

Chapter 1

More Instruments and Broader Goals: Moving Toward the Post-Washington Consensus

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INTRODUCTION

I would like to discuss improvements in our understanding of economic development, in particular the emergence of what is sometimes called the “post-Washington consensus”. My remarks elaborate on two themes. The first is that we have come to a better understanding of what makes markets work well. The Washington consensus held that good economic performance required liberalized trade, macroeconomic stability and getting prices right (see Williamson, 1990). Once the government dealt with these issues – essentially, once the government “got out of the way” – private markets would allocate resources efficiently and generate robust growth. To be sure, all of these are important for markets to work well: it is very difficult for investors to make good decisions when inflation is running at 100 per cent a year and highly variable. But the policies advanced by the Washington consensus are not complete, and they are sometimes misguided. Making markets work requires more than just low inflation; it requires sound financial regulation, competition policy, and policies to facilitate the transfer of technology and to encourage transparency, to cite some fundamental issues neglected by the Washington consensus.

Our understanding of the instruments to promote well-functioning markets has also improved, and we have broadened the objectives of development to include other goals, such as sustainable development, egalitarian development and democratic development. An important part of development today is seeking complementary strategies that advance these goals simultaneously. In our search for these policies,

however, we should not ignore the inevitable tradeoffs. This is the second theme I will address.

SOME LESSONS OF THE EAST ASIAN FINANCIAL CRISIS

Before discussing these themes, I would like to address the implications of the current East Asian crisis for our thinking about development. Observation of the successful, some even say miraculous, East Asian development was one of the motivations for moving beyond the Washington consensus. After all, here was a regional cluster of countries that had not closely followed the Washington consensus prescriptions but had somehow managed the most successful development in history. To be sure, many of their policies – such as low inflation and fiscal prudence – were perfectly in line with the Washington consensus. Several aspects of their strategy, such as an emphasis on egalitarian policies, while not at odds with the Washington consensus, were not emphasized by it. Their industrial policy, designed to close the technological gap between them and the more advanced countries, was actually contrary to the spirit of the Washington consensus. These observations were the basis for the World Bank's *East Asian Miracle* study (World Bank, 1993), and it stimulated the recent rethinking of the role of the state in economic development.

Since the financial crisis the East Asian economies have been widely condemned for their misguided economic policies, which are seen as responsible for the mess in which those economies find themselves today. Some ideologues have taken advantage of the current problems in East Asia to suggest that the system of active state intervention is the root of the problem. They point to the government-directed loans and the cozy relations between the government and the large *chaebol* in the Republic of Korea. In doing so, they overlook the successes of the past three decades, to which the government, despite occasional mistakes, has certainly contributed. These achievements, which include not only large increases in per capita GDP but also increases in life expectancy, the extension of education and a dramatic reduction in poverty, are real and will prove more lasting than the current financial turmoil.

Even when the governments directly undertook actions themselves,

they had notable achievements. The fact that they created the most efficient steel plants in the world challenges the privatization ideologues who suggested that such successes are at best a fluke, and at worst impossible. Nevertheless, I agree that, in general, government should focus on what it alone can do and leave the production of commodities like steel to the private sector. But the heart of the current problem in most cases is not that government has done too much in every area but that it has done too little in some areas. In Thailand the problem was not that the government directed investments into real estate; it was that government regulators failed to halt it. Similarly, the Republic of Korea suffered from problems including overlending to companies with excessively high leverage and weak corporate governance. The fault is not that the government misdirected credit – the fact the current turmoil was precipitated by loans by so many US, European and Japanese banks suggest that *market* entities also may have seriously misdirected credit. Instead the problem was the government's lack of action, the fact that the government underestimated the importance of financial regulation and corporate governance.¹

The current crisis in East Asia is not a refutation of the East Asian miracle. The basic facts remain: no other region in the world has ever had incomes rise so dramatically and seen so many people move out of poverty in such a short time. The more dogmatic versions of the Washington consensus fail to provide the right framework for understanding either the success of the East Asian economies or their current troubles. Responses to East Asia's crisis grounded in these views of the world are likely to be, at best, badly flawed and, at worst, counterproductive.

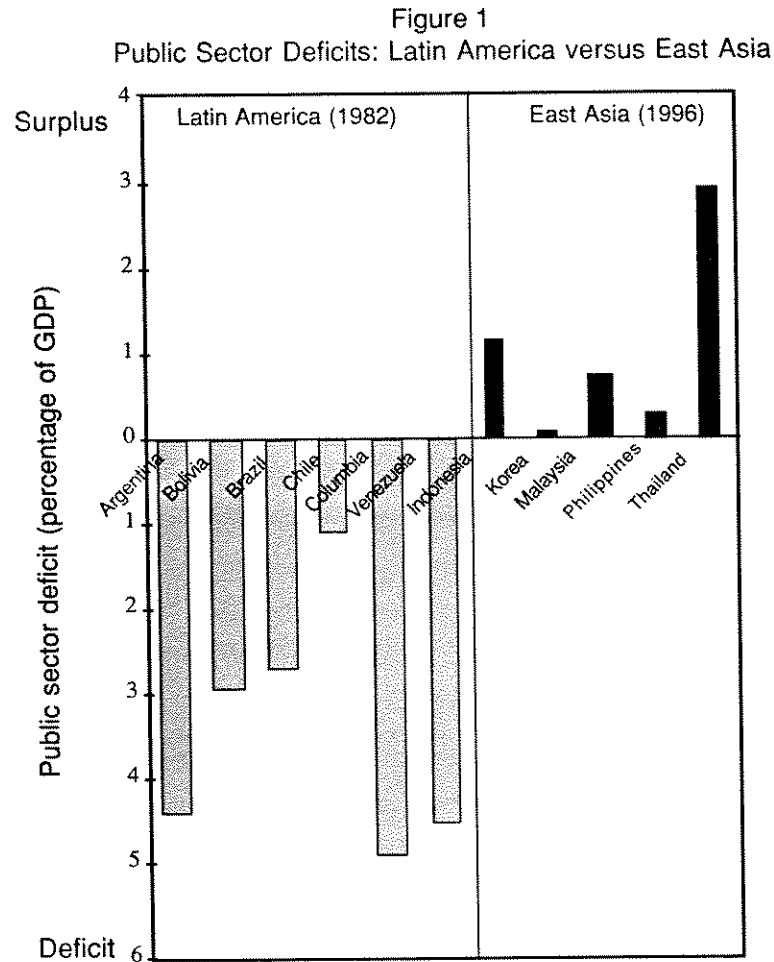
MAKING MARKETS WORK BETTER

The Washington consensus was catalyzed by the experience of Latin American countries in the 1980s. At the time markets in the region were not functioning well, partly the result of dysfunctional public policies. GNP declined for three consecutive years. Budget deficits were very high – some were in the range of five to ten per cent of GDP² – and the spending underlying them was being used not so much for productive investments as for subsidies to the huge and inefficient state sector. With strong curbs on imports and relatively little emphasis on exports, firms

had insufficient incentives to increase efficiency or maintain international quality standards. At first deficits were financed by borrowing – including very heavy borrowing from abroad. Bankers trying to recycle petrodollars were quick to lend and low real interest rates made borrowing very attractive, even for low-return investments. After 1980, though, real interest rate increases in the United States restricted continued borrowing and raised the burden of interest payments, forcing many countries to turn to seignorage to finance the gap between the continued high level of public spending (augmented by soaring interest payments) and the shrinking tax base. The result was very high and extremely variable inflation. In this environment money became a much costlier means of exchange, economic behavior was diverted toward protecting value rather than making productive investments, and the relative price variability induced by the high inflation undermined one of the primary functions of the price system: conveying information.

The so-called “Washington consensus” of US economic officials, the International Monetary Fund (IMF) and the World Bank was formed in the midst of these serious problems. Now is a good time to reexamine this consensus. Many countries, such as Argentina and Brazil, have pursued successful stabilizations; the challenges they face are in designing the second generation of reforms. Still other countries have always had relatively good policies or face problems quite different from those of Latin America. East Asian governments, for instance have been running budget surpluses; inflation is low and, before the devaluations, was falling in many countries (see figures 1 and 2). The origins of the current financial crises lie elsewhere and their solutions will not be found in the Washington consensus.

The focus on inflation – the central macroeconomic malady of the Latin American countries, which provided the backdrop for the Washington consensus – has led to macroeconomic policies that may not be the most conducive for long-term economic growth, and it has detracted attention from other major sources of macro-instability, namely, weak financial sectors. In the case of financial markets the focus on freeing up markets may have had the perverse effect of contributing to macroeconomic instability by weakening the financial sector. More broadly, in focusing on trade liberalization, deregulation, and privatization, policymakers ignored other important ingredients, most notably competition, that are required to make an effective market economy and which may be at least as important as

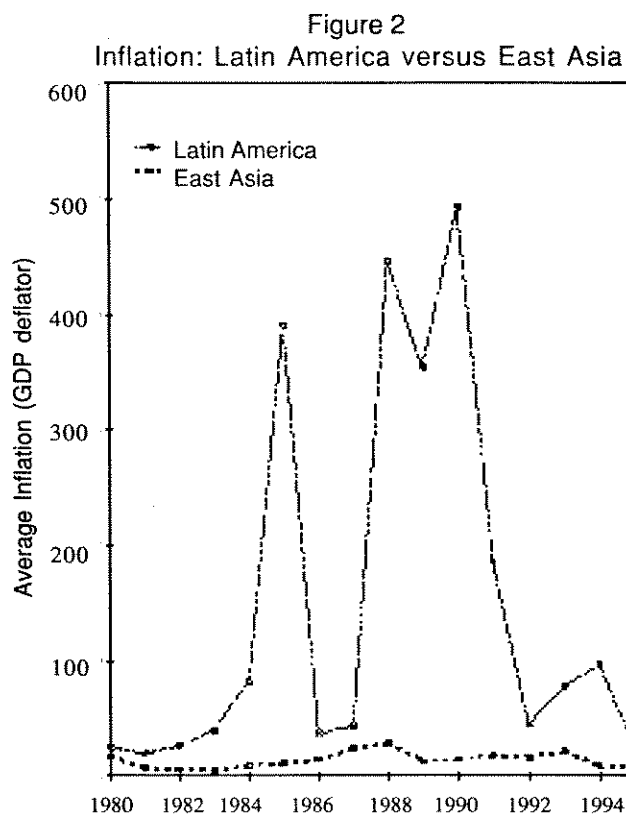


Note: Calculations based on data from IMF International Financial Statistics Database. Figures for Thailand are from 1995.

the standard economic prescriptions in determining long-term economic success.³

Other essential ingredients were also left out or underemphasized by the Washington consensus. One – education – has been widely recognized within the development community; others, such as the improvement of technology, may not have received the attention they deserve.

The success of the Washington consensus as an intellectual doctrine rests on its simplicity: its policy recommendations could be administered by economists using little more than simple accounting frameworks. A few economic indicators – inflation, money supply growth, interest rates, budget and trade deficits – could serve as the basis for a set of policy recommendations. Indeed, in some cases economists would fly into a



Note: Unweighted regional averages based on World Development Indicators 1997 data

country, look at and attempt to verify these data, and make macroeconomic recommendations for policy reforms, all in the space of a couple of weeks.⁴

There are important advantages to the Washington consensus approach to policy advice. It focuses on issues of first-order importance, it sets up an easily reproducible framework which can be used by a large organization worried about recommendations depending on particular individuals' viewpoints, and it is frank about limiting itself only to establishing the prerequisites for development. But the Washington consensus does not offer answers to every important question in development.

In contrast, the ideas that I present here are, unfortunately, not so simple. They are not easy to articulate as dogma nor to implement as policy. There are no easy-to-read thermometers of the economy's health, and worse still, there may be trade-offs, in which economists, especially outside economists, should limit their role to describing consequences of alternative policies. The political process may actually have an important say in the choices of economic direction. Economic policy may not be just a matter for technical experts! These conflicts become all the more

important when we come to broaden the objectives, in the final part of this talk.

This part of the paper focuses on enhancing the efficiency of the economy. I will discuss macro-stability and liberalization – two sets of issues about which the Washington consensus was concerned – as well as financial sector reform, the government’s role as a complement to the private sector, and improving the state’s effectiveness – issues that were not included in the consensus. I shall argue that the Washington consensus’ messages in the two core areas are at best incomplete and at worse misguided. While macro-stability is important, for example, inflation is not always its most essential component. Trade liberalization and privatization are key parts of sound macro-economic policies, but they are not ends in themselves. They are means to the end of a less distorted, more competitive, more efficient marketplace and must be complemented by effective regulation and competition policies.

ACHIEVING MACROECONOMIC STABILITY

Controlling inflation

Probably the most important policy prescription of the stabilization packages promoted by the Washington consensus was controlling inflation. The argument for aggressive, preemptive strikes against inflation is based on three premises. The most fundamental is that inflation is costly and should therefore be averted or lowered. The second premise is that once inflation starts to rise it has a tendency to accelerate out of control. This belief provides a strong motivation for preemptive strikes against inflation, with the risk of an increase in inflation being weighed far more heavily than the risk of adverse effects on output and unemployment. The third premise is that increases in inflation are very costly to reverse. This line of thought implies that even if maintaining low unemployment were valued more highly than maintaining low inflation, steps would still be taken to keep inflation from increasing today in order to avoid having to induce large recessions to bring the inflation rate down later on. All three of these premises can be tested empirically.

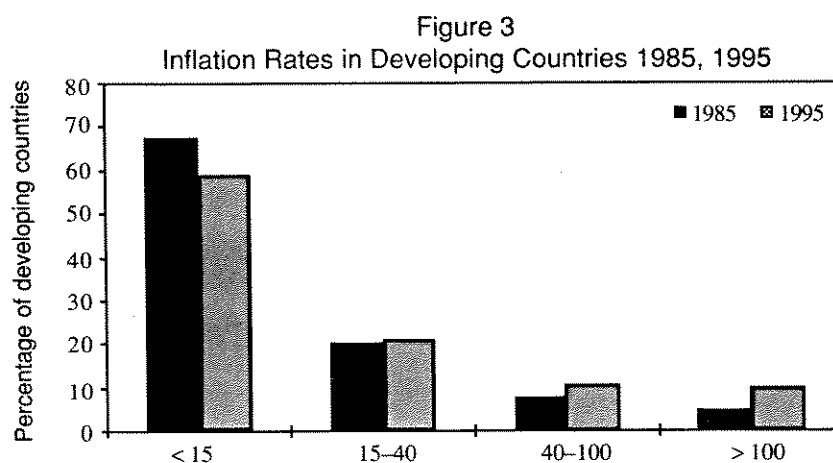
I have discussed this evidence in more detail elsewhere (Stiglitz 1997a). Here I would like to summarize briefly. The evidence has shown only that high inflation is costly. Bruno and Easterly (1996) found that when

countries cross the threshold of 40 per cent annual inflation, they fall into a high-inflation/low-growth trap. Below that level, however, *there is little evidence that inflation is costly*. Barro (1997) and Fischer (1993) also confirm that high inflation is, on average, deleterious for growth, but they, too, fail to find any evidence that low levels of inflation are costly. Fischer finds the same results for the variability of inflation.⁵ Recent research by Akerlof, Dickens, and Perry (1996) suggests that low levels of inflation may even improve economic performance relative to what it would have been with zero inflation.

The evidence on the accelerationist hypothesis (also known as “letting the genie out of the bottle”, the “slippery slope”, or the “precipice theory”) is unambiguous: there is no indication that the increase in the inflation rate is related to past increases in inflation. Evidence on reversing inflation suggests that the Phillips curve may be concave and that the costs of reducing inflation may thus be smaller than the benefits incurred when inflation is rising.⁶

In my view the conclusion to be drawn from this research is that controlling high and medium-rate inflation should be a fundamental policy priority but that pushing low inflation even lower is not likely to significantly improve the functioning of markets.

In 1995 more than half the countries in the developing world had inflation rates of less than 15 per cent a year (figure 3). For these 71 countries controlling inflation should not be an overarching priority. Controlling inflation is probably an important component of stabilization and reform



Inflation rate (GDP deflator)

Source: World Development Indicators, 1997

Note: 121 of 158 low- and middle-income countries

in the 25 countries, almost all of them in Africa, Eastern Europe and the former Soviet Union, with inflation rates of more than 40 per cent a year. The single-minded focus on inflation may not only distort economic policies – preventing the economy from living up to its full growth and output potentials – but also lead to institutional arrangements that reduce economic flexibility without gaining important growth benefits.⁷

Managing the budget deficit and the current account deficit

A second component of macroeconomic stability has been reducing the size of government, the budget deficit and the current account deficit. I will return to the issue of the optimal size of government later; for now I would like to focus on the twin deficits. Much evidence shows that sustained, large budget deficits are deleterious to economic performance (Fischer, 1993; Easterly, Rodriguez and Schmidt-Hebbel 1994).⁸ The three methods of financing deficits all have drawbacks: internal finance raises domestic interest rates, external financing can be unsustainable, and money creation causes inflation.⁹

There is no simple formula for determining the optimum level of the budget deficit. The optimum deficit – or the range of sustainable deficits¹⁰ – depends on circumstances, including the cyclical state of the economy, prospects for future growth, the uses of government spending, the depth of financial markets, and the levels of national savings and national investment. The United States, for example, is currently trying to balance its budget. I have long argued that the low private saving rate and the ageing of the baby boom suggest that the United States should probably be aiming for budget surpluses. In contrast, the case for maintaining budget surpluses in the East Asian countries in the face of an economic downturn, where the rate of private saving is high and the public debt- GDP ratios are relatively low, is far less compelling.

The experience of Ethiopia emphasizes another determinant of optimal deficits, the source of financing. For the last several years Ethiopia has run a deficit of about eight per cent of GDP. Some outside policy advisers would like Ethiopia to lower its deficit. Others have argued that the deficit is financed by a steady and predictable inflow of highly concessional foreign assistance, which is driven not by the necessity of filling a budget gap but by the availability of high returns to investment.

Under these circumstances – and given the high returns to government investment in such crucial areas as primary education and physical infrastructure (especially roads and energy) – it may make sense for the government to treat foreign aid as a legitimate source of revenue, just like taxes, and balance the budget inclusive of foreign aid.

The optimal level of the current account deficit is difficult to determine. Current account deficits occur when a country invests more than it saves. They are neither inherently good nor inherently bad but depend on circumstances and especially on the uses to which the funds are put. In many countries the rate of return on investment far exceeds the cost of international capital. In these circumstances current account deficits are sustainable.¹¹

The form of the financing also matters. The advantage of foreign direct investment is not just the capital and knowledge that it supplies, but also the fact that it tends to be very stable. In contrast, Thailand's eight per cent current account deficit in 1996 was not only large but came in the form of short-term, dollar-denominated debt that was used to finance local-currency denominated investment, often in excessive and unproductive uses like real estate. More generally, short-term debt and portfolio flows can bring the costs of high volatility without the benefits of knowledge spillovers.¹²

Stabilizing output and promoting long-run growth

Ironically, macroeconomic stability – as conceived by the Washington consensus – typically downplays stabilizing output or unemployment. Minimizing or avoiding major economic contractions should be one of the most important goals of policy. In the short run large-scale involuntary unemployment is clearly inefficient – in purely economic terms it represents idle resources that could be used more productively. The social and economic costs of these downturns can be devastating: lives and families are disrupted, poverty increases, living standards decline, and, in the worst cases, social and economic costs translate into political and social turmoil.

Moreover, business cycles themselves can have important consequences for long-run growth (see Stiglitz 1994a). The difficulty of borrowing to finance research and development means that firms will need to reduce drastically their research and development expenditures when their cash flow decreases in downturns. The result is slower total

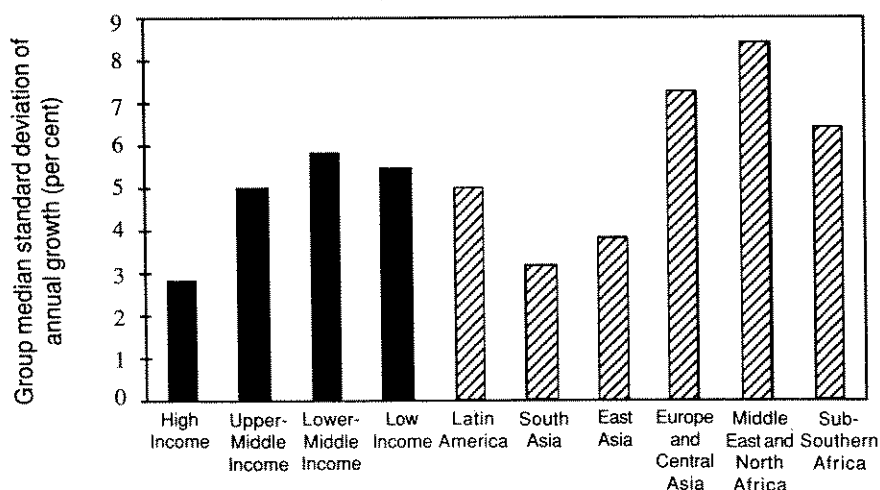
factor productivity growth in the future. This effect appears to have been important in the United States; whether or not it matters in countries in which research and development plays a less important role requires further study. Generally, however, variability of output almost certainly contributes to uncertainty and thus discourages investment.¹³

Variability of output is especially pronounced in developing countries (see Pritchett, 1997). The median high-income country has a standard deviation of annual growth of 2.8 per cent (figure 4). For developing countries the standard deviation is five per cent or higher, implying huge deviations in the growth rate. Growth is especially volatile in Europe and Central Asia, the Middle East and North Africa, and Sub-Saharan Africa.

How can macroeconomic stability in the sense of stabilizing output or employment be promoted? The traditional answer is good macroeconomic policy, including countercyclical monetary policy and a fiscal policy that allows automatic stabilizers to operate. These policies are certainly necessary, but a growing literature, both theoretical and empirical, has emphasized the important microeconomic underpinnings of macroeconomic stability. This literature emphasizes the importance of financial markets and explains economic downturns through such mechanisms as credit rationing and banking and firm failures.¹⁴

In the nineteenth century most of the major economic downturns in industrial countries resulted from financial panics that were sometimes

Figure 4
Volatility of GDP growth, 1970–95



Source: Calculations based on real annual growth rates from *World Development Indicators*, 1997.

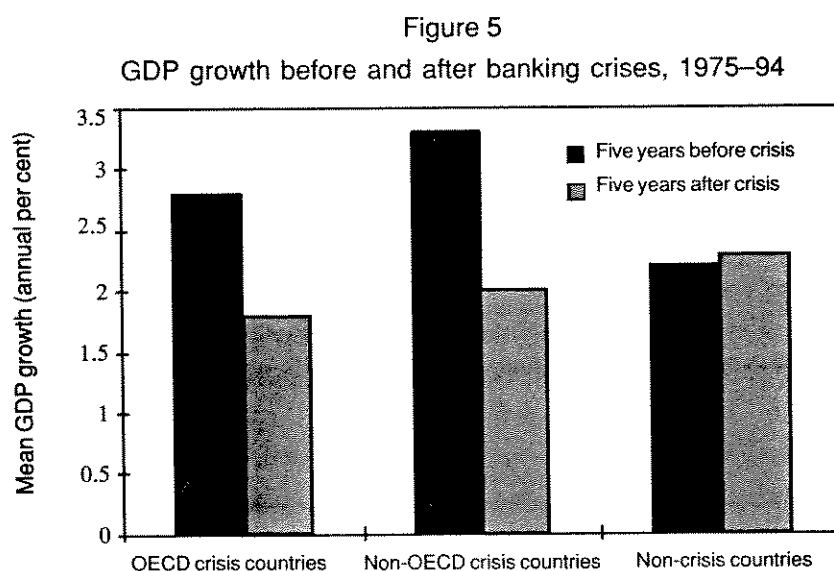
preceded by and invariably led to precipitous declines in asset prices and widespread banking failures. In some countries improvement in regulation and supervision, the introduction of deposit insurance and the shaping of incentives for financial institutions reduced the incidence and severity of financial panics. But financial crises continue to occur, and there is some evidence that they have become more frequent and more severe in recent years (Caprio and Klingebiel, 1997). Even after adjusting for inflation, the losses from the notorious savings and loan debacle in the United States were several times larger than the losses experienced in the Great Depression. Yet when measured relative to GDP, this debacle would not make the list of the top 25 international banking crises since the early 1980s (table 1).

Table 1

Fiscal costs of banking crises in selected countries (percentage of GDP)	
Country (Date)	Cost (percentage of GDP)
Argentina (1980–82)	55.3
Chile (1981–3)	41.2
Uruguay (1981–4)	31.2
Israel (1977–83)	30.0
Cote d’Ivoire (1988–91)	25.0
Senegal (1988–91)	17.0
Spain (1977–85)	16.8
Bulgaria (1990s)	14.0
Mexico (1995)	13.5
Hungary (1991–5)	10.0
Finland (1991–3)	8.0
Sweden (1991)	6.4
Sri Lanka (1989–93)	5.0
Malaysia (1985–8)	4.7
Norway (1987–9)	4.0
United States (1984–91)	3.2

Source: Caprio and Klingebiel 1996.

Banking crises have severe macroeconomic consequences, affecting growth over the five following years (figure 5). During the period 1975–94 growth edged up slightly in countries that did not experience banking crises; countries with banking crises saw growth slow by 1.3 percentage points in the five years following a crisis. Clearly, building robust financial systems is a crucial part of promoting macroeconomic stability.



Source: Caprio, 1997.

The process of financial reform

The importance of building robust financial systems goes beyond simply averting economic crises. The financial system can be likened to the “brain” of the economy. It plays an important role in collecting and aggregating savings from agents who have excess resources today. These resources are allocated to others – such as entrepreneurs and home builders – who can make productive use of them. Well-functioning financial systems do a very good job of selecting the most productive recipients for these resources. In contrast, poorly functioning financial systems often allocate capital to low-productivity investments. Selecting projects is only the first stage. The financial system must continue to monitor the use of funds, ensuring that they continue to be used productively. In the process financial markets serve a number of other functions, including reducing

risk, increasing liquidity and conveying information. All of these functions are essential to both the growth of capital and the increase in total factor productivity.

Left to themselves financial systems will not do a very good job of performing these functions. Problems of incomplete information, incomplete markets and incomplete contracts are all particularly severe in the financial sector, resulting in an equilibrium that is not even constrained Pareto efficient (Greenwald and Stiglitz, 1986).¹⁵

The emphasis on “transparency” in recent discussions of East Asia demonstrates our growing recognition of the importance of good information for the effective function of markets. Capital markets, in particular, require auditing standards accompanied by effective legal systems to discourage fraud, provide investors with adequate information about the firms’ assets and liabilities, and protect minority shareholders.¹⁶ But transparency by itself is not sufficient, in part because information is inevitably imperfect. A sound legal framework combined with regulation and oversight is necessary to mitigate these informational problems and foster the conditions for efficient financial markets.

Regulation serves four purposes in successful financial markets: maintaining safety and soundness (prudential regulation), promoting competition, protecting consumers, and ensuring that underserved groups have some access to capital. In many cases the pursuit of social objectives – such as ensuring that minorities and poor communities receive funds, as the United States’ Community Reinvestment Act does, or ensuring funds for mortgages, the essential mission of the government – created Federal National Mortgage Association – can, if done well, reinforce economic objectives. Similarly, protecting consumers is not only good social policy, it also builds confidence that there is a “level playing field” in economic markets. Without such confidence those markets will remain thin and ineffective.

At times, however, policymakers face tradeoffs among conflicting objectives. The financial restraints adopted by some of the East Asian economies, for example, increased the franchise values of banks, discouraging them from taking unwarranted risks that otherwise might have destabilized the banking sector. Although there were undoubtedly some economic costs associated with these restraints, the gains from greater stability almost surely outweighed those losses. As I comment below, the removal of many of these restraints in recent years may have

contributed in no small measure to the current instability that these countries are experiencing.

The World Bank and others have tried to create better banking systems. But changing the system – through institutional development, transformations in credit culture, and creation of regulatory structures which reduce the likelihood of excessive risk-taking¹⁷ – has proved more intractable than finding short-term solutions, such as recapitalizing the banking system. In the worst cases the temporary fixes may even have undermined pressures for further reform. Since the fundamental problems were not addressed, some countries have required assistance again and again.

The Washington consensus developed in the context of highly regulated financial systems, in which many of the regulations were designed to limit competition rather than promote any of the four legitimate objectives of regulation. But all too often the dogma of liberalization became an end in itself, not a means of achieving a better financial system. I do not have space to delve into all of the many facets of liberalization, which include freeing up deposit and lending rates, opening up the market to foreign banks and removing restrictions on capital account transactions and bank lending. But I do want to make a few general points.

First, the key issue should not be liberalization or deregulation but construction of the regulatory framework that ensures an effective financial system. In many countries this will require changing the regulatory framework by eliminating regulations that serve only to restrict competition but accompanying these changes with increased regulations to ensure competition and prudent behavior (and to ensure that banks have appropriate incentives.)

Second, even once the design of the desired financial system is in place, care will have to be exercised in the transition. Attempts to initiate overnight deregulation – sometimes known as the “big bang” – ignore the very sensitive issues of sequencing. Thailand, for instance, used to have restrictions on bank lending to real estate. In the process of liberalization it got rid of these restrictions without establishing a more sophisticated risk-based regulatory regime. The result, together with other factors, was the large-scale misallocation of capital to fuel a real estate bubble, an important factor in the financial crisis.

It is important to recognize how difficult it is to establish a vibrant

financial sector. Even economies with sophisticated institutions, high levels of transparency and good corporate governance like the United States and Sweden have faced serious problems with their financial sectors. The challenges facing developing countries are far greater, while the institutional base from which they start is far weaker.

Third, in all countries a primary objective of regulation should be to ensure that participants face the right incentives: government cannot and should not be involved in monitoring every transaction. In the banking system liberalization will not work unless regulations create incentives for bank owners, markets and supervisors to use their information efficiently and act prudentially.

Incentive issues in securities markets also need to be addressed. It must be more profitable for managers to create economic value than to deprive minority shareholders of their assets: rent-seeking can be every bit as much a problem in the private as in the public sector. Without the appropriate legal framework, securities markets can simply fail to perform their vital functions – to the detriment of the country's long-term economic growth. Laws are required to protect the interests of shareholders, especially minority shareholders.

The focus on the microeconomic, particularly the financial, underpinnings of the macroeconomy also has implications for responses to currency turmoil. In particular, where currency turmoil is the consequence of a failing financial sector, the conventional policy response to rising interest rates may be counterproductive.¹⁸ The maturity and structure of bank and corporate assets and liabilities are frequently very different, in part because of the strong incentives for banks to use short-term debt to monitor and influence the firms they lend to and for depositors to use short-term deposits to monitor and influence banks (Rey and Stiglitz, 1993). As a result interest rate increases can lead to substantial reductions in bank net worth, further exacerbating the banking crisis.¹⁹ Empirical studies by IMF and World Bank economists have confirmed that interest rate rises tend to increase the probability of banking crises and that currency devaluations have no significant effect (Demirgüç-Kunt and Detragiach, 1997).²⁰

Advocates of high-interest rate policies have asserted that such policies are necessary to restore confidence in the economy and thus stop the erosion of the currency's value. Halting the erosion of the currency, in turn, is important to both restore the underlying strength of

the economy and prevent a burst of inflation from the rise of the price of imported goods.²¹ This prescription is based on assumptions about market reactions – i.e., what will restore confidence – and economic fundamentals.

Ultimately confidence and economic fundamentals are inextricably intertwined. Are measures that weaken the economy, especially the financial system, likely to restore confidence? To be sure, if an economy is initially facing high levels of inflation caused by high levels of excess aggregate demand, increases in the interest rate will be seen to strengthen the economic fundamentals by restoring macro-stability. For an economy where there is little initial evidence of macro-imbalances but a predicted large exogenous fall in aggregate demand, high interest rates will lead to an economic slump and the slump will combine with the interest rates themselves to undermine the financial system.

Fostering competition

So far I have argued that macroeconomic policy needs to be expanded beyond a single-minded focus on inflation and budget deficits; the set of policies that underlay the Washington consensus are not sufficient for macroeconomic stability or long-term development. Macroeconomic stability and long-term development require sound financial markets. But the agenda for creating sound financial markets should not confuse means with ends; redesigning the regulatory system, not financial liberalization, should be the issue.

I now want to argue that competition is central to the success of a market economy. Here, too, there has been some confusion between means and ends. Policies that should have been viewed as means to achieve a more competitive marketplace were seen as ends in themselves. As a result, in some instances they failed to attain their objectives.

The fundamental theorems of welfare economics, the results that establish the efficiency of a market economy, assume that both private property and competitive markets exist in the economy. Many countries – especially developing and transition economies – lack both. Until recently, however, emphasis was placed almost exclusively on creating private property and liberalizing trade – trade liberalization being confused with establishing competitive markets. Trade liberalization is

important, but we are unlikely to realize the full benefits of liberalizing trade without creating a competitive economy.

Promoting free trade

Trade liberalization, leading eventually to free trade, was a key part of the Washington consensus. The emphasis on trade liberalization was natural: the Latin American countries had stagnated behind protectionist barriers.²² Import substitution proved a highly ineffective strategy for development. In many countries industries were producing products with negative value added, and innovation was stifled. The usual argument – that protectionism itself stifled innovation – was somewhat confused. Governments could have created competition among domestic firms, which would have provided incentives to import new technology. It was the failure to create competition internally, more than protection from abroad, that was the cause of the stagnation. Of course, competition from abroad would have provided an important source of competition. But it is possible that in the one-sided race, domestic firms would have dropped out of the competition rather than enter the fray. Consumers might have benefited, but the effects on growth may have been more ambiguous.

Trade liberalization may create competition, but it does not do so automatically. If trade liberalization occurs in an economy with a monopoly importer, the rents may simply be transferred from the government to the monopolist, with little decrease in prices. Trade liberalization is thus neither necessary nor sufficient for creating a competitive and innovative economy.

At least as important as creating competition in the previously sheltered import-competing sector of the economy is promoting competition on the export side. The success of the East Asian economies is a powerful example of this point. By allowing each country to take advantage of its comparative advantage, trade increases wages and expands consumption opportunities. For the past 15 years trade has been doing just that – with world trade growing at five per cent a year, nearly twice the rate of world GDP growth.

Interestingly, the process by which trade liberalization leads to enhanced productivity is not fully understood. The standard Heckscher-Ohlin theory predicts that countries will shift intersectorally, moving along their production possibility frontier, producing more of

what they are better at and trading for what they are worse at. In reality, the main gains from trade seem to come intertemporally, from an outward shift in the production possibility frontier as a result of increased efficiency, with little sectoral shift. Understanding the causes of this improvement in efficiency requires an understanding of the links between trade, competition and liberalization. This is an area that needs to be pursued further.²³

Facilitating privatization

State monopolies in certain industries have stifled competition. But the emphasis on privatization over the past decade has stemmed less from concern over lack of competition than from a focus on profit incentives. In a sense, it was natural for the Washington consensus to focus more on privatization than on competition. Not only were state enterprises inefficient, their losses contributed to the government's budget deficit, adding to macroeconomic instability. Privatization would kill two birds with one stone, simultaneously improving economic efficiency and reducing fiscal deficits.²⁴ The idea was that if property rights could be created, the profit-maximizing behavior of the owners would eliminate waste and inefficiency. At the same time the sale of the enterprises would raise much needed revenue.

Although in retrospect the process of privatization in the transition economies was, in several instances at least, badly flawed, at the time it seemed reasonable to many. Although most people would have preferred a more orderly restructuring and the establishment of an effective legal structure (covering contracts, bankruptcy, corporate governance and competition) prior to or at least simultaneous to promulgations, no one knew how long the reform window would stay open. At the time privatizing quickly and comprehensively – and then fixing the problems later on – seemed a reasonable gamble. From today's vantage point, the advocates of privatization may have overestimated the benefits of privatization and underestimated the costs, particularly the political costs of the process itself and the impediments it has posed to further reform. Taking that same gamble today, with the benefit of seven more years of experience, would be much less justified.

Even at the time many of us warned against hastily privatizing without

creating the needed institutional infrastructure, including competitive markets and regulatory bodies. David Sappington and I showed in the fundamental theorem on privatization that the conditions under which privatization can achieve the public objectives of efficiency and equity are very limited and are very similar to the conditions under which competitive markets attain Pareto-efficient outcomes (Sappington and Stiglitz, 1987). If, for instance, competition is lacking, creating a private, unregulated monopoly will likely result in even higher prices for consumers. And there is some evidence that, insulated from competition, private monopolies may suffer from several forms of inefficiency and may not be highly innovative.

Indeed, both large-scale public and private enterprises share many similarities and face many of the same organizational challenges (Stiglitz, 1989). Both involve substantial delegation of responsibility – neither legislatures nor shareholders in large companies directly control the daily activities of an enterprise. In both cases the hierarchy of authority terminates in managers who typically have a great deal of autonomy and discretion. Rent-seeking occurs in private enterprises, just as it does in public enterprises. Shleifer and Vishny (1989) and Edlin and Stiglitz (1995) have shown that there are strong incentives not only for private rent-seeking on the part of management but for taking actions that increase the scope for such rent-seeking. In the Czech Republic the bold experiment with voucher privatization seems to have foundered on these issues, as well as the broader issues of whether, without the appropriate legal and institutional structures, capital markets can provide the necessary discipline to managers as well as allocate scarce capital efficiently.

Public organizations typically do not provide effective incentives and often impose a variety of additional constraints. When these problems are effectively addressed, when state enterprises are embedded in a competitive performance-based environment, performance differences may narrow (Caves and Christenson, 1980).

The differences between public and private enterprises are blurry, and there is a continuum of arrangements in between. Corporatization, for instance, maintains government ownership but moves firms toward hard budget constraints and self-financing; performance-based government organizations use output-oriented performance measures as a basis for incentives. Some evidence suggests that much of the gains from privatization occur before privatization as a result of the process of putting in place effective individual and organizational incentives (Pannier, 1996).

The importance of competition rather than ownership has been most vividly demonstrated by the experience of China and the Russian Federation. China extended the scope of competition without privatizing state-owned enterprises. To be sure, a number of problems remain in the state-owned sector, which may be addressed in the next stage of reform. In contrast, Russia has privatized a large fraction of its economy without doing much to promote competition. The contrast in performance could not be greater, with Russia's output below the level attained almost a decade ago, while China has managed to sustain double-digit growth for almost two decades. Though the differences in performance may be only partially explained by differences in the policies they have pursued, both the Chinese and Russian experiences pose quandaries for traditional economic theories.

In particular, the magnitude and duration of Russia's downturn is itself somewhat of a puzzle: the Soviet economy was widely considered rife with inefficiencies, and a substantial fraction of its output was devoted to military expenditures. The elimination of these inefficiencies should have raised GDP, and the reduction in military expenditures should have increased personal consumption still farther.²⁵ Yet neither seems to have occurred.

The magnitude and success of China's economy over the past two decades also represents a puzzle for standard theory. Chinese policymakers not only eschewed a strategy of outright privatization, they also failed to incorporate numerous other elements of the Washington consensus. Yet China's recent experience is one of the greatest economic success stories in history. If China's 30 provinces were treated as separate economies – and many of them have populations exceeding those of most other low-income countries – the 20 fastest-growing economies between 1978 and 1995 would all have been Chinese provinces (World Bank, 1997a). Although China's GDP in 1978 represented only about one-quarter of the aggregate GDP of low-income countries and its population represented only 40 per cent of the total, almost two-thirds of aggregate growth in low-income countries between 1978 and 1995 was accounted for by the increase in China's GDP.

While measurement problems make it difficult to make comparisons between Russia and China with any precision, the broad picture remains persuasive: real incomes and consumption have fallen in the former Soviet Union, and real incomes and consumption have risen rapidly in China.

One of the important lessons of the contrast between China and Russia is for the political economy of privatization and competition. It has proved difficult to prevent corruption and other problems in privatizing monopolies. The huge rents created by privatization will encourage entrepreneurs to try to secure privatized enterprises rather than invest in creating their own firms. In contrast, competition policy often undermines rents and creates incentives for wealth creation. The sequencing of privatization and regulation is also very important. Privatizing a monopoly can create a powerful entrenched interest that undermines the possibility of regulation or competition in the future.

The Washington consensus is right – privatization is important. The government needs to devote its scarce resources to areas the private sector does not and is not likely to enter. It makes no sense for the government to be running steel mills. But there are critical issues about both the sequencing and the scope of privatization. Even when privatization increases productive efficiency, it may be difficult to ensure that broader public objectives are attained, even with regulation. Should prisons, social services, or the making of atomic bombs (or the central ingredient of atomic bombs, highly enriched uranium) be privatized, as some in the United States have advocated? Where are the boundaries? More private sector activity can be introduced into public activities (through contracting, for example, and incentive-based mechanisms, such as auctions). How effective are such mechanisms as substitutes for outright privatization? These issues were not addressed by the Washington consensus.

Establishing regulation

Competition is an essential ingredient in a successful market economy. But competition is not viable in some sectors – the so-called natural monopolies. Even there, however, the extent and form of actual and potential competition are constantly changing. New technologies have expanded the scope for competition in many sectors that have historically been highly regulated, such as telecommunications and electric power.

Traditional regulatory perspectives, with their rigid categories of regulation versus deregulation and competition versus monopoly have not been helpful guides to policy in these areas. These new technologies

do not call for wholesale deregulation, because not all parts of these industries are adequately competitive. Instead, they call for appropriate changes in regulatory structure to meet the new challenges. Such changes must recognize the existence of hybrid areas of the economy, parts of which are well suited to competition, while other parts are more vulnerable to domination by a few producers. Allowing a firm with market power in one part of a regulated industry to gain a stranglehold over other parts of the industry will severely compromise economic efficiency.

Forging competition policy

Although the scope of viable competition has expanded, competition is often imperfect, especially in developing countries. Competition is suppressed in a variety of ways, including implicit collusion and predatory pricing. Control of the distribution system may effectively limit competition even when there are many producers. Vertical restraints can restrict competition. And new technologies have opened up new opportunities for anticompetitive behavior, as recent cases in the US airline and computer industry have revealed.

The establishment of effective antitrust laws for developing countries has not been examined adequately. The sophisticated and complicated legal structures and institutions in place in the United States may not be appropriate for many developing countries, which may have to rely more on *per se* rules.

Competition policy also has important implications for trade policy. Currently, most countries have separate rules governing domestic competition and international competition (Australia and New Zealand are exceptions). With little if any justification, rules governing competition in international trade (such as anti-dumping provisions and countervailing duties) are substantially different from domestic antitrust laws (see Stiglitz, 1997b); much of what we consider as healthy price competition domestically would be classified as dumping.²⁶ These abuses of fair trade were pioneered in the industrial countries but are now spreading to the developing countries – which surpassed industrial countries in the initiation of antidumping actions reported to the General Agreement on Tariffs and Trade (GATT) and the World Trade Organization (WTO) for the first time in 1996 (World Bank, 1997b).

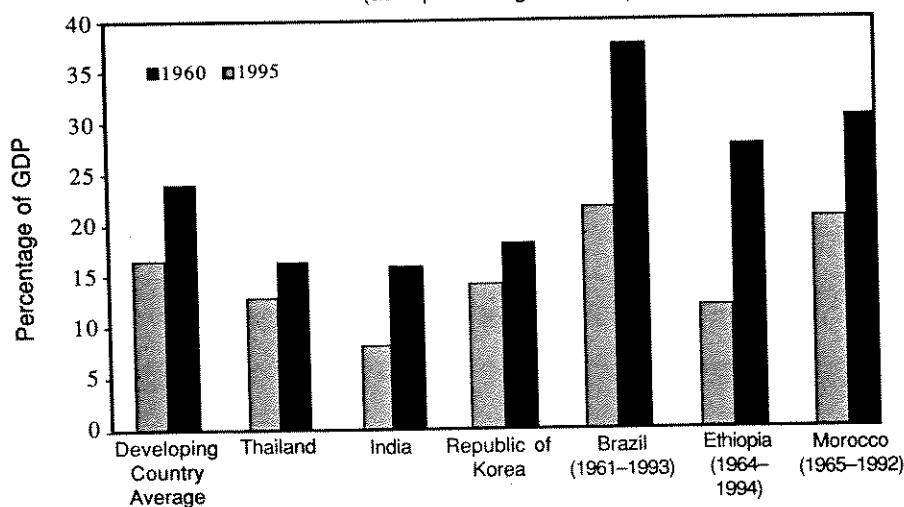
The best way to curtail these abuses would be to integrate fair trade and fair competition laws based on the deep understanding of the nature of competition that antitrust authorities and industrial organization economists have evolved over the course of a century.

Government acting as a complement to markets

For much of this century people have looked to government to spend more and intervene more. Government spending as a share of GDP has grown with these demands (figure 6). The Washington consensus policies were based on a rejection of the state's activist role and the promotion of a minimalist, noninterventionist state. The unspoken premise is that governments are worse than markets. Therefore the smaller the state the better the state.

It is true that states are often involved in too many things, in an unfocused manner. This lack of focus reduces efficiency; trying to get government better focused on the fundamentals – economic policies, basic education, health, roads, law and order, environmental protection – is a vital step. But focusing on the fundamentals is not a recipe for minimalist government. The state has an important role to play in appropriate regulation, social protection and welfare. The choice should

Figure 6
Government spending in selected countries
(as a percentage of GDP)



Note: Data from IMF Government Financial Statistics

not be whether the state should be involved but how it gets involved. Thus the central question should not be the size of the government, but the activities and methods of the government. Countries with successful economies have governments that are involved in a wide range of activities.

Over the past several decades, there has been an evolving framework within which the issue of the role of the government can be addressed: the recognition that markets might not always yield efficient outcomes – let alone socially acceptable distributions – led to the market failures approach.²⁷ There was a well-defined set of market failures, associated with externalities and public goods, that justified government intervention. This list of market failures was subsequently expanded to include imperfect information and incomplete markets, but the market failure approach continued to focus on dividing sectors and activities into those which should be in the government domain and those that fall within the province of the private sector. More recently, there has been a growing recognition that the government and private sector are much more intimately entwined. The government should serve as a complement to markets, undertaking actions that make markets work better and correcting market failures. In some cases the government has proved to be an effective catalyst – its actions have helped solve the problem of undersupply of (social) innovation, for example. But once it has performed its catalytic role, the state needs to withdraw.²⁸

I cannot review all of the areas in which government can serve as an important complement to markets. I shall discuss briefly only two, building human capital and transferring technology.

Building human capital

The role of human capital in economic growth has long been appreciated. The returns to an additional year of education in the United States, for instance, have been estimated at five to 15 per cent (Willis, 1986; Kane and Rouse, 1995; Ashenfelter and Krueger, 1994). The rate of return is even higher in developing countries: 24 per cent for primary education in Sub-Saharan Africa, for example, and an average of 23 per cent for primary education in all low-income countries (Psacharopoulos, 1994). Growth accounting also attributes a substantial portion of growth in developing countries to human capital accumulation.²⁹ The East Asian

economies, for instance, emphasized the role of government in providing universal education, which was a necessary part of their transformation from agrarian to rapidly industrializing economies.

Left to itself, the market will tend to underprovide human capital. It is very difficult to borrow against the prospects of future earnings since human capital cannot be collateralized. These difficulties are especially severe for poorer families. The government thus plays an important role in providing public education, making education more affordable and enhancing access to funding.

Transferring technology

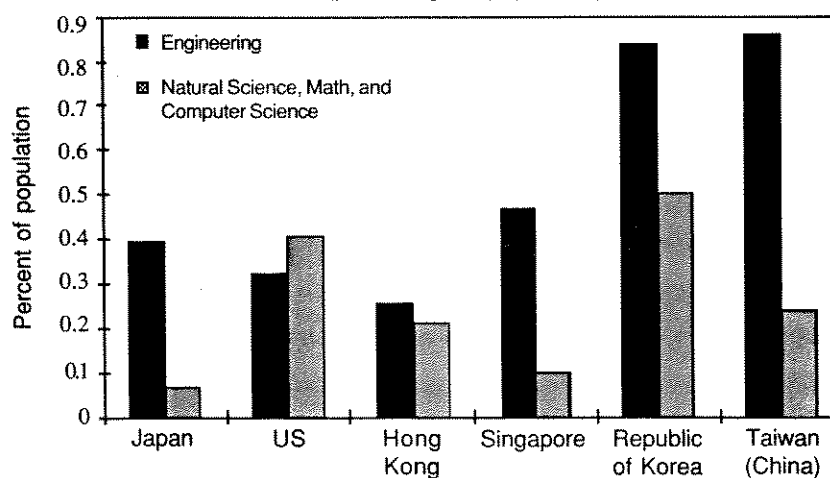
Studies of the returns to research and development (R & D) in industrial countries have consistently found individual returns of 20–30 per cent and social returns of 50 per cent or higher – far exceeding the returns to education (Nadiri, 1993). Growth accounting usually attributes the majority of per capita income growth to improvements in total factor productivity – Solow's (1957) pioneering analysis attributed 87.5 per cent of the increase in output per man-hour between 1909 and 1949 to technical change. Based on a standard Cobb-Douglas production function, per capita income in the Republic of Korea in 1990 would have been only \$2,041 (in 1985 international dollars) if it had relied solely on capital accumulation, far lower than actual per capita income of \$6,665. The difference comes from increasing the amount of output per unit of input, which is partly the result of improvements in technology.³⁰

Left to itself, the market underprovides technology. Like investments in education, investments in technology cannot be used as collateral. Investments in R & D are also considerably riskier than other types of investment and there are much larger asymmetries of information that can impede the effective workings of the market.³¹ Technology also has enormous positive externalities that the market does not reward. Indeed, in some respects, knowledge is like a classical public good. The benefits to society of increased investment in technology far outweigh the benefits to individual entrepreneurs. As Thomas Jefferson said, ideas are like a candle, you can use them to light other candles without diminishing the original flame. Without government action there will be too little investment in the production and adoption of new technology.

For most countries not at the technological frontier, the returns

associated with facilitating the transfer of technology are much higher than the returns from undertaking original research and development. Policies to facilitate the transfer of technology are thus one of the keys to development. One aspect of these policies is investing in human capital, especially in tertiary education. Funding of universities is justified not because it increases the human capital of particular individuals but because of the major externalities that come from enabling the economy to import ideas. Of course, unemployment rates for university graduates are high in many developing countries, and many university graduates hold unproductive civil service jobs. These countries have probably overemphasized liberal arts educations.³² In contrast, the Republic of Korea and Taiwan (China) have narrowed the productivity gap with the leading industrial countries by training scientists and engineers (figure 7).

Figure 7
Tertiary level students in technical fields
(percentage of population)



Source: UNESCO, Statistical Yearbook, 1995, Government of Taiwan, Taiwan Statistical Yearbook, 1994, Ministry of Education (Singapore)

Another policy that can promote the transfer of technology is foreign direct investment. Singapore, for example, was able to assimilate rapidly the knowledge that came from its large inflows of foreign direct investment.

Policies adopted by the technological leaders also matter. There can be a tension between the incentives to produce knowledge and the benefits from more dissemination. In recent years concern has been expressed that the balance industrial countries have struck – often under

pressure from special interest groups – underemphasizes dissemination. The consequences may slow the overall pace of innovation and adversely affect living standards in both richer and poorer countries.³³

Making government more effective

How can policies be designed that increase the productivity of the economy? Again, ends must not be confused with means. The elements stressed by the Washington consensus may have been reasonable means for addressing the particular set of problems confronting the Latin American economies in the 1980s, but they may not be the only, or even the central, elements of policies aimed at addressing problems in other circumstances.

Part of the strategy for a more productive economy is ascertaining the appropriate role for government – identifying, for instance, the ways in which government can be a more effective complement to markets. I now want to turn to another essential element of public policy, namely, how we can make government more effective in accomplishing whatever tasks it undertakes.

World Development Report 1997 shows that an effective state is vital for development (World Bank, 1997c). Using data from 94 countries over three decades, the study shows that it is not just economic policies and human capital but the quality of a country's institutions that determine economic outcomes. Those institutions in effect determine the environment within which markets operate. A weak institutional environment allows greater arbitrariness on the part of state agencies and public officials.

Given very different starting points – unique histories, cultures, and societal factors – how can the state become effective? Part of the answer is that the state should match its role to its capability. What the government does, and how it does it, should reflect the capabilities of the government – and those of the private sector. Low-income countries often have weaker markets and weaker government institutions. It is especially important, therefore, that they focus on how they can most effectively complement markets.

But capability is not destiny. States can improve their capabilities by reinvigorating their institutions. This means not only building administrative

or technical capacity but instituting rules and norms that provide officials with incentives to act in the collective interest while restraining arbitrary action and corruption. An independent judiciary, institutional checks and balances through the separation of powers, and effective watchdogs can all restrain arbitrary state action and corruption. Competitive wages for civil servants can attract more talented people and increase professionalism and integrity.

Perhaps some of the most promising and least explored ways to improve the function of government is to use markets and market-like mechanisms. There are several ways the government can do this:

- i. It can use auctions both for procuring goods and services and for allocating public resources;
- ii. It can contract out large portions of government activity;
- iii. It can use performance contracting, even in those cases where contracting out does not seem feasible or desirable;
- iv. It can design arrangements to make use of market information. For instance, it can rely on market judgments of qualities for its procurement (off-the-shelf procurement policies); it can use information from interest rates paid to, say, subordinated bank debt to ascertain appropriate risk premiums for deposit insurance.

At the same time, governments are more effective when they respond to the needs and interests of their citizens, while at the same time giving them a sense of ownership and stake in the policies. Michael Bruno emphasized the importance of consensus building in ending inflations. The reason for this should be obvious: if workers believe that they are not being fairly treated, they may impose inflationary wage and other demands, making the resolution of the inflationary pressures all but impossible (see Bruno, 1993).

At the microeconomic level, governments aid agencies and non-governmental organizations have been experimenting with ways of providing decentralized support and encouraging community participation in the selection, design, and implementation of projects. Recent research provides preliminary support for this approach: a study by Isham, Narayan and Pritchett (1995) found the success rate for rural water projects that involved participation was substantially higher than the success rate for those that did not. It is not just that localized information

is brought to bear in a more effective way; but the commitment to the project leads to the long-term support (or “ownership” in the popular vernacular) which is required for sustainability.

BROADENING THE GOALS OF DEVELOPMENT

The Washington consensus advocated use of a small set of instruments (including macroeconomic stability, liberalized trade, and privatization) to achieve a relatively narrow goal (economic growth). The post-Washington consensus recognizes both that a broader set of instruments is necessary and that our goals are also much broader. We seek increases in living standards – including improved health and education – not just increases in measured GDP. We seek sustainable development, which includes preserving natural resources and maintaining a healthy environment. We seek equitable development, which ensures that all groups in society, not just those at the top, enjoy the fruits of development. And we seek democratic development, in which citizens participate in a variety of ways in making the decisions that affect their lives.

Knowledge has not kept pace with this proliferation of goals. We are only beginning to understand the relationship between democratization, inequality, environmental protection and growth. What we do know holds out the promise of developing complementary strategies that can move us toward meeting all of these objectives. But we must recognize that not all policies will contribute to all objectives. Many policies entail tradeoffs. It is important to recognize these tradeoffs and make choices about priorities. Concentrating solely on “win-win” policies can lead policymakers to ignore important decisions about “win-lose” policies.

Achieving multiple goals by improving education

Promoting human capital is one example of a policy that can help promote economic development, equality, participation and democracy. In East Asia universal education created a more egalitarian society, facilitating the political stability that is a precondition for successful long-term economic development. Education – especially education that emphasizes critical, scientific thinking – can also help train citizens to participate more effectively and more intelligently in public decisions.

Achieving multiple goals through joint implementation of environmental policy

To minimize global climate change, the nations of the world need to reduce the production of greenhouse gases, especially carbon dioxide, which is produced primarily by combustion. The reduction of carbon emissions is truly a global problem. Unlike air pollution (associated with sulfur dioxide or nitrogen dioxide), which primarily affects the polluting country, all carbon emissions enter the atmosphere, producing global consequences that affect the planet as a whole.

Joint implementation gives industrial countries (or companies within them) credit for emissions reductions they would not otherwise have undertaken anywhere in the world. It may be a feasible first step toward designing an efficient system of emission reductions because it requires commitments only from industrial countries and therefore does not entail resolving the huge distributional issues involved either in systems of tradable permits or the undertaking of obligations by developing countries.

The premise of joint implementation is that the marginal cost of carbon reductions may differ markedly in different countries. Because developing countries are typically less energy efficient than industrial countries, the marginal cost of carbon reduction in developing countries may be substantially lower than in industrial countries. The World Bank has offered to set up a carbon investment fund that would allow countries and companies that need to reduce emissions to invest in carbon-reducing projects in developing countries. For developing countries this plan would offer increased investment flows and pro-environment technology transfers. These projects would also be likely to reduce the collateral environmental damage caused by dirty air. Joint implementation allows industrial countries to reduce carbon emissions at a lower cost. This strategy is designed to benefit the developing countries as it improves the global environment.

Recognizing the tradeoffs involved in investing in technology

One important example of a potential tradeoff is investment in technology. Earlier I discussed the way investments in tertiary technical education

promote the transfer of technology and thus economic growth. The direct beneficiaries of these investments, however, are almost inevitably better off than average. The result is thus likely to be increased inequality.

The transfer of technology may also increase inequality. Although some innovations benefit the worst off, much technological progress raises the marginal products of those who are already more productive. Even when it does not, the opportunity cost of public investment in technology might be forgone investment in anti-poverty programs. By increasing output, however, these investments can benefit the entire society. The potential trickle down, however, is not necessarily rapid or comprehensive.

Recognizing the tradeoff between protecting the environment and increasing participation

A second example of a tradeoff is the choice between environmental goals and participation. Participation is essential. It is not, however, a substitute for expertise. Studies have shown, for instance, that popular views on the ranking of various environmental health risks are uncorrelated with the scientific evidence (United States Environmental Protection Agency, 1987; Slovic, Layman and Flynn, 1993). In pursuing environmental policies, do we seek to make people feel better about their environment, or do we seek to reduce real environmental health hazards? There is a delicate balance here, but at the very least, more dissemination of knowledge can result in more effective participation in formulating more effective policies.

CONCLUDING REMARKS

The goal of the Washington consensus was to provide a formula for creating a vibrant private sector and stimulating economic growth. In retrospect the policy recommendations were highly risk-averse – they were based on the desire to avoid the worst disasters. Although the Washington consensus provided some of the foundations for well-functioning markets, it was incomplete and sometimes even misleading.

The World Bank's East Asian miracle project was a significant turning point in the discussion. It showed that the stunning success of the

East Asian economies depended on much more than just macroeconomic stability or privatization. Without a robust financial system – which the government plays a huge role in creating and maintaining – it is difficult to mobilize savings or allocate capital efficiently. Unless the economy is competitive, the benefits of free trade and privatization will be dissipated in rent seeking, not directed toward wealth creation. And if public investment in human capital and technology transfers is insufficient, the market will not fill the gap.

Many of these ideas – and more still that I have not had time to discuss – are the basis of what I see as an emerging consensus, a post-Washington consensus consensus. One principle that emerges from these ideas is that whatever the new consensus is, it cannot be based on Washington. If policies are to be sustainable, developing countries must claim ownership of them. It is relatively easier to monitor and set conditions for inflation rates and current account balances. Doing the same for financial sector regulation or competition policy is neither feasible nor desirable.

A second principle of the emerging consensus is that a greater degree of humility is called for, acknowledgment of the fact that we do not have all of the answers. Continued research and discussion, not just between the World Bank and the International Monetary Fund but throughout the world, is essential if we are to better understand how to achieve our many goals.

NOTES

1. There are, to be sure, many other dimensions to the turmoil. Misguided foreign exchange policies and the potential for political instability are a few other significant issues that I discuss at more length in Stiglitz (1998).
2. Argentina, for example, had a deficit of over five per cent of GDP in 1982 and seven per cent in 1983, Colombia's budget deficit was over four per cent from 1982 to 1984, and Brazil's deficit increased from 11 per cent in 1985 to 16 per cent by 1989 (World Bank, 1997d).
3. See Vickers and Yarrow (1988) for a fuller discussion of privatization, competition and incentives.
4. These issues came up in the management of the US economy. Although much research showed that the United States was able to operate at lower levels of unemployment without an acceleration of inflation, reports from some international institutions, using oversimplified models of the US economy, recommended tightening monetary policy. Had this advice been followed, the remarkable economic expansion, and the resulting low unemployment rate, which has brought marginalized groups into the labor force, reduced poverty and contributed

- substantially to the reduction of welfare rolls, would all have been thwarted (see Chapter 2 of the *Economic Report of the President 1997* for some of this analysis).
5. Because the level and variability of inflation are correlated, Fischer reported great difficulty in disentangling their separate effects at any level/variance of inflation. This point holds true generally: any study of the consequences of inflation probably also picks up costs associated with the variability of inflation. The strength of nonlinearity in the relationship between inflation and social welfare is clear from the outcome of research conducted by the US Federal Reserve Bank. Despite the efforts of their first-rate economists – some of them working full time on the costs of inflation – the Fed has still failed to find definitive evidence of costs of inflation in the United States. Should they eventually succeed in finding such results, they will have proven only that data mining works, not that inflation is costly.
 6. Stiglitz (1997c) discusses the evidence in the United States. Tentative research at the World Bank discussed in Stiglitz (1997a) extends the results to a number of other countries, including Australia, Canada, France, Germany, Italy, Japan and Brazil. Mexico was the only country with adequate data to run the tests where the Phillips curve appeared convex.
 7. Some have argued that central banks should have an exclusive mandate to maintain price stability. This perspective has even been introduced into IMF programs in economies such as Korea with no history of an inflation problem. There is no evidence that such constraints (whether embodied in legislation or formal commitments such as inflation targets) improve real economic performance as measured by growth (see Alesina and Summers, 1993). Such results are consistent with the earlier empirical evidence concerning the real effects of inflation. More importantly, these issues involve fundamental political judgments, values, and trade-offs in addition to technical expertise. For example, I – as well as most other members of the Clinton Administration’s economics team – strongly opposed proposals to change the charter of the Federal Reserve Board to make price stability its primary or sole mandate. Such proposals might well have been the center of a major political debate if they had been pushed. See Stiglitz (1997a) for a broader discussion of these issues.
 8. The theoretical literature on Ricardian equivalence (Barro, 1974) criticizes the view that the deficit by itself has significant economic effects. The Washington consensus was not based on models that explicitly addressed the issue of Ricardian equivalence.
 9. Easterly and Fischer (1990) summarize the simple analytics of the macroeconomic effects of government budget deficits.
 10. I use the terms optimum and sustainable loosely. In this context, “sustainable” does not necessarily mean “sustained” at a high level indefinitely. Rather, it refers to situations such as when large deficits are used to stimulate the economy out of an economic downturn expected to be of short duration. “Optimum” has to be defined relative to a clearly articulated objective such as maximizing in an intertemporal social welfare function. There are circumstances and reasonable social welfare functions that give markedly different values for today’s optimal level of deficit – one cannot assert that desirable level of deficit without knowing both factors. The same observation applies to the following discussion of the optimal level of the current account deficit.
 11. The current account deficit is an endogenous variable. Assessing whether it is too “high” depends on the source of its size. If, for example, misguided foreign exchange policies account for the deficit, it is too high.

12. Traditional government macro-policies focus on aggregates such as capital flows and budget deficits and do not deal directly with these issues. If the maturity structure of foreign borrowing leads to significant risks, other capital restraints or interventions may be necessary.
13. There are also other channels through which economic downturns leave a longer term adverse legacy: the attrition of human capital has, for instance, been emphasized in the literature on the hysteresis effect and may be a factor in the sustained high levels of unemployment in Europe (see Blanchard and Summers, 1987). As I discuss in the following section, economic downturns, when severe enough, can undermine the strength of the financial system.
14. In the Great Depression, falling prices combined with fixed interest payments reduced firms' net cash flows, eroding net worth, and decreasing their investment and further weakening the economy. As a result, these models are sometimes called debt-deflation models. See Greenwald and Stiglitz (1988, 1993a, 1993b).
15. The term "constrained Pareto efficient" means that there are (in principle) government interventions which can make some people better off without making anyone else worse off, which respect the imperfections of information and the incompleteness of markets – and more broadly, the costs of offsetting these imperfections.
16. For a fuller discussion of the role of these protections as part of the basic architecture of modern capitalism, see Greenwald and Stiglitz (1992).
17. This is sometimes referred to as the problem of moral hazard.
18. Supporters of these policies, while recognizing these problems, argue that a temporary increase in interest rates is required to restore confidence and that as long as the interest rate measures are very short-term, little damage will be done. Whether increases in interest rates will, or should, restore confidence has been much debated. The evidence from the recent experience is not fully supportive. Thailand and Indonesia have been pursuing high-interest rate policies since summer 1997.
19. Most analyses of the US savings and loan crisis place the ultimate blame on the unexpectedly large increases in interest rates that began in the late 1970s under Fed Chairman Paul Volcker. This increase in interest rates caused the value of their assets to plunge, leaving many with low or negative net worth. Attempts to allow individual savings and loans to try to solve their own problems (part of regulatory forbearance) failed, worsening the eventual debacle.
20. There is another reason that government should perhaps be more sensitive to interest rate changes than to exchange rate changes: while there is an economic logic to maturity mismatches, there is no corresponding justification for exchange rate mismatches. There is a real cost associated with forcing firms to reduce maturity mismatches. Exchange rate mismatches, in contrast, simply represent speculative behavior. In practice, policy cannot rely on these general nostrums but needs to look carefully at the situation within the country in crisis. It is possible that currency mismatches are far larger than maturity mismatches, and while future actions might be directed at correcting such speculation with its systemic effects, current policy must deal with the realities of today.
21. The persistence of the inflationary effects of a devaluation raise subtle questions. Earlier I argued against the "precipice" theory of inflation. One might argue that an increase in the price level associated with a devaluation is even less likely to give rise to inflation inertia than other sources of increases in prices, particularly when there may be a perception that the exchange rate has overshot.

22. Advocates of import substitution point out that during certain periods countries that pursued protectionist policies, notably Brazil and Taiwan (China) in the 1950s, did achieve strong economic growth.
23. The adverse effects associated with protectionism may come more from its impact on competition and its inducement to rent-seeking behavior. These forces are so strong that even when there might be seemingly strong arguments for trade interventions in particular cases, most economists view intervention in trade policy with considerable skepticism.
24. Short-term impacts on deficits were, however, often markedly different from the long-term impacts. In those cases where the state enterprises were reasonably well run, the latter could be negligible or even negative while the former could be substantial. In response, some governments disallowed the inclusion of capital transactions in the annual budget – an accounting practice consistent with views that such public sector financial reorganization may have little impact on macro-behavior, or at least far different effects.
25. This can be thought of either as a movement toward the production possibilities curve or as an outward shift of the production possibilities curve (a “technological improvement”, where the curve has embedded in it the institutional constraints reflecting how production and distribution is organized).
26. Lester Thurow has noted that, “if the [anti-dumping] law were applied to domestic firms, 18 out of the top 20 firms in Fortune 500 would have been found guilty of dumping in 1982.” (Thurow, 1985, p.359.)
27. See Stiglitz (1989) for an extended discussion of the economic role of the state from this perspective.
28. The US government, for example, established a national mortgage system, which lowered borrowing costs and made mortgages available to millions of Americans. Having done so, however, it may be time for this activity to be turned over to the private sector.
29. Mankiw, Romer and Weil (1992).
30. While more recent studies (Young, 1994, for example) have questioned the robustness of these results and some growth accounting exercises for the United States suggest little increase in total factor productivity growth over the past quarter century, the observation that changes in technology have played a major role in improvements in standards of living seems uncontroversial.
31. The innovator will be reluctant to describe his innovation to a provider of capital, lest he steal his idea; but the provider of capital will be reluctant to supply capital without an adequate disclosure. A clear regulatory structure for protecting intellectual property rights is necessary, but not sufficient, to overcome these sorts of problems.
32. There may also be an absence of complementary factors, such as the conditions required for new enterprises to develop to use these skills.
33. Knowledge is a key input into the production of knowledge; an increase in the “price” of knowledge (as a result of stricter intellectual property standards) may thereby reduce the production of knowledge. There is also a concern that an excessive amount of expenditures on research are directed at trying to convert “common knowledge” into a form that can be appropriated. While in principle “novelty” standards are intended to guard against this, in practice the line is never perfectly clear, and stricter intellectual property regimes are more likely to commit “errors” of privatizing public knowledge, thereby creating incentives for misdirecting intellectual energies in that direction.

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