AN AGENDA FOR GLOBAL GROWTH

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This is an exciting time to be part of the economic policy process. Thanks to recent research both inside and outside academia, policymakers 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 sole source of higher living standards in the long run.

EXPLORING GROWTH

Why should all countries – rich or poor – make growth their top economic priority? To start with, consider the potential gains among the world's poorest countries. Output per worker varies widely around the world, with living standards in the United States typically outpacing those in the poorest countries by a factor of ten or more. To some extent, these differences in output-per-worker stem from underlying differences in capital per worker. Yet a surprising lesson of the new growth research is that differences in productivity, not capital, are far more important in explaining the huge differences in living standards around the world. If you want to help a country like Niger, where per capita income is only one thirty-fifth of the level in the United States, the starting point must be promoting policies that help Niger close the productivity gap. There are policies that can do just this.

For developed countries, operating much closer to the productivity frontier, the pro-growth agenda insures that their productivity level grows as rapidly as possible. I came of age as an economist during the productivity slowdown of the 1970s and 1980s, when U.S. productivity growth stagnated. From 1973 to 1995, U.S. labor productivity grew at a rate that implied a doubling of living standards every two generations. Since 1995, however, U.S. 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 U.S. 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, Ho, and Stiroh, 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. Business practices must be transformed in appropriate ways, so that technology-intensive investment has the highest possible effect on productivity growth. The institutions that encourage these transformations make up a pro-growth agenda.

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 U.S. retail trade. To be sure, firms in this industry invested heavily in information technology in the late 1990s. But 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 insure proper staffing and inventory levels. Still other innovations, such as the "big-box" format that maximizes revenue per square foot, had little to do with IT, but raise productivity nonetheless.

Work by McKinsey researchers has shown that many innovations were first put in place at the nation's largest retailer, Wal-Mart. But because of the pro-competitive policies in place in the United States, the productivity increase in U.S. retailing did not begin and end at a single firm. On the contrary, as Wal-Mart's innovations allowed it to lower prices, other companies were forced to follow suit or suffer the consequences.

The experience of U.S. retail trade is not unique. In other industries, and at other times, technological innovations have had to be combined with changes in business practice in order 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. This allowed them 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, U.S. firms outside of retailing have also had to change business 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 policymakers 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, so that market forces are transmitted even when corporate ownership and corporate control are in separate hands.
- The macroeconomic environment faced by private decisionmakers must be stable, with clear relative price signals and low 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 favor 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 percent faster, on average, than more closed economies (Sachs and Warner, 1995). Another

study showed that raising a country's trade-to-GDP ratio by one percentage point raised income per capita by two percent 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 $108 billion to $155 billion from a complete liberalization of trade (International Monetary Fund, 2001; Francois, 2000). These gains would equal about 3.1 percent 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. But 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 U.S. 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, 2001). 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 this year 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 currently 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 75 countries shows that as of the late

1990s, an Austrian entrepreneur needed to complete 12 separate procedures, which took at least 154 business days and cost US$11,612 in government fees. Bolivian entrepreneurs needed to complete 20 different procedures, pay US$2,696 in fees, and wait at least 82 business days to acquire the necessary permits. By contrast, in Canada, an entrepreneur could finish the process in roughly two days by paying US$280 in government fees and completing only two procedures. (Djankov, *et al.*, 2002.)

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 has been required in order for any large retail store to 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 prevents retail stores from staying open late and thereby prevents German retailers from operating at peak efficiency (McKinsey, 2002b).

Labor 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. But other labor market restrictions can harm growth 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 is not necessarily an increase in the unemployment rate, but a "sclerotic" labor 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 labor 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 labor market interventions? Using a theoretical model calibrated to U.S. data, one study found that legislated severance payments equal to six months salary reduced consumption and output by more than two percent (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 U.S. economic contraction in 2001. Empirical evidence on the effect of labor market restrictions comes from an important 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 four percent 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.

In addition to empirical research, economists have also asked whether there is ever a theoretical rationale for government ownership. The generally accepted view is that the role for active government ownership is severely limited (Shleifer, 1998). But this is not to say that government has no role in the marketplace. There was no more forceful opponent of government ownership than the Nobel laureate Frederich Hayek, yet even he believed that 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 insure that any investment they do undertake is not appropriated by someone else (De Soto, 2000).

One of the most important areas in which the protection of property rights plays a role in economic outcomes is in a country's financial system. Property rights are crucial to the functioning of financial market 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 insure that people that 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. An important study of 49 countries found 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, Hubbard, and Love, 2001). These findings strengthen the case for a good financial system having a direct, causal 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.

Insure 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.

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 the best interest of shareholders.

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 the President this summer, 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. 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 an important role in the maintenance of low inflationary expectations. Agents around the world know that the U.S. 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 U.S. price level.

This credibility is the most important feature of U.S. 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.

CONCLUSION

Any potential policy under consideration by a government should be viewed through the lens of a pro-growth agenda. When a policy is debated, policymakers should ask themselves a series of hard questions:

- How would the policy affect the market's ability to allocate of 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 policymakers, organized around the view that citizens should be allowed to profit as much as possible from the technological improvements that are transforming our world.

This is certainly how the President views the pro-growth imperative in the United States. In fact, the agenda I have outlined informs not only the Administration's view of U.S. policy, but also its mission to help lesser developed countries. In March of this year, the President introduced the Millennium Challenge Account (MCA), which is based on a new philosophy of providing international assistance. The MCA is governed by the fundamental principle that assistance is most effective when it flows to countries that are themselves committed to pro-growth policies. The three benchmarks used in allocating aid under the MCA are "economic freedom," "ruling justly," and "investing in people," with specific quantitative indicators used to determine whether a particular country would be a good recipient of U.S. aid. This aid will take the form of grants, not loans, and it will not replace aid programs already in place. But the MCA will truly live up to its name, challenging recipient countries to follow policies that give their citizens the best hope of a better life.

The Nobel laureate Robert Lucas once said that when one contemplates the impact that even slight increases in economic growth can have when cumulated over time, it is hard to think about anything else. I hope these remarks illustrate the Administration's enthusiasm for a pro-growth agenda, as well as given some indication of how such an agenda can transform economic outcomes in every corner of the world.

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