

**FINANCIAL STRUCTURE, SAVING AND GROWTH:
GOVERNMENT IN THE DEVELOPMENT PROCESS**

by

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Pathbreaking work by Edward Shaw (1973) and Ronald McKinnon (1973) challenged the orthodoxy of the early postwar years that viewed a low interest rate on loans as an essential condition for prosperity in developed economies and growth of less developed economies. At the time they wrote, interest rates in the developed countries had long since been allowed to rise from their wartime levels, but central banks in many developed economies had been slow to permit interest rates or exchange rates to change sufficiently to keep prices stable. In many developing countries the formal financial structure consisted of a central bank, some government development banks and a small number of commercial banks (at times owned or controlled by the government). Capital flows were restricted. Many governments imposed credit allocation at below market interest rates as part of their development plan. Lending and deposit rates changed infrequently. With the rise in world inflation in the late 1960s and 1970s, real interest rates became substantially negative in many developing countries.

While there were different rationales for these policies -- political and social as well as economic -- the economic rationale was most often a simple Keynesian model in which investment is a function of the interest rate; the lower the real interest rate, the higher is real investment. Since more investment yields more capital, and capital contributes to output, lower interest rates increase output and living standards. In some versions of this model, there is an effect on the growth rate of output, but that is not necessary. If below market interest rates can be maintained, investment can be maintained at above the level that would prevail at the equilibrium interest rate.

To assist development, the World Bank was organized as a development bank

*I am grateful to Ross Levine for suggestions and guidance.

on the presumption that markets would supply too few loans to developing countries and charge relatively high rates of interest. The debt problems of the 1980s showed that this presumption was wrong. The opposite was true for a large number of developing countries. These countries borrowed more than their capacity to service or repay under the circumstances of the 1980s. The availability of loans on concessional terms from the World Bank and other international agencies encouraged many developing countries to borrow, to keep their capital markets closed to equity investors, and to restrict foreign ownership of domestic assets.

McKinnon and Shaw showed that the Keynesian argument was flawed. Their analyses, and subsequent work, reversed the early postwar conclusion. The implication of this work was that countries with repressed financial systems should grow more slowly for at least five reasons. First, if saving depends on the rate of interest, holding interest rates below their equilibrium value reduces saving. Second, financial repression -- holding interest rates on deposits below market clearing rates -- reduces the amount of deposits in the banking system, the size of the banking system, and the amount of bank lending. Some of the lending and borrowing shifts to the informal sector (or curb market). This substitution reduces the efficiency of financial intermediation and investment. More efficient forms of intermediation are restricted, so investment is less productive. Third, if banks lend at below market rates, less efficient or less productive projects are financed by the banking system. Fourth, if the informal financial sector or curb market charges a risk premium or a rent (because competition is restricted), some projects that would have been financed are deterred. Fifth, opportunities for political intervention, favoritism and corruption increase with government control of banks.

In the past twenty years, economists have produced a considerable body of evidence bearing on these issues. Several recent studies summarize and interpret the evidence on the McKinnon-Shaw thesis. See Fry (1993), Little, Cooper, Corden, and Rajapatirana (1993), and World Bank (1989, 1993). Other studies of growth and development test the effect of financial intermediation in equations that relate the rate of growth to income in an earlier period, education, investment, and other variables

that have been found or suggested to affect development. I refer to these regressions of education, initial period income, and one or more other variables as Barro-type regressions. See Barro (1991). Before commenting on this evidence, I want to put these studies in a broader, less formal but, I believe, useful context.

Learning about Growth and Development: What Can Data and Experience Show?

When we consider the data on the role of financial repression and intermediation in economic development, we learn that the effects on development are less than clearcut. Any knowledgeable observer can think of countries that controlled interest rates, allocated credit, or used official "guidance" yet grew rapidly. Japan, particularly in the 1950s and 1960s, and Korea before the mid-1980s are such examples. On the other side are countries like Hong Kong and Singapore that had few restrictions on domestic and international lending and borrowing. But, Singapore enforced policies that required households to save, and the Singapore government favored some types of investment over others. Does it matter that Korea or Japan relied more heavily on credit allocation while Singapore relied most heavily on other incentives and prohibitions?

Regulation, taxation, government spending, "guidance" and allocation of financial resources all affect allocation. Differences in their effects are often more subtle than are captured by available data. The researcher's problem is difficult. The number of alternative methods of allocation or direction of investment is large relative to the number of countries. Interaction between different restrictions may be important quantitatively.

Interpretation is complicated by three additional problems. First, the time period over which the effects on growth of alternative policies are revealed may be measured in years or even decades. Stalinist policies industrialized the Soviet Union in the 1930s and the 1950s. Measured growth rates were comparatively high for a time, but living standards remained low and other measures of development such as life expectancy never reached the levels of the principal market economies. Easterly and

Fischer (1994) document the spurt in growth and its subsequent moderation. These longer-term effects were not known at the time. Governments can borrow externally and produce domestic growth for a considerable period before any effects of resource misallocation dominate the data. In the mid-1980s Poland and Yugoslavia claimed levels of per capita income about equal to Portugal and Argentina. Brazil, Mexico, and other Latin American countries also supported growth in the late 1970s by borrowing.¹ These countries, and others in Latin America, grew rapidly for a time under policies of import substitution. The costs and inefficiencies of the governments' policies eventually slowed growth.

Suppose Latin American government had not taken a prominent role in the development process and had relied on capital markets and private owners to finance investment instead of government borrowing or guarantees. The efficiency of investment would have been higher, but measured growth in the 1970s would most likely have been lower. Growth in the 1980s would have been higher. The principal reasons are that private investors would not have accumulated as much capital in the 1970s, and they would have borne any losses in the 1980s. Instead, governments reduced aggregate demand, particularly investment.

Second, a government may direct resources to efficient uses. There is no economic law that says that all public resource allocations must fail or waste resources. Chance alone assures that some government investment will be productive and some private investments unproductive. Evidence of the superior outcome obtained from market allocation must come from comparison over many trials.

Much of what passes for analysis of comparative performance consists of examples that do not support a general conclusion.² Japan, guided by some ministry

¹This problem is akin to the problem of choosing well managed companies. Shortly after the author of a best seller chose some well managed companies, several had severe difficulties.

²The World Bank (1993) study of East Asia attempts a more comprehensive evaluation.

officials, invested in shipbuilding, steel mills, autos, and consumer electronics. Korea, using similar methods, invested in shipbuilding, textiles and steel. These are typically described as successes. But, the Japanese ministries later promoted investment in high definition television and the fifth generation computer, while Korea used lending and other subsidies to develop chemical and heavy industries. These decisions wasted resources.

Unless we measure all the gains and losses over decades and compare the returns to the returns in economies with much less direction, we learn little from these comparisons. No law of nature or man says that governments always misallocate or that private ownership always succeeds. If one or the other were always the case, either all investment would be done by governments or, apart from redistribution and political favors, only malevolent or misinformed governments would intervene.

Third, regulators can succeed for a time by investing in technologies that have worked well elsewhere. Korea's ministries kept their eyes on Japan. Japanese ministries looked to Europe and North America. Copying or adapting does not always work, but it does not always fail. When copying works, even an authoritarian, inefficient government can bring about a period of growth.

In the past forty years, we have had several different experiments about the role of government in economic development. These experiments were not designed to test the effect on development of institutional and organizational differences. They are not, therefore, experiments in the sense of the physical sciences. They are, nevertheless, about as close as we are likely to come to experimental evidence on some central propositions of economic development.

One set of comparisons is between countries that relied mainly on markets and property rights to allocate resources and countries that relied mainly on command and control. Financial repression or development is not the most important difference between these systems, but the World Bank (1993, p. 219) speaks of the "massive waste" of forced savings in command economies. Differences are not limited to savings. Comparison of market and command economies provide evidence on the role of markets in fostering developments.

The examples of North and South Korea and East and West Germany are particularly relevant. Here we hold constant culture, language, and past history. Differences in resources in 1950 or at the end of World War II do not favor one system over the other. Probably North Korea and West Germany had an advantage at the start. After forty years, the market economies with private ownership achieved much higher living standards. Per capita incomes are difficult to compare across countries, but there is little doubt that the increase in the two market economies is at least 3 to 5 times greater than in the two socialist, command and control, economies. This is an impressive difference in favor of property rights and market economies and the magnitude is probably understated..

Comparison of Hong Kong, Taiwan and China introduce differences in size as well as in political and economic systems. Again the comparison favors the market systems and private property. By 1990, Hong Kong was classified by the World Bank as a high income country; its per capita income was 30 times the income of China.

Although governments in Korea, Taiwan, and Hong Kong were authoritarian, not democratic, there were important differences in political rights between the citizens of these countries and those in China and North Korea. Citizens in the non-communist countries had more rights to speak, travel, or express opinions. They could own property. These freedoms affect growth. We cannot infer from the differences in growth rates that all of the differences in growth results from differences between the market system and command economies or between private property and state control. Additional evidence is needed to separate political from economic factors.

The Chinese government conducted an unplanned experiment to separate political and economic factors at an early stage of development.³ They retained political control but changed the system of resource allocation. First in agriculture, and later in manufacturing and trade, they shifted toward increased reliance on private ownership (or long-term leases), free markets and individual or firm decision making.

³Efforts to test for the role of political freedom using the Gastil index or similar measures have not found strong evidence of these measures of political freedom. The reason is not clear.

Growth rates rose and for several years have approached the best levels achieved in market economies.

While analytic evaluation of the results of these experiments may not pin down the source of higher growth, the difference in results achieved under different systems has affected governments and people in other countries. India, much of Latin America, Eastern Europe and possibly parts of Africa have reduced state intervention, planning and directing. These countries and regions now rely more on markets to allocate saving, investment and resource use. Several Eastern European countries have moved decisively from state ownership to private property. The revealed judgment appears to be that private property and market allocation increase prospects for growth.

Not all market economies have grown. Particularly during the 1980s, several countries in Latin America and Africa experienced falling per capita real incomes. There are many possible reasons, among them slower growth and recessions in Europe and North America, increased debt burdens, and the increased burden of import substitution in much of Latin America.

A second experiment of the postwar years concerns the effect of trade policy on development. Recognizing that GATT rules made a return to the protectionist policies of the interwar years unlikely, some countries adopted strategies of export led growth. Others chose import substitution as their trade policy. The early results were far from decisive; in the early postwar years, growth rates reached 8 to 10% in Brazil and Mexico and for 1965-80 growth under import substitution averaged 6% for Latin America as a whole. The rate under export led growth in East Asia was 7% for the same period (World Bank (1993a, p. 27)). For 1965-90, however, growth of per capita income in East Asia averaged 5-1/2% while average growth in Latin America and the Caribbean was below 2%. World Bank (1993, p. 2). Government financed, subsidized, or protected investment programs produced rising income at first, much as the statist, protectionist policies in the Soviet Union, Eastern Europe and China had done when they started. In many Latin countries, exchange rates overvalued the domestic currency, discouraging exports often to the disadvantage of the agricultural

sectors. Overvaluation would have favored imports if they had not been restricted in other ways.

A World Bank study of Latin American development summarizes the results of the policy. World Bank (1993a, p. 25).

“By the late 1950s the import substitution strategy began to run into difficulties. Most of the easy and obvious substitutions had taken place, and the process was losing its dynamism... Real industrial production in most countries in the 1960s grew at half the annual rate of the previous decade.”

It was only in the 1980s, however, that the growth rate of Latin American countries fell far below East Asian growth. The World Bank report continues (*Ibid.*, p. 27)

“In the mid-1980s, the widespread view in Latin America was that the state-based development model followed since the 1940s had entered a deep and generalized crisis.”

In the 1980s, East Asian countries adjusted more rapidly than the Latin Americans to the effects of higher real interest rates and reduced borrowing. Greater export growth, less regulation, more stable policies, exchange rates close to market values, and lower barriers to competition from abroad contributed to the better performance of these countries. As knowledge of the comparative experience spread through Latin America, a willingness to abandon import substitution and state direction spread. The results of Chile's policies of greater openness and reliance on markets convinced several countries that East Asian successes could be achieved in Latin America, Mexico, Argentina, Peru and others adopted policies of stabilization, privatization, reduced regulation, and export-oriented growth.

One effect of large scale privatization is on efficiency of resource use. Another may be on national saving. State owned enterprises are often inefficient and overmanned, so they produce losses that are paid by the Treasury. The public deficit may reduce national saving. There is also an indirect effect. If selling the enterprises

lowers the budget deficit, the pressure for inflation falls. Lower budget deficits, reduced inflation, privatization and deregulation encourage nationals to invest at home instead of abroad and foreigners to invest in the country. Capital flows in, augmenting domestic saving.

Opening a country to trade and competition from abroad encourages efficiency in several ways. Licensing foreign technology improves production practices. Capital from abroad embodies the latest technology. New technology often requires new skills. To learn these skills, students are sent abroad and foreign managers and consultants are used at home. Exposure to new and different ideas encourages innovation. Attention to exports encourages the development of world class products. Competition from imports forces improvement of old products and specialization where comparative advantage is greatest.

Pack and Page (1994) argue that much of the technological change in East Asian countries came from adopting "best practices." They present evidence showing that countries that are more open have higher productivity growth. Using a Barro-type regression, they find that productivity growth is positively related either to an index of an economy's degree of openness or to the share of manufactured to total exports. Further, they report some evidence that countries that are more open converge more rapidly toward the higher income levels of the industrial countries.⁴

A third type of evidence comes from the comparison of countries in which governments have taken more and less active roles in directing or encouraging particular industries or firms. Although Korea, and Singapore have operated market economies, the governments of these countries have encouraged and subsidized some activities as part of a development plan. Particularly in the 1950s and 1960s, the Japanese government also took a leading role in planning and encouraging some specific activities and discouraging others. On the opposite side, development of the Hong Kong economy relied almost entirely on investors' private decisions. Young

⁴Young (1993) finds that part of the difference between East Asian and other countries is explained by variations in hours worked. Most regressions, including those of Pack and Page, do not control for hours worked.

(1992) presents evidence showing that Hong Kong has generated much more growth per dollar invested than more interventionist Singapore.

The World Bank's (1993) study of the reasons for rapid growth in East Asia discusses the alternative policies. The principal conclusions I draw are that (1) that intervention is not necessary for growth and development, and (2) that policies that produced macroeconomic stability contributed to growth. The Hong Kong economy, where government had almost no role, has one of the highest growth rates over a 25 or 30 year span. Singapore and Korea where government took a more active role in the investment or development process, have done about as well, perhaps at greater cost in living standards. Young (1992). Many others have grown more slowly than Hong Kong. Government planning and directing is not necessary and is surely not sufficient to produce growth or sustain development.

Saving and Intermediation

Government has responsibility for choosing the institutional structure. Governments choose tax systems, financial systems, and regulatory structure. All of these choices influence resource allocation and economic development. Laws affecting property rights, labor, contracts, and bankruptcy affect development by influencing returns and risks. Enforcement of laws and costs of enforcement are also relevant.

The financial system is one part of this set of relationships. No systematic attempt has been made to sort out the separate effects of the various parts of these relationships or their interaction. However, King and Levine (1993) studied the 27 countries that undertook intensive structural adjustment in the second half of the 1980s. These countries received World Bank loans conditional on major changes in trade, budget, regulatory and privatization policies. King and Levine show that post-reform per capita GDP growth is related to the depth of financial structure (or the share of credit going to the private sector) when reform is undertaken. Their study also shows that the same measures of financial sector development are positively related to per capita income growth, investment and productivity in a Barro-type regression.

Table 1

<u>Growth</u>	Gross National <u>Saving/GDP</u>	Gross <u>Investment/GDP</u>
>7%	28%	28.6%
3-7%	18.5	22.6
<3%	19	19

Saving and Investment

In a study of the relation of saving to growth the World Bank (1989, p. 27) found the relation shown in Table 1 for the years 1965 to 1987. These data suggest that the countries with relatively high and low saving rates have relatively high and low growth rates respectively. For intermediate countries, the relation of saving to growth is less clear than the relation of investment to growth.

The data do not show the causal direction. Increased saving may precede or follow growth. Starting from a given level of income and rate of growth, the public can restrict consumption to increase saving and investment. Or, policy can encourage domestic saving to finance a higher rate of investment. In these cases, higher saving precedes an increase in growth. An alternative is to increase investment and growth by borrowing from abroad. Since borrowing is equivalent to dissaving, this scheme has growth first and saving later. As income rises in response to productive investment, saving increases.

These alternatives do not exhaust the possible relations between growth, investment, saving, and the current account balance. There is no presumption in economics that one of these schemes must dominate the others. In fact, the data in Table 1 suggest that, on average, investment was financed by national saving in both the high growth and low growth countries. These countries on average did not borrow or lend abroad in the aggregate. The same was not true for the countries with annual growth between 3 and 7%. On average, countries in this group borrowed in the aggregate to maintain investment above domestic saving.

The World Bank (1993, p. 204) study of East Asian growth found that "incomes have often risen before saving rates rather than after." This is consistent with the permanent income theory of consumption if increases in income have a large unanticipated component. Life cycle considerations may also be at work. (*Ibid.*, p. 205). For Latin America, where the saving share of GDP has typically been lower than in East Asia, the saving share in several countries where growth has resumed remains below the share achieved in 1980. World Bank (1993a, p. 112).

Countries differ in the extent to which saving is voluntary. Governments may require saving (as in Singapore), may run budget surpluses or deficits thereby perhaps increasing or reducing national saving, or may choose policies that encourage or discourage private saving.⁵ There is not a large body of evidence on the effects of these policies. Barro and Lee (1994) show that increased government spending on consumption (as a share of GNP) slows growth. For 5 Latin American countries and 14 African countries that grew relatively slowly in the 1980s and 1990s, Barro and Lee's study suggests that relatively high government spending on consumption reduced the average growth rate by one percentage point. An empirical study of 13 developing countries cited in World Bank (1993a, pp. 207-8) found that a temporary cut of a dollar in government spending reduced private saving by 16 to 50 cents. A dollar of tax increase reduced private saving by 48 to 65 cents. This evidence suggests that reducing budget deficits (or increasing budget surpluses) increases national saving.

Studies that attempt to test the McKinnon-Shaw thesis have produced mixed results. Some econometric evidence suggests that there is a positive relation between saving and the real interest rate paid at banks, but this evidence is far from conclusive. Real interest rates can rise or fall for several reasons such as increased productivity of capital or unanticipated disinflation. More generally, both the real interest rate and saving are endogenous variables, so not much confidence can be placed in

⁵Indonesia, Japan, Korea, Singapore and Thailand all had relatively low shares of public consumption. Public sector saving was relatively high on average in several East Asian high growth countries. World Bank (1993, p. 208).

conclusions based on a regression of one on the other. Also, increasing the interest rate on bank loans may shift assets from non-banks to banks without changing total saving. A shift of this kind may increase the productivity of investment and overall efficiency without directly affecting the saving rate. The study by King and Levine (1993), discussed above, supports this conclusion; growth increases with the share of credit issued by banks. However, King and Levine do not separate saving and intermediation.⁶

World Bank data (1989, Table 2.3, p. 31) show that for 1965-73 and 1974-85, real interest rates and real growth rates are positively related when countries are grouped by real interest rates. Countries with positive real interest rates have the highest growth rates and largest changes in GDP per unit of investment. Countries with moderately negative real interest rates are intermediate, with values in both periods lower than in countries with positive real interest rates but higher than in countries with strongly negative real rates. Again, these data cannot show the direction of causality. However, as Fry (1993, p. 29) notes, there are sizeable differences in the efficiency of investment in countries with positive real interest rates. Differences in investment shares of GDP are small or non-existent in the two periods, but differences in the efficiency of investment are from 1.7 (1965-73) to 3.7 (1974-85) times greater in countries with positive real rates than in countries with strongly negative real interest rates.

Variability of interest rates was substantially lower in the rapidly growing East Asian economies than in Latin America, Africa or South Asia. A World Bank study (1993, p. 206) reports averages and standard deviations of ex post real interest rates for ten to twenty year periods for 35 countries. The standard deviation for high performing East Asian countries as a group is 3.5, relatively close to the 2.8 for a sample of OECD countries. Comparative measures are 13.9 for Sub-Saharan Africa and 40.3 for a Latin American sample. The principal reason for these differences in

⁶After completing the paper, I became aware of King and Levine (1993a) where the authors separate saving (or investment) from intermediation. They find consistently that future growth increases with prior development of the financial system.

variability is the difference in the variability of inflation. A more general finding is that countries with greater macro variability invest less and develop less rapidly. One reason is that they develop payments problems. Little, et al., (1993, p. 359).

The conclusion usually drawn from the available evidence is that the ratio of saving to output or spending is not much affected by financial liberalization. The complementary conclusion should not be overlooked: there is no evidence that governments facilitate growth by keeping real rates of interest low or negative. Countries that allow interest rates to respond to market forces do not pay a penalty for higher rates; they generally benefit by getting greater efficiency (or more output) per unit or dollar invested. The last proposition must be partly hedged because positive real rates of interest are often accompanied by regulatory, exchange rate, tax and other policies that encourage efficiency in the use of resources.

We are likely to learn more about the effects of liberalization and open capital markets in the future. Private capital flows to developing countries rose from \$20.6 billion in 1989 (of which \$15 billion was bank lending) to \$50 billion in 1992 (of which \$17 billion was bank lending) and to \$34 billion in the first half of 1993 (\$9 billion). IMF Survey, (January 10, 1993, p. 5). The much increased flow of private capital includes borrowing and equity issues by private firms. Significant improvements in investment efficiency should result, if financial market liberalization is important for efficiency.

Financial Structure

Developed financial markets increase efficiency by saving transaction costs, by eliminating the costs of barter, by reducing costs of acquiring information, and increasing the efficiency of investment. Three major problems arise in going from these potential sources of efficiency gain to the design of a financial structure that facilitates growth.

First, the increase in efficiency is most often either a one-time gain or a series of one-time gains that reduce average cash balances or lower risk. These gains improve welfare and increase per capita consumption but do not change the permanent growth

rate.

Second, in practice, large banks and development institutions are frequently organized to lend to large, rather than to small, projects. Information about small borrowers is often costly to acquire, and small loans to new borrowers are more costly to service. Informal institutions like the Korean curb markets or the informal lending markets in Taiwan may make small loans more efficiently than commercial or development banks. Informal lenders often have family, regional or other ties that raise the perceived cost of default by borrowers.

Fry (1993, p. 24) summarizes the available literature.

“The main conclusion to be drawn from this survey of financial development models for developing countries is that, at the macroeconomic level, the effects of financial liberalization depend entirely on the initial assumptions that are made. If one assumes that the official banking system is more efficient at allocating investible funds than the curb market and that households substitute mainly out of unproductive tangible assets (inflation hedges) when the real deposit rate of interest increases, financial liberalization raises the total real supply of credit, the quantity and quality of investment, and the rate of economic growth. The growth rate rises temporarily in a neo-classical growth model but permanently in Harrod-Domar and endogenous growth models.”

Empirical evidence is mixed. King and Levine (1993) found that financial intermediation contributed significantly to growth using a Barro-type regression. They measured the degree of financial intermediation as the ratio of a broad definition of money to GDP at an initial date (1960). Fischer (1993) found the opposite. Financial intermediation is not significant in his regressions.

The conclusion I draw is that the efficiency of the financial system is not well measured by the ratio of banking liabilities to GDP. A principal reason is that there are

many distortions -- reserve requirements, government regulations, credit allocation, preferential lending arrangements, and controls on interest rates.

Third, government intervention in financial markets has often produced large losses. The types of regulatory failures that contributed to the saving and loan problems in the United States are common in some developing countries. As in the United States, the loans may at first direct economic activity to a particular location. Relatively large defaults and loan losses may follow later.

In developing countries, preferential terms and subsidies are at times financed by the international development banks. Since credit is fungible and the alleged purpose of the borrower differs from the project financed on the margin, it is difficult to learn how the subsidies affect resource usage. Further, subsidies are often accompanied by domestic credit subsidies.

The size of subsidies can be large. The World Bank (1989, p. 59) reports that in Brazil in 1987 credit subsidies were estimated at between 4 and 8 percent of GDP. In Mexico for 1982-87, credit subsidies were 3% of GDP. Korea had 221 directed credit programs at one time. (*ibid.*, p. 55)

Default rates are often high. The World Bank (*ibid.*, p. 67) reports that default rates on subsidized agricultural credit from development banks ranged from 30 to 95%. Housing finance has also been a source of losses and defaults. Korea's use of subsidies and directed credit to develop heavy industry left Korea's banks insolvent in the 1980s. Non-performing assets reached 20% of total loans. Fry (1993, p. 47). The government continued to direct credit toward failing firms at the expense of growing firms.

Credit allocation and subsidized lending has been used in some countries to hide the public sector deficit in the financial system. Brazil in the 1970s regularly reported a balanced public sector budget. This was misleading. Subsidies were made through the financial system and financed by the central bank. These practices were the cause of inflation in Brazil, but Brazil is not unique. Other countries used similar practices.

Of course, the government may use its credit subsidies cautiously and choose

projects judiciously. In the 1950s, Japan directed credit toward the financing of industrial equipment by providing about 1/3 of the cost. By 1990, the share had dropped to 8%. The beneficiaries were industries with large optimum size and increasing returns to scale. World Bank (1993, pp. 280-1). However, much evidence suggests that government intervention has had the opposite result in many countries. World Bank (1993, p. 289); Little, *et al.* (1993, pp. 353-4). It has proved difficult for governments in democratic and authoritarian regimes to resist the blandishments of groups and individuals that seek favorable treatment, or to seek political support by allocating credit on concessional terms, or to finance inefficient public projects by lending at concessional rates, or to avoid corrupt practices.

Credit Regulation and Supervision⁷

Instead of allocating or subsidizing loans, governments can provide an institutional framework that gives incentives for intermediaries to grow. Deposit insurance, prudential regulation, and supervision are often used as examples of policies that encourage intermediation by reducing transaction costs and lowering risk.

Recent problems in the banking and financial systems of several developed countries have stimulated interest in regulatory reform and led to reconsideration of regulatory policies. Heightened understanding of insurance and risk principles has produced new proposals for reform of financial regulation and supervision. Several proposals recognize that regulation and supervision can contribute to efficiency and flexibility by reducing opportunities for forbearance and politically motivated intervention and increasing incentives for prudential behavior by managements. Efficient regulation would minimize regulatory burden and the costs of the financial safety net. Central banks or governments would retain their role as lenders of last resort to prevent systemic failure.

Two very different types of reform proposals have been made. Benston and Kaufman (1988) use equity, subordinated debentures and rules for closing banks to

⁷Part of this section is based on Meltzer (1993).

limit potential losses to a deposit insurance fund. The aim of their proposal is to eliminate moral hazard from deposit insurance by making equity owners and (non-insured) debenture holders bear all the losses on a bank's portfolio. A weak version of the Benston-Kaufman proposal has been adopted in the United States.

An alternative, called the narrow bank, separates the banks' lending from its deposits. Deposits would be fully collateralized by government debt, hence insured by default-free nominal claims. Lending and borrowing would be done by non-banks. These institutions would raise equity capital or borrow on the capital markets and lend to businesses and households for shorter terms.

Neither proposal is applicable to small, newly developing countries where financial markets are rudimentary. However, middle income countries can develop these arrangements to avoid some of the costs that both they and developed countries have experienced in administering the financial safety net. The principal cost is malallocation of resources when subsidized or risky projects fail or produce negative or relatively low returns.

There is a clear, positive correlation between growth and the development of financial markets. The most promising explanation of this relation, I believe, has causality running both ways. As wealth rises, wealth owners seek more diversified portfolios; intermediation expands in response to demand. Firms benefit from specialized types of lending and finance. The expansion of specialized financial services increases efficiency and living standards.

Since there is no clear evidence that financial intermediaries generate non-pecuniary externalities, governments should leave the development of the financial system to private decisions.⁸ When there is sufficient demand for a particular service, a competitive market will supply the service. Government can help to keep financial markets competitive by permitting entry and expansion of domestic and foreign

⁸A possible exception is the development of a postal savings system to mobilize household saving. Some evidence suggests that these institutions have contributed to development particularly in newly developing countries. World Bank (1993, p. 218). The problem is to maintain efficient allocation of the loans supported by these deposits.

intermediaries and can increase efficiency by reducing regulation, reserve requirements and interest rate controls.

Recent expansion of equity and debt markets in developing countries shows how international capital markets have responded to deregulation and elimination of barriers in many developing countries. Between 1989 and 1992 international bond and equity issues of developing countries increased eight fold, from \$6.3 to \$50.9 billion dollars. In the first half of 1993, developing countries raised an additional \$39 billion by selling debt and equity. Some of these issues are sold to domestic purchasers but, as noted earlier, private capital transfers have increased substantially. Part of the increased debt and equity sales substitute for bank lending. IMF (1994, p. 5).

Conclusion

When economists and development banks turned their attention to the mechanics of development in the 1950s, many believed that economic theory and planning models would provide a blueprint for growth. Looking back at forty years of experience, several recent studies conclude that we know very little about the details of the development process. World Bank (1989, 1993, 1993a). Setting an institutional or political framework that encourages development seems more useful than any specific set of measures intended to promote growth.

In The Constitution of Liberty and elsewhere, Hayek (1960), Hayek stresses the role of search in economic development and human affairs. Innovations occur in myriad ways through chance, human intelligence, even planning. What matters for progress is that improvements are encouraged and sustained while mistakes are abandoned. Private ownership and secure property rights contribute to these outcomes.

Recent studies conclude that governments can contribute to economic development by providing a stable environment, avoiding high inflation, unstable exchange rates, and frequent changes in the rules of the game. Governments can encourage growth by supporting education, particularly basic education, avoiding

restrictive regulation and protection, encouraging openness and competition, and keeping tax rates and redistribution low. Little, *et al.* (1993, p. 359), World Bank (1993, pp. 241-2), and World Bank (1993a, p. 116) reach many of the same conclusions.

Development is a long-term process. Governments can stimulate demand, borrow abroad to finance development, and in other ways increase short-term expansion. For the long-term, however, efficient use of resources and continued innovation are more important.

What is true of development generally is also true of saving and financial intermediation. The evidence suggests that saving increases with development and that the financial system develops as the economy develops. Development of the financial system appears to be driven by demand. Government can assist this development by providing a structure in which change and innovation are more likely to occur. Price stability or low inflation, stable economic policies, and avoidance of preferential lending programs, high reserve requirement ratios and other impediments to endogenous development of financial structure are important contributions that governments can make.

What remains of the McKinnon and Shaw thesis about financial repression? At one level the evidence does not support it. Higher saving need not precede growth and frequently has not. Modest intervention in financial markets has not prevented growth and has not always inhibited growth. Some economies have grown despite credit allocation, controlled interest rates, restrictions on capital outflow and other types of government interference in capital markets.

I believe this is a correct but narrow reading of the evidence. Financial repression is often part of a program of intervention in many aspects of the economy. While there are examples of growth with intervention, it is rare for growth and development to be sustained under these conditions. And there are many examples where saving has been directed to projects that yield low or negative returns, where wealth has been reduced by intervention, or resources have been wasted.

Countries with little intervention and no financial repression have grown relatively well. Intervention and financial repression are neither necessary nor

sufficient for economic development. And often interventionist policies have proved to be anti-growth.

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