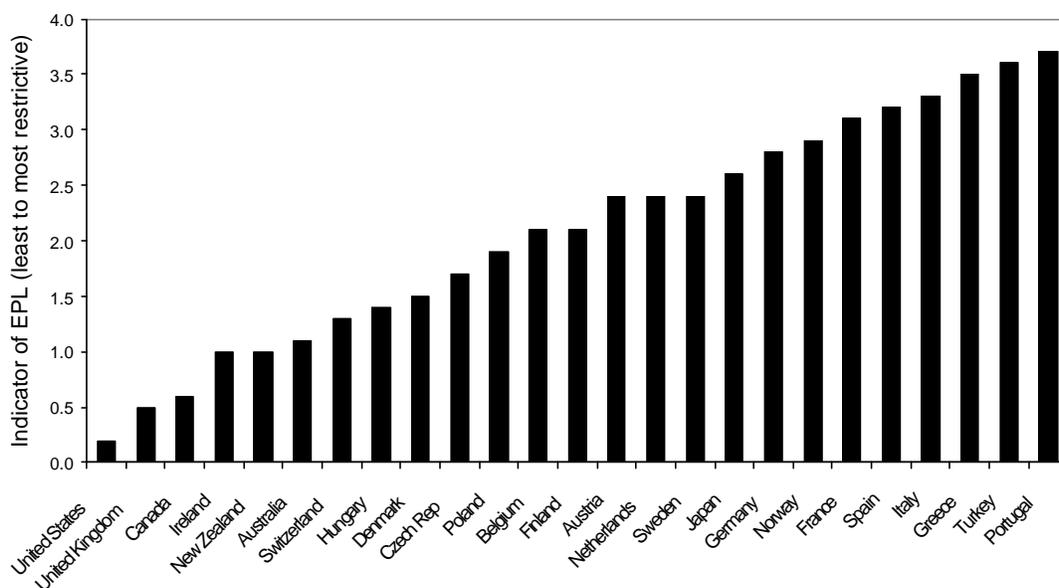
many OECD countries shows that product market deregulation, especially entry liberalization, leads to greater investment in the long-run (Alesina et al. 2003).

Competition can also be limited by regulations on the firms that manage to clear the hurdles to legitimate production. In France, for example, approval by a regional zoning board is typically required before a large retail store can be created or expanded. Stronger deterrence of entry by these boards has increased retail concentration in France and slowed employment growth (Bertrand and Kramarz 2002). Another example of stifling product market regulation are the hours restrictions in Germany, which prevent retail stores from staying open late and thereby prevent German retailers from operating with maximal flexibility (McKinsey 2002b).

Labour market restrictions can also hinder growth. It is well-known that when the unemployed are given generous benefits indefinitely, workers can lose the necessary incentives to find a job. A particularly deleterious result is that young people who live on the dole do not gain the work-related skills that would raise their standard of living. A recent study of 85 countries found that heavier labour regulation is associated with a larger unofficial economy, lower labour force participation, and a higher unemployment rate among the young (Djankov et al. 2003). Figure 1 shows an indicator of employment protection legislation for many OECD countries. While the U.S. ranks as the least restrictive in employment protection, many European countries rank on the very high end.

Figure 1

Employment protection legislation



Source: Nicoletti et al, "Summary Indicators of Product Market Regulation with an Extension to Employment Protection Legislation," OECD ECO Working Paper #226, 2000.

Labour market restrictions can harm the economy by interfering with productivity growth. For example, the firing restrictions in place in many European countries generally make firms less willing to hire workers in the first place. The result might be an increase in the unemployment rate, but more importantly is a 'sclerotic' labour market, in which workers are

rarely reallocated to more efficient uses. To cite one example, Portuguese firing restrictions severely limit flows through that country's labour market, even though its unemployment rate is similar to that of the United States (Blanchard and Portugal 2001).

How serious are the productivity effects of these labour market interventions? Using a theoretical model calibrated to US data, one study found that legislated severance payments equal to six months salary reduced consumption and output by more than 2 per cent (Hopenhayn and Rogerson 1993). This effect, which arises from the inability of the most productive firms to expand, is more than three times the reduction in output during the US economic contraction in 2001. Empirical evidence on the effect of labour market restrictions comes from an OECD study of 17 countries, which found a strong, negative correlation between a country's technology growth-rate improvement from the 1980s to the 1990s and the strength of its employment protection laws (OECD 2002).

Promote private ownership and protect property rights

The above discussion makes clear that firms become most productive when either foreign or domestic competition drives them to improve. It should not be surprising, therefore, that an important element in the pro-growth agenda is private ownership. Government managers have little incentive to innovate or to cut costs, because they do not reap the benefits of doing so. As a result, government enterprises are often cauldrons of inefficiency. Economic research is full of examples – a Turkish state-owned coal-mining firm that generated annual losses per worker equal to six times Turkey's per capital national income, and a Tanzanian state-owned shoe factory that could only operate at about 4 per cent of capacity, even with help from the World Bank, before eventually closing its doors (Shleifer 1998).

The inefficiency associated with government ownership has led to a wave of privatization during the past two decades. We now know that this privatization has paid big dividends. An expansive, systematic study of privatization around the world has showed that privatization does improve firm-level performance, just as standard economic theory predicts (Megginson et al. 1994). Yet this study also showed something surprising: These gains took place without reductions in employment. Performance gains in privatized firms were so strong that these firms tended to expand, not contract.

What role, then, is the role for the state? As Nobel laureate Frederich Hayek described, governments should work diligently to protect private property rights with adequate legal safeguards:

The liberal argument is in favor of making the best possible use of the forces of competition as a means of coordinating human efforts, not an argument for leaving things just as they are.... It does not deny, but even emphasizes, that, in order that competition should work beneficially, a carefully thought-out legal framework is required and that neither the existing nor the past legal rules are free from grave defects (1944 [1986], p. 27).

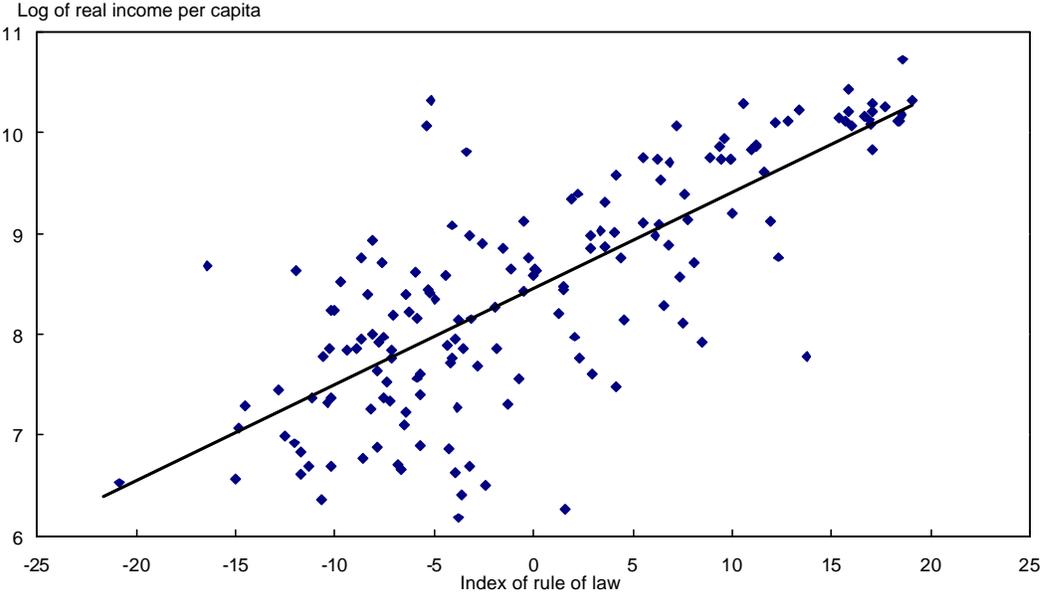
Property rights must be protected by trustworthy courts and law-enforcement officers untainted by corruption. Only then are the social benefits of investment equated with private benefits, so that worthwhile investment projects are undertaken. Sadly, though, potential entrepreneurs in many countries still lack adequate property-rights protection. De Soto's work on informal sectors, noted above, provides a vivid illustration of how the lack of property rights can hinder

growth. De Soto argues that while many of the world's poor own assets, they cannot use these assets as capital because they lack formal title. As a result, they cannot borrow to expand their informal businesses. They must also rely on extra-legal means to ensure that any investment they do undertake is not appropriated by someone else (De Soto 2000). The importance of property rights is closely related to the prospects for economic growth. Figure 2 shows the positive relationship of rule of law and income per capita. The rule of law indicator includes the effectiveness of the judiciary and enforceability of contracts.

Figure 2

Rule of Law and Income per Capita

Income levels are higher in countries with stronger rule of law.



Note: Income adjusted for purchasing power parity.
 Source: Daniel Kaufmann, Aart Kraay, and Pablo Zoido-Lobaton, "Governance Matters," World Bank Policy Research Department, Working Paper No. 2196, 1999, using updated data for 2000-2001.

Another important area in which the protection of property rights plays a role in economic outcomes is a country's financial system (Kroszner 1997, 1998). Property rights are crucial to the functioning of financial markets because finance has an explicit intertemporal dimension. In spot markets, transactions take place at a single point in time. Each participant can typically see what he is trading for, so he is in a relatively good position to evaluate the costs and benefits of the trade. Transactions in financial markets, however, typically take place over a period of time. Lenders extend credit, or equity investors extend funds, in order to reap as-yet-unseen rewards in the future. This limits their ability to protect themselves from unscrupulous trading partners. As a result, the law must ensure that people who lend to firms (either in bond markets or through banks) can be sure that their loans are senior to other obligations, and that they can take legal control either of the firm or the loan's collateral if it declares bankruptcy. Similarly, equity investors must be sure that they can replace managers who perform poorly or who try to expropriate profits for themselves. Globalization has made the adequate provision of property rights even more important, as foreign investment – crucial for the transmission of new technology to developing countries – is obviously discouraged by the fear of expropriation.

Even today, however, the legal systems that protect financial property rights vary widely around the world. A study of 49 countries found that much of this variation in the property rights of equity investors is explained by the legal origins of individual nations. Common law countries (for example the United Kingdom) tend to have the strongest investor protections, with French civil law countries having the weakest. German civil law and the Scandinavian countries fall between these two extremes. The study also found that the level of investor protection in a country is strongly correlated with the ownership concentration of firms. In countries with strong protections, ownership of firms was widely dispersed among a number of investors. By contrast, in countries with weak investor rights, firm ownership was more concentrated, perhaps because a few large investors are better able to police firm managers than a large number of small investors with imperfect access to the court system (La Porta et al. 1998).

Recent research confirms the intuitive prediction that well-functioning financial systems lead directly to economic growth. One influential paper found that countries with advanced financial systems are particularly good places for industries that need lots of external finance, as measured by the industrial pattern of external finance requirements in the United States (Rajan and Zingales 1998). Other work has illustrated relationships among corporate governance, the cost of capital, and economic growth (Himmelberg et al. 2001). These findings strengthen the case for a good financial system having a direct effect on economic growth. In doing so, they provide further evidence that the adequate protection of property rights is a fundamental component of a pro-growth agenda.

Ensure transparency and accountability in corporate governance arrangements

Closely related to the protection of property rights is a country's system of corporate governance, which provides the checks and balances on the managers of firms. When corporate governance institutions are functioning properly, shareholders exert ultimate control over the firm and the drive to maximize shareholder value raises productivity levels (Holderiness et al. 1999).

Shareholder rights enforce discipline on corporations in a number of ways. One of the most important is the threat that if managers do not perform, shareholders are free to sell their shares to an outside raider. In the United States, the effects of shareholder control were evident in the hostile takeover battles of the 1980s and the proxy fights of the 1990s. To avoid being subjected to a takeover or face a proxy fight, many managers integrated outside observers into their internal decision processes. This helped to make sure that company funds were invested in ways that were in the best interest of shareholders. Although the correlation is far from perfect, independent directors are often associated with better firm performance (for example Kroszner and Rajan 1997).

Shareholder control is weakened, however, when investors have only imperfect information about the firm's activities. Recent concerns about corporate reporting in the United States highlight the importance of transparent accounting arrangements, so that investors have timely and accurate information about the firms they own. Better information allows investors to limit their exposure to losses associated with delegating control of assets to management, as well as move quickly to remove managers when their performance is poor. The Sarbanes-Oxley Act, signed by President Bush in 2002, takes several steps to improve information supplied by

companies. Penalties for misleading statements are increased, and a new oversight board for auditors will more closely monitor information supplied to markets. In addition, moves toward auditor independence provide an additional impetus toward transparency in the management of large firms.

Maintain macroeconomic stability

Each of the three areas discussed above is 'microeconomic' in nature, as they improve the operation of individual markets. Yet just as microeconomic policy sets the stage for productivity growth, macroeconomic policy can also play a role, by making sure that the aggregate economic environment faced by entrepreneurs is as stable as possible. Perhaps the most important component of macroeconomic stability is low inflation. Figure 3 shows the relationship between high rates of inflation and slower economic growth. Even if it is anticipated by workers and firms, high inflation can reduce economic growth by exacerbating distortions that arise from the taxation of nominal quantities. High inflation can also obscure changes in relative prices, which are needed to allocate resources efficiently. Finally, high inflation often becomes variable inflation, which can redistribute income arbitrarily between lenders and creditors and further dampen investment and growth.

In the United States, as well as many other countries, the independence of the central bank plays a role in the maintenance of low inflationary expectations. Agents around the world know that the US Federal Reserve is committed to price stability, so they are willing to purchase dollar-denominated assets without fear of the implicit expropriation that would arise from a large and unforeseen increase in the US price level.

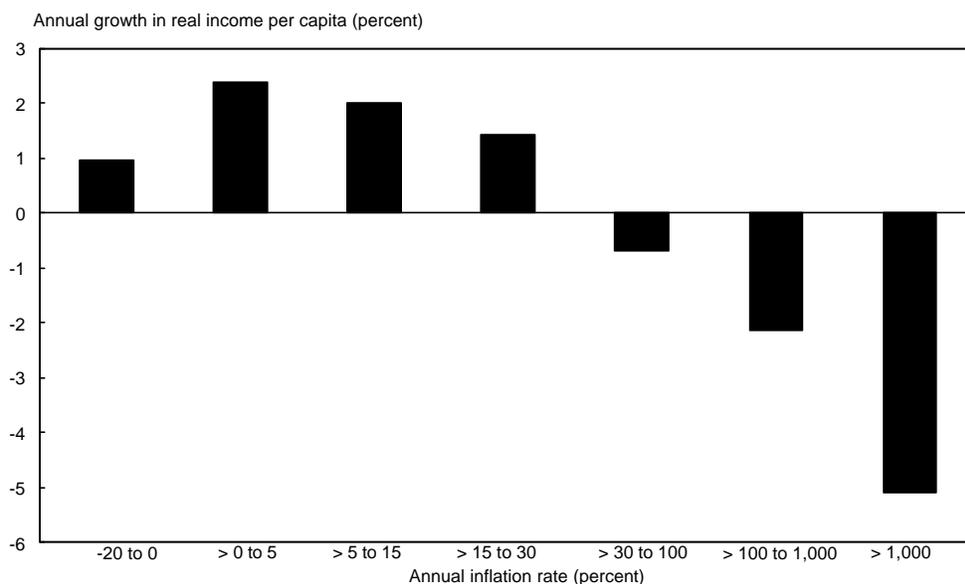
This credibility is the key feature of US monetary policy. In many other countries the central bank has adopted a formal inflation target, which instructs the bank to maintain the inflation rate within a given band. The benefits and costs of inflation targeting is currently an active area of academic research; however, it is important to remember that an inflation target can never be a substitute for the underlying central bank credibility that forces agents to take the target seriously in the first place.

On the fiscal side, spending restraint is perhaps the most important – and most difficult – goal for governments to achieve. Limiting the government's 'slice of the economic pie' leads to lower taxation; this leads in turn to less tax-induced distortion and fewer wedges between private and social investment returns. In addition to its macroeconomic effects, fiscal policy has microeconomic consequences as well. For example, a fiscal package that raises the payroll tax to fund an increase in unemployment insurance benefits is especially deleterious to growth, because it reduces employment incentives on both the demand and the supply side.

Figure 3

Inflation and Growth in Income per Capita

Higher inflation is associated with slower growth, with the strongest effect over 30 percent.



Note: Data are for 136 developing and developed countries for 1960 to 1994.

Source: Michael Bruno and William Easterly, "Inflation Crises and Long-Run Growth," World Bank Policy Research Department, Working Paper No. 1517, 1997.

Conclusion

Any potential policy under consideration by a government should be viewed through the lens of a pro-growth agenda. This could be accomplished by reviewing the growth consequences of proposed policy changes. In the United States, for example, the Office of Management and Budget (OMB) reviews the costs and benefits of certain proposed regulations through the Office of Information and Regulatory Analysis. US federal agencies issue approximately 4,500 new rulemaking notices each year, and about 600 of those are significant enough to warrant OMB review. Of those, about 50-100 per year meet the necessary condition of being 'economically significant' (more than \$100 million in either yearly benefits or costs). Every 'economically significant' proposal then receives a formal analysis of the benefits and costs by the issuing agency.

Similarly, 'economically significant' proposals concerning the tax system, labor markets, product market regulation, and other relevant policies could be subject to an analysis of their

growth consequences. Such a growth impact study could be undertaken by an “office of policy impact analysis” and be a significant element in the policy debate. The analysis would examine a series of hard questions related to the major themes of the global growth agenda:

- How would the policy affect the market’s ability to allocate resources? Would this policy make it easier or harder for firms to compete, either domestically or internationally?
- Does this policy clarify or obscure property rights? Does this policy make property rights easier or harder to enforce?
- How does this policy affect the balance between corporate ownership and corporate control?
- Does this policy help provide a stable macroeconomic environment? Is it likely to increase inflationary pressure or necessitate future tax increases that would discourage investment and growth?

Viewed in this way, a 'pro-growth agenda' does not consist of a list of proposals. Rather, it describes the mindset of policy makers, organized around the view that citizens should be allowed to profit as much as possible from the technological improvements that are transforming our world. The agenda I have outlined informs not only the Administration’s view of US policy, but also its international assistance program. The Bush administration’s proposed Millennium Challenge Account will provide US aid (on top of that which is currently provided) to countries that are themselves committed to pro-growth policies (see Chapter 6 in the 2003 *Economic Report of the President*).

My University of Chicago colleague, the Nobel laureate Robert Lucas, once said that when one contemplates the impact that sustained economic growth has on human welfare, it is hard to think about anything else. I hope these remarks illustrate the Bush administration’s enthusiasm for a pro-growth agenda, as well as giving some indication of how such an agenda can transform economic outcomes around the world.

References

- Alesina, Alberto et al (2003), 'Regulation and Investment', National Bureau of Economic Research Working Paper 9560.
- Baily, Martin N. and Hans Gersbach (1995), 'Efficiency in manufacturing and the need for global competition', Brookings Papers on Economic Activity: Microeconomics, 307-47.
- Bertrand, Marianne and Francis Kramarz (2002), 'Does entry regulation hinder job creation? Evidence from the French retail industry', Quarterly Journal of Economics, 117 (4), 1369-1414.
- Blanchard, Olivier and Pedro Portugal (2001), 'What hides behind an unemployment rate? Comparing Portuguese and U.S. labor markets', American Economic Review, 91 (1), 187-207.
- Bottasso, Anna and Alessandro Sembenelli (2001), 'Market power, productivity and the EU single market program: evidence from a panel of Italian firms', European Economic Review, 45 (1), 167-86.
- Brynjolfsson, Erik and Lorin M. Hitt (2000), 'Beyond computation: informational technology, organizational transformation and business performance', Journal of Economic Perspectives, 14 (4), 23-48.
- David, Paul A. (1990), 'The dynamo and the computer: an historical perspective on the modern productivity paradox', American Economic Review, 80 (2), 355-61.
- De Soto, Hernando (1989), The Other Path: The Invisible Revolution in the Third World, New York: Harper & Row.
- De Soto, Hernando (2000), The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else, New York: Basic Books.
- Djankov, Simeon, Rafael La Porta, Florencio Lopez-de-Silanes and Andrei Shleifer (2002), 'The regulation of entry', Quarterly Journal of Economics, 117 (1), 1-37.
- Djankov, Simeon, Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer and Juan Botero (2003), 'The Regulation of Labor', National Bureau of Economic Research Working Paper 9756.
- Frankel, Jeffrey A. and David Romer (1999), 'Does trade cause growth?' American Economic Review, 89 (3), 379-99.
- Francois, J. (2000), The Economic Impact of New Multilateral Trade Negotiations. Tinbergen Institute and Center for Economic and Policy Research.
- Foster, Lucia, John Haltiwanger and C.J. Krizan (2002), 'The Link Between Aggregate and Micro Productivity Growth: Evidence from Retail Trade', National Bureau of Economic Research Working Paper 9120.
- Hall, Robert E. and Charles I. Jones (1998), 'Why do some countries produce so much more output per worker than others?' Quarterly Journal of Economics, 114 (1), 83-116.
- Hayek, Frederich A. (1944), The Road to Serfdom. London: Routledge & Kegan Paul, 1986.
- Himmelberg, Charles P., R. Glenn Hubbard and Inessa Love (2001), 'Investor protection, ownership, and the cost of capital', Columbia University manuscript.
- Holderness, Clifford, Randall S. Kroszner and Dennis Sheehan (1999), 'Were the good old days really that good? Changes in managerial stock ownership since the great depression', Journal of Finance, 435-69.
- Hopenhayn, Hugo and Richard Rogerson (1993), 'Job turnover and policy evaluation: a general equilibrium analysis', Journal of Political Economy, 101 (5), 915-38.

- International Monetary Fund (2001), Market Access for Developing Countries, Staff Paper (joint with International Bank for Reconstruction and Development).
- Jorgenson, Dale W., Mun S. Ho and Kevin J. Stiroh (2002), 'Projecting productivity growth: lessons from the U.S. growth resurgence', Federal Reserve Bank of Atlanta Economic Review, Third Quarter 2002, 1-13.
- Kroszner, Randall S. (1997), 'Free banking: the scottish experience as a model for emerging market economies', in Gerard Caprio and Dimitri Vittas (eds), Reforming Financial Systems: Historical Implications for Policy, New York: Cambridge University Press, 41-61.
- Kroszner, Randall S. (1998), 'The political economy of banking and financial regulatory reform in emerging markets', Research in Financial Services, 33-51.
- Kroszner, Randall S. and Raghuram G. Rajan (1997), 'Organization structure and credibility: evidence from commercial bank securities activities before the Glass-Steagall Act', Journal of Monetary Economics, 475-516.
- Kroszner, Randall S. "Global Growth Agenda: European Challenges," pp. 47-59 in Gertrude Tumpel-Guggerell and Peter Mooselchum, eds., Structural Challenges for Europe, Northampton, MA: Edward Elgar, 2003.
- La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer and Robert W. Vishny (1998), 'Law and finance', Journal of Political Economy, 106 (6), 1113-55.
- Levinsohn, James A. (1993), 'Testing the imports-as-market-discipline hypothesis', Journal of International Economics, 35 (1-2), 1-22.
- McKinsey & Co. (2002a), 'Reaching higher productivity growth in France and Germany', October.
- McKinsey & Co. (2002b), 'How IT enables productivity growth: the U.S. experience across three sectors in the 1990s', November.
- Meggison, William L., Robert C. Nash and Matthias Van Randenborgh (1994), 'The financial and operating performance of newly privatized firms: an international empirical analysis', Journal of Finance, 49 (2), 403-52.
- OECD (2002), 'Productivity and innovation: the impact of product and labor market policies', Chapter 8 of Economic Outlook 71.
- Oliner, Stephen and Daniel E. Sichel (2002), 'Information technology and productivity: where are we now and where are we going?' Federal Reserve Bank of Atlanta Economic Review, Third Quarter 2002, 15-44.
- Rajan, Raghuram G. and Luigi Zingales (1998), 'Financial dependence and growth', American Economic Review, 88 (3), 559-86.
- Pavcnik, Nina (2002), "Trade liberalization, exit, and productivity improvements: Evidence from Chilean plants," Review of Economic Studies 69 (1), 245-76.
- Romer, Paul (1995), 'Comment on "The Growth of Nations," by N. Gregory Mankiw, Brookings Papers on Economic Activity, 1995 (1), 313-20.
- Sachs, Jeffrey D. and Andrew Warner (1995), 'Economic reform and the process of global integration', Brookings Papers on Economic Activity, 1995 (1), 1-95.
- Shleifer, Andrei (1998), 'State versus private ownership', Journal of Economic Perspectives, 12 (4), 133-50.

