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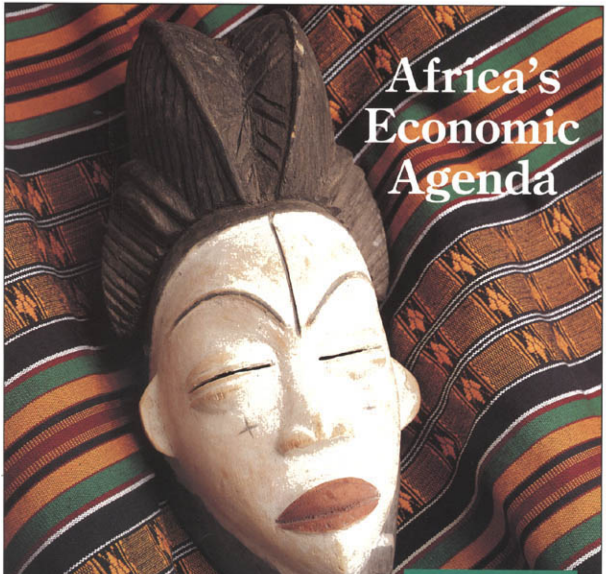

Africa's Economic Agenda

Water management

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AIDS intervention

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Debt problems
in transition
economies

Letter from the Editor

SUB-SAHARAN AFRICA'S ECONOMIC DECLINE has proved to be more prolonged and more difficult to reverse than originally foreseen. Now, a decade into adjustment, current growth rates—even among the best performers—are still too low to raise living standards much. These developments have sparked a debate about why this region has been left trailing by the rest of the developing world and what can be done to remedy this trend.

Both the questions and the answers in this debate are complex. There are many obstacles to growth, including large budget deficits, high and volatile rates of inflation, financial repression that distorts resource allocation, underdeveloped financial sectors, and excessive government intervention in the economy. Growth may also be impeded by protection from foreign competition, overvalued exchange rates, unsustainable population growth, failure to build consensus for reform, and poor governance. An unsustainably high external debt burden, which is often the legacy of past expansionary policies, could be added to this list. Countries that suffer from these problems are often particularly vulnerable when terms of trade shocks and natural disasters occur.

Sub-Saharan African countries have experienced some or all of these obstacles to growth. Even with adjustment programs in place, progress may appear to be slow because economic distortions run so deep. The region's prospects nevertheless depend upon pressing forward with structural reform and macroeconomic adjustment. But for reforms to work requires a stable environment for economic decision making—which means overcoming social fragmentation and political instability. The experience of the successful reformers in Africa shows that adjustment is the first, unavoidable step to restoring growth and improving living standards.

In their article, "Africa's Quest for Prosperity: Has Adjustment Helped?," Christine Jones and Miguel Kiguel provide insight into why adjustment has met with relatively limited success and offer advice on what Sub-Saharan African countries can do to place their economies on the road to sustainable, poverty-reducing growth. The experience of individual countries is reviewed in depth in a companion article by Ishrat Husain. In February of this year, the CFA franc countries were jolted by the first devaluation in decades of their common currency. Jean Clément examines why the devaluation was necessary and reviews what it is expected to achieve. The experience of many developing countries, particularly the East Asian countries and also some of the successfully adjusting African countries, suggests that a well-functioning financial sector—including the foreign exchange market—can help to promote efficient allocation of real resources. Yin-Fun Lum and Calvin McDonald touch on these and other issues in their article on interbank foreign exchange markets in Africa.

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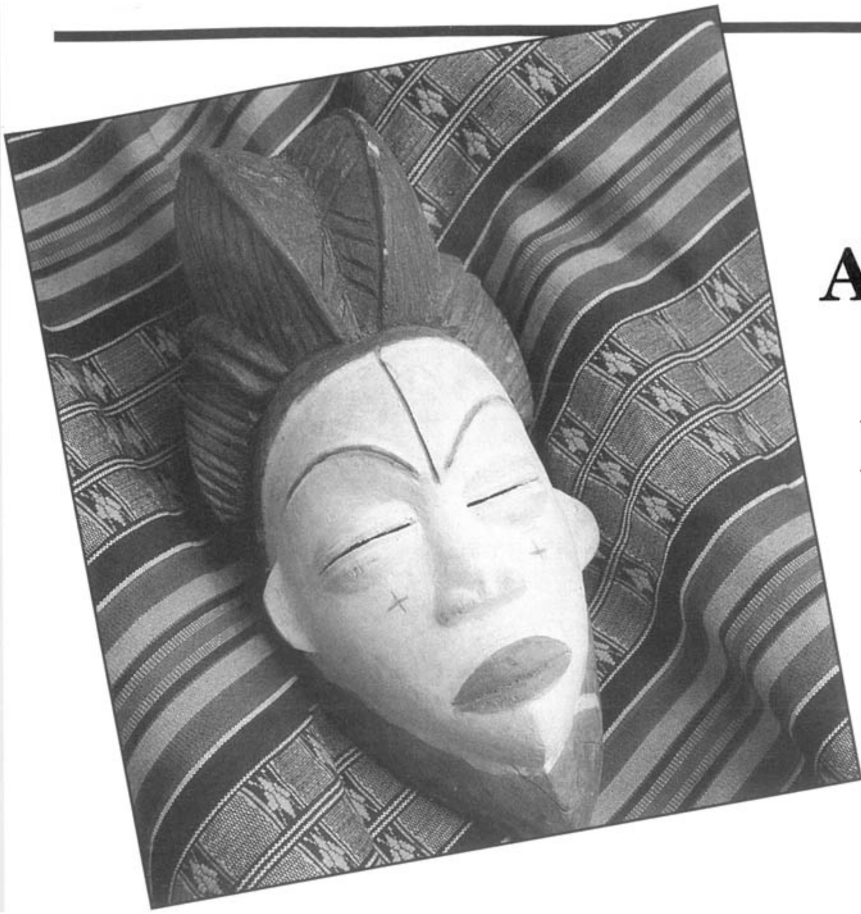


Africa's Quest for Prosperity: Has Adjustment Helped?

CHRISTINE JONES AND
MIGUEL A. KIGUEL

THE SUB-SAHARAN African countries that have made strides in improving policies have enjoyed some resurgence of growth. Countries still need to deepen the reform efforts that have led to a renewal of growth in the short term and to rethink the adjustment strategy where reforms have been limited or have had little payoff.

Africa's poor economic performance is not a recent phenomenon. After growing rapidly in the late 1960s and early 1970s, the region has experienced decline since the mid-1970s. GDP per capita fell by 15 percent between 1977 and 1985; export performance collapsed—from a growth of almost 10 percent per year in the early 1970s to a slight decline in the early 1980s. The region most in need of growth to reduce poverty has had the least.

To reverse the economic decline, many African countries have undertaken structural adjustment programs since the mid-1980s as a necessary step on the road to sustainable, poverty-reducing growth. Although there has been a turnaround in growth for a number of countries, economic performance for the region as a whole has been disappointing. This poor economic record has sparked debate on the adjustment process itself: does Africa's poor performance represent a failure to implement the needed policy reforms? Or is it a failure of the design of the adjustment policies themselves?

To gain some insight into how much adjustment has taken place and how successful it has been in African countries, the World Bank recently conducted a major study, *Adjustment in Africa: Reforms, Results, and the Road Ahead.* The study compares the policies and performance of 29 Sub-Saharan African countries during two periods: from 1981 to 1986, when most African countries were in economic crisis, and from 1987 to 1991, when all countries introduced economic adjustment programs. The cutoff point was 1991, as macroeconomic data for all countries were available only through that year at the time the research was carried out. A companion report, *Adjustment in Africa: Lessons from Country Case Studies* (see following article), documents reform efforts in seven countries and thus complements the regional perspective here.

The study shows that Africa's inability to improve growth is mainly the result of a lack of sustained reform, not a failure of the reforms themselves. Indeed, in the few countries that have implemented and sustained major policy reforms, there has been renewed growth. However, many countries have yet to implement the reforms needed to restore growth. And even among the strongest adjusters, no country has gone the full distance in putting a stable macroeconomic framework in place.

Even if implemented fully, adjustment policies alone are not enough to put African countries on a sustained, poverty-reducing growth path. Development requires much more than just good policies. It also requires sustained investment in human capital and infrastructure, strong institutions, and good governance.

Why the need to adjust

According to the study, the decline in the terms of trade from the early 1970s to the mid-1980s—which also affected developing countries outside Africa—accounted for a relatively small part of Africa's collapse in

growth. Poor policies played a bigger role. In pursuing the ambitious development objectives of the postindependence period, African countries adopted policies that were not conducive to growth and ultimately reduced their flexibility in responding to terms of trade shocks. Among poor policies, both macroeconomic and sectoral, the following deserve special mention.

• Many African countries had severely overvalued exchange rates by the mid-1980s. Indeed, among developing countries, these nations had by far the largest parallel market premiums for foreign exchange.

• The ratio of government consumption to GDP, averaging 15 percent between 1975 and 1986, exceeded those of other regions by nearly 5–6 percentage points, a result of public sector expansion during commodity booms that proved difficult to scale back when the booms ended.

• Most African economies followed an inward-oriented, import-substitution strategy, supplemented by widespread use of tariff and nontariff barriers to reduce external competition, mainly in manufacturing.

• Farmers were taxed 70 percent more than in countries in other regions.

To the extent that deteriorating policies were critical in explaining the economic decline, would a better policy environment reverse the decline? According to the study, countries that sustained a better policy environment enjoyed significant increases in growth, exports, and agriculture. Progress in improving policy reforms, however, has been uneven, across both countries and sectors.

Macroeconomic reforms. Six of the adjusting countries saw a large improvement in policies, 9 a small improvement, and 11 a deterioration, based on the index of macroeconomic policy reform developed in the study. Taken as a whole, these countries have cut their budget deficits and reduced inflation to moderate levels. Countries with flexible exchange rates (those outside the CFA franc zone) have reduced the premium on the parallel market for foreign exchange and effected a needed 50 percent real depreciation.

Trade reforms. Many countries have substantially reduced the number of imports subject to nontariff barriers and have begun to rationalize the tariff structure to encourage greater efficiency. Most of the countries with a flexible exchange rate have moved to more automatic systems of granting foreign exchange licenses.

Agricultural reforms. Two thirds of the adjusting countries are taxing their farmers less. Despite huge declines in real export prices, policy changes increased real producer prices for agricultural exporters in 10 countries. Of the 15 governments that had major restrictions on the private purchase, distribution, and sale of major food crops before adjustment, 13 have withdrawn from marketing almost completely.

Public enterprise and financial sector reforms. Less progress has been made in public sector reform. The pace of privatization has been slow, with African governments selling off only a small portion of their assets. Financial flows to public enterprises are still high, and overall performance has not improved. One encouraging trend, however, is that governments have stopped expanding their public enterprise sectors.

In the financial sector, there has been progress in rationalizing real interest rates and in increasing private sector ownership in commercial banks. Efforts to restructure and recapitalize banks have been less successful, however, as banks have continued to lend to unhealthy public enterprises, undermining the sustainability of the restructuring efforts.

Policy reforms pay off

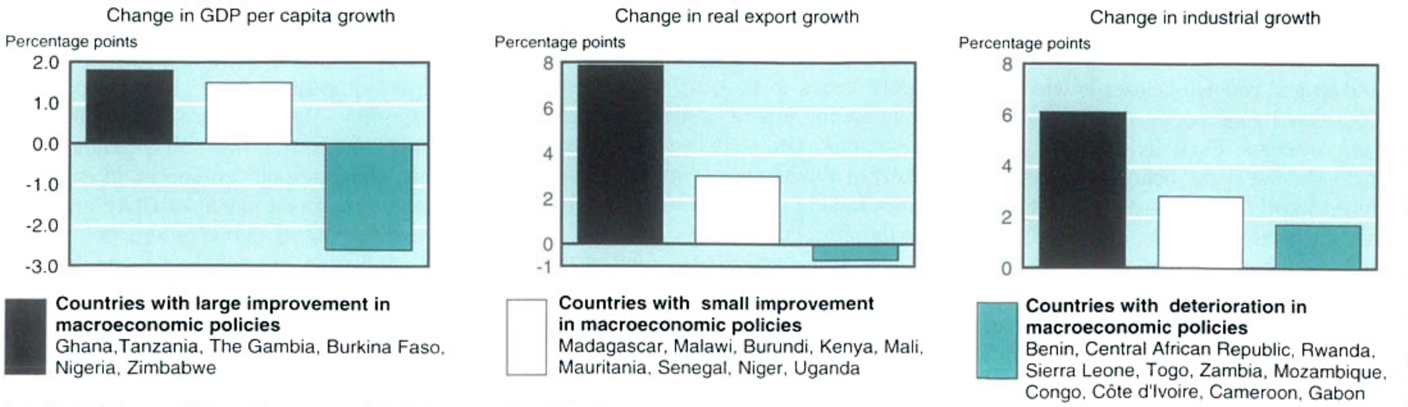
The group of countries that instituted the most extensive macroeconomic reform policies between 1981–86 and 1987–91 enjoyed a median increase of GDP per capita growth of almost 2 percentage points. By contrast, countries that did not improve their policies saw their median GDP growth decline by 2.6 percent. A similar pattern is evident for export and industrial growth (Chart 1). As for agriculture, countries that taxed their major export crops less experienced a jump of 2 percentage points in the growth of total agricultural value added, while countries that penalized their farmers more saw agricultural growth rates fall by 1.6 percentage points.

To the extent that macroeconomic policies matter—and they do—getting the exchange rate right is one of the top priorities for short-term growth. Countries that significantly reduced the black market premium (by devaluing) and adopted realistic macroeconomic policies enjoyed the biggest payoffs (e.g., Ghana, Nigeria, and Tanzania). Countries that brought about a real depreciation of 40 percent or more between 1981–86 and 1987–91—all of them with flexible exchange rates—had a median increase in GDP per capita growth of 2.3 percentage points (e.g., The Gambia, Mauritania, and Sierra Leone). Countries that had appreciations—all of them with fixed exchange rates—suffered a median decline of 1.7 percentage points (e.g., Cameroon, Côte d'Ivoire, and Gabon).

Chart 1

Payoffs to improving policies

(median changes in average annual growth rates between 1981-86 and 1987-91)



Note: Chad, Guinea, and Guinea–Bissau are not included because of insufficient data.
Source: *Adjustment in Africa: Reforms, Results, and the Road Ahead.*

There were payoffs not only to improving policies, but also to maintaining good policies. Countries assessed as having adequate or fair macroeconomic policies had a median rate of GDP per capita growth of 0.4 percent a year during 1987–91—low, but at least positive. By contrast, in countries ranked as having poor or very poor macroeconomic policies, median GDP per capita growth fell by 2.1 percentage points a year on average.

The extent of government intervention in markets also made a difference in growth. Countries with limited intervention had median GDP per capita growth of almost 2 percent during 1987–91, compared with declines of more than 1 percent for the countries that intervened more extensively.

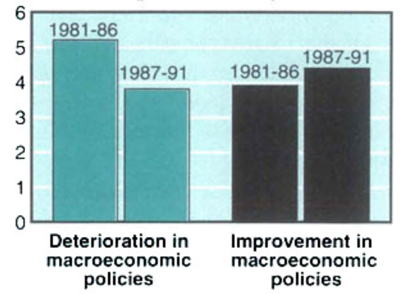
These countries' economic policies have continued to evolve, of course, since the study was completed. The recent devaluation in the CFA franc zone countries provides a unique opportunity for a rapid and noticeable rebound in growth (see "Striving for Stability: CFA Franc Realignment" in this issue). Success, however, largely depends on whether (1) the devaluation is accompanied by supporting fiscal and credit policies to ensure that it is not eroded by large increases in domestic prices, and (2) the benefits of the higher prices for tradable goods are passed along to agriculture producers, so that exports can become a dynamic factor and energize growth. Other countries have also taken steps to improve their macroeconomic policies since 1991, notably Mauritania, Mozambique, Sierra Leone, Uganda, and Zambia. But policies have worsened in Burundi and Nigeria, while Kenya has exhibited both backsliding and improvement.

Room for better policies

Policy reforms have helped restore positive rates of growth of GDP per capita in many countries. Despite improvements in policy, most African countries are still far from implementing the sound economic policies of the fast-growing countries in other regions. While changes in macroeconomic policies have moved several countries closer to what might be considered good policy, there is still room for improvement. Even for the best African performers, the fiscal deficits are large and financed mostly by external aid; inflation is above international levels; and the parallel market premium for foreign exchange still remains. For instance, Ghana had inflation rates well in excess of international levels (about 30 percent), while Burundi and The Gambia had parallel market premiums of about 20 percent. In some other countries, even substantial improvements in macroeconomic policies leave them a long way from adequate policies.

What more must be done to generate rapid growth and reduce poverty? Progress is needed in all aspects of the development agenda, particularly investments in people and infrastructure. But for those investments to pay off, sound economic policies must be implemented and sustained. Many of the African countries are moving in the right direction with their macroeconomic, agricultural, and trade policies, and most policymakers agree on what still needs to be done. But there has been little progress in reforming public enterprises and the financial sector, and there is much less consensus on how to proceed. Reform in these sectors is particularly difficult because of the powerful vested interests that have been created through government intervention.

Chart 2
Health and education expenditures
(percent of GDP)



Source: *Adjustment in Africa: Reforms, Results, and the Road Ahead.*

Getting macroeconomic policies right. Countries should continue with the current strategy: avoiding overvalued exchange rates and keeping inflation and budget deficits low. Most countries in the region still need to cut budget deficits and indirect fiscal losses (those covered by the banking system) in order to lessen the need for inflationary financing or additional external financing. More needs to be done to increase savings. Eliminating large negative real interest rates is an important step; however, given the difficulty of obtaining rapid growth in private savings, raising public savings is the best option in the short run.

Taxing agriculture less. In agriculture, the main policy reform task is to continue reducing explicit and implicit taxation of farmers by reducing the bias against tradable crops created by overvalued exchange rates and by liberalizing pricing and marketing of export and food crops. In many cases, there is no clear rationale for agricultural marketing parastatals, and they can be eliminated as barriers to private sector entry are removed. These reforms can help farmers reap the full benefit of the exchange rate depreciations, the additional earnings from which might otherwise be used to shore up the financial position of parastatals.

Putting exporters first. Because exports are so beneficial for growth, countries should seek to remove unnecessary policy impediments that hinder export competition. Providing exporters with automatic access to imported foreign exchange, eliminating export monopolies, and facilitating access to intermediate inputs and capital goods would reduce bias against exporters. Direct government promotion of particular exports or exporters is not indicated, given the difficulty of insulating technocratic decisions from political considerations.

Rationalizing import barriers. There has been progress in eliminating widespread government controls over access to foreign exchange and import licenses, but most countries have gone only partway. African countries should continue to replace nontariff barriers with tariff-based protection to rationalize the trade regime and increase transparency. The next steps on the agenda are to simplify the tariff structure, reduce the highest rates to more moderate levels, and institute a minimum tax—so long as effective systems are in place to provide exporters duty-free access to imports. These reforms can often generate enough government revenues to offset a fairly substantial overall lowering of tariffs while leading to a more competitive environment and productivity gains. Beyond that, further progress toward a low and completely uniform tariff structure should not sacrifice fiscal revenues.

Privatizing public enterprises. Well-functioning infrastructural services can help to promote private investment and growth. Despite efforts at rehabilitation, the quality of public services in many countries remains poor. Greater focus on private sector delivery holds promise, especially as the alternatives—imposing hard budget constraints, granting the enterprises greater autonomy, and putting them on a commercial footing—have seldom worked in an environment where the institutional capacity and willingness to subject public enterprises to market discipline is lacking. But many barriers to greater private sector participation, including privatization, remain. Progress on divesting even the "nonstrategic" enterprises that do not provide public services, has been limited, reflecting the difficulties, political and otherwise, of reform in this area.

Countries elsewhere are getting around the obstacles to privatization, and their experience may be useful for African countries. Some of these countries have fostered broadly based ownership by giving private citizens vouchers for shares in public enterprises or by reserving shares for employees. For natural monopolies, many countries are finding it advantageous to promote private sector management and delivery of essential public services—through leasing or concession arrangements, for example—even while maintaining public sector ownership where necessary.

Prudent financial reform. The overall approach to financial development is on target, but reforms have suffered from too much faith in quick fixes. African countries need to continue with a three-part strategy of reducing financial repression, restoring bank solvency, and improving financial infrastructure. Adjustment programs have been overly hasty in cleaning balance sheets and recapitalizing banks in an environment where institutional capacity is weak, and the main borrowers (the government and public enterprises) are financially distressed. Many programs were based on the assumption that banks could improve their performance simply by removing the bad loans from their balance sheets, replacing managers, and injecting new capital to bring assets up to international standards. These steps have proved to be insufficient because reforms were not accompanied by needed macroeconomic and structural changes, bank managers continued to be exposed to political interference, and regulatory and supervisory capacities were inadequate and could be developed only over time.

A more prudent strategy to restore bank solvency involves downsizing publicly owned banks, privatizing them where possible, and encouraging new entrants. Because most African countries have limited capacity to regulate and supervise, the challenge is to devise a financial system that offers extra cushions against risk. These may include setting higher-than-normal capital adequacy ratios, relying more on foreign banks, and limiting entry to reputable banks with a solid capital base. Countries must strike a balance between the need to increase competition and the need to ensure the solvency of financial institutions.

Improving public sector management. Public sector management capacity in Africa is weak. Many adjustment reforms are intended to free up this scarce capacity by reducing government intervention in the production and distribution of goods and services, so that the state can concentrate on fulfilling its essential tasks. These include providing law and order, a stable macroeconomic framework conducive to growth, and basic social services. Enhancing the capacity of the state to carry out such tasks is part of the long-term development process, and not something that adjustment-related policy reforms should be expected to bring about in the short term.

Restructuring external debt. So far, aid flows and concessional lending have more than offset debt-service payments. But in the medium and long term, as countries adopt better policies, the debt overhang is likely to deter private investment. Further, the debt-service burden threatens to eat away at increased export earnings and domestic savings that might otherwise be used in pursuit of long-term development objectives. Even the proposed debt relief strategies under consideration would leave some countries with an unsustainable debt burden. Instead, the focus should be on reducing the stock of debt to sustainable levels for countries that are undertaking comprehensive and sustained policy reform programs, even if that means differences in treatment across countries.

Protecting the poor. It is very difficult to assess the impact of adjustment on the poor due to a lack of data for the region as a whole. The evidence from Côte d'Ivoire shows that poverty increased substantially in the late 1980s, as policies deteriorated and economic recession took hold. Evidence from other areas in the world, notably East Asia, demonstrates that countries that have been the most successful in attacking poverty have encouraged a pattern of rapid growth that makes efficient use of labor and have invested heavily in the human capital of the poor. Improvements in macroeconomic and agricultural sector policies in Sub-Saharan African countries should also help to foster a more broadly based labor-intensive pattern of growth beneficial to the poor, the vast majority of whom live in the rural sector. However, reforms that have improved producer incentives have sometimes had negative consequences for those consumers who benefited from food subsidies and cheap imported foodstuffs. While evidence on the incidence of these subsidies is limited, indications are that subsidized foodstuffs were often highly rationed and did not extend to the poor, limiting the potentially negative impact of these reforms.

Contrary to what is commonly thought, those countries that improved their macroeconomic policies managed to increase slightly the level of social spending by the government as a percentage of GDP (Chart 2). Countries in which macroeconomic policies deteriorated, however, experienced a drop in social expenditures. Eliminating large macroeconomic distortions enabled countries to restore their tax base, giving them greater scope for protecting social expenditures. Despite this achievement, however, much remains to be done to improve the quality of spending within the health and education sectors in support of poverty reduction. African countries spend twice as much of their education budget on universities as countries such as Korea, Indonesia, and Thailand, even though literacy rates lag far behind. Similarly, too little of the health budget is spent on basic health services. Improving public spending policies is desirable not only because it can lead to improvements in social indicators in the short term, but also because, as the East Asian economies have shown, it contributes to rapid, broadly based growth and poverty reduction over the long term.

Conclusion

In Africa, the road to sustainable development and rapid poverty alleviation is bound to be long and difficult. Structural reforms are essential, but they alone will not assure rapid growth; investments in human capital, infrastructure, institutional capacity, and a strong commitment to good governance are important and essential ingredients as well. But the experience of countries that have sustained reforms in Africa has shown that adjustment is the first and crucial step to restoring growth and getting back on the road to development. ■

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For further detail and analysis, see Adjustment in Africa: Reforms, Results, and the Road Ahead, *a World Bank Policy Research Report led by Christine Jones and Miguel Kiguel.*

Results of Adjustment in Africa: Selected Cases

ISHRAT HUSAIN

SUB-SAHARAN Africa's economic decline, although modestly reversed in some countries, is deeply worrying. A World Bank case study of seven countries pinpoints the need for consistent and unfettered implementation of reform policies, along with investments in infrastructure and human resources, to lift these countries out of poverty.

After a prolonged period of economic stagnation, many African countries committed themselves in the mid-1980s to a series of structural reforms and adjustment policies aimed at restoring economic growth. Now, almost a decade into adjustment, Africa's economic climate still remains unclear and uncertain, with the overall results modest relative to original expectations.

Although some countries have enjoyed a resurgence of growth, the economic performance of the region as a whole has been disappointing, raising troubling questions about the extent and efficacy of policy reform efforts. (See "Africa's Quest for Prosperity: Has Adjustment Helped?" in this issue.) Previous studies of structural adjustment have focused on cross-sectional and aggregate performance of a group of countries that have taken adjustment loans from the World Bank and the IMF. Few empirical studies have actually measured the extent to which policies have, in fact, been implemented by the countries themselves and then related changes in policies to subsequent economic performance.

To fill this gap, a recent World Bank study examined in depth seven countries—Burundi, Côte d'Ivoire, Ghana, Kenya, Nigeria, Senegal, and Tanzania—that undertook adjustment programs during the mid-1980s. The period covered by these case studies ends, for most countries, in 1991. The countries were chosen to capture a variety of characteristics and initial conditions. In all seven countries, adjustment programs addressed such distortions as an overvalued exchange rate, high current account and fiscal deficits, low factor mobility, restrictions on domestic and foreign trade, distorted pricing for tradables, and inefficient public services.

How far have these countries come in reforming their policies? To assess the extent of reform, the study looked at the five questions that are raised most frequently in connection with adjustment programs: Has growth been adequate? Has the supply response been strong? Do investment-to-GDP ratios show improvement? What role has been played by external financial flows? And, have adjustment policies hurt the poor?

The results of this study confirm the findings of the main World Bank Report *Adjustment in Africa: Reforms, Results, and the Road Ahead.* Those countries that have pursued adjustment programs in a consistent and sustained manner, such as Ghana and Tanzania, have shown positive results in terms of a resurgence in growth. But it is equally clear that many structural reforms have yet to take place; consequently, economic recovery is still fragile and economic growth rates are still insufficient to make any dent in poverty alleviation.

Higher growth

All the countries studied, except for Côte d'Ivoire, had positive per capita GDP growth during the adjustment period 1986–91. The average growth rate of the six countries over the adjustment period was 4.5 percent a year—a strong improvement compared with an average growth rate of 1 percent during the crisis (1981–86).

Burundi and Kenya, which had fairly good initial conditions, maintained their previous growth rates. The biggest turnarounds during 1986–91 were registered in Nigeria (8 percentage points), Ghana (8.8 percentage points), and Tanzania (4 percentage points). Even Senegal registered a small turnaround in growth despite the handicap of an overvalued exchange rate. Côte d'Ivoire, which once had an impressive growth rate, could not return to its pre-crisis rate primarily because of its exchange rate problems (see Chart 1). A large devaluation of the CFA franc took place in January 1994, removing one of the principal obstacles to the full interplay of policy instruments required for adjustment in CFA franc zone countries. It is hoped that Côte d'Ivoire and Senegal, which have been adversely affected by the overvaluation of the CFA franc since 1985, will enter into a new period of higher growth.

Supply response

The most important contributor to domestic supply and output in the region is the agri-

Africa after adjustment

Chart 1

Real average annual GDP growth rate

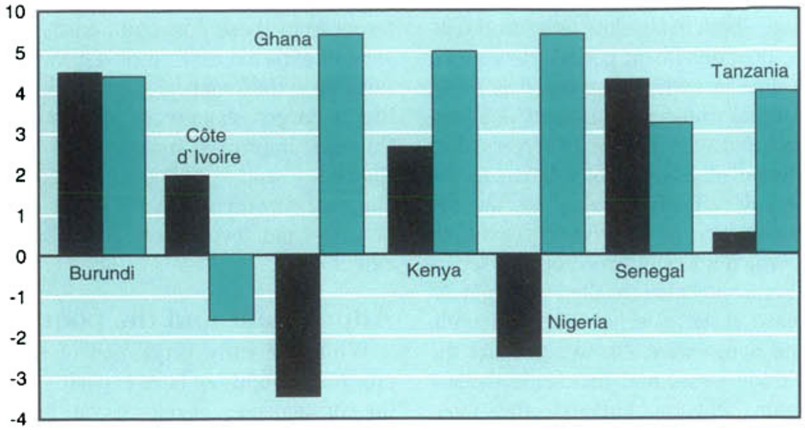


Chart 2

Export growth

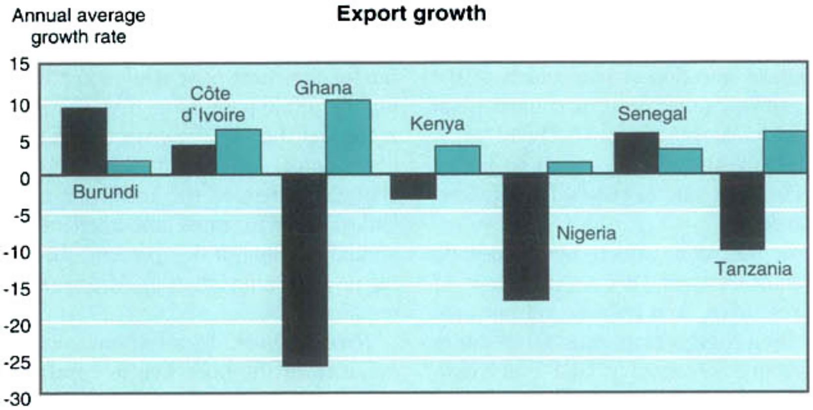
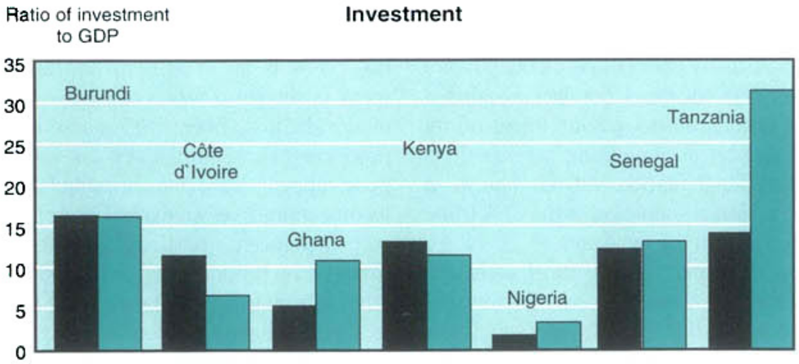


Chart 3

Investment



Before adjustment | Adjustment period

	Before adjustment	Adjustment period
Burundi and Nigeria	1980-85	1986-91
Tanzania	1981-85	1986-91
Côte d'Ivoire	1981-86	1987-91
Kenya	1980-84	1985-91
Senegal	1982-85	1986-91
Ghana	1979-83	1983-91

Source: World Bank.

cultural sector, followed by the export sector, which relies heavily on agricultural commodities, mining, and petroleum.

Agricultural sector. All seven countries showed significant output increases—a trend corroborated by evidence on prices, food imports, and food production. The index of per capita food production rose in almost all countries except Tanzania, where the data are inconsistent—food imports and food prices both show a decline. In Burundi, per capita food production seems to have stagnated, but at least kept pace with the population growth rate during the 1980s. Food prices in real terms declined in Nigeria. Average food imports declined by 30–60 percent in Burundi, Kenya, Nigeria, and Tanzania and remained the same in Côte d'Ivoire, Ghana, and Senegal.

The volume of cash crop exports grew rapidly in Burundi, Ghana, Nigeria, Senegal, and Tanzania—but declined in Côte d'Ivoire. New nontraditional agricultural exports have emerged in almost every country in this group, although the amounts are still modest.

Export sector. Another good indicator of the supply response is the behavior of total exports. The most consistent finding that emerges from this study (which is corroborated by other studies) is that export growth has been remarkably high despite declines in terms of trade; exports have not only recovered from the crisis period but have also surpassed their pre-crisis level (see Chart 2).

The country case studies also investigated whether there was any diversification in exports from traditional commodities. Oil still dominates Nigerian exports, and even the anecdotal evidence on Nigerian unofficial exports of manufactured goods to neighboring countries is fragmentary, preventing any definite conclusion. But unlike in the early 1980s, Nigerian goods are now competing with other imports in the West African markets. Despite a sharp fall in cocoa prices in the world market, Ghana has more than doubled its exports in the past seven years, with gold exports replacing cocoa as the number one export. Today, at least 20 percent of Ghana's export earnings come from products other than cocoa, gold, and timber, compared with 8 percent a decade ago. Tanzania shows the largest documented rise in nontraditional exports; its unrecorded exports are estimated at about $400–500 million a year. Côte d'Ivoire, Kenya, and Senegal have export bases that are among the most diversified in Africa, but changes during adjustment have been minor and show no persistent trend. Burundi is the only country among the seven to show continuing heavy reliance on coffee; its diversification efforts, though started, have been negligible.

Investment responds slowly

Despite increased inflows of foreign savings, public investment has fallen in relation to GDP in all seven countries, recovering to pre-crisis levels only in Tanzania (see Chart 3). The conditions needed to encourage private investors have generally been lacking, so this slow response is understandable. In the short run, the slowdown in public investment (in an attempt to reduce budget deficits and cut uneconomic projects) is bound to depress the overall investment ratios unless there is a compensating rise in private investment.

The relatively low investment rate is not a major obstacle to restoring growth in the short term as long as the efficiency of investment compensates for the low levels. After all, despite much higher pre-crisis investment rates, these countries did not grow faster because of the poor quality of the investments. "White elephant" projects, inflated contracts, flight capital, and other associated ills became rampant before—and eventually contributed to—the crisis in each case. A major aim of adjustment programs, therefore, has been to weed out these undesirable investments (particularly in the public sector) and to improve overall efficiency. Indeed, roughly similar investment ratios generated 1 percentage point of annual growth in the crisis period but close to 5 percentage points in the adjustment period.

A crucial issue is how long it will be before private investment picks up the slack caused by this slowdown in public investment. The evidence so far is not reassuring. Domestic investors have been deterred in the short run by changes taking place as a result of restrictive monetary policies, high interest rates, devaluations (which increase the cost of imported inputs), and trade liberalization. Foreign investors have yet to be convinced that African economies offer good investment prospects. Country studies confirm the vital importance of the stability, continuity, and credibility of policies for providing the appropriate signals to domestic and foreign investors. Of the seven countries, Ghana and (until recently) Kenya came closest to meeting this objective but could have achieved more. If the Ghanaian authorities' general attitude toward the private sector in the past had been less ambivalent, Ghana no doubt would have seen a greater revival of private investment. In Kenya, the lack of transparent policies and the general perception of poor governance discouraged potential investors, even though Kenya had a more stable economic environment than other countries in this sample.

External flows

The three principal mechanisms through which the external economic environment affects African countries are (1) the terms of trade, (2) the debt-service burden, and (3) external resource transfers.

Six of the seven countries studied had a decline in the terms of trade during the adjustment period—both in absolute terms and relative to the pre-adjustment period. How much of this decline in external income was offset by net external transfers (aid flows, debt-servicing relief, and accumulation of arrears) during the period of adjustment relative to the earlier period? Tanzania was by far the largest beneficiary of positive net external transfers, which not only wiped out the terms of trade losses but also resulted in a significant increase in net external flows. Burundi, Ghana, and Kenya were able to neutralize the terms of trade losses and had some modest overall gain. Nigeria suffered the most through terms of trade losses compounded by net negative transfers. Côte d'Ivoire and Senegal also incurred net declines in external flows.

The central question is how much of the renewed growth of the adjusting countries can be ascribed to external factors (aid and terms of trade changes) and how much to policy reform. The case studies reached the following conclusions:

- Nigeria has done much better despite terms of trade losses and net negative flows of external resources. And because net resource transfers from Nigeria to its external creditors equaled about 5 percent of its GDP every year, its growth would have been higher if it had not been so heavily burdened with debt.
- Côte d'Ivoire has been hurt by terms of trade losses and a relative decline in external flows, as well as by poor policies. Côte d'Ivoire is also severely indebted but has avoided a cash flow crunch by not paying (most of) its creditors and by accumulating arrears. It is hoped that this situation will change as a result of the 1994 devaluation of the CFA franc and the accompanying measures.
- Burundi, Ghana, Kenya (until recently), and Senegal are among a select group of African countries that are fully servicing their debt—all four have been hurt by terms of trade losses. The gross flows appear large in each one of these cases but, when they are adjusted for the debt service paid and terms of trade losses, the "net external resource availability" indicator is not large. Kenya's growth record reflects some positive impact of adjustment. Clearly, Ghana's growth turnaround was due far more to better policies than to the other changes.
- Tanzania's growth can be attributed to factors other than aid. Generally perceived as highly dependent on external donors, Tanzania has received very large sums of aid historically both during "normal" periods and during times of crisis. Once debt-servicing and terms of trade losses are accounted for, the real external resource flows to Tanzania during its adjustment are no different in absolute terms from those during its crisis. This high level of external assistance is clearly not sustainable in the long run. Tanzania has to mobilize a larger volume of domestic savings through improved management of public finances and financial intermediation. External resources can fill in the gaps temporarily and, even then, only to a limited extent.

Adjustment and the poor

While the early generation of adjustment programs might not have explicitly addressed the consequences of reforms on the poor, the subsequent awareness of these issues has changed the approach of adjustment efforts. An important finding of the study is that adjustment has generally improved the welfare of the rural poor while most likely hurting the urban poor. More disturbing, however, is the fact that the growth attained thus far as a result of adjustment policies is still not enough to reduce the incidence of poverty. Unless growth rates are accelerated to an annual average of 6–7 percent, the prospects for poverty alleviation in Africa are likely to remain dim.

Rural poor. In all seven countries, the majority of the poor live in rural areas, are self-employed smallholders, and derive their incomes from producing and marketing both food and export crops. Because six of the countries (Côte d'Ivoire in the second half of the 1980s is an exception) had an improvement in the rural terms of trade—as a result of devaluation, liberalized marketing, higher producer prices, and lower taxes—the rural poor appear to have benefited from real income gains over an extended period. Export crop producers, particularly nontraditional export crop producers, have gained more than other agricultural producers. Real food prices to farmers have declined in many countries, but the marketed output has increased, replacing food imports in many cases. The real income gains to food producers have varied. Those in Ghana, Nigeria, and Tanzania seem to have benefited the most. Burundi and Kenya have been self-sufficient in food, and, therefore, the food crop farmers in these countries have not gained much. The situation in Côte d'Ivoire and Senegal is still unclear.

Urban poor. The impact on the urban poor has been mixed. In Ghana and Tanzania, the urban poor are better off since adjustment. As consumer goods have become available,

real food prices have declined and informal sector activities have expanded. To the extent that the urban poor were buying their essential goods (including food) in the black market before adjustment, there has been no change in the welfare of this group.

In Côte d'Ivoire and Senegal, the urban poor are worse off. This would also seem to be the case for the unemployed, fixed-income earners, and minimum wage earners in Nigeria. Because there are no data on Burundi and Kenya, it is unclear whether the real incomes of the urban poor in those countries are better or worse off.

Chance for progress?

The implementation of adjustment policies in these countries has been uneven, mixed, and intermittent. A straightforward comparison of policy progress and turnaround in per capita GDP growth shows that Ghana, Kenya, Nigeria, and Tanzania had positive turnarounds along with policy progress. Burundi and Senegal had moderate policy progress with a small turnaround in per capita growth. Côte d'Ivoire clearly had negative per capita growth with little policy progress and also experienced a decline in external income. Often, the short-term political costs of adjustment, especially to the privileged groups, have been enormous and have led to slippages and reversals.

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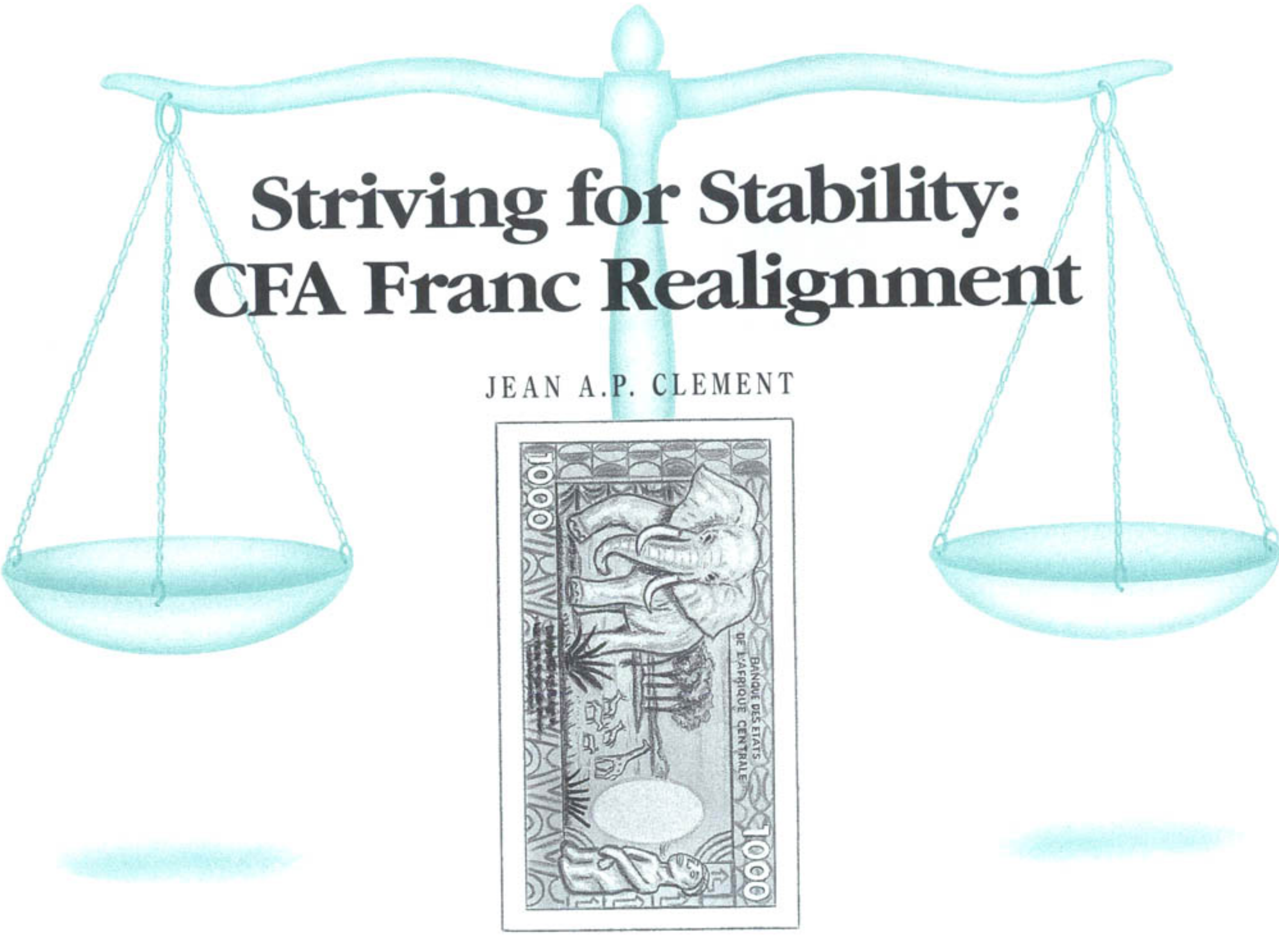
Already, since these case studies were completed, there have been significant developments in some of these countries. Côte d'Ivoire and Senegal, as part of the CFA franc zone, have significantly devalued their currency. Burundi, which was doing rather well, has witnessed a bloody *coup d'état* and the assassination of its elected president, and Nigeria has experienced macroeconomic backsliding, as the new military government abandoned its adjustment policies and reverted to its pre-1986 regime. These drastic changes in the political and economic environment have created uncertainty for some about the future direction of economic policies, but have renewed impetus for growth for others.

In sum, there is no doubt that consistent and unfettered implementation of adjustment policies will improve the outlook for growth in these countries. Adjustment is necessary, even if it is bound to work slowly. But for it to work at all depends upon the strong commitment of countries' leaders to sustain reform policies in the face of adverse and harsh external circumstances and internal pressures. It is equally clear, however, that adjustment policies, by themselves, will not be able to lift African countries out of poverty. These countries still need to improve investment in human resources and infrastructure, accelerate privatization, enhance the role of governance, strengthen institutional capacity building, and, most important, maintain national solidarity and social cohesion. ■

This article is based on Adjustment in Africa: Lessons from Country Case Studies, *edited by Ishrat Husain and Rashid Faruquee, World Bank Regional and Sectoral Studies.*

Striving for Stability: CFA Franc Realignment

JEAN A.P. CLEMENT



FACED with a turbulent economic and financial situation since the mid-1980s, the 14 African member countries of the franc zone made a historic decision to adopt a new comprehensive adjustment strategy, including a substantial realignment of the parity of their common currency. The new strategy should improve the economic outlook for member countries, strengthening the foundation for a full monetary and economic union.

Since its creation almost 50 years ago, the African franc zone has served its members well. The common currency, freely convertible, pegged to the French franc at a fixed rate, and supported by the operations accounts with the French Treasury of the zone's three central banks (the BCEAO, the BEAC, and the Central Bank of the Comoros), provided an anchor for the economic and financial policies of the 14 African member countries (see box). On the whole, these countries benefited from a long period of stability with remarkably low inflation and—until the 1980s—sustained economic growth (see "CFA Franc: Zone of Fragile Stability in Africa" by James Boughton, *Finance & Development,* December 1992).

After 1985, however, external shocks and inadequate policy adjustments led to a deterioration in the economic and financial situation of the members of the zone—a situation that threatened their unity. In response, the member countries adopted a broadly based strategy consisting of a onetime change in the parity of their currency, effective January 12, 1994, coupled with a coherent set of macroeconomic and structural measures aimed at significantly improving economic growth and restoring confidence in the zone.

Mounting difficulties

In 1985, the economic and financial situation began to worsen as a consequence of two major shocks (see chart). First, the zone's terms of trade deteriorated by about 50 percent, owing mainly to a sharp drop in world market prices for its major exports (cocoa, coffee, cotton, and petroleum). Second, the external competitiveness of the zone weakened further as a result of the marked nominal appreciation of the French franc against the currencies of the zone's major trading partners. At the same time, the zone was handicapped by a number of structural and sectoral problems, particularly, relatively high wages.

Despite repeated attempts at internal adjustment, the economic and financial situation continued to worsen, with per capita income falling and financing gaps widening. In particular, the public sector faced increasing difficulties reflecting a shrinking tax base, weakening performance of public enterprises, and rising expenditures. The erosion of the tax base was attributable to the declining competitiveness of the export and import substitution sectors and the growth of the informal sector, including illegal trade. Rising production costs, especially wage costs, contributed to a substantial drop in profitability, most apparent in the public enterprise sector,

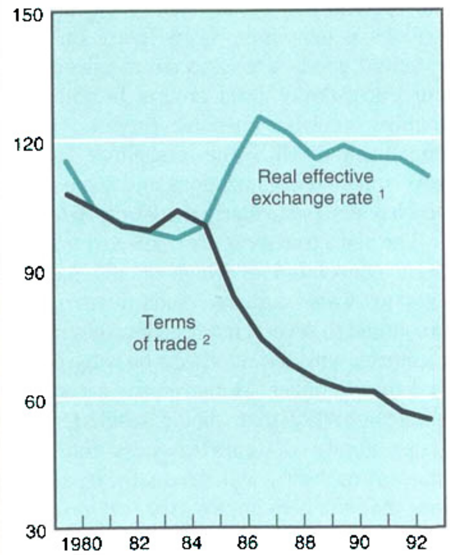
and led to budgetary transfers. With the government's wage expenditures representing more than 60 percent of current budgetary revenue and other outlays increasing markedly, the public sector financing requirement expanded significantly, crowding out the private sector. Considerable domestic and external payments arrears were accumulated, creating serious distortions for production and weakening the banking system. Under these circumstances, the zone's attractiveness for foreign investors diminished substantially, despite the advantage of stable prices and exchange rates, and capital flight increased.

Limits to internal adjustment

To deal with an increasingly difficult situation, several of the countries in the zone tried to strengthen their internal adjustment efforts. The scope of the shocks and the magnitude of the imbalances, however, were such that the internal measures alone, while necessary—especially those intended to control wage costs and restructure the banking system and public enterprises—were not sufficient. Indeed, reliance on internal adjustment resulted mainly in increased tax rates being imposed on a shrinking tax base and in large cuts in priority current and capital expenditures, particularly in education, health, and infrastructure, thereby jeopardizing the basis for sustainable growth.

The unfavorable economic performance of the zone compared with other Sub-Saharan countries is shown by a number of leading indicators (see table). Although the zone has experienced no growth over the past eight years on average, the other Sub-Saharan African countries grew by 2.5 percent annually; the contrast in terms of per capita income, which is declining by some 3 percent in the zone, is even starker. Inflation, however, was lower in the zone countries. The overall budget and external current account deficits were also much larger in the CFA franc zone members, while external debt increased by nearly 40 percentage points relative to GDP compared with 14 percentage points in other Sub-Saharan African countries.

Two major shocks affected the zone's economic climate
(weighted by 1985 GDP; 1985=100)



Source: Information Notice System, African Department; and *World Economic Outlook*, IMF.
[1] An upward movement of the real effective exchange rates is an appreciation.
[2] A downward movement of the terms of trade is a loss.

The alternative strategy

While a deepening of the internal adjustment strategy could have been envisaged, it would have pushed the zone further into a deflationary spiral that already showed signs of being socially untenable. The member countries consequently agreed that a far-reaching strategy, including a onetime change in the parity of the CFA franc and the Comorian franc, was required to keep the zone from falling further into recession and to prevent the members from choosing to act individually or separately. To be sure, the latter course of action would have inevitably destroyed the zone's unity.

The member countries decided that a substantial devaluation was the best way to respond to the mounting difficulties and return to a path of sustainable growth. The parity adjustment is to be accompanied by comprehensive adjustment programs, including far-reaching fiscal, wage, monetary, and structural measures, tailored to the circumstances of each country, to ensure that competitiveness is effectively restored. Simultaneously, the member countries resolved to strengthen the foundation of their economic integration. Accordingly, they will meet at least twice yearly to coordinate their economic policies and monitor the implementation of their adjustment programs. As an important step, the member countries of the West African Monetary Union adopted a treaty establishing the West African Economic and Monetary Union.

Why 50 percent?

The size of the parity change was decided on the basis of a number of indicators that estimated the overvaluation of the CFA franc, including the evolution of the real effective exchange rate, the deterioration in the terms of trade, and the change in parity required to restore domestic and external equilibrium in the medium term. The zone members decided on the size of the change in parity—50 percent in foreign currency terms for the CFA franc (CFAF 50 to CFAF 100 for 1 French franc) and 33 percent for the Comorian franc (CF 50 to CF 75 for 1 French franc). An important consideration in deciding on the size of the adjustment was to set the rate at a level that would remain fixed for a long time.

The expected results

The parity adjustment, accompanied by measures aimed at controlling demand and fostering a recovery in supply, will enable zone members to regain competitiveness. This is because the parity adjustment, by changing relative prices between tradables and nontradables, will encourage a shift of resources to the more dynamic sectors from the less growth-oriented sectors of the economy. Agriculture—which employs most of the population—may be the first to benefit. The same

The African franc zone: a profile

The 14 African countries of the franc zone currently consist of two separate groups of Sub-Saharan countries and the Islamic Federal Republic of the Comoros. The first group includes the seven members of the West African Monetary Union (WAMU)—Benin, Burkina Faso, Côte d'Ivoire, Mali, Niger, Senegal, and Togo—which have assigned responsibility for conducting monetary policy to a common central bank, the Banque Centrale des Etats de l'Afrique de l'Ouest (BCEAO). The second group includes the six members of another common central bank, the Banque des Etats de l'Afrique Centrale (BEAC)—Cameroon, the Central African Republic, Chad, the Congo, Equatorial Guinea, and Gabon.

The two groups and the Comoros maintain separate currencies—the franc of the African Financial Community for the WAMU countries, the franc of the Financial Cooperation in Central Africa for the BEAC countries, and the Comorian franc for the Comoros. The currencies of the two groups and the Comoros, however, are commonly referred to as the CFA franc. The CFA franc was pegged to the French franc at a rate of CFAF 50 per F 1 for 45 years prior to the January 12, 1994 devaluation. The Comorian franc was pegged at a rate of CF 50 per F 1 from 1979 until the devaluation.

The two common central banks and the Central Bank of the Comoros each have an operations account at the French Treasury into which they deposit 65 percent of their foreign exchange holdings. Convertibility of the CFA franc into French francs through authorized intermediaries is supported by provision for central bank overdrafts on these accounts.

Unfavorable trends since the mid-1980s
CFA[1] versus other Sub-Saharan African countries

	1975–85 Average	1985	1986	1987	1988	1989	1990	1991	1992	1993	1986–93 Average
					(annual changes in percent)						
Real GDP growth											
CFA	**4.6**	7.3	**4.0**	-1.7	**-0.4**	1.7	**-1.0**	-0.2	**0.1**	-1.9	**0.1**
Non-CFA	**1.4**	2.8	**2.1**	2.5	**5.7**	4.0	**2.7**	1.6	**-0.5**	1.5	**2.5**
Real per capita GDP growth											
CFA	**1.7**	4.8	**0.9**	-4.4	**-3.3**	-1.3	**-3.8**	-3.2	**-2.8**	-4.7	**-2.8**
Non-CFA	**-1.3**	-0.1	**-0.6**	-0.3	**2.8**	1.1	**-0.3**	-1.2	**-3.1**	-1.0	**-0.3**
Inflation (CPI)											
CFA	**11.2**	5.6	**3.4**	0.6	**2.4**	1.2	**1.0**	0.4	**0.2**	-0.3	**1.1**
Non-CFA[2]	**17.8**	16.2	**16.8**	20.4	**26.2**	26.2	**15.8**	17.3	**26.3**	27.2	**22.0**
					(percent of GDP)						
Overall fiscal balance											
CFA	**-5.0**	-2.7	**-3.9**	-9.5	**-8.9**	-8.8	**-8.0**	-6.8	**-6.6**	-8.1	**-7.6**
Non-CFA	**-6.1**	-4.5	**-5.0**	-5.7	**-7.2**	-4.1	**-2.8**	-5.3	**-6.5**	-8.2	**-5.6**
External current account (including grants)											
CFA	**-6.5**	-1.7	**-6.4**	-8.9	**-8.5**	-7.1	**-7.5**	-6.5	**-7.4**	-6.7	**-7.4**
Non-CFA	**-1.9**	0.2	**-2.2**	0.4	**-1.8**	-0.4	**0.6**	-0.6	**-1.3**	-1.2	**-0.8**
Merchandise exports											
CFA	**28.0**	32.1	**25.8**	21.2	**20.4**	21.8	**22.5**	22.9	**21.6**	22.4	**22.3**
Non-CFA	**20.7**	19.6	**21.1**	25.3	**23.6**	25.1	**25.9**	23.4	**23.5**	24.0	**24.0**
Merchandise imports											
CFA	**23.8**	21.1	**19.8**	19.3	**18.3**	19.1	**18.7**	17.6	**18.2**	18.5	**18.7**
Non-CFA	**18.9**	15.4	**18.5**	20.6	**21.5**	21.6	**20.7**	20.7	**21.7**	22.2	**20.9**
External debt											
CFA	**38.2**	54.2	**53.8**	60.6	**66.0**	72.4	**76.8**	82.9	**83.5**	93.5	**73.7**
Non-CFA	**25.2**	41.0	**55.9**	62.1	**56.9**	59.7	**57.2**	56.3	**52.6**	55.0	**57.0**

Source: *World Economic Outlook*, spring 1994, IMF.
[1] Sub-Saharan Africa, excluding Djibouti, Liberia, Mauritania, Somalia, and Sudan but including Nigeria and South Africa.
[2] Excluding Zaïre.

holds true for the nontraditional export- and import-substitution sectors. With improved profitability in these sectors, existing capacities would be utilized, growth and employment would be revived, and private investment would be encouraged. This, together with effectively targeted public investment, would lay the basis for further productivity growth over the medium term.

Clearly, the devaluation will have repercussions for the general price level. It is important, however, that the onetime adjustment in the price level not lead to inflation. This will require strictly containing aggregate demand to ensure that the needed correction in relative prices between tradables and nontradables is realized and inflation returns quickly to its low predevaluation level. The return to financial stability will hinge crucially on the implementation of rigorous fiscal, wage, and monetary policies, as well as on the expected reduction in import duties and taxes. At the same time, the liberalization of procedures for foreign trade, marketing, and prices should stimulate competition and therefore limit price increases.

The example of countries that have used the exchange rate instrument provides compelling evidence that, with the proper supporting policies, inflation can be quickly brought under control, and normal rates can soon be restored. The zone also has a major advantage that can be particularly helpful: its common monetary policy based on strict rules prevents an excessive supply of currency from fueling inflation. If monetary policy and a firm fiscal policy, together with a prudent wage policy, are applied, inflation and wage costs can be controlled.

Social aspects

The new strategy should have a positive impact on the real incomes of most of the population and should contribute to reducing poverty as well as social and regional disparities over the medium term. In the agricultural sector, a sizable increase can be expected in the incomes of small farmers and wage earners producing export and food crops, whose purchasing power has eroded considerably since 1985. The new strategy should also benefit wage earners in other sectors involving international tradables, including the informal sector. In contrast, the short-term effects of the adjustment will be negative for groups employed in sectors involving nontradables—including the civil service—which represent a significant proportion of the urban population.

To minimize the short-term negative impact of the adjustment on the poorest and most vulnerable segments of the population, social safety nets are planned, based on the individual needs of each member country. In particular, specific tax and budgetary measures, as well as a temporary price freeze on a few essential goods, are expected to alleviate the burden of these social groups. In addition, a number of labor-intensive projects will be implemented with the assistance of nongovernmental organizations and some donors and lenders, particularly the World Bank.

The new strategy is also expected to lead to fiscal consolidation, which should mean an end to wage arrears. Such arrears have amounted to several months of wages in some countries, with serious effects on wage earners and their families. Moreover, the general economic recovery that should result from the zone's improved competitiveness and higher investment levels will gradually create new jobs that will help improve the real incomes of all social groups in the medium term.

International support

The rigorous implementation of this comprehensive adjustment strategy should make it possible over time to reduce net financing

requirements to sustainable levels and eliminate all domestic and external payments arrears in franc zone countries, thereby going a long way toward restoring the zone's creditworthiness. The medium-term balance of payments viability of the African countries of the franc zone, however, will also hinge crucially on strong support by the international community. This support would need to include substantial debt relief from bilateral and private creditors. France has already taken far-reaching initiatives in this regard.

The IMF assisted each CFA zone country in formulating comprehensive adjustment programs. For 11 of the 14 countries, arrangements were already approved by the IMF's Executive Board at end-March 1994. To put IMF assistance in place as rapidly as possible, a number of programs are being supported first with stand-by arrangements and are expected to be replaced by annual arrangements under the enhanced structural adjustment facility (ESAF). This facility supports low-income countries pursuing comprehensive adjustment programs with financing on concessional terms. At present, 12 of the 14 African countries of the CFA zone are eligible for the ESAF (Congo and Gabon are not eligible because their per capita incomes exceed the level that defines low-income countries). The World Bank has also closely collaborated in the design of the programs and has already assisted with mobilizing financial support. Very shortly after the adjustment programs were approved by the IMF's Executive Board, the respective countries benefited from rescheduling arrangements with private and bilateral creditors, the latter under the aegis of the Paris Club.

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Conclusion

The substantial realignment of the parity of their common currency is a significant move for the members of the CFA franc zone. This change is to be accompanied by a coherent and far-reaching set of macroeconomic, structural, and social measures tailored to the particular circumstances of each country. The strategy is aimed at restoring competitiveness, thereby improving both the use of existing productive capacity and the allocation of resources in the economy, as well as enhancing the zone's economic diversification and ability to absorb external shocks.

As members of the franc zone make better use of their comparative advantages—particularly their abundant, young labor force—economic growth should increase markedly, thus improving the well-being of the population. The new strategy, if implemented with determination, should restore confidence in the zone and lead to a return of private capital and investment. Finally, the foundation for a full monetary and economic union would be considerably strengthened. ■

Interbank Foreign Exchange Markets in Africa

YIN-FUN LUM AND CALVIN MCDONALD

AFRICAN countries experimenting with interbank floating exchange markets are discovering the significant benefits these markets provide, such as realistic exchange rates for domestic currency and an increased flow of foreign exchange through the official market. But numerous institutional and regulatory issues still need to be resolved to help the new markets operate smoothly.

In industrial countries, billions of dollars change hands daily in the interbank markets for foreign exchange. These markets are the deepest, most liquid, and most resilient of all global currency markets. But, only in recent years have interbank foreign exchange markets begun to emerge in developing countries, in many cases spurred by the need to reform exchange rate systems. Since the mid-1980s, for example, a number of African countries have moved to floating exchange rate systems, often through interbank market arrangements.

Under an interbank market arrangement, the exchange rate is determined in negotiations between commercial banks (or other licensed dealers) and their clients, and in transactions between the banks. The exchange rate may vary from day to day and even from minute to minute. In some instances, foreign exchange bureaus are allowed in an interbank market, although there may be specific regulations governing their participation. Bureaus usually concentrate on retail transactions (such as those involving foreign bank notes and traveler's checks) rather than on wholesale transactions in foreign funds. Some countries that are constrained by institutional considerations have opted for an auction rather than an interbank system. While an interbank arrangement closely approximates a free market, in an auction system, the central bank conducts a one-sided market by auctioning off given quantities of foreign exchange to eligible bidders.

Establishing an interbank market system is not easy. The process takes time, and its success depends upon the sustained pursuit of sound macroeconomic policies. While some studies have already devoted attention to the relationship between macroeconomic policies and interbank markets, less attention has been paid to microeconomic concerns that relate to the institutional and operational structures within which these markets operate. To address this latter issue, a recent IMF study examined the experiences of six African countries—The Gambia, Ghana, Kenya, Mozambique, Nigeria, and Sierra Leone—that have created interbank markets. The study shows that while these countries have made a good start—increasing the efficient allocation of their foreign exchange resources and narrowing the exchange rate differentials in the parallel and official markets—they still need to resolve many operational and institutional issues that threaten to hinder further development of these markets.

How interbank markets work

In the ideal case, interbank transactions take place in a market sufficiently competitive so that participants can respond freely to price signals. Further, demand and supply would reflect prevailing macroeconomic conditions, such as movements in interest rates, inflation, and trade flows. At the same time, electronic exchanges or exchanges through any other medium allow a central bank instant access to the prevailing rates, which can then be influenced, as necessary, through market interventions.

In general, interbank rates from such a market would result from transactions of a standard minimum size and be conducted between professionals with sufficient market expertise to ensure that the prevailing rates truly reflect market conditions. To avoid distortions caused by retail transactions, such as those involving foreign bank notes and traveler's checks, the interbank transactions used for determining the central exchange rate would typically include only wholesale transactions.

The African connection

In practice, interbank systems in Africa are in their early stages, with many practical and operational issues still to be addressed. Only two of the countries surveyed—The Gambia and Mozambique—adopted an interbank system from the start and maintained it thereafter. The other four countries first experimented with various auction schemes as well as with legal parallel markets operated by foreign exchange bureaus. Except for Nigeria, which abolished the interbank market in January 1994, the countries surveyed still have functioning interbank markets. Nigeria's interbank experience until the end of 1993 is still valid for purposes of this discussion, however.

Market transactions. In these African countries, most transactions are made not among banks but between banks and their clients. Nonbank dealers, including foreign exchange bureaus, may also play an important role. Interbank transactions are relatively limited for several reasons. Shortages of foreign exchange have created a situation where few, if any, dealers find themselves with the excess foreign exchange balances necessary for transactions with other dealers. Furthermore, the spread between the buying and selling rates applicable in transactions between dealer and

client is typically higher than the spread in interbank transactions, so that the latter are not viewed as profitable. Given the newness of market arrangements, dealers are not comfortable with carrying out transactions with each other, owing partly to a lack of experience and the pressures of competition to gain market share and partly to the lack of comprehensive prudential regulations limiting the foreign exchange exposure of dealers.

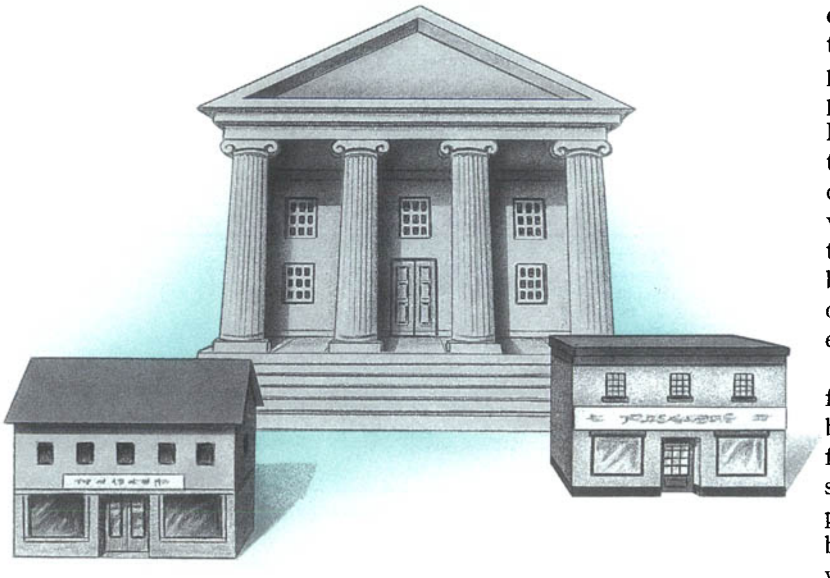
Setting the rate. Given the low volume of true interbank transactions in the countries studied, central banks for the most part rely on dealer/client transactions to determine the "interbank" rate in the market. In Mozambique, the market, or "secondary," rate is calculated as a weighted average of all transactions reported by dealers to the central bank each day. Similar situations exist in The Gambia, Kenya, and Sierra Leone, where the rates are determined freely in the market as a weighted average of the rates posted. In contrast, the Bank of Ghana has attempted to use "moral suasion" to hold the exchange rate down, though with limited success; and in Nigeria, rates in the interbank market were subject to a 1 percent spread between buying and selling rates.

In contrast to the "ideal case," however, reliance on dealer/client transactions to determine the interbank rate can present some problems. Transactions between dealers and clients tend not to be homogeneous; because transactions are generally large in number and of different sizes, processing reports and calculating average rates is difficult. Further, mixing transactions in bank notes or traveler's checks with foreign funds deposited in accounts increases the chances for distortions. Last, the lack of double reporting on the buyer and seller sides of transactions makes it difficult to verify the accuracy of the reports provided by banks and other dealers.

Level of expertise. It is only natural that in the early stages of the development of interbank markets, dealers lack experience in information gathering. The result can be an excessive divergence of rates among dealers, uncertainty about how to set rates, and even a reluctance to change rates frequently.

In addition to this, dealers in most of these countries operate with an inadequate communications infrastructure, leading to a limited flow of "real time" information about the foreign exchange markets, especially exchange rates quoted by different institutions. The problem is more pronounced in the bureau sector of the market, where variations in quoted exchange rates can be more significant. Such variations reduce efficiency and competitiveness and allow the larger dealers to develop collusive practices. For many clients, the transaction costs are still too high to force a greater convergence of rates among dealers, and in none of the countries has the development of foreign exchange brokerage services been apparent.

At this stage, none of the dealers in African markets actively manage their foreign exchange positions internationally, although countries have made an attempt to keep abreast of developments in the international markets through various media. Dealers have also not yet reached a level of sophistication that would allow them to develop forward markets for hedging exchange risks.



Institutional and regulatory issues

In most of these countries, market entry seems to be guided by concerns about maintaining competition, ensuring appropriate prudential regulations, and reducing illegal transactions in the parallel market. But to develop the markets and make them function smoothly, other institutional features and forms of official involvement need to be addressed.

Market concentration and size. In order for an interbank market to operate competitively, countries need to have a sufficient number of commercial banks and foreign exchange dealers. African interbank exchange markets, however, are dominated by a relatively small number of players. This oligopolistic market structure has resulted in the practice of setting rates by "following the big banks." Market concentration is greatest in The Gambia and Mozambique (see table).

Although the number of dealers is limited, it appears as though there is a large dealer presence in the market, judging from transactions turnover. For example, total transactions in the interbank market of Nigeria amounted to $4 billion in 1992, equivalent to about 50 percent of all merchandise imports. About the same ratio was expected for 1993. For Mozambique, approximately $400 million was traded in the interbank market in 1992, compared with about $900 million in imports.

In these countries, the central bank is generally the main source of foreign exchange. The relative importance of central bank sales of foreign exchange, as against private sector primary sales of foreign exchange, differs from country to country. For example, in Nigeria, about 60 to 70 percent of all funds supplied to dealers were supplied by the Central Bank of Nigeria either through allocations based on the size of the dealer's capital base or, at various times, through auctions. In Kenya, the central bank auctions small amounts of foreign exchange to dealers several times a week.

Fixing sessions. In a fixing session, the central bank brings dealers together, face to face, to trade exclusively with each other and possibly with the central bank itself. In The Gambia, weekly fixing sessions are held at the central bank, with the participation of the commercial banks and foreign exchange bureaus. The rates determined at these sessions are used mainly for statistical and customs valuation purposes and apply only to interbank transactions taking place at that time.

Although transactions settled by the fixing rate tend to be small relative to overall transactions in the market, the fixing sessions serve some useful purposes. First, for dealers who are hesitant to trade with each other, these sessions provide an opportunity for genuine interbank transactions to take place, with the central bank playing a pivotal role. Second, the fixing sessions provide a unique forum for the central bank to discuss and resolve operational problems affecting the market. Third, the sessions offer the central bank an opportunity to intervene with full information regarding dealers' positions. For all these reasons,

Diversity in implementing market arrangements

Country	Number of dealers	Degree of market control	Foreign exchange surrender requirements	Rate determination	Fixing sessions	Central bank intervention	Regulations on open positions	Regulations on working balances
The Gambia	9	One bank accounts for 30 percent of the market	Not applicable [1]	Market-determined with no restrictions	Held weekly at the central bank with the participation of commercial banks and bureaus	Net purchaser of foreign exchange to meet international reserve targets	None	Limit of $50,000 for bureaus; varies for banks
Ghana	15	Four banks account for 80 to 85 percent of the market	At least 65 percent of all traditional export receipts except cocoa and gold to a commercial bank, all cocoa and a negotiated portion of gold receipts to the central bank	Central bank uses moral suasion to hold the exchange rate down	None	Net seller of foreign exchange based on reserve targets and perceived "need" of commercial banks	Open positions of commercial banking system limited to $4 million	Same as open positions
Kenya	30	Six banks account for virtually all of the market	50 percent of traditional export receipts to the central bank	Market-determined with no restrictions	None	Intervenes through frequent mini-auctions	None	...
Mozambique	14	Commercial banks as a group account for 90 percent of the market, with one commercial bank dominating 70 to 80 percent of the market	None	Market-determined with no restrictions	None	Sells foreign exchange from import support funds. Main provider of foreign exchange	Currently being developed for banks	Working balance limits on bureaus
Nigeria	80	The 10 largest banks control 60 to 70 percent of the market	All oil export receipts net of operating costs and 75 percent of parastatal receipts to the central bank	Market-determined, subject to a 1 percent spread between the buying and selling rates	None	Affects exchange rate through sales and purchases	...	...
Sierra Leone	13	Commercial banks as a group account for 90 percent of the market	None	Market-determined with no restrictions	None	Guided by reserve targets	None	None

[1] Surrender requirements were not formally abolished in The Gambia but *de facto* ceased to be implemented.
...: Data are not available.

fixing sessions can prove highly useful in the development of the interbank foreign exchange market, especially in its early stages.

Foreign exchange surrender requirements. With the exception of The Gambia, Mozambique, and Sierra Leone, the countries surveyed have official requirements for surrendering foreign exchange to the official market (see table). But these requirements raise some issues: (1) how to determine the appropriate surrender requirements for the repatriation of foreign exchange earnings and the surrender of such earnings to the central bank and the interbank foreign exchange market; and (2) whether allowing exporters or other holders of foreign exchange to establish foreign exchange accounts in the domestic banking system facilitates the development of an interbank market.

In general, as the market develops, the forced surrender of foreign exchange earnings should become less necessary. In some countries (e.g., The Gambia and Ghana), greater reliance on appropriate macroeconomic policies has fostered voluntary sales of foreign exchange earnings to authorized dealers. The establishment of foreign exchange accounts can facilitate the development of the market by providing an opportunity for private earners of foreign exchange to determine, in tandem with purchasers, the most efficient allocation of a country's scarce foreign exchange resources. Nevertheless, if macroeconomic conditions remain unfavorable, holders of these accounts may choose instead to keep the retained foreign exchange as a hedge against the risk of adverse foreign exchange rate movements, restricting the flow of foreign exchange to the interbank market.

Official involvement. The ability of a central bank to regulate and participate in the domestic interbank foreign exchange market is linked closely to (1) its capacity to know what is happening in the market in "real time," and (2) its weight in the market as a buyer and seller of foreign exchange. Central banks that participate actively in international markets tend to have relatively well-organized foreign exchange departments with separate sections for dealing, research, and control and payments in order to ensure effective "checks and balances." As a result, these central banks are more adept at playing a constructive role in the development of an efficient foreign exchange market.

A major constraint continues to be the absence of an electronic exchange or other medium to carry out transactions and receive quotes instantaneously. To obtain quotes, most of the African central banks rely primarily on frequent informal calls to commercial banks. In the six countries, central bank intervention has varied from the use of occasional

auctions to open market sales and purchases.

More important, most of these countries have yet to develop a set of comprehensive prudential guidelines to govern the foreign exchange market. The paucity of prudential regulations on issues such as open position exposure (foreign exchange holdings or contracts subject to exchange rate risk) and working balance limits may not only put the operation of interbank markets at excessive risk but may also hinder interdealer transactions. In cases where ceilings on working balances exist, the limits are often not binding, given the excess demand for foreign exchange in these countries.

Assessing interbank markets

An efficient, well-functioning interbank market arrangement can typically be assessed by:

- the market's ability to reduce segmentation and, consequently, to reduce exchange rate differentials;
- the increased allocation of foreign exchange through the official market and a market exchange rate that reflects demand and supply conditions as closely as possible;
- the ability of market participants to collect, analyze, and transmit information at the lowest possible cost, as well as to minimize transaction costs; and
- the central bank's ability to monitor the market through effective information gathering, market intervention, and regulations. In general, it is fair to say that the six countries surveyed have made some progress in these areas. The differences between parallel and official rates have narrowed in all six countries since the introduction of interbank markets to between 2 percent and 13 percent from as high as 58 percent.

The available data on transactions turnover in the foreign exchange markets in these countries suggest that since the introduction of interbank markets, more funds are being allocated through official channels. But markets could be made wider and deeper by further eliminating surrender requirements and encouraging more direct transactions in the interbank market.

Much more, however, needs to be done to improve the operation of the market. In the future, central banks have to be more active (without necessarily being interventionist) in educating participants about the market's operations, alternative approaches to managing foreign exchange resources and open positions, and the need to turn to other dealers, instead of to the central bank, to reduce open positions. To improve their own effectiveness in the market, central banks need to continue to develop their capacity to monitor, intervene, and provide sound guidance through regulation and dialogue.

In all of these economies, exchange markets are still new, and countries are "learning by doing." Despite the existence of distortions in the interbank foreign exchange markets, these six countries have taken a positive step forward to ensure that exchange rates are more flexible and responsive to the forces of supply and demand. By facing up to the challenges presented by the practical and operational aspects of the market, the interbank exchange markets in these countries can be further developed to play a pivotal role in determining exchange rates. ■

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For further detail, see "Operational Issues Related to the Functioning of Interbank Foreign Exchange Markets in Selected African Countries," by the authors, IMF Working Paper (WP/94/48).

Developing Asia:

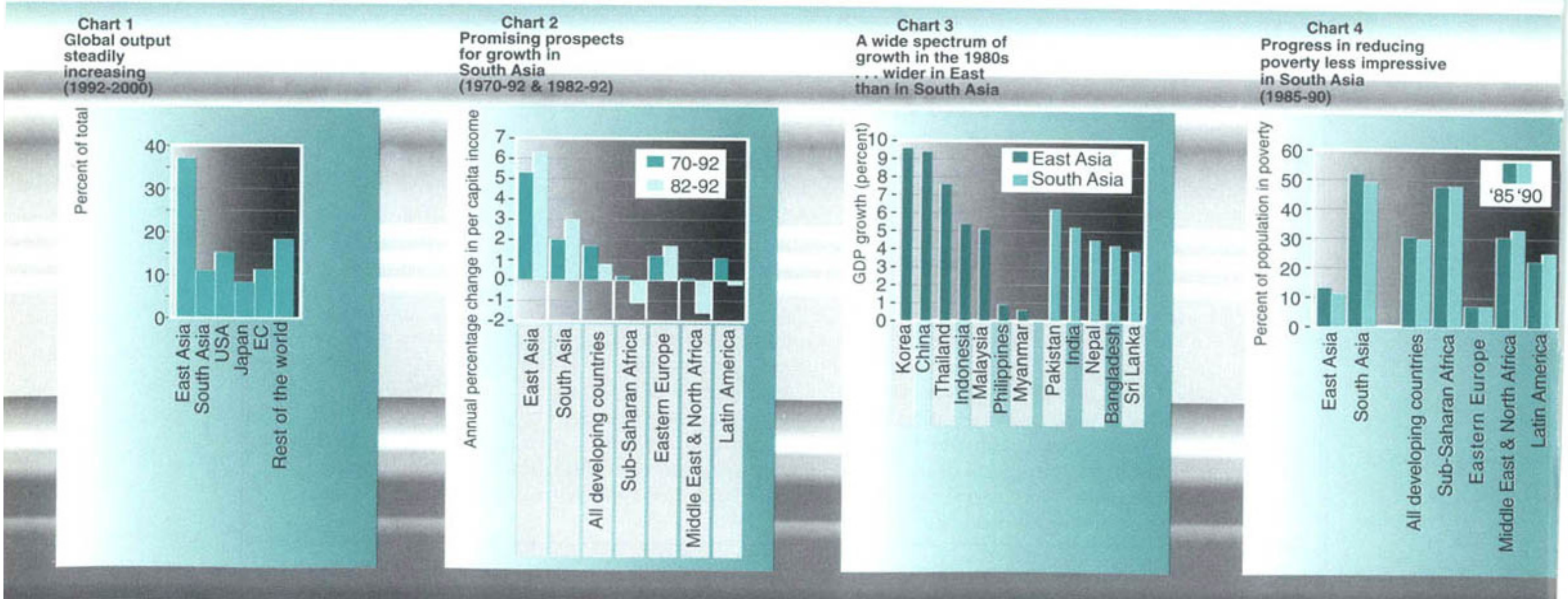
T*HE EAST ASIAN "miracle" may be spreading to South Asia. Though major challenges remain, developing Asia is poised to become a major catalyst for global economic growth over the next decade.*

Developing Asia may emerge as the new locomotive for world economic growth over the next five to ten years, as the traditional engine—growth in the Group of 7 industrial countries—slows down. East and South Asia's share of global output has been climbing steadily, and it is projected to be the fastest growing region in the world for the rest of the decade. On current projections, developing Asia will account for almost one half of the increase in global output through the year 2000 (Chart 1).

Developing Asia is a region diverse in culture, growth performance, economic management record, and legal and regulatory systems. Yet the region as a whole exhibits an important trend: all of the major countries have moved toward a stronger reliance on the market. Some, like those in East Asia, did so early; others, like China, India, and Indonesia, are now undergoing major economic transformations. Many uncertainties remain, particularly about political transitions. By working with the international community, the countries in the region can deepen and broaden the reform process and mobilize resources—particularly foreign private investment—to assist restructuring. Developing Asia could become a major growth center of the world economy.

Developing Asia pulls ahead

Over the past quarter century, per capita income in East Asia has nearly quadrupled (an annual rate of 5 percent), and this has been coupled with a sharp reduction in poverty. East Asia's growth was impressive in the 1970s and accelerated further in the 1980s (Chart 2). Its solid economic performance has been based on a strong outward orientation, an emphasis on human resource development, and a very effective institutional framework. Exports grew by around 10 percent per year during the 1970s and 1980s, and exports from the United States, Japan, and the European Union—formerly the European Community—to this region expanded by 35 percent between 1988 and 1991. Of equal significance is the fact that intraregional trade



Source: World Bank.

A New Growth Pole Emerges

ERNEST STERN

grew at twice that rate—72 percent. More recently, China's phenomenal economic performance has set new records. This internal dynamic—buoyed by China's very rapid growth—is what has made East Asia so resilient to global slowdown.

What is less well known is that growth has been relatively dynamic in South Asia as well. Although pale in comparison with that of East Asia, South Asian growth was well above the rest of the developing world, and per capita income grew at a 3 percent annual rate in the 1980s—three times the rate in the previous two decades. Similarly, the growth of private consumption and domestic investment in the 1980s exceeded that in other developing regions with the exception of East Asia. Although a traditionally inward-looking region, South Asia has also begun to explore outside markets. Exports grew by 7 percent per year in the 1980s—twice the rate of the preceding decade—allowing their share in domestic output to double.

Developing Asia is diverse

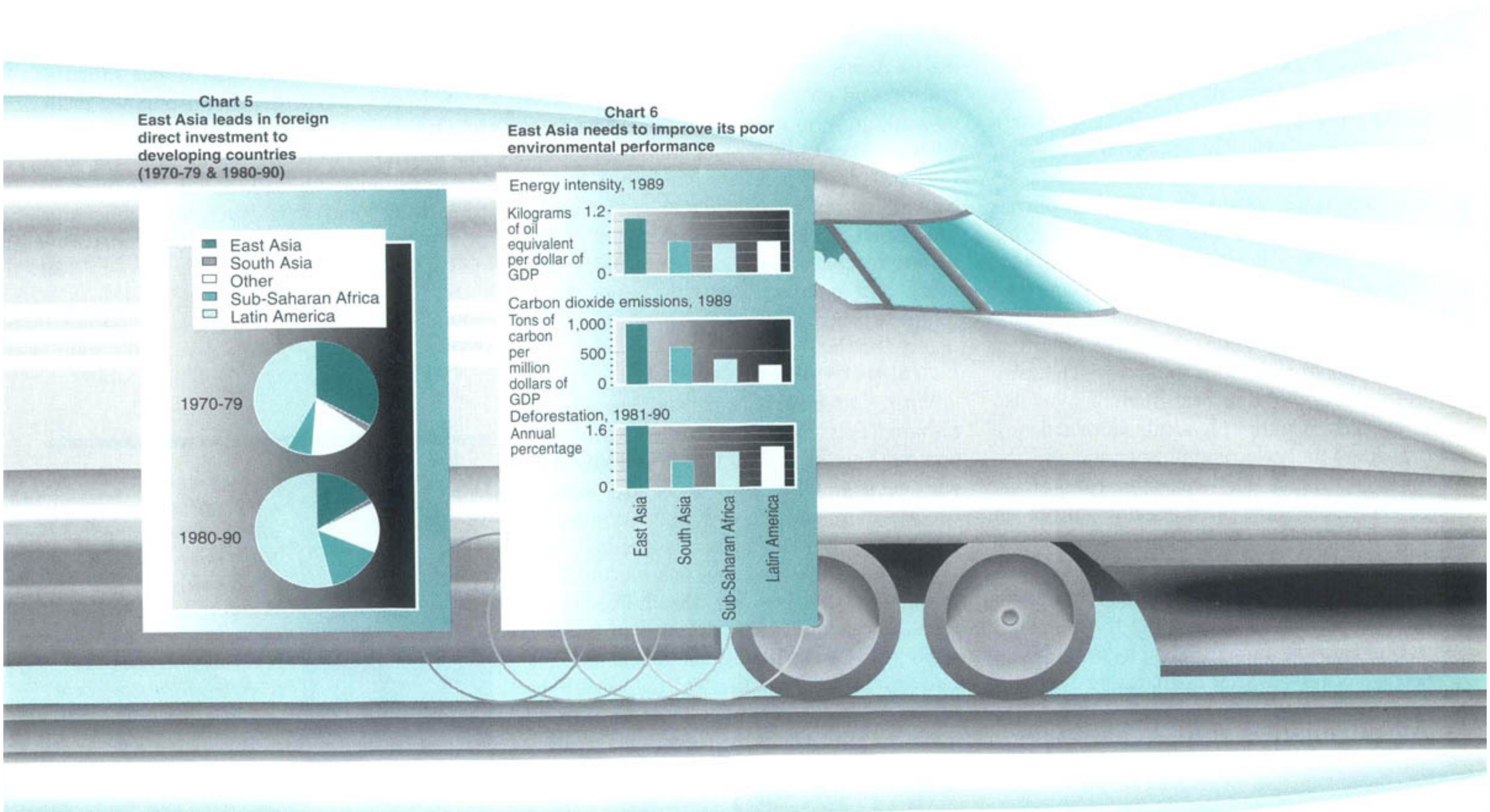
There are important differences within and between East and South Asia. Both regions, for example, display widely differing growth rates among their respective countries—more so in East than in South Asia (Chart 3). In East Asia, the attack on poverty has been very effective—demonstrating again that rapid growth and poverty alleviation are not contradictory—indeed, they are mutually reinforcing (Chart 4). In South Asia, progress in reducing poverty has been much less impressive. In 1990, about half of the region's population was still below the poverty line.

The two areas also differ in their ability to absorb foreign direct investment (FDI) (Chart 5). In East Asia, foreign direct investment has been attracted by expanding domestic markets; in turn, this dynamic contributed to the rapid growth of exports. East Asia's share of total FDI to developing countries doubled—to 33 percent—in the 1980s. As a result of its less hospitable environment, South Asia's share of FDI remains very small, less than 2 percent in the 1980s.

Growing intraregional trade has been an important stimulus to growth, particularly in the East Asian economies. Even more striking is the emerging nexus of trade and investment, with foreign direct investment and exports forming a virtuous circle. In China, for example, the southern provinces of Guandong and Fujian are becoming major centers for FDI and exports. In 1992, China was the recipient of almost 20 percent of all net FDI in the developing world.

East Asian approach spreading

The reasons for East Asia's phenomenal



success are its policies, which have focused on a high level of savings; quality of the labor force; support for entrepreneurial efforts in a competitive setting; emphasis on exports; the willingness to import knowledge and technology; and—perhaps above all—flexibility in adjusting to global conditions while maintaining relative macroeconomic stability. These were the main findings of a recent World Bank report, "The East Asian Miracle." (See articles in *Finance and Development*, March 1994.)

There are encouraging signs that the East Asian approach to economic management is spreading from the original rapidly growing countries to Indonesia, Malaysia, Thailand, and Viet Nam, and, not least, China. Although a late starter, South Asia too is beginning to reform its investment and trade policies. Bangladesh, India, Pakistan, and Sri Lanka have initiated reforms that are dismantling restrictions on domestic and foreign private investment, removing quantitative trade restrictions, and reducing the level and dispersion of tariffs. The response to these steps has been very encouraging; in the 1990s, FDI in Pakistan and Sri Lanka doubled in dollar terms and rose by 20 percent in India compared with the second half of the 1980s.

India has in the past two years initiated an expanded reform program, as have Pakistan and Sri Lanka. By providing momentum, India's trade and investment reforms are likely to be contagious as its neighbors accelerate reform to keep pace. Pakistan and Sri Lanka, for example, have shown progress in improving the incentive framework, mainly through deregulation in areas such as industrial licensing, lowering restrictions on direct foreign investment, and waiving entry barriers in most sectors. The improved climate for reform doubtless owes something to the positive experiences of the East Asian countries and to the negative ones in the states of the former Soviet Union and Eastern Europe. Whatever the origin, there is now some consensus on certain broad directions of change.

But there is no doubt that these programs are still far from those of the East Asian countries—particularly in their attention to education and health, physical infrastructure (transport and telecommunications), and the financial system. The respective roles of the government and the private sectors are not yet fully redefined, nor is the political consensus in support of reform in place. Much remains to be done to improve competition and lower the transactions costs of doing business and to build up the human and physical capital needed for private sector expansion.

An unfinished reform agenda

Developing Asia's heterogeneity implies different reform agendas for East and South Asia. East Asia will have to address its infrastructure bottlenecks; give priority to public enterprise reform and to fostering private sector development and competition; and pursue a large and unfinished agenda of financial sector reforms. It will also need to improve its poor environmental performance (see "Reversing Pollution Trends in Asia" in this issue). Among the developing regions, it has the highest rate of deforestation, the highest intensity of energy use per unit of GDP, and the highest emission rate of carbon dioxide per unit of GDP (Chart 6). It faces serious problems of sanitation in urban areas and of soil degradation in rural areas.

In South Asia, the agenda is driven by the need to achieve sustainable growth and reduce poverty. This will require public sector reform, including tax reform and expenditure restructuring, and an improvement in the performance of public enterprises through more competition, privatization, a wider distribution of share ownership, and removal of entry barriers that still impede participation of the private sector. Tax reform is still in the early phase, except in Bangladesh, which has successfully imposed a value-added tax. Financial reform remains an elusive objective although some important steps have been taken in Pakistan, and India has placed it at the top of the policy agenda. Little progress has been made in reforming land and labor markets.

Developing South Asia's human resource base is particularly important in pursuing an outward-looking, pro-poor growth strategy. South Asia's ability to pursue this strategy will depend on its success in shifting public expenditure priorities to the social sectors to ensure a more rapid buildup of human capital. Currently, life expectancy in South Asia lags behind that in East Asia; out of every ten children born, at least one is expected to die before reaching his/her first birthday and nearly half of the children in the region do not complete primary school.

Prospects are excellent

With sustained reforms and an external resource flow to support restructuring, the prospects are very good that developing Asia will achieve GDP growth of 6.5 percent between now and the end of the century. In purchasing power terms, developing Asia already accounts for about one fourth of the world economy. Looking ahead five to ten years, developing Asia continues to promise rapid growth, expanding markets, and excellent export opportunities. On the whole, the region is likely to continue to be marked by stable macroeconomic management, a steadily improving environment for private investment, and a continuation of its nearly impeccable record of prompt servicing of debt.

East Asia's performance owes much to its export strategy. This, in turn, was possible not only because of the policies of the East Asian countries themselves but also because the United States and the European Union provided market access. East Asian countries have been liberalizing their trade regimes, but further efforts are necessary. Trade restrictions—both tariff and nontariff—still remain higher than those of industrial trading partners, contributing to trade frictions.

South Asia's growth prospects depend to a large extent on what happens in India. The reform efforts in India, combined with similar reforms of investment and the trade and payments system initiated in Bangladesh, Pakistan, and Sri Lanka, augur well for the medium-term growth prospects of South Asia. Contingent on the successful completion of current reforms, export growth is expected to improve and boost growth in the latter half of the 1990s to the 5–6 percent range from the present low of 3–4 percent.

Uncertainties remain. Several of the important countries in developing Asia face transitions in leadership. The political process is broadening out in these countries, and generational changes in political and economic leadership are taking place. No one can be sure how these processes will evolve or what the economic consequences will be. And in some of the bigger countries in the area—China, India, and Pakistan—there are large numbers of very poor people at early stages of an accelerated development process. Rapid rates of growth are not synonymous with robust institutions at the local level, which is where ultimately most decisions on investments and implementation are made. It will take time for the institutional infrastructure—public and private—to effectively support the modernization of these economies. ■

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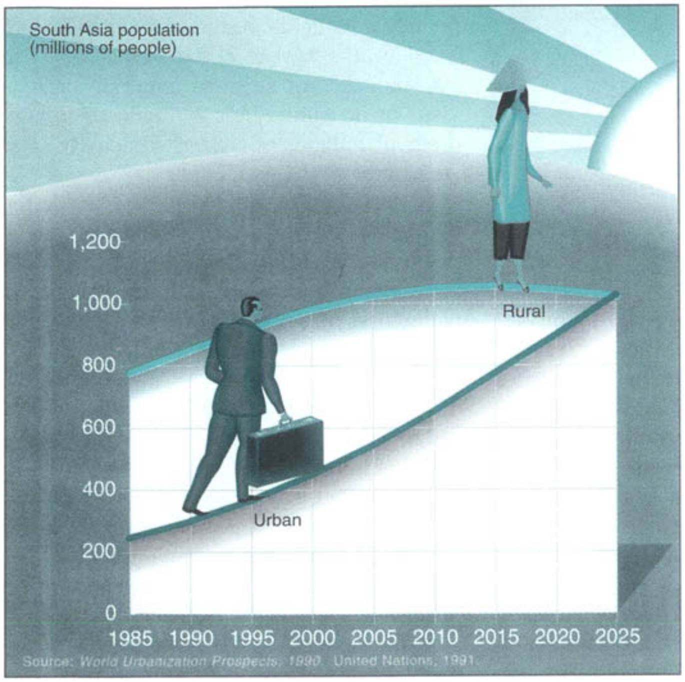
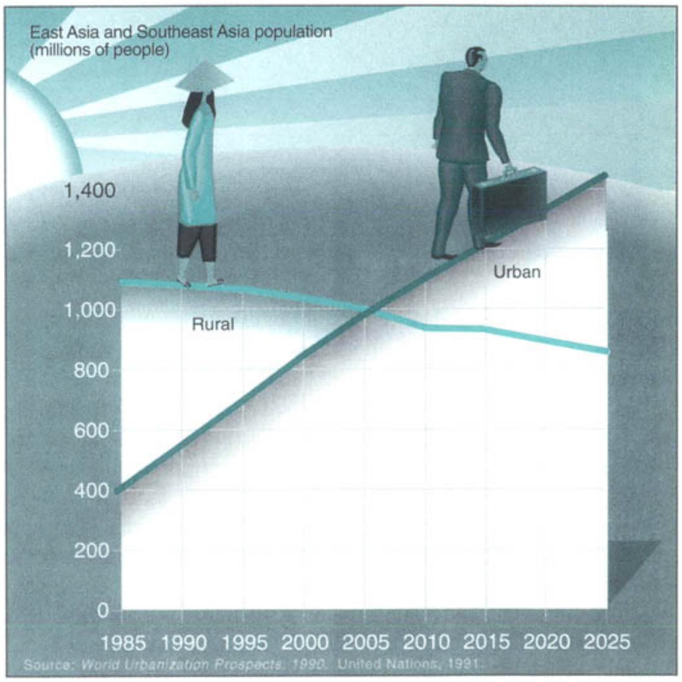
Reversing Pollution Trends in Asia

CARTER BRANDON

Asia is becoming more urbanized

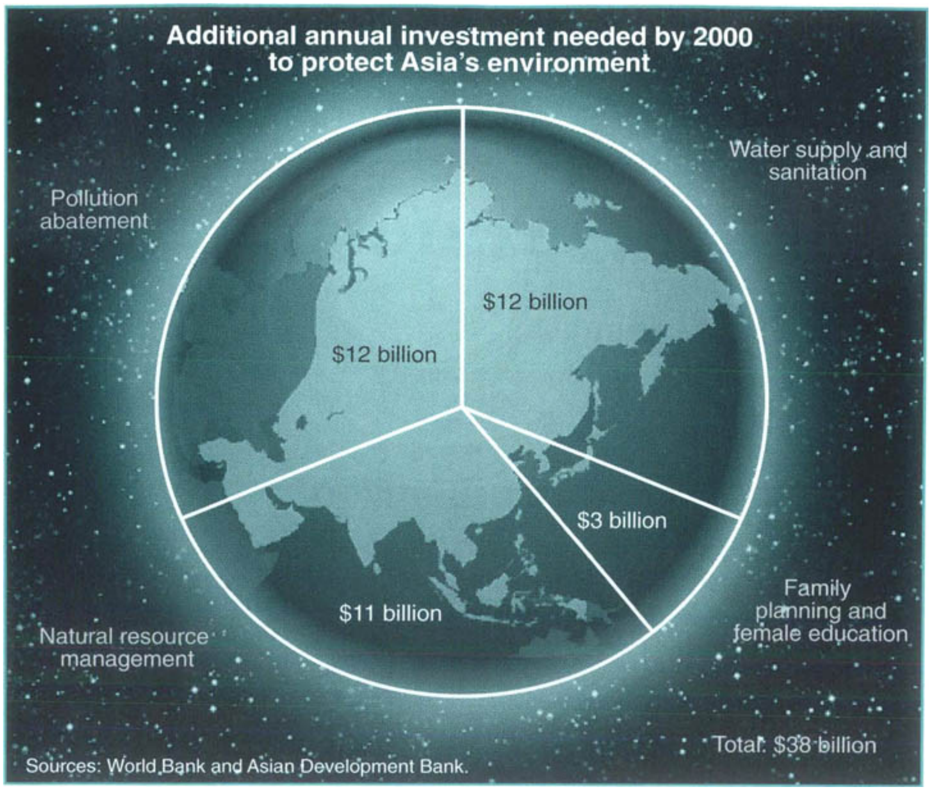




URBAN and industrial pollution in Asia—a by-product of rapid economic growth—is one of the region's greatest development challenges. A World Bank study argues that environmental protection does not preclude economic growth, provided that concerted policy and investment efforts are made. Asian countries have started to address the issue, but more is needed to reduce today's rising pollution trends.

During the last decade, the developing countries of Asia, especially East Asia, have experienced dramatic economic growth, ranging from 6 percent to 10 percent a year. But at the same time, pollution levels have been increasing even faster—by 10–20 percent a year in some energy, industry, and transport subsectors. As a result, the real costs of environmental degradation are mounting, taking the form of increasing health costs and mortality, reduced output in resource-based sectors, and irreversible loss of biodiversity and overall environmental quality.

These worrisome trends threaten to undercut the gains of growth both economically and in terms of the quality of life. But a recent World Bank study, echoing the message of the Bank's *World Development Report 1992*, argues that these trends can be reversed and the remaining resources protected without sacrificing economic growth. Moreover, whereas a full cost valuation (including health and environmental costs not valued in the marketplace) of all pollution



in the big Asian cities is 5–10 percent of urban GDP, the cost of cleanup is perhaps only 2–3 percent of GDP.

Causes and effects

There are a number of reasons for the high rate of environmental degradation in this region, which now has five of the seven cities in the world with the worst air pollution.

First, rapid ***urbanization*** is changing the face of Asia. In East Asia, the rural population has already peaked, and all net population growth is taking place in the cities (owing to both migration into the cities and the birth of new cities in what had been villages and towns). By 2015, nearly two billion people, or more than half of the entire population of Asia at that time, will live in cities (see chart p.21).

Second, ***energy use*** is growing faster than the underlying economies. Electricity consumption—the most rapidly growing part of the energy sector—grew in Korea by 27 percent a year between 1980 and 1990, compared with 9 percent GDP growth. The comparable figures for Malaysia are 17 percent and 6 percent; for Indonesia, 12 percent and 6 percent; for Nepal, 13 percent and 5 percent; and for India, 9 percent and 6 percent. The only country whose electricity consumption grew more slowly than the economy during the 1980s was China, where large systemic inefficiencies were reduced.

With energy demand doubling in Asia every 12 years, total emissions of air pollutants, including particulates, acid rain precursors, and carbon dioxide, are also increasing. At current rates, for example, Asian countries will produce more sulphur dioxide by 2005 than Europe and America combined. On the more positive side, cleaner thermal power fuels and technologies are becoming more commonplace, and the pollution intensity of particulate emissions and acid rain precursors may be falling.

Third, rapid ***industrialization*** is leading to increased and more concentrated industrial pollution. Recent World Bank pollution estimates, based on multiplying production data for Asia by US pollution intensities (but not by Asian pollution intensities, which are not known) suggests that, in Indonesia, the Philippines, and Thailand, most toxic and some water-based pollutants are growing three to five times faster than the underlying economies. Air pollutants and biochemical oxygen-demand substances appear to be growing less dramatically but still two to three times faster than the economy. These trends are primarily due to the scale effect of increased industrial output, although in Bangladesh, Indonesia, Pakistan, and the Philippines, there has been stronger growth in seven of the "dirtiest" industrial subsectors than in the six "cleanest" subsectors.

Fourth, the ***number of vehicles*** is outpacing economic growth, doubling every three years in Korea and Thailand and every four years in China. Pollution levels are aggravated by the high-polluting characteristics of the large diesel and two-stroke vehicle population and by the fact that Asia has some of the dirtiest fuels in the world—although this is changing in Southeast Asia.

The resultant health and productivity effects of pollution cost billions of dollars a year in the large Asian cities. For example, the annual cost of air pollution is estimated at \$1.3–3.1 billion in Bangkok, \$1.0–1.6 billion in Kuala Lumpur, and \$400–800 million in Jakarta. These figures include the costs assigned to mortality and morbidity. (Additional losses due to congestion, such as fuel spent, time wasted, and production delayed, are not included but would add another 20–40 percent.) In Bangkok and Jakarta, World Bank studies estimate that air pollution alone is responsible for 1,000 to 2,000 deaths a year in each city; 25,000 to 100,000 cases of sickness requiring doctor's visits or hospitalization; and millions to hundreds of millions of "restricted activity" and "respiratory symptom" days.

On top of these direct effects on health, the unquantifiable impact on quality of life is gaining in significance. Populations are increasingly demanding, and expressing their willingness to pay for, reduced air, water, and noise pollution.

What can be done?

The common perception (caused, in part, by a lack of information) is that a direct trade-off exists between environmental protection and economic growth. However, analysis shows that this notion is largely a myth.

Economic growth cannot be "blamed" for high pollution. There are numerous examples of both high-growth/low-pollution countries (e.g., Japan) and low-growth/high-pollution countries (e.g., some countries in Eastern Europe). Rather, widespread market failures (lack of markets for environmental "goods" such as clean air or biodiversity) and policy failures (energy subsidies or inadequate property rights) with respect to environmental issues—a phenomenon that Asia shares with most of the world—have allowed these pollution trends to continue. The problem is that the marketplace has tended to underestimate the economic and social costs of pollution and to undervalue the economic and environmental benefits of conserving natural resources.

Economic growth can help. It does this by allowing for more rapid turnover of aging technology, more rapid restructuring of industry and its product mix, greater opportunities for attracting foreign partners and technology, and higher public revenues. Efficient policies would provide the right incentives to

shape the resource use and pollution intensity of new investment. By 2010, 85 percent of industrial investment, 90 percent of vehicles, and perhaps 70 percent of power generation in Asia will be new. Because of this "window of opportunity," it is more important and cheaper to ensure that the new capacity adheres to clean environmental standards than it is to focus solely on existing polluters.

Good environmental policies are cost-effective. Policy reforms that correct the widespread market and policy failures noted above cost less to implement than the resulting reduction in external economic and social costs. They also lead to a net increase in economic efficiency and social return on investment and provide the right incentives for downstream investment location and technology choices. Many Asian countries have taken major steps in areas where cost-effectiveness is quite clear, such as in stabilizing particulate emissions, reducing lead in gasoline, and abating the pollutants that are threatening public water supplies.

Pollution prevention is far cheaper than cleanup. This has been amply demonstrated in recent decades by the industrial countries. For example, when Japan began to clean up the environment in the early 1970s, pollution abatement investment surged to up to 25 percent of all industrial investment. No developing country can afford this type of surge—either now or ten years from now. Also, a variety of policy approaches can be used to foster pollution abatement, ranging from "command-and-control" measures, which dictate actual technologies and acceptable levels, to "market-based" instruments, which provide economic incentives for compliance with standards but also allow for greater flexibility and economic efficiency. However, US and European experience has shown the high administrative costs, as well as the relatively low economic efficiency, of the command-and-control approach. Developing countries would be better served by more cost-effective, market-oriented policies.

Investments in pollution abatement help the poor. The poor are disproportionately the victims of pollution because they are less buffered than the nonpoor from water pollution, toxic wastes, solid wastes, congestive traffic, and air and noise pollution. Given the economics of land use and land access, the urban poor, in particular, have little alternative to these high exposures. Expenditure on environmental protection will thus reduce far more sickness and death in the poorest neighborhoods than elsewhere. The financing would almost certainly come from sources other than local user fees and would therefore be progressive as well. Contrary to the perception that environmental cleanup is a luxury reserved for the rich, pollution abatement directly and progressively benefits the poor—a vital issue for Asia, which houses one fourth of the world's poor in South Asian cities.

"... pollution abatement directly and progressively benefits the poor ..."

Who will pay?

Protecting the environment does not necessarily require large net spending by governments. Removing subsidies to natural resources (e.g., coal, water, and petroleum products) or taxing or auctioning permits for pollution should raise revenues. Even if overall revenue neutrality is maintained, revenues obtained this way involve less distortion to the economy than reliance on current tax bases. Revenue trends of pollution-based taxes tend to go in one of two ways: high revenues due to high pollution or low revenues due to active pollution abatement by polluters. Ultimately, governments want low pollution and low pollution tax revenues, with corresponding investments in clean technologies. But in the meantime, pollution-based taxes, such as on fuel or coal, could generate 2–10 percent of public revenue requirements in Malaysia, Indonesia, and Thailand and still not tax pollution at the extra cost of the environmental damage incurred.

How much will protecting Asia's environment cost above and beyond projections of "business as usual"? The World Bank estimates that about $38 billion a year by 2000, or 2–3 percent of regional GDP (see chart p. 22) will be needed—two thirds in East Asia. However, this "cost" will be more than offset by the additional income generated by good economic management, the future value of conserved resources, and the future value of health, productivity, and amenity benefits.

International donors will probably be able to provide about 5 percent of the required finances—the World Bank alone has invested $2.2 billion in 1993–95 on controlling pollution in Asia. Governments will be able to finance another 20–40 percent, leaving a 50–75 percent financing "gap" for the private sector to fill. But for this to happen, private investment in environment-related infrastructure (water treatment, power generation, waste management, and mass transit) will have to be made more profitable. Two important ways that countries can do this are (1) by "commercializing" or even privatizing certain components of infrastructure sectors (e.g., power, water and sanitation, petroleum, and state-owned industrial enterprises); and (2) by raising prices for infrastructure-related services (e.g., energy, water, garbage, sewage, and transport).

The environment is a public good and is not adequately protected by the workings of free markets. As a result, governments are the key to correcting these market failures through appropriate interventions. At a time when many governments are downsizing and privatizing services, environmental protection requires that governments play a stronger role than they have in the past. In particular, they need to reform price and tax structures to encourage conservation and pollution abatement; strengthen public institutions charged with environmental policymaking and enforcement; and boost public and media attention as a way of promoting "informal regulation" through informed public participation. Each of these measures is being introduced somewhere in Asia. However, given the need to reverse some of today's rising pollution trends, a more concerted effort is required.

■

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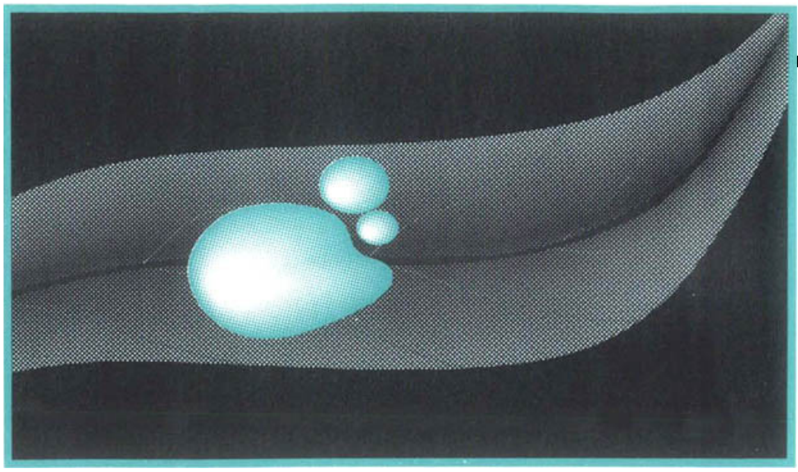
For more details, see Toward an Environmental Strategy for Asia, *by Carter Brandon and Ramesh Ramankutty, World Bank Discussion Paper No. 224, 1993.*



Managing Water in a Sustainable Manner

GERSHON FEDER AND GUY LE MOIGNE

AS WATER becomes an increasingly scarce resource, countries and development agencies are rethinking the best way to manage this vital resource. The World Bank's new approach centers less on generating new supplies and more on the "demand" side—economic behavior, policies to overcome market and government failures, and more efficient water use.

Water is critical for human survival, economic development, and the environment. Indeed, few other resources affect so many areas of the economy or of human and environmental health.

• Unsafe water can be fatal. Waterborne diseases are implicated in the deaths of 3 million people annually—mostly children—and cause over a billion episodes of illness a year. Yet insufficient progress has been made in supplying adequate water and sanitation, especially to the poor. Over 1 billion of the world's 5.4 billion people lack access to safe drinking water, and 1.7 billion lack access to adequate sanitation. These problems are not limited to developing countries.

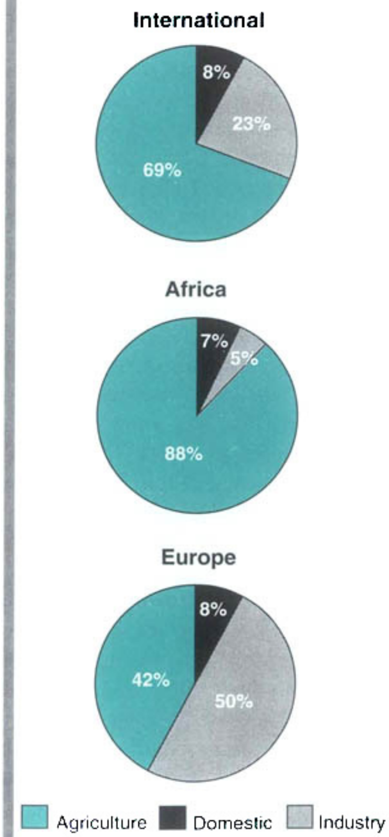
• Water plays a vital role in the economy, through its use in agriculture and industry, as well as supplying energy through hydropower. A third of the world's harvested crops are produced by irrigated agriculture.

• Much of the natural environment—from coastal ecosystems to wetlands—depends on water. Degrading the quality or supply of that water can have disastrous effects on the environment and on biodiversity.

Clearly, the availability of good-quality water is central to economic progress and to maintaining a natural environment that can help to sustain such progress; yet in most countries, water resources are not being managed in an efficient and sustainable manner—a situation that cannot continue.

To begin with, the world's population is growing rapidly, especially in urban areas (from 5.3 billion in 1990 to at least 8 billion by 2025). This implies a greater demand for food and hence for irrigation. At the same time, the demand for water by households and industries, further stimulated by economic growth, is rising. These factors imply escalating competition for irrigated agriculture, which already takes a hefty share of available water (Chart 1).

Chart 1
Who uses the water?



Source: World Resources Institute 1992. *World Resources 1992/93*. Washington, DC.

Second, the supply of good-quality water is being contaminated through pollution originating from domestic wastes, industry, agricultural chemicals, and misguided land use—effectively decreasing the amount of water available.

Third, the engineering and environmental costs of developing new water sources are much higher than those of sources already tapped. For many cities, the cost of water provided by "the next project" can be two to three times the cost of current supplies, even before environmental costs are factored in. In Amman, Jordan, for example, when the water supply system was based on groundwater, the average incremental cost was $0.41 per cubic meter. But this rose to $1.33 per cubic meter when chronic shortages of groundwater led to the use of surface water.

As the increasing scarcity of water threatens to worsen the quality of life, impair the potential for economic development, and endanger vital ecosystems (Chart 2), a number of countries and development agencies, including the World Bank, have begun to rethink their approaches. This is particularly important for the Bank, which since 1950 has lent over $36 billion for water projects—one of the most important areas of Bank lending during the past four decades. While significant achievements have been made, investments have often encountered implementation, operational, and social problems, most of which stem from the weaknesses in current water resources management. In recent years, a consensus has begun to emerge on what needs to be done to correct the problems. This article describes these ideas, which are embodied in the Bank's new water resources policy guidelines.

Current weaknesses

Why have governments typically assumed responsibility for the overall management of water? Water's special characteristics make it difficult to use unregulated markets to deliver water efficiently or to allocate it equitably. The large capital requirements and economies of scale in water infrastructure tend to create monopolies, warranting regulation to prevent overpricing. Public investments in water infrastructure are often necessary given the large size and long time horizon of projects; underdeveloped capital markets in many lower-income countries and the potential for political interference reduce incentives for private investments. Water's natural supply is subject to extreme variability over time and space. Certain aspects of water-related activities, such as flood control, are public goods, which cannot easily be charged for on the basis of use. Finally, water moves through an intricate cycle within the ecosystem that makes water activities highly interdependent and results in numerous spillover effects, many of which affect the environment. These effects cannot be reflected in market prices.

Yet there are many weaknesses in the ways governments manage water, in developed and developing countries alike.

Fragmented management of water resources. Many governments face growing problems because they have failed to address water resources management in a comprehensive manner. Government activities are generally organized so that each type of water use is managed by a separate and independent department or agency—for example, irrigation, municipal water supply, power, and transportation. This fragmentation has often resulted in a failure to consider the cross-sectoral effects of water activities, leading to waste and suboptimal allocation.

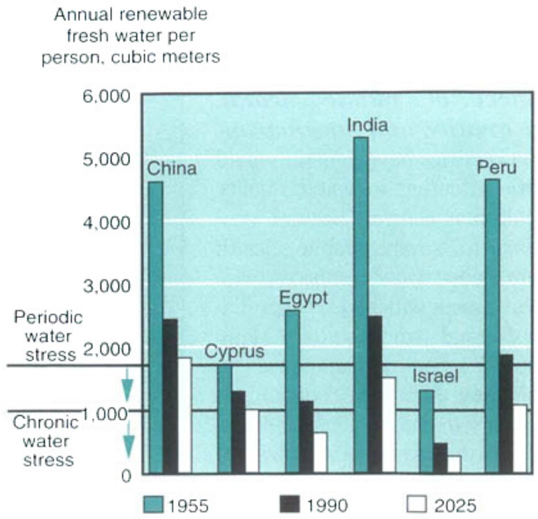
Overextended government agencies. When water is scarce, governments tend to base allocations on political and social considerations rather than on purely economic criteria. Moreover, they have an understandable concern that relying exclusively on unregulated markets would not generate the best allocation. In many countries, the result has been a tradition of heavy dependence on government agencies for developing, operating, and maintaining water systems—with the noticeable absence of incentives for profitability and efficiency that typically motivate market participants. In addition, in most cases, users have not been consulted or otherwise involved in planning and managing water resources. This has often led to a vicious cycle of unreliable projects that produce services that do not meet consumers' needs and for which they are unwilling to pay, thus further worsening the quality of service.

Underpricing of water and lack of cost recovery. Pricing water well below its economic value is prevalent throughout the world, sometimes for cultural and religious reasons. Underpricing often results in misallocation and inefficient use. In many countries, expanding the supply is politically more expedient than raising fees; therefore, pricing and demand management have received much less attention. Farmers in both industrial and developing countries often pay little for their publicly supplied irrigation water and so have few incentives to refrain from growing water-intensive crops or to conserve water. This can lead to gross misallocations, whereby agriculture, which absorbs the lion's share, often includes low-value uses compared with higher-value domestic and industrial uses. For example, in Arizona, several agricultural water uses yield values in the range of $19–$48 per 1,000 cubic meters, while in cities of the same state, water values range between

Chart 2

How scarce is water?

Estimated water availability, selected countries



The availability of water is already a major problem for many countries, and water will be critically scarce in some countries by the year 2025 unless overall demand is reduced. Indeed, as this chart shows, countries that not too long ago had no water problems, or faced relatively minor problems, are already experiencing stress, or will encounter scarcity within the foreseeable future.

A noted Swedish hydrologist, Malin Falkenmark, has calculated that 100 liters per day (36.5 cubic meters per year) is a rough minimum per capita requirement needed to maintain good health, while 5 to 20 times that amount tends to be needed to satisfy the requirements of agriculture, industry, and energy production. Falkenmark has suggested that when annual renewable freshwater availability falls below 1,700 cubic meters per person, a country will experience periodic water stress; below 1,000 cubic meters, a country will experience chronic scarcity. These benchmarks are rough; factors such as climate and level of economic development influence water stress and chronic scarcity. Using medium-range UN population projections, some 34 countries will have less than 1,000 cubic meters of annual renewable water per capita in 2025.

Source: Robert Engleman and Pamela LeRoy, *Sustaining Water,* Population Services International, Washington, DC, 1993.

$262 and $302. Charges for water used by urban households are often low as well. A recent review of Bank-financed municipal water supply projects found that the price charged for water covered only about 35 percent of the cost of supply.

Neglect of public health, water quality, and the environment. Countries have generally paid too little attention to water quality and pollution control. Besides contributing to severe public health problems, poor water resources management causes widespread degradation of land and water. Many countries do not have standards to control water pollution adequately or the capacity to enforce existing legislation. Furthermore, new types of pollution—often stemming from public investment projects—have arisen involving small quantities of non-degradable chemicals that are invisible, toxic, persistent, and costly to treat.

Piecemeal evaluations of water resource projects have often overlooked the cumulative environmental degradation caused by several projects, and interactions within the ecosystem have not been adequately considered. Because many irrigation projects lack drainage components, they have caused serious waterlogging and salination problems. Moreover, when water is diverted upstream, downstream areas that support sensitive water-dependent ecosystems (e.g., wetlands) become less able to fulfill valuable functions such as filtering pollutants and supporting biodiversity.

Inadequate service delivery to the poor. The weaknesses highlighted above have a particularly adverse effect on the poor (see "Poverty and Water Supply: How to Move Forward," by John Briscoe, *Finance & Development*, December 1992). Because public services are overextended and underfunded, the inadequate supply is pre-empted by wealthier and more influential groups. Paradoxically, large numbers of poor people in urban areas depend on water vendors, paying a much higher price than a middle-class person pays. A study of water vending in 16 cities shows that the cost of water sold by vendors is from 4 to 100 times higher than piped city water.

France's "model" system

The French system of water resources management, adopted after many years of study and debate, could well serve as a model for developed and developing countries, as they look for the best way to put the new "demand"-focused approach into action. Key elements are:

Well-defined laws and regulations. The Water Acts of 1964 and 1992 are the foundation of the French system. The earlier law established specific quality objectives and regulations for pollution control, while the later act is designed in part to meet stricter European directives on water management.

Hydrographic basin management. The system is organized around six major hydrographic basins, with appropriate national policy oversight. These correspond to the country's four main catchment areas and to two areas of dense population and intense industrial activity.

Comprehensive management, decentralization, and participation. Each of the six basins has a basin committee and a corresponding executing agency, a water board. The basin committee, also known as a "water parliament" because of its representation and powers, reflects regional—rather than central—government control and is designed to promote the role and responsibility of different interest groups in the basin. The water boards, while executing the committee's directives, are also responsible to the central government for certain technical matters (e.g., upholding national standards). Water and sewerage services are provided by either public or private firms (increasingly through competitive bidding) and are chosen by communities.

Cost recovery and incentives. The companies and entities operating water services deliver a portion of the charges they collect to the basin agencies. In addition, a "pollution fee" (i.e., a penalty) is collected by the basin agency. Most of these revenues are reinjected to provide technical assistance and help the public or private sector ensure safe, purified water.

Supporting research. About 14 percent of the water boards' expenditures in 1992–96 are budgeted for research and development.

New approaches

How to overcome the weaknesses in water resources management has been the subject of much international discussion. At the June 1992 United Nations Conference on Environment and Development in Rio de Janeiro, member countries endorsed policies that stress integrated water resources management "based on the perception of water as an integral part of the ecosystem, a natural resource and social and economic good." They also stressed "the implementation of allocation decisions through demand management, pricing mechanisms, and regulatory measures."

These policies reflect the current worldwide consensus on moving away from past approaches that tended to center on developing new sources of water—a "supply" focus. The new emphasis is on economic behavior, policies to overcome market and government failures, and technologies for increasing the efficiency of water use—a "demand" focus (see "Water Management in the Maghreb" in this issue). This approach underlies the Bank's new policy for managing water resources. Among the measures countries are increasingly adopting:

Applying a comprehensive analytical framework, incorporating cross-sectoral and environmental considerations. Water resources should be managed in the context of a national water strategy that reflects the nation's social, economic, and environmental objectives and is based on an assessment of its water resources. Such a framework ensures that cross-sectoral and environmental implications of water investments and use are taken into account and can overcome the problems caused by fragmented management through appropriate coordination mechanisms. Often, the most appropriate management unit under a comprehensive framework is a river basin, as it is a reasonably self-contained hydrological system.

Placing greater emphasis on incentives for efficiency and financial accountability. Establishment of proper incentives induces better performance by providers of water services and efficient use by consumers, leading ultimately to a better allocation of water among different uses. A key component of an appropriate incentive system is the pricing of water. For example, when the city of Bogor (Indonesia) increased fees by 30 percent, the consumption of water declined by a similar rate, and expensive investments in new supply sources were postponed.

While ideally the price should reflect the opportunity cost of water (i.e., its value in the best alternative use), in many countries political obstacles allow only gradual moves toward this objective. In these cases, charges covering the cost of water service entities would be a good starting point. Such charges ensure the sustainability of financially autonomous entities, where incentives for efficient operations are closer to those of businesses. Indeed, privatization of water services and transfer of ownership or operational responsibility to the community are reforms that improve incentives. Guinea provides a striking example: some 18 months after responsibility for supplying urban areas with water was turned over to a private supplier, the fee collection rate had increased from 15 percent to 70 percent, and services had improved markedly. Another arrangement with the potential to increase efficiency is the facilitation of water trades (see "Are 'Water Markets' a Viable Option?" in this issue).

Establishing strong laws and regulations. Laws and regulations covering

monopoly organizations, environmental protection, and other aspects of water management that are not adequately handled by unregulated market forces can be a foundation for effective water resources management. Several countries (e.g., Mexico and Peru) are examining their legal and regulatory structures with special attention to water ownership and rights.

Decentralizing water service delivery. With a foundation of appropriate legal and regulatory procedures and given an overall coordinating framework, the management and delivery of water services can be decentralized, increasing local and community control and improving efficiency. Many countries are encouraging users' associations to take more control of water management. In an effort to both decentralize and involve beneficiaries, Mexico is transferring management of 78 irrigation districts (covering more than 1.8 million hectares) to water users' associations, which will be responsible for operating and maintaining all canals and water distribution.

Prescribing and encouraging the participation of stakeholders. Experience has shown that the participation of "stakeholders"—individuals and institutions that would be affected by decisions about water resources management—in formulating strategies, planning, designing, implementing, and managing water activities is not only good management practice but also helps to build necessary political and social consensus. Water users are willing to pay for services that are designed to cater to their needs, which improves the ability to financially sustain water service activities. In projects in Bangladesh and Kenya, water users not only participate in establishing rural water and sanitation systems but also manage them.

Protecting, enhancing, and restoring water quality and water-dependent ecosystems. Protecting existing ecosystems is typically less costly than attempting to restore water quality or restore valuable ecosystems once damage has been done. For example, until the 1960s, the Aral Sea was environmentally stable and had a thriving commercial fishing industry. The massive diversion of the lake's water sources to expand irrigated cotton production eventually shrank the lake by 66 percent, with disastrous ecological, economic, and health consequences. Had authorities considered the consequences to the Aral Sea of the effects of diverting water, a different scale of diversion would have resulted, and costly efforts to save part of the lake and surrounding areas would not have been necessary.

Assigning greater priority to the provision of adequate services for the poor. This will help to stop the spread of disease in crowded low-income areas. Besides building water delivery infrastructure, fee schedules can be structured so that consumers receive a limited amount of water at a low cost and pay a higher fee for additional water. For example, the Istanbul Water and Sewerage Authority has instituted block volumetric water charges to meet the dual objectives of raising funding while assuring that the basic water needs of the population are met, including, in particular, those of lower-income households. Water charges up to a minimum to meet basic health requirements are kept particularly modest. This system requires that individual consumers be metered. In areas where metering is not possible, connections to sewage and sanitation may need to be subsidized for the poor. However, it is important that water entities not be driven to financial unsustainability by being charged with social objectives. Social objectives should be funded directly from the public budget.

Supporting research, development, and adoption of low-cost technologies to conserve water and enhance its quality. Much can be done and is being done in this area. Simple measures can often have dramatic effects. In its efforts to cut water use per capita, Mexico City has replaced 350,000 toilets with smaller, more efficient models, thereby saving enough water to meet the household needs of 250,000 residents. The use of water-saving devices, leak detection and repair, and more efficient irrigation in its parks helped Jerusalem reduce its use of water per capita by 14 percent from 1989 to 1991.

Putting ideas into practice

Each of the measures illustrated above is worthwhile in itself, but their full potential will be realized only if they are all integrated in a country's water resources management practices. Many countries have already put some of these elements into place, while others are just beginning. France is certainly ahead in this regard—its water resources management system incorporates many of the proposed elements (see box). In fact, the French system has served as a model for Poland, which has also adopted river basin-based management, and is being considered by others.

Of course, every country will have to tailor the new approach to its own situation. Many of the countries with limited renewable water resources are in the Middle East, North Africa, central Asia, and Sub-Saharan Africa, where populations are growing fastest. Elsewhere, water scarcity may be less of a problem at the national level but is nevertheless severe in specific regions (e.g., northern China, western and southern India, western South America, and large parts of Mexico and Pakistan). For some countries, such as those in Eastern Europe, pollution is the biggest problem affecting water resources. In much of Africa, implementation capacity is a critical issue exacerbated by the frequency of droughts.

The challenge of meeting the water requirements of the planet is enormous—for developing countries alone, an estimated $600–700 billion over the next decade is needed for investments in irrigation, hydropower, water supply, and sanitation. World Bank lending will provide a small part of this amount, roughly $18 billion over the next five years. Most will have to come from domestic resources. An important way in which countries can help is by following policies that encourage cost recovery, provide economic incentives to manage water efficiently, and induce private sector investment. In the long run, the comprehensive framework for water resources management and the attendant policies outlined above will be crucial for countries to sustain this vital resource for economic growth. ■

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For more information, see (1) the World Bank's policy paper Water Resources Management, *prepared by K. William Easter, Gershon Feder, Guy Le Moigne, and Alfred M. Duda, with significant contributions from others inside and outside the Bank; and (2) "When the Cup Is Half Full: Improving Water and Sanitation Services in the Developing World," by John Briscoe,* Environment, *May 1993, Vol. 35, No. 4.*

Water Management in the Maghreb

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AS THE MAGHREB countries look for ways to tackle an impending water crisis, it is becoming clear that governments must move away from the traditional supply-oriented, agency-specific policies. The best hope lies in a comprehensive approach that focuses on managing demand.

During the past few decades, the Maghreb countries—Algeria, Morocco, and Tunisia—have invested heavily in water development works to tackle the serious problems imposed by an arid/semiarid climate with highly variable and irregular rainfall and limited water resources. They have built dams, canals, wells, irrigation schemes, and water supply systems, with impressive results. From 1970 to 1990, the irrigated area increased by almost 80 percent, and nearly all urban dwellers in the Maghreb countries, and a large part of the rural population in Tunisia, gained access to safe drinking water. The improved water infrastructure has stimulated economic growth and reduced somewhat the damaging effects of droughts.

But these North African countries are entering a critical phase. At current demand levels, available water resources will be almost completely used up within the next 15–20 years. Tunisia may reach this point even earlier as it now uses over 75 percent of its annually renewable water resources. Moreover, water demand will continue to rise rapidly because of growing populations and expanding economies. At the same time, the remaining opportunities for building dams and exploiting groundwater will become more and more expensive, and widespread water pollution will further whittle down the available supply. Thus, the Maghreb needs to move quickly to overhaul its approach to water management.

Water management problems

Water shortages. The rainfall in the Maghreb countries is concentrated along the northern coastal mountain ranges, with rain mostly in the winter months and great variations from year to year. This variability introduces an element of risk, making it difficult to estimate the true opportunity cost of water (i.e., its value in the next best economic use). It means expensive storage capacity is required to utilize the seasonal and interannual flows. Systematic contingency planning is also needed to ensure proper responses to drought—a typical feature of the region and the main reason for heavy investments in water storage development.

In addition, the irregular spatial distribution of water makes it necessary to build costly transfer schemes. Almost all the major cities, such as Algiers, Casablanca, and Tunis, depend on water transfers for their water supply, and several large cities suffer water shortages—Oran, Algeria can supply drinking water for only a few hours a day during a few days a week. Making matters worse, rapid population growth is reducing, and will continue to reduce, water availability (see chart).

Faced with a shortage of renewable water, Algeria, Libya, and Tunisia have begun exploiting nonrenewable (fossil) groundwater in the Sahara. But apart from the high cost of transporting such water over long distances to the demand centers, mining groundwater is not sustainable in the long term.

Pollution. Water pollution began to reach dangerous levels in the 1970s as industries and growing urban centers discharged large volumes of untreated wastewater into rivers, lakes, and coastal waters. In northern Algeria, where heavy industries are concentrated, most wastewater treatment plants do not work. In Morocco, the Sebou River's pollution level has reached crisis proportions. In Tunisia, which has already invested heavily in pollution control measures, the pollution of some coastal aquifers and beaches threatens the vital tourist industry.

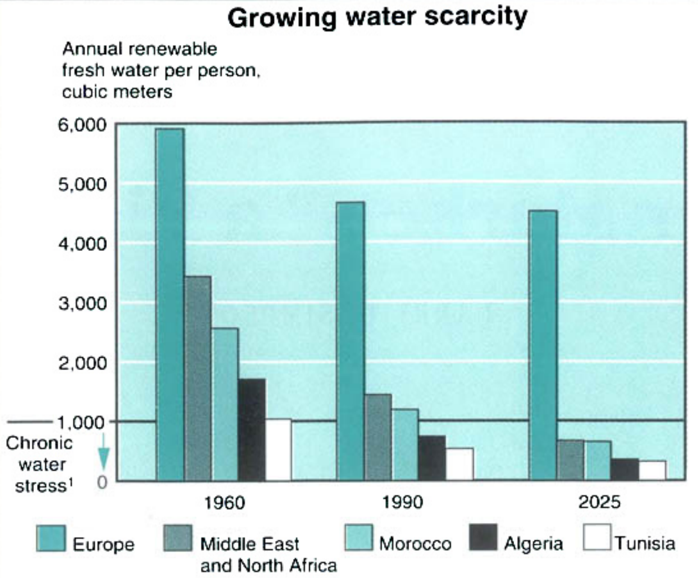
But the most serious problem is the contamination of groundwater. This stems from industries' discharging untreated wastewater and depositing waste materials without special precautions (e.g., petrochemical industries in northeastern Algeria), as well as from the excessive use of agrochemicals. Since groundwater is generally accepted as the best source of drinking water, its contamination often endangers existing water supplies. Possible cleanup procedures are very expensive and time consuming.

Institutional issues. In a region where water sector institutions have been dominated by government, centralized public agencies have been responsible for constructing dams and canals and for building and operating irrigation and domestic and industrial water supply projects. While the actions of single-purpose agencies during periods of relative surplus were successful, governments are now being forced to consider other solutions. Governments still need to determine policies, set long-term strategies, correct market failures, and establish and enforce regulations such as quality standards. However, experience shows that independent agencies or private companies are generally better able to provide efficient water delivery services.

Irrigation. All Maghreb governments have ambitious plans to increase irrigated areas to better use natural resources, increase food production, develop rural areas, and generate employment. But there is growing pressure to reallocate water from irrigation—now using over 60 percent of Maghreb water—to other uses. Increased efficiencies should help: in Morocco, 10 percent of the water being used

in irrigation would provide enough to double the volume of water for domestic supply. However, if less water is available, farmers would have to abandon irrigated land or reduce water use per hectare, a possible but costly move.

Using treated wastewater is often advocated as a solution, but it is not suitable for all crops and a thorough monitoring of water quality would be needed. In Santiago, Chile, typhoid cases rose rapidly after 16,000 hectares of vegetable field were irrigated with inadequately treated wastewater. Similarly, irrigated crops in Jordan had to be destroyed when a wastewater treatment plant malfunctioned. Moreover, treated wastewater is usually available near large cities, meaning it would have to be brought over considerable distances, often pumped, to irrigated areas.



[1] See Chart 2 ("How scarce is water?") on page 25 in the article "Managing Water in a Sustainable Manner."
Source: World Resources Institute.

Toward a policy shift

Given these constraints and problems, it is becoming increasingly evident that an important policy shift is needed—one that focuses on the "demand" side (promoting more desirable levels and patterns of water use) rather than on the "supply" side (i.e., locating, developing, and exploiting new sources). This approach follows the thinking outlined in the World Bank's new policy paper on managing water resources.

Managing water demand. Direct technical and regulatory measures to control water use are difficult to enforce and, therefore, rarely successful, whereas indirect measures that affect voluntary behavior—market mechanisms, financial incentives, and public awareness programs—hold much more promise. In the Maghreb, as in most other parts of the world, water charges are below levels that would cover costs, rarely approaching levels that would reduce water use. Thus, higher prices are essential for recovering costs, reducing water use, and helping to allocate water with greater value uses. Yet, in the past, raising prices has been resisted because

• water has been seen as a free good, and water charges are consequently resented;

• governments find it difficult to raise charges when incomes are low and unemployment is high (e.g., about 25 percent in Algeria);

• low irrigation water charges—generally much lower than drinking water charges—are often defended as a way to compensate farmers for low product prices (set by governments), raise their incomes, and entice them into remaining in the rural areas.

Such issues are real and are being addressed by the Maghreb governments, particularly for drinking water. In irrigation, changes are more difficult, but progress is being made. The Tunisian Government has already decided to gradually introduce prices that will cover the full cost of irrigation water.

Water agencies can also influence demand by offering incentives for adopting conservation measures, as Cyprus and Israel have shown. Measures can range from the installation of water saving fixtures to the recycling of water in industrial processes. In addition, governments could undertake stronger public education programs, stressing how to save this scarce and precious resource, as has been successfully done in Cyprus and Mexico.

Reforming institutions. Institutional reform is a key requirement for comprehensive planning and management, yet it is one of the most difficult reforms to carry out. Given the predominance of government agencies, the first steps should consist of granting these agencies greater independence, subcontracting to private companies for nonessential activities (e.g., repairs and construction), and involving water users in the planning and operation of water systems. The governments basically back this policy, but entrenched interests tend to prolong implementation. At the same time, the agencies should concentrate on areas where they are the most efficient, taking a more comprehensive approach. Tunisia already has a well-coordinated centralized system; Morocco has a high-level coordination mechanism, although strong government agencies still tend to pursue their own interests; and Algeria is just starting to address these issues.

Tackling pollution. Cleaning up pollution involves massive financial resources because the cost of sewerage and wastewater treatment facilities is higher than for providing drinking water, and the necessary investments are lagging far behind water supply investments. In addition, toxic industrial effluents and deposits are endangering water resources. Even in the richest countries, cleanup efforts require that limited resources be spent on the highest-priority investments. A major initiative to deal with the worst cases is the Mediterranean Environmental Technical Assistance Program, which has identified environmental "hot spots." It is also necessary to develop a comprehensive pollution control approach within the corresponding hydrological units (i.e., river basins and coastal regions) to prevent recontamination of cleaned areas.

Rethinking irrigation strategies. Because water will have to be reallocated to domestic and industrial uses in the near future, a major expansion of irrigated areas is doubtful. Moreover, the rising cost of irrigation water—because of conservation measures, the use of treated wastewater and the upward adjustment of low water charges—will force farmers to shift from low-value crops like cereals to such higher-value crops as fruits, vegetables, and flowers, for which local markets are limited and export markets are difficult to develop. Thus, traditional agriculture will not be able to expand and, in some areas, will decline in the long run.

There will be no simple solutions as conflicting interests will have to be reconciled. Besides the need for more efficient water use, other aspects (e.g., food production, employment, pollution, exports, and regional development) will have to be considered. However, since private irrigation development, in the Maghreb as elsewhere, has shown that it can operate profitably while government-dominated districts often require subsidies, a determined shift toward turning public irrigation districts over to private farmers or farmer groups is critical. ■

Are "Water Markets" a Viable Option?

LARRY D. SIMPSON

AS DEVELOPING countries look for the best way to allocate scarce water supplies, many economists and environmentalists are advocating "water markets." The good news is that the prerequisites needed for a viable water market are the same as those needed for good water management.

Throughout history, one of the major determinants of successful societies has been their ability to provide a safe and reliable supply of water for their members. Techniques to do so have continually evolved since the inception of irrigation in Mesopotamia.

Recently, many economists and environmentalists have touted "water markets" as the most promising tool for use in water management. These markets involve the annual or permanent transfer of the water use rights between a willing buyer and a willing seller in exchange for compensation determined by supply and demand, the cost of mobility (i.e., the cost of building additional infrastructure), the reliability of the supply, and the cost of mitigating any environmental and third-party effects. This transfer value should not be confused with the price or tariff paid annually for the use of the water—a rate that should reflect the full recovery of the pro rata costs of administration, operation, maintenance and capital recovery. This rate, set on an escalating scale, has also been used as a disincentive for waste and inefficient use.

For economists, water markets represent the most efficient way to allocate a scarce resource, while for environmentalists, the markets appear to be a way to stave off building more dams and reservoirs. However, many engineers and sociologists view such markets with suspicion. For them, these markets are regarded as a path toward monopolistic control of a vital resource and misallocation between the "haves" and the "have-nots."

At this stage, developed countries—particularly the United States—have had considerable success with water markets, whereas developing countries are just beginning to move in this direction. The results so far are quite mixed, with some water markets working much better than others. The question is to what extent the successes can be duplicated in different cultural and geographic settings. The answer lies in developing good water-management practices and in creating transferable water use rights. From this foundation, water markets will emerge where they make sense.

Advantages of water markets

Governments can opt to transfer water supplies in many ways, ranging from expropriation (with or without compensation), reallocation through directive, or reallocation through a market-based incentive system. What does the last option have to offer? The advantages of water markets include:

Increased efficiency. Experience has shown that users (i.e., the owners) of the water use rights are fully capable of making sound business decisions regarding their own assets. Those who make bad decisions fail economically and are replaced by others. Water markets provide these stakeholders with the ability to control decision making and the opportunity to derive financial benefits. This encourages an efficient use of the resources as owners are faced with the alternative of developing ways to use water more effectively in order to derive financial gain through the sale of the surplus. Owners can also profit from these gains to purchase the technology and assets necessary to improve efficiency. For example, a farmer might sell a part of his inefficiently used flood irrigation supply and, with the proceeds, buy a sprinkler system that allows more timely and complete irrigation with resultant increases in yield. This market process provides a voluntary method for the evolution of scarce water supplies to their highest and best use.

Delay of new infrastructure. Because water markets encourage the most efficient use of existing supplies, they tend to delay the time when resources must be spent to develop new supplies. They should not, however, be viewed as a substitute for all infrastructure development because most major transfers require additional transportation and storage systems. For example, agricultural water diverted during stream runoff periods for use during the growing season could be used for municipal purposes but would require the construction of sufficient storage facilities to make it available year-round. New conduits may also be needed to deliver the supplies to their end users. These costs, along with any other direct economic costs, should be reflected in the value of the water use right.

Removal of political favoritism. In areas where water is reallocated by governmental decree, politicians and bureaucrats are pressured to allocate water supplies based upon political influence. The political system is asked to make complex resource allocation decisions outside of its traditional role of setting policies and enacting legislation. A market system removes this responsibility from the political arena and places it with the owners of the water use rights.

Given all of the above advantages, it is not surprising that water markets have sprung up in developed countries wherever water rights are legally transferable. This has primarily occurred in the United States.

Several developing countries have moved or are contemplating moving in the direction of

market-based reallocation systems. In some places, informal water markets have existed for decades, despite the fact that they were not legally sanctioned (e.g., in parts of Algeria, India, Morocco, Pakistan, and Tunisia). In the southern part of the State of Ceara, Brazil, a functioning system of water use rights and market-based transfer of those rights has been in existence since before 1900. In northern India, a very active market-based system for transferring water derived from privately owned tube wells has developed informally.

Of the newer systems, Chile's water market is the most active, despite some initial allocation problems (e.g., the initial public auction of surplus undeveloped supplies has concentrated the control of future supplies in the hands of a few). Mexico has now adopted a system that should eventually permit the allocation and transferability of rights between individuals, water user associations, and irrigation districts. Brazil is exploring the water market option (e.g., in the State of Ceara in the northeast) although there is not yet universal acceptance of the concept of definable and transferable water rights. Peru recently modified its constitution to allow the allocation of water rights and the transferability between users and is now working on a new water law to implement these constitutional provisions.

Prerequisites for success

If water markets offer so many advantages, why are they not used universally? The reason is that a successful market relies upon certain prerequisite conditions that may be difficult for a given country to meet for political, economic, or cultural reasons. Without these conditions, a functioning market cannot succeed. The conditions are:

A definable right. There must be a defined property right to the use of a certain amount of water—there is not a market for sunshine because it cannot be defined, controlled, and traded. In almost all nations, the actual ownership of water resources is held in trust by either the nation or the state, but the right of use is granted in a variety of forms. These include perpetual concessions, permits, licenses, contractual rights, and outright ownership. The right must be measurable in precisely defined terms and be easily measured in the field using practical methods easily understood by the user.

In the western United States, water rights often take the form of shares of stock in user-financed companies that developed water supplies with private capital during the late 1800s and early 1900s. All water constitutionally belongs to the states, but the right to use it is a property right vested in the user through an allocation process. This "right of use" can then be traded within the marketplace, with varying degrees of regulatory control.

Greater demand than supply. Demand is created by the product's desirability as well as its scarcity, which can come about through any limitation of the supply (i.e., location, timing, drought, or unusable water quality). Most successful water markets have developed in semiarid areas, where scarcity creates competing demands.

Product availability. Society needs water on a continuous basis, but water occurs at the whims of nature. As a result, it must be conserved through storage, just as fruit must be stored in refrigerated warehouses after the harvest. In some areas, nature has provided storage through snowpack or groundwater, but in most instances, the storage must be developed and managed. Once man has exercised dominion over water, it becomes a product that can be traded within a market-based system.

Societal acceptance. Society must accept the concept of the free transfer of water use rights through a market system, or the market will be doomed to excessive regulation and possible extinction. This area touches on societal perceptions and cultural traditions; it can even involve religious beliefs.

In some societies, where water is considered a gift from God, the idea of its use being traded as an article of commerce has yet to be accepted. What is actually being traded, however, is the right to the use of the infrastructure that stores and delivers the water. For most societies where water is scarce, there is a growing recognition that some method of inventory, allocation, and measurement is necessary to assure equitable distribution. For example, the lack of defined water use rights in the State of Ceara, Brazil, has resulted in the concentration of the use with those who have the location and the resources to divert the water—those located downstream receive what is left, if any. Recent efforts, however, have been directed at creating equity through establishing defined water use rights as property rights and an administrative system to enforce those rights.

A good administrative and regulatory structure. A system of administration must be put in place to assure both the buyer and the seller that their respective rights will be honored and enforced. This involves keeping an accurate registry of the rights and their ownership, as well as an accounting system that ensures that users receive the proportional share to which they are entitled. Until such a system is established and confidence in its reliability, fairness, and equity develops, a market-based transfer program cannot function satisfactorily. In northern India, for example, the lack of a defined allocation and administration system is resulting in the overuse of the aquifers—beyond their safe-yield capacity—thus placing the resource in danger of being depleted. A determination of

the safe yield of the aquifers and an allocation of pumping rights would help to assure the sustainability of the supply.

Sufficient mobility. There must be either an adequate infrastructure to transport the water supplies to the buyer or the economic and technical ability to construct one. In the São Francisco River Basin of Brazil, for example, a water use right has little value to states located outside the basin unless a transportation system is developed to carry the water to the place where it is needed. The value of the right must be discounted by the amount that it would cost to build the needed canals, pumping plants, and reservoirs.

A fair and equitable initial allocation system. A fair and equitable system of initial allocation of the use of water must be implemented, recognizing historical uses but not rewarding waste. This requires careful evaluation of the parameters of use. These parameters must include the consideration of societal needs such as environmental concerns, subsistence needs, and historical use, as well as the reliability of the annually available water supplies. While the use of a public auction for initial allocation has been advocated by some, its use in actual practice has resulted in large blocks of water going to economically strong entities who have no reasonably foreseeable beneficial use. This can result in monopolistic control over future development and use of the supplies. A high tax on the non-use of an allocation is touted as a solution, but it would unfairly penalize those who can demonstrate a justifiable and foreseeable future need for the supply.

In the initial allocation scheme of a newly developed water use rights system, proper allowance should be made for the water needed to maintain reasonable aquatic and riparian habitats. Where an initial allocation for environmental purposes is not possible because long-standing historic uses and entitlements have pre-empted the total supply, the water market provides a means by which environmental advocates can enter the marketplace and acquire the water to enhance the environmental quality of the stream. Where new water projects are proposed, water markets allow the cost of environmental mitigation to be reflected in the value of the water use rights.

A fair reallocation system. There must be an equitable system of transferring water rights that enables the reallocation of rights to different uses as needs change. The Colorado-Big Thompson Project, which allows the transfer of rights on both a temporary rental basis and on a permanent transfer basis, is a model project in this regard. Users can adjust every year to meet annually variable needs, and rights can also be permanently transferred to meet the changing needs of growing cities, industries, and agriculture using the market system. The only regulatory controls required are that the title transfer be registered and that the need for the water be demonstrated.

Potential problems

Even with all of these conditions in place, however, some degree of government intervention may be needed to prevent abuse.

Speculation and monopolies. Care must be taken to prevent the wholesale acquisition of available supplies without a demonstration of present or reasonably foreseeable need. Even the stock and commodities exchange markets penalize the development of monopolistic positions. Various methods have been used to deal with this issue, ranging from regulatory controls over the market transfer to a prohibitively high tax for holding a right without developing it within a reasonable time. Once the market transfer system has been in place for a while, the value of the water use right becomes well known and the opportunity for abuse or manipulation decreases. However, every effort must be made initially to provide education and full information to the owner so that the seller is just as well informed as the buyer.

Subsistence user. The question of allowing the transfer or sale of water rights used for subsistence must be dealt with or it could result in social costs over the longer term—that is, those who have sold the rights during good water years will fall back on the social system for support during the drought years. One possible solution to this problem would be to limit the transfer of subsistence level water use rights by attaching them to the land necessary for subsistence farming. The real answer to this problem, however, lies in the education of the user as to the real market value of the asset.

Third-party impact. Perhaps the toughest problem facing administrators is the objective consideration of the effects of water transfers on third parties. This situation typically occurs when the transfer involves removing the supply from its basin of origin or drying up one area to provide a supply to a different area. However, these same concerns must be addressed even when such transfers occur through governmental decision, and it may be easier to address them in a market-based transfer system because transaction costs should reflect the real cost of compensation to the area of origin.

In California's Imperial Valley, the loss of water to saline groundwater is being decreased by canal lining, with municipal users bearing the cost. Agricultural users are not losing any net supplies but instead are receiving system improvements and cash payments in exchange for the municipal users' receiving the salvaged water. This type of agreement works only where the salvaged water would otherwise be lost to beneficial use, but even in this case, the question has arisen as to how this approach affects the water supply in Mexico.

In practice, equitable water reallocation is frequently controlled through regulatory or judicial means, or, in the interest of expediency, ignored. Those with the most political power or the most financial means generally succeed in obtaining the necessary water allocation. In the olden days in the western United States, it was said that the best water right was to be upstream on the river with a shovel in one hand and a shotgun in the other. The market system provides an alternative to these methods.

Conclusion

As water shortages grow worldwide, interest in water markets as a mechanism for increasing the efficiency of water use will also grow. More experience with them is needed, especially in diverse cultures and geographic regions. But regardless of whether a water market is planned or just evolves, good water resource management calls for (1) a system of water use rights to allocate the resource, (2) a system of administration to ensure the integrity of the water rights, (3) a good infrastructure system to capture, store, and distribute the resource, and (4) an efficient institutional system to manage, operate, and maintain the entire process. If these prerequisites are in place—with water rights clearly transferable—a market-based system for their transfer will inevitably evolve. ■

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The Case for Low Uniform Tariffs

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ARE LOW, uniform tariffs part of the solution to improving competitiveness? Policymakers in many developing countries seem to think so. They are beginning to put in place reforms aimed at simplifying tariff structures and making them more uniform, as well as at bringing tariff levels more in line with those of industrial economies.

For years policymakers in many developing countries felt that balance of payments problems could be fixed by imposing tariffs that were far above those prevailing in industrial countries and that had a wide variety of rates. In theory, high and dispersed tariffs can fulfill certain government objectives—increased revenue, income distribution, and protection of domestic industries—if better, trade-neutral domestic taxes or subsidies are difficult to use. In practice, however, this type of tariff structure tends to distort the allocation of resources, creates an anti-export bias, inhibits the use of foreign technology, and reduces the comparative advantage that many labor-intensive developing countries could exploit to improve income distribution. Other, indirect costs—such as preferential treatment for certain products and industries, and smuggling—may only exacerbate the situation. By the late 1970s, many of these disadvantages surfaced and it became clear that high and widely dispersed tariffs were themselves part of the problem.

Case for uniformity

To be most effective, taxes should be broadly based, that is, cover as many taxpayers as possible, and be set at relatively low rates. Since tariffs are essentially a tax on foreign trade, the case for them is no different. Thus, policy prescriptions on tariff reform made under World Bank- and IMF-supported programs have emphasized reductions in both the average tariff level and the range of tariff rates. Indeed, the eventual goal is to reach what is called a uniform effective rate—that is, a structure with one or very few tariff rates. Ultimately, the objective is to achieve uniform effective protection, or equal protection to value added in all domestic industries, which would take into account tariffs on both outputs and inputs. This goal, however, is seldom achieved, and a uniform nominal tariff structure serves the purpose. It generally approximates the theoretical target and has other practical advantages as well.

A uniform structure responds to many of the problems developing countries in general experienced under earlier trade regimes. Resources get misallocated under a structure that has very high tariffs on consumer goods and low tariffs on raw materials and intermediates. This arrangement protects domestically produced consumer goods, encouraging domestic resources to move away from exports toward producing inefficient import substitutes. Thus, the import tax effectively acts as an export tax. A low, uniform tariff with few exemptions minimizes this anti-export bias and, by improving the allocation of resources, increases a country's competitiveness. It also reduces the possibility of misclassifying products, thereby discouraging importers from shifting goods from a high- to a low-tariff category.

A uniform structure offers developing countries other important advantages. It eliminates cumbersome paperwork and is easier to administer than more complex systems, especially if customs departments function poorly or are constrained by a lack of resources. It dissuades interest groups from lobbying to secure greater protection for themselves, because any increase one group secures is automatically available to others.

Finally, uniformity responds to a growing skepticism about the merits or feasibility of governments picking winners and losers. For example, the infant industry argument—often invoked to justify selective protection of industries—requires governments to identify industries that could become competitive in the long run but require some initial protection. For this to work, governments must maintain appropriate levels of protection, remain immune to lobbying from special interest groups, and be able to reverse the protection once the infants have "grown up." However, experience has shown that this process can seldom be carried out successfully. If some protection is believed to be necessary, the easiest way to do it is to cover all threatened industries with a few standard tariffs.

A sample of reformers

Since the mid-1980s, a number of developing countries have undertaken far-reaching reforms of their tariff structures, in the hope that tariff reform would lead to greater international competitiveness and improved export performance. The list includes several Latin American countries (Bolivia, Chile, Colombia, Mexico, and Uruguay) and Ghana. Other

countries in Asia (Bangladesh, India, Pakistan, and Sri Lanka) and Africa (Egypt, Kenya, and Uganda) are beginning to do the same. For all of these countries, reducing or eliminating tariffs has been a key component of trade reform, which in turn has been an important element of overall structural reform.

How have the recent reformers fared as they have moved from high and widely dispersed rates toward uniformity? To answer this question, a sample of six countries was studied; some of them have successfully completed the current phase of their reforms (Colombia and Ghana), and for others the process is ongoing (Bangladesh, Brazil, Egypt, and the Republic of Korea). The reform of quantitative restrictions, which were often the binding constraint in the pre-reform period, was undertaken prior to or at the same time as tariff reforms. The two early reformers (Colombia and Ghana) eliminated quantitative restrictions before reforming tariffs.

In all cases, the basic cascading structure, which involves higher tariffs on goods at more advanced stages of processing, was retained after the reform process. Thus, effective protection for final goods has remained greater than that for intermediate and capital goods. But because pre-reform maximum rates on final goods were substantially reduced, the overall effective level of protection—relative to intermediate and capital goods—has been reduced.

Table 1
Simplifying the tariff maze

(percent, unless otherwise specified)

	Bangladesh	Brazil	Colombia	Egypt	Ghana	Korea
Year initiated	1986	1990	1990	1986	1983	1978
Duration (years)	7.0	3.5	2.0	7.0	9.0	16.0
Number of tariff rates						
Pre-reform	24.0	18.0	22.0	43.0	n.a.	n.a.
Reform	4.0	9.0	4.0	10.0	3.0	n.a.
Other charges (rates)						
Pre-reform	13-83	6.2	18.0	22-27	10-500	n.a.
Reform	2.5	6.2 [1]	n.a.	10 max.	n.a.	n.a.
Maximum tariff						
Pre-reform	400.0	85.0	200.0	160.0 [2]	50.0 [2]	60.0
Reform	35.0	35.0	20.0 [2]	80.0 [2]	25.0 [2]	10.0
Average tariff [3]						
Pre-reform	n.a.	32.2	43.6	48.0	n.a.	41.0
Reform	<30.0	14.2	11.0	31.0	17.0	7.9

Sources: Trade Policy Review Mechanism reports, General Agreement on Tariffs and Trade (GATT); World Bank; and IMF.
Note: "Reform" data refer either to the current period or to the target period.
n.a.: Data not available.
[1] Although no explicit commitment has been announced, Brazil should eliminate all surcharges and fees in order to be compatible with MERCOSUR Common External Tariff.
[2] Higher rates apply to selected products.
[3] Simple average of nominal tariffs, except for pre-reform period in Egypt (weighted average).

Pace of reform. There was a wide range in the pace of reform, with Colombia adopting the "big bang" approach, implementing its reforms in two years, whereas Ghana implemented its reforms gradually over a 9-year period. In the other sample countries, the pace of reform was much slower, although international considerations, including the Uruguay Round trade negotiations, did help quicken the pace for all.

Degree of differentiation. Governments in the sample considered here chose minimally differentiated tariff structures in order to reconcile the need to simplify and unify tariffs with the desire, in some cases, to continue to use tariffs to pursue multiple objectives. The four countries for which data are available (Bangladesh, Brazil, Colombia, and Egypt) had more than 20 different rates prior to the reforms; these were reduced to between 4 and 10 (Table 1). For the most successful reformers (Colombia and Ghana), the target number of bands was about 4—close to the number used in the value-added tax (VAT) structure favored by many industrialized European countries.

Special surcharges. Prior to the reforms, the countries in the sample had levied a number of exclusive or discriminatory charges on imports, resulting in wide variations in protection; for example, Brazil had 11 and Egypt 5 extra charges. Often these charges were applied at different rates, and each could have its own separate list of exemptions. Bangladesh had three separate rates for its sales tax on imports, and Ghana levied its super sales tax on imports at rates ranging anywhere from 10 percent to 500 percent. Such charges on imports were either eliminated during the reforms or assimilated into the new tariff.

Transparency. The elimination of other charges on imports not only reduced the level of protection but also simplified the tariff structure and made it more transparent. Converting specific into *ad valorem* rates also helped transparency, as did the elimination of arbitrary exemptions.

Maximum rates. The sample countries tended to reduce the maximum rates substantially, often from very high initial levels (400 percent in Bangladesh, 200 percent in Colombia, and 160 percent in Ghana) to as low as 10–25 percent. Reducing the maximum rate, especially from very high initial levels, is less harmful for fiscal revenue than is commonly believed. In some instances, the revenue effect can be positive because lower tariffs tend to increase import volumes and reduce smuggling, evasion, and lobbying for exemptions.

Minimum rates. Two countries in the sample, Egypt and Bangladesh, also raised their minimum rates. A minimum tariff usually raises fiscal revenues substantially and reduces the spread of effective protection, especially when it is levied on intermediate and capital goods used to produce final consumer goods. The most successful reformers—Colombia and Ghana—among the sample countries aimed for minimum tariff levels of 5–10 percent. Overall, average tariff levels dropped substantially, with Colombia's, Ghana's, and Korea's falling to the lowest levels—10–17 percent. But these averages understate the true extent of the reduction, as they do not take into account the decreases in or elimination of other charges on imports or nontariff barriers.

Announcements. Four countries in the sample, including Colombia and Ghana, announced in advance their plans for tariff reduction (Table 2). Preannouncement, especially when the reforms are implemented gradually, helps investors and producers make decisions based on the target tariff structure; it also reduces costs arising from uncertainty about future tariffs and hence about long-run price signals.

Tariff band allocation

How did developing countries allocate goods among tariff bands? The record shows that allocation was generally guided by three objectives: income distribution, protection, and export promotion. For purposes of income distribution, governments assign consumer and "luxury" goods to the highest tariff band and essential goods (such as food and medicine) to the lowest. This is often rein-

Table 2
The reform process at work

(percent, unless otherwise specified)

	Bangladesh	Brazil	Colombia	Egypt	Ghana	Korea
Preannouncement of target structure						
Yes	√	√	√		√	
No				√		√
Cascading structure						
Yes	√	√	√	√	√	√
No						
Structure of tariffs [1]						
Raw materials	55	n.a.	5,10,15	20	10	3.3
Intermediates	70	n.a.	5,10,15	22	10	9.3
Final	74	n.a.	20 [2]	56	20,25 [2]	9.4
Duty drawback						
Yes	√	√	√	√	√	√
No						
Minimum tariffs raised						
Yes	√			√		
No		√	√		√	√

Sources: Trade Policy Review Mechanism reports, General Agreement on Tariffs and Trade (GATT); World Bank; and IMF.
n.a.: Data not available.
[1] In the case of Bangladesh, the classification is primary, semiprocessed, and processed products; figures are simple averages of applied tariffs; for Korea, figures are for industrial tariffs.
[2] Higher rates apply to selected products.

forced by protectionist interests in consumer goods industries or by government policies that foster such industries.

Moreover, government objectives often determine how intermediate and capital goods are treated. If governments want to foster a domestic capital goods industry, they generally place high tariffs on capital goods imports. This action effectively reduces the level of protection for the industry using the protected capital or intermediate goods as inputs. This can penalize exports by raising the cost of imported inputs and by creating incentives for producers to shift out of exports into the protected import substitutes.

To minimize this anti-export bias, all six countries in the sample employ duty-drawback (or equivalent) schemes (Table 2), under which exporters do not have to pay the tariffs on imported inputs used in export production. In principle, these schemes can have positive effects, but they can also raise difficulties. Administrative costs (including leakages and fraudulent claims for drawback) make them expensive to implement, especially when import tariffs are high. In addition, exports covered by these schemes may expand at the expense of other exports, and the schemes themselves may become a surrogate for more wide-ranging import liberalization.

Supporting reform

The value of tariff reforms risks being sharply undercut in the short term if the reforms are not simultaneously accompanied by macroeconomic reforms to compensate for any loss of fiscal revenue and the pressures on domestic producers that may arise from increased imports. In this regard, all of the sample countries undertook the necessary fiscal and balance of payments adjustments either before or during tariff reform.

The sample countries faced serious fiscal constraints as a result of the changes in tariff structures and levels because they had relied heavily on tariffs for revenue and needed time to develop alternative domestic taxes. (In the pre-reform period, tariffs accounted for between 25 percent and 35 percent of total tax revenue in Bangladesh, Colombia, Egypt, and Ghana. These shares declined in the postreform period.) The most successful reformers—Colombia and Ghana—were able to overcome this, and the fiscal deficit-to-GDP ratio in these countries dropped significantly during the reform period, falling from 2.4 percent to 0.9 percent in Colombia and from 6.5 percent to 0.4 percent in Ghana. In Colombia, fiscal action consisted of complementary domestic tax reforms that expanded the tax base; in Ghana, currency depreciation improved the fiscal situation. Bangladesh has also been able to accelerate the pace of reform by implementing a broadly based value-added tax.

On the balance of payments front, in all the sample countries, high tariffs had been used explicitly in response to payments problems. However, corrective macroeconomic policies (including more flexible exchange rates) helped give some breathing space during the reforms. For instance, the depreciation of the real effective exchange rate helped the external accounts in Bangladesh, Colombia, and Ghana.

What next?

Moving away from the sample, if we look at developing countries in general, international considerations, including regional integration initiatives, not only have apparently influenced the pace and scope of reforms but also have continued to shape the further steps that these countries might take. In Latin America, for example, tariff reform has been determined in the context of regional arrangements, such as the Caribbean Community (CARICOM), the Andean Pact (made up of Bolivia, Colombia, Ecuador, Peru, and Venezuela), and the Southern Cone Common Market (MERCOSUR, consisting of Argentina, Brazil, Paraguay, and Uruguay). These arrangements play an important part in the negotiations between regional partners on setting the common external tariff.

To ensure that reforms cannot be reversed because of domestic pressures, a number of countries have chosen to join the General Agreement on Tariffs and Trade (GATT) and "bind" their tariff structures, which represents an international commitment not to raise tariffs without consulting and compensating their trading partners. As a result of the recently concluded Uruguay Round agreement, developing countries will have bound a high proportion of their tariffs, as well as reduced them in industrial and agricultural sectors. However, because current tariff levels—even Colombia's and Ghana's—are still higher than those prevailing in several industrial countries, rates will no doubt need to be reduced further, unilaterally or through international negotiations. Ultimately, if countries decide some assistance should be provided to domestic industries, tariffs could be replaced by subsidies, which are easily identified and have more clearly visible costs. ■

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The Swedish Labor Model in Crisis

RAMANA RAMASWAMY

THE STRUCTURAL problems behind Sweden's current economic dilemma can be traced to key institutional features of its labor market. Centralized bargaining and equalizing wages may no longer be appropriate.

The Swedish economy has been experiencing its worst crisis in the postwar period.

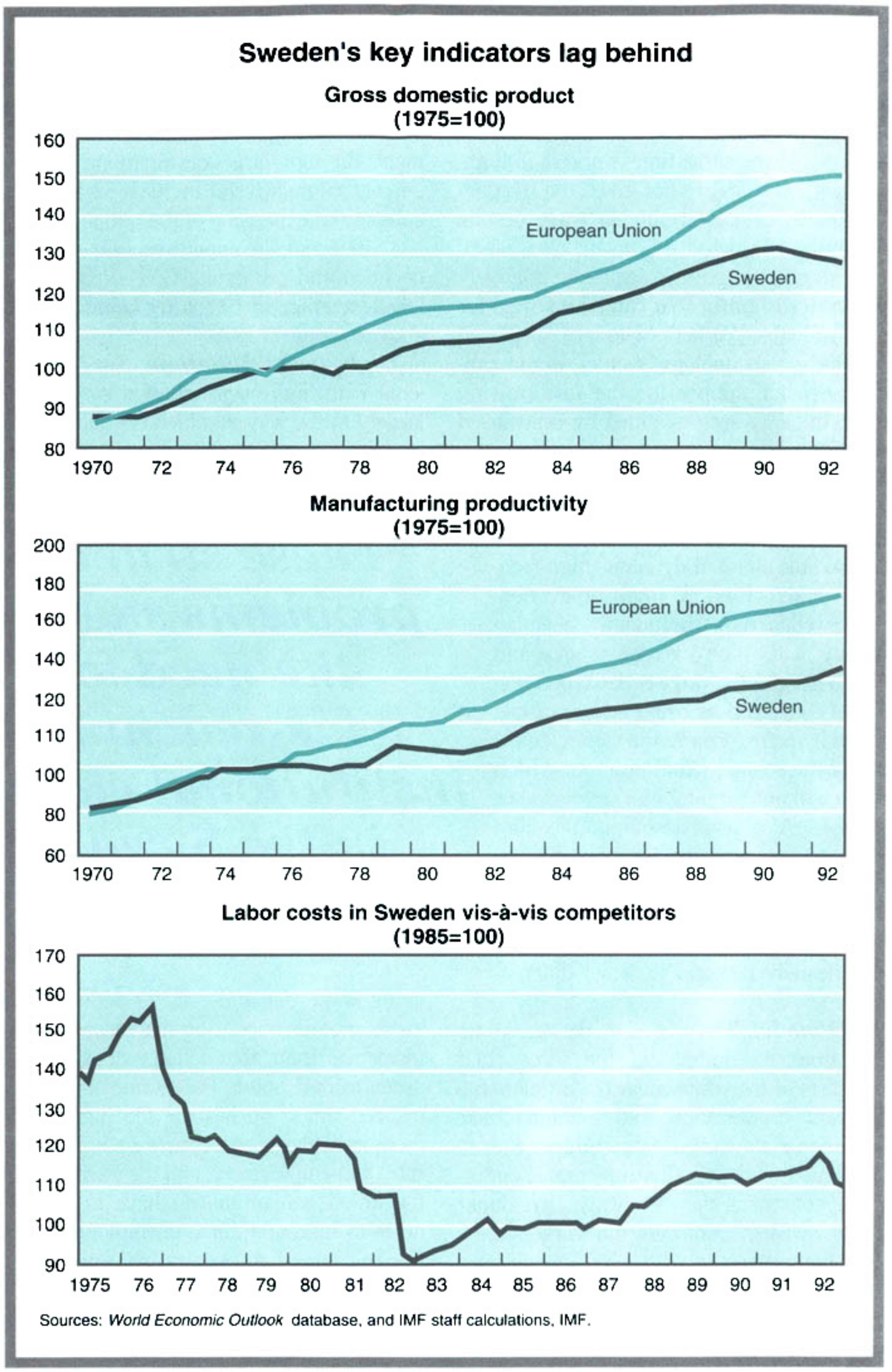
- Real GDP declined by about 8 percent between the peak in the first quarter of 1990 and the trough of the recession in the second quarter of 1993.
- The unemployment rate increased from about 3 1/2 percent of the labor force in 1990 (including the 1 percent in state-sponsored labor market programs for that year) to almost 13 percent in 1993 (including about 4 1/2 percent in labor market programs)—ending Sweden's record of maintaining one of the lowest rates of unemployment among the industrial countries.
- The central government's overall borrowing requirement rose to over 18 percent of GDP in 1993–94, a symptom of the dramatic deterioration in Sweden's public finances in recent years.

The current recession was precipitated by the big credit-led expansion of both consumption and investment that followed the financial liberalization of the mid-1980s. When the boom ended in early 1990,

property values and asset prices fell sharply, triggering a sharp contraction in domestic demand. However, in addition to these immediate factors, the crisis also has its roots in the underlying structural problems of the Swedish economy—in particular, the long-term productivity slowdown and high wage inflation that have characterized its recent history. These structural problems, in turn, are linked to specific institutional features of the Swedish economy, such as its tax and benefit systems and, more important, the labor market institutions.

To gain a sense of how deep Sweden's structural problems are, it is useful to look at several key indicators (see chart). First, the growth of labor productivity in manufacturing has been, in general, slower than the average for the European Union (EU)—formerly the European Community (EC)—since 1976. This has resulted in an increasing productivity gap with respect to the EU and a relative decline in Swedish living standards. While Sweden's per capita private consumption had ranked fifth among the Organization for Economic Cooperation and Development (OECD) countries in 1970, it slipped to twelfth position by 1990. The Swedish economy also suffered from problems of declining external competitiveness in the 1980s. Because of the rapid growth of nominal wages and the slow growth of productivity, Sweden's labor costs have been rising faster than those of its competitors—despite large devaluations in 1981–82, which led only to a transient improvement in competitiveness in the early 1980s.

What are the factors behind the long-term problems of slow productivity growth and high wage inflation? Although the answer is complex and multifaceted, it may well be strongly linked to specific features of the Swedish labor market. This article takes a look at the Swedish labor model and examines how Swedish labor market institutions over time have become a retarding influence on economic performance.



Sources: *World Economic Outlook* database, and IMF staff calculations, IMF.

Swedish labor model

The "Swedish model," usually identified as an advanced form of the welfare state, has attracted attention from many quarters for its apparent earlier success. One of its components—the Rehn-Meidner model—is aimed at promoting structural change and growth by combining centralized wage bargaining with an explicit policy of attempting to narrow wage differentials drastically across both firms and industries. The other component—the EFO model—is concerned with preserving the competitiveness of the Swedish economy by controlling the rate of growth of wages.

Although some form of centralized wage bargaining is common to all the Nordic countries, the Swedish trade unions have been unique in pursuing an explicit policy of wage equalization ("solidaristic wages") as a key objective. Since the late 1930s, wage negotiations have been conducted between centralized trade unions and a centralized employers' organization (Swedish Employers' Confederation). One union represents all blue-collar workers and the other, all white-collar workers. Because almost 80 percent of the workers are unionized, these unions are truly all-encompassing. While wage negotiations are conducted at the central level, the system also allows for "wage drift," whereby central wages are topped up at the local level.

Rehn-Meidner model. This model derives its name from the two economists of the Swedish trade union organization, Gösta Rehn and Rudolf Meidner, who were instrumental in outlining the economic arguments for the Swedish model in the early 1960s. It is based on the theory that wage equalization has two distinct effects.

First, it imposes a high wage cost on low-

technology sectors and inefficient firms by not giving them the freedom to set a relatively low wage. This means that low-productivity enterprises will have to either rationalize operations and become more efficient or go out of business. At the same time, workers in high-technology sectors are not given the freedom to negotiate a relatively higher wage despite their higher productivity. This makes it possible for these enterprises to generate relatively higher rates of profit that can be invested for faster growth. Workers who are displaced from the low-technology sectors would provide the labor supply for the fast-growing high-technology sectors, aided by centralized retraining schemes.

Over time, this policy of implicitly penalizing low-productivity sectors and providing incentives for high-productivity sectors increased the share of dynamic, high-technology enterprises in total production. Since Sweden has traditionally been an economy with high average wages and labor shortages, the wage equalization policy was conceived as being advantageous for rapidly transforming the technological basis of the economy and promoting high growth without running into serious labor shortages. A crucial assumption behind this model was that the forcible retrenchment and retraining of workers ensures that structural change and growth are faster than in a system where workers spontaneously respond to wage differentials.

EFO model. The second model derives its name from the initials of the three chief economists of the white-collar trade union, the employers' organization, and the blue-collar trade union in the early 1960s—Edgren, Faxen, and Odhner—who were instrumental in outlining the consensus view on wage bargaining between Swedish employers and workers.

The main objective of the EFO model was to maintain the international competitiveness of Swedish industry. Hence, in the competitive sector, or the sector open to foreign trade, the wage increase was to be restricted to the sum of international price inflation and the rate of growth of labor productivity in this sector. This would maintain Swedish tradable goods prices on a par with those of competitors. However, at the same time, the policy of wage equalization adopted by the trade unions dictated an equal wage increase for workers in the nontraded sector. Since productivity growth in the nontraded goods sector is relatively low, this policy imparted an inflationary thrust to the nontraded goods sector.

Swedish model problems

While the Swedish economy performed relatively well until the mid-1970s, serious problems emerged thereafter. Productivity growth slowed down and wage inflation averaged more than 8 percent a year in the 1980s. Sweden managed to avoid high unemployment through large devaluations (about 26 percent cumulatively) in 1981–82 and then a substantial expansion of the public sector, but its external competitiveness gradually declined and per capita GNP dropped to the OECD average in 1990 after being 10 percent above average in 1970.

High wage inflation. Sweden's problems with high wage inflation can be traced largely to the way in which negotiations have come to be conducted. In theory, a centralized trade union is expected to be more moderate in its wage demands, as its actions have a much greater impact on macroeconomic performance than the actions of an isolated decentralized union. For example, if the centralized union pushes for too high a wage, there is likely to be an increase in the overall rate of unemployment, and the membership of the union will ultimately have to pay more taxes to fund additional unemployment benefits. In contrast, a decentralized union, operating in isolation, does not have to bear directly the adverse effects of its actions, because part of these costs are passed on to others.

"These structural problems suggest the need for far-reaching institutional changes in the Swedish labor market . . ."

However, Sweden has been unable to tap these potential benefits, especially since the early 1980s, for three main reasons.

(1) The multilevel bargaining structure in which wage drift accounted for a significant part of the overall settlements. Because of the subsequent wage drift, the central union usually decides on the initial nominal wage increase that is compatible with a given final real wage target. The real wage target is usually set with a view to maintaining a low rate of unemployment—a critical objective for the central union. This system works fairly well in an environment of high price inflation, as was the case in the 1970s.

However, multilevel bargaining does not work well in the context of low productivity growth and low price inflation, as was the case during much of the 1980s. To achieve the real wage target in this environment requires the centralized union to negotiate a negligible nominal wage increase because of the anticipated wage drift that is likely to follow. If the central union persists with its real wage target and desists from procuring any nominal wage increases at the central level, it is likely to have severe legitimacy problems with the membership, especially in light of the fact that the Swedes had become used to living in an inflationary environment. Hence, the central union is forced into bargaining for a nominal wage increase that is not warranted by the productivity performance or employment target. This seems to have happened especially during the mid-1980s, when the increase in real wages was higher than that warranted by productivity considerations. In the last two years, given the severity of the current recession, inflationary expectations have subsided and wage demands have become more moderate.

(2) The breakdown of the EFO model in the 1980s. The EFO model—based on the lead- ing role of the traded goods sector—failed to provide the basis for wage negotiations in 1983, when the engineering workers broke off from centralized negotiations and concluded a separate wage pact. At the same time, workers in the nontraded goods sector (mainly services) started negotiating their wages without regard for the implications for the competitiveness of the traded goods sector. This was particularly true of public sector workers.

Because the nontraded goods sector is not fully subject to market discipline, the wages negotiated in this sector turned out to be far too high for maintaining the competitiveness of the traded goods sector. With the breakdown of the discipline provided by the EFO model, uncoordinated, competitive wage increases took place in all sectors. In addition, with a weakening of centralized bargaining, there was a significant increase in the degree of wage drift, which accounted for over 40 percent of total wage increases by the end of the 1980s, compared with about 25–30 percent in the 1970s.

(3) The impact of labor market programs in situations of very low unemployment. There are reasons to believe that, contrary to conventional wisdom, certain types of labor market programs may at times actually tend to raise wages. These programs, which are aimed at discouraging dependency on unemployment benefits, encompass centrally provided training schemes, relief work

(which consists of temporary state-sponsored jobs), subsidized employment, and youth training.

The main argument for the wage-reducing impact of labor market programs is based on the fact that training programs and relief work, by helping to avoid problems of long-term unemployment and loss of skills of the labor force, promote more effective competition for jobs and consequently reduce upward pressure on wages.

However, at very low rates of unemployment (as happened in Sweden between 1974–77 and 1987–90, when the open unemployment rate averaged less than 1 1/2 percent), the wage-reducing impact of labor market programs—particularly relief work—may cease to operate. This is because such programs effectively provide employed workers, or "insiders," the guarantee of avoiding open unemployment—rather than enabling the unemployed "outsiders" to compete effectively for jobs. There is, therefore, an argument for making relief work contingent on the cyclical position of the economy.

Slow productivity growth. The analysis of long-term trends in productivity is a complex issue. A number of different factors, such as savings-investment behavior, educational attainment, and incentive mechanisms available for innovativeness, influence productivity. For Sweden, other factors, including the large public sector and the generous welfare state, also play a role. However, it is not easy to identify the exact empirical importance of each of these factors in explaining the country's productivity performance.

In analyzing Sweden's relatively poor productivity performance after the mid-1970s, this article focuses mainly on the impact that the incentive mechanisms operating in the labor market, particularly solidaristic wages, had on productivity. Other explanations are not taken up, not because they are unimportant but because there has so far been no systematic examination of this link between labor markets and productivity. The analysis provided is basically qualitative, suggesting possible causation mechanisms rather than providing an exhaustive, empirically testable explanation for the productivity slowdown.

The Rehn-Meidner model's strategy of combining centralized bargaining with wage equalization seemed appropriate in the 1960s and early 1970s when the goal was to shift workers from the low-technology to high-technology industries, where they could take advantage of the rapid international transmission of technical knowledge. This strategy enhanced both the average levels of productivity and living standards. However, Sweden's successful period of "catching up" implied that by the mid-1970s, a substantial part of Swedish industry was already technologically advanced. Hence, further productivity growth could be obtained only by increasing the efficiency with which existing enterprises operated. This required the creation of appropriate incentive mechanisms that would allow firms to increase productivity by restructuring their enterprises and motivating workers to enhance their human capital.

New developments in the organization of work—notably, a shift from standardized assembly line production ("Fordism") to flexible work practices ("post-Fordism")—also warranted a change in the wage regime. In the post-Fordist environment, there is a much greater diversity between individual firms, meaning a lot of variation in the level of effort, diligence, and skills that firms expect of their workers. Individual employers need the freedom to substantially vary their remuneration schemes, but a labor market with drastically compressed wage differentials makes this extremely difficult.

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Although the concept of solidaristic wages was initially conceived as equal pay for equal work, in the 1970s, the unions pursued an aggressive policy of across-the-board wage equalization with little consideration for the nature of the work performed. As a result, by the early 1980s, Swedish wage differentials were substantially lower than in other OECD countries. The wage spread for industrial workers, calculated as the difference between the highest and lowest deciles in 1984, was an estimated 34 percent for Sweden, far narrower than the 210 percent for the United Kingdom and 490 percent for the United States. Furthermore, not only were pre-tax wages "equalized," but progressive taxes in the 1980s reduced even further the differences in disposable incomes. By 1990, however, Sweden's wage spread had inched up to 45 percent due to a weakening of centralized bargaining.

Finally, Sweden's centralized training schemes proved inappropriate in the post-Fordist environment. These schemes, by their very nature, impart mainly general skills, whereas the new technology required a much greater emphasis on firm-specific skills. But in order to find it optimal to offer in-house training, firms required the freedom to devise their own internal wage differentials and promotion schemes to motivate workers to enhance their human capital and stay on in the firm after acquiring the training. For example, firms needed the flexibility to offer a low wage initially and increase it steeply later in the career stream, so that workers would not have an incentive to move to another firm once they finished receiving the training. However, the rigidity imposed by the system of centralized bargaining and solidaristic wages precluded firms from tailoring their own remuneration schemes to enhance productivity.

Implications for Sweden

Thus, Sweden's current economic crisis cannot be overcome solely by tackling the cyclical factors that have contributed to the current high levels of unemployment. Policymakers should also address the underlying structural problems—notably those in the labor market. High wage inflation in the 1980s can be traced to the combined impact of multilevel bargaining, the breakdown of the leading role of the traded goods sector in wage determination, and the operation of certain types of labor market programs in conditions of extremely low unemployment. Slow growth of productivity, in turn, can be attributed to the inappropriateness of the policy of wage equalization in an environment in which flexible working practices have become more prevalent and there is less scope for technological "catching up."

These structural problems suggest the need for far-reaching institutional changes in the Swedish labor market—particularly for increasing wage differentials and dispensing with multilevel bargaining. However, in moving toward a greater market determination of wages, it is important to avoid the problem of long-term unemployment, which has become the defining feature of European labor markets. This calls for reforms to the labor market programs to make them more appropriate for the changed circumstances rather than abandoning them altogether. It is also vital to avoid the marginalization of sections of the labor force due to very high wage differentials, as in the United States. That is easier said than done. ■

For more details, see "The Structural Crisis in the Swedish Economy: Role of Labor Markets," by the author, IMF Staff Papers, *June 1994.*

AIDS: Invest Now or Pay More Later

SETH BERKLEY, PETER PIOT, AND DORIS SCHOPPER

***A**S DEVELOPING countries seek the most cost-effective ways to control the spread of AIDS, the* **World Development Report 1993** *argues that no country is immune. Delaying action will sharply raise the cost of intervening and increase the threat the epidemic poses to development. Without a cure, prevention holds the key, along with research on vaccines and treatments.*

Although the first cases of AIDS were not identified until 1981, the virus has now spread worldwide, with cases reported in 173 countries. The World Health Organization (WHO) estimates that, currently, over 12 million persons—90 percent of whom live in developing countries (see table)—are infected with the human immunodeficiency virus (HIV). Since the beginning of the epidemic, over 14 million persons have probably been infected and over 2 million have died.

The HIV epidemic is still growing—unlike many other relatively stable diseases such as malaria—and holds the potential to become one of the most costly and debilitating epidemics for developing countries. While HIV is still less common than diseases such as malaria, its economic impact per case is far greater because it mainly affects productive young adults, and the resultant illnesses lead to demands for costly care.

Developing countries bear the heaviest burden

Estimated distribution of HIV prevalence in adults, late 1993
(millions)

Sub-Saharan Africa	7.00+
South and Southeast Asia	2.00
Latin America and the Caribbean	1.00+
North America	.80
Western Europe	.40
North Africa and Middle East	.08
Eastern Europe and Central Asia	.05
East Asia and Pacific	.03
Australasia	.02
Global total	**11-12**

Source: World Health Organization.

There are cost-effective interventions to slow the epidemic, yet current annual worldwide expenditure on AIDS prevention is only about $1.5 billion a year, with perhaps less than $200 million of this spent in developing countries. Among them, Thailand spends the most ($45 million in 1992, 75 percent of which was from government funds), whereas total spending throughout Sub-Saharan Africa was only double this amount, a mere 10 percent of which came from government funds.

A recent WHO study suggests that comprehensive services to prevent AIDS and sexually transmitted disease (STD) in all developing countries would cost $1.5 billion to $2.9 billion a year. While this would be a substantial increase in current spending, WHO estimates that the number of new adult HIV infections averted could be as high as 9.5 million over the next decade. This article looks at the most cost-effective ways to fight the spread of AIDS, drawing heavily upon the studies undertaken for the World Bank's *World Development Report 1993.*

Why a special case?

For developing countries, a key question

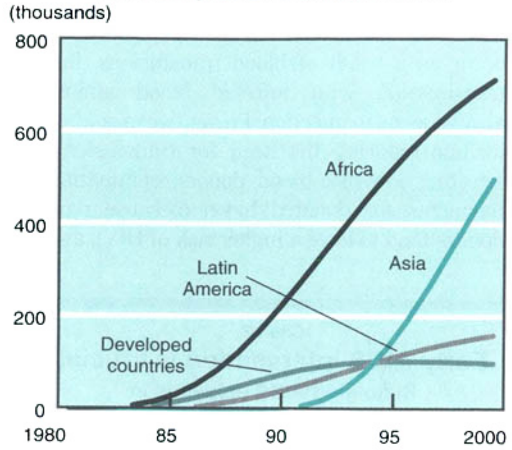
these days is how much of limited government funds should be spent on fighting AIDS, especially given that there are other diseases that currently exact a higher toll. The *WDR 1993* argues that the spread of HIV and AIDS merits special and immediate attention for several reasons:

The HIV epidemic is bad and getting worse. The HIV virus is spread in three ways: through sexual contact, through contact with contaminated blood or blood products, and from mother to child during the perinatal period with an additional risk during breast-feeding. In developing countries, HIV is ostensibly an STD, with over 85 percent of infections occurring through heterosexual intercourse.

Chart 1

The shifting trend among regions

(estimated global annual AIDS incidence)



Source: World Health Organization.

Available evidence suggests that all HIV-infected individuals will ultimately suffer from AIDS and that all AIDS patients will die within a few years. Because, on average, it takes six to ten years for an HIV-infected adult to develop AIDS, regardless of future changes in HIV transmission, there will be an increasing number of AIDS cases over the next few years. Already, the estimated 12 million infected individuals constitute about 2.4 percent of the world's global burden of disease—the present value of future streams of disability-adjusted life years (DALYs) lost as a result of death, disease, or injury. This measure attempts to gauge the full loss of healthy life.

But even these figures obscure the true magnitude of the epidemic. In young adults in developing countries, HIV/AIDS is already the greatest cause of disease burden in males and the fourth greatest cause in females. Conservative projections indicate that the number of persons infected with HIV will increase to more than 26 million in the year 2000, with 1.8 million deaths that year alone, contributing about 3.3 percent to the global burden of disease. Given the short time it takes infection rates to double in many developing countries and the recent spread to countries with low infection levels, total figures in 2000 could even be two or three times higher.

Of course, there are large differences in infection rates among regions and within regions. For a long time, Africa, where it is estimated that HIV accounts for 6.3 percent of the burden of disease, had to contend with the most rapid spread of the virus. In some African populations, 1 in 40 adults is already infected, whereas in certain capital cities, the prevalence of infection is as high as 1 in 3 sexually active women. The deaths of their infected offspring as well as the loss of the care giver for those infants not infected will contribute to a reversal of the long-term downward trend in child mortality. In these heavily affected countries, population growth rates will decline substantially, although due to the high fertility rates, growth will still be positive. But it is in Asia where the virus is spreading fastest (Chart 1). In Thailand, 2 percent of the adult population is already infected, and India is in the midst of an explosive epidemic.

AIDS is an especially costly disease. At the macro level, AIDS poses a threat to economic growth in many countries already in distress. Indeed, World Bank simulations indicate an annual slowing of growth of income per capita by an average 0.6 percentage point per country in the ten worst affected countries in Sub-Saharan Africa.

The powerful negative impact of AIDS on households, productive enterprises, and countries stems partly from the high costs of treatment, which divert resources from productive investments, and mostly from the fact that AIDS primarily affects people during their economically productive adult years, when they are typically responsible for the support and care of others.

One study in a rural African community has shown that 89 percent of the deaths in the population of those 25–34 years can be attributed to HIV infection (an excess mortality of 13/1,000). These adult deaths can tip vulnerable households into poverty. Even in Tanzania, where the government pays a large share of health costs, a Bank study shows that affected rural households in 1991 spent $60—roughly the equivalent of annual rural income per capita—on treatment and funerals. Moreover, the effects of losing an adult persist into the next generation as children are withdrawn from school to help at home.

Preventing AIDS prevents other key transmissible diseases. Efforts to slow the spread of HIV will also reduce the magnitude of the STD and tuberculosis (TB) epidemics. STDs are extremely common (over 250 million new infections worldwide per year), are harder to treat in HIV-infected individuals, and have severe, often irreversible consequences that disproportionately compromise women. Besides their enormous burden, STDs increase by three- to fivefold the transmission and acquisition of HIV.

For individuals previously infected with the tuberculosis bacillus, infection with HIV is one of the most important factors promoting the development of active tuberculosis. There are estimated to be more than four million persons dually infected. TB is already the first and second ranked cause of disease burden in young and middle-aged males. In females, it ranks second and third in the same age groups. Increasing numbers of active TB infections will lead to further spread in both the HIV and non-HIV infected populations.

The cost-effectiveness of the available interventions rapidly declines as the epidemic spreads. Since there is no vaccine or cure for AIDS, primary prevention is the only current method of fighting the epidemic. Without it, AIDS spreads rapidly in the transmission, or "core," groups—those particularly vulnerable to acquiring and transmitting infection due to high-risk activities—followed by a slower and then accelerating spread in the general population (Chart 2). Thus, early and effective targeting of HIV interventions is critical because the cost-effectiveness of these interventions diminishes as the infection moves out of the high transmission groups into the general population.

Studies in nine developing and seven high-income countries suggest that preventing one case of AIDS saves, on average, about twice the GNP per capita in discounted lifetime costs of medical care. In some urban areas, the savings may be as much as five times GNP per capita. Moreover, indirect costs are an estimated five to ten times higher. In Thailand, for example, calculations suggest that if we could slow transmission rates by just 20 percent, discounted savings in medical costs by the year 2000 would be $1,250 per currently infected person, or a potential total of $560 million. As fewer persons overall would be

infected in the future, the stream of savings would continue to grow.

Prevention involves sensitive, politically charged issues. Preventing HIV infection often necessitates working with socially marginalized groups (including, in many cultures, homosexuals) and people who practice illegal activities (e.g., drug use or prostitution). This means that unusually strong government commitment is essential to implement effective prevention programs. In addition, because of the stigma attached to HIV infection and the long time lag between infection and the onset of AIDS symptoms, governments often do not assign high priority to HIV prevention until the epidemic has spread deeply into the population.

What can be done?

A combination of strategies, backed by adequate resources, is required to stem AIDS.

Providing information. Informing people about how to protect themselves against HIV infection is central to any AIDS strategy. They need to know that the risk of infection can be minimized by reducing the number of new sexual partners, choosing partners of the lowest risk, refraining from risky sexual practices such as anal sex, seeking treatment for other STDs, and avoiding contact with infected blood.

Encouraging condom use. Condom use is effective in slowing the spread of both HIV and STDs and needs to be encouraged in all risky sexual encounters. Programs to promote condom use in highly vulnerable groups are very cost-effective. One such program, geared to low-income prostitutes in Nairobi, reduced the mean annual incidence of gonorrhea from 2.8 cases per woman in 1986 to 0.7 cases in 1989. A model of HIV transmission indicates that use of condoms averted 6,000–10,000 new HIV infections per year, at an approximate cost per DALY of about $0.50 per year of life saved. This compares favorably with the most cost-effective of all health interventions.

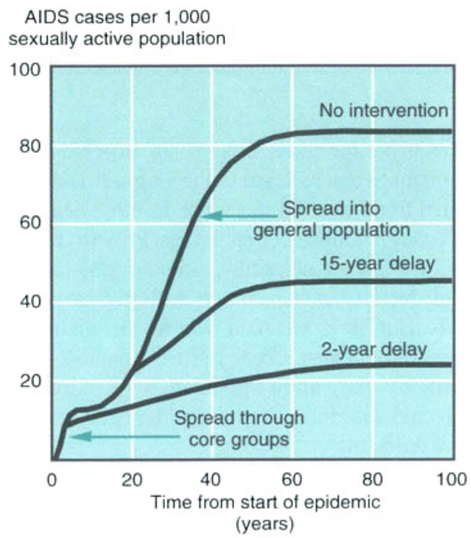
Social marketing—the marketing of a consumer good to fulfill a public health or other social need, with retail costs subsidized by the public sector—is another strategy. In Zaïre, distribution outlets—from pharmacies to traditional healers and from nightclubs to street vendors—were saturated with subsidized condoms. Condom sales rose from 20,000 in 1987 to 18.3 million in 1991: 90 percent of the condoms were bought by men and 60 percent were intended for casual sex. In 1991 alone, the program averted an estimated 25,000 HIV infections. Similar programs have been developed in many other countries, including at least 22 in Sub-Saharan Africa.

Reducing blood-borne transmission. Only about 5 percent of all HIV infections occur as a result of blood transfusions, but transmission with infected blood almost always leads to infection. Preventive measures include reducing the need for transfusions, selecting low-risk blood donors, eliminating payments for donated blood (because paid donors tend to have a higher risk of HIV), and screening blood. Effective early treatment of health problems, combined with the education of health care providers, can reduce blood transfusions by up to 50 percent. Intravenous drug users can lower their risks by using clean needles.

Chart 2

Early AIDS intervention is crucial

Simulated AIDS epidemic in a Sub-Saharan African country



Source: Adapted from Potts, Anderson, and Boily, *Lancet* 338 (September 7, 1991).

Integrating AIDS prevention and STD services. Little of the AIDS prevention budgets has been allocated for preventing and treating other STDs. Yet, because the efficiency of transmission of HIV is increased by STDs, and STD patients and their partners are an important high-risk group to target, the wide availability of STD services is crucial for fighting AIDS. Treatment of STDs is also important in its own right: these diseases alone account for the second largest disease burden (behind maternal causes) in women aged 15–44 in developing countries.

Because many STDs are asymptomatic, especially in women, infected individuals frequently are unaware and do not seek treatment. For those with symptoms who seek treatment, charges for clinical services may reduce access to adequate care, thereby increasing the spread of STDs. Because of the primary and secondary benefits of treating STDs, it would make good sense to subsidize the delivery of STD services, including case management and counseling, condom promotion, and partner notification. Combining STD and family planning services is another good strategy.

Providing voluntary testing and counseling. Easy and inexpensive voluntary access to HIV testing gives people an opportunity to take responsibility for their own sexual behavior and ensure their partner is not infected. Studies suggest that counseling and testing help individuals and couples adopt safer sexual behavior. The once prohibitive cost of testing has declined sharply thanks to new technology—testing now costs around $2 a couple (excluding counseling). Experience from Uganda, where a voluntary testing center was set up in 1990, shows the demand is high.

HIV testing, however, is not always reliable because there is a short period when HIV may not be detected in a newly infected person. Furthermore, a negative test result is no guarantee of continuing risk-free behavior. This means that testing is most useful for couples in or planning a long-term monogamous relationship. Governments will need to ensure that testing remains voluntary and anonymous, is of high quality, and is accompanied by the appropriate counseling.

Caring for the infected. Individuals who are ill from HIV-related illnesses demand care, and, unless this care is planned for, AIDS treatment has the potential to overwhelm clinical capacity and result in a deterioration of care for other illnesses. In 1992, developing countries spent about $340 million to care for AIDS patients. While this is only a small fraction of the $4.7 billion spent by developed countries to care for their AIDS patients, it is still nearly twice the amount spent on AIDS prevention in the developing world. If spending per patient remains constant, the amount spent on the care of AIDS patients in developing countries will more than quadruple to $1.5 billion in the year 2000. Strategic planning for care programs, including the use of a small number of relatively inexpensive drugs and outpatient or community treatment where possible, can greatly reduce costs. Palliative home care using a basic visitation program is relatively inexpensive but imposes a heavy burden on family members.

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Need for urgent action

Despite national and international attention and the significant effort by WHO to help design and implement plans for controlling AIDS, most national AIDS programs are currently inadequate. They often remain limited to ministries of health, are too standardized, and—until recently—lack STD control as a significant contribution to AIDS prevention. Because of its vast demographic, social, economic, and political implications, AIDS is not simply a health problem; it is a national development issue. National leadership and the involvement of multiple sectors are thus crucial. The most effective programs, such as Thailand's, pursue strategies that involve many agencies, both inside and outside governments, in an atmosphere of openness and frankness.

Each country will have to tailor its AIDS control plans to a number of local factors—including the epidemiology of HIV, the capacity of the health system and other related sectors, and the available financial resources. Countries with a significant burden of HIV disease will also need to develop strategies for financing and providing care for infected individuals, as well as for those indirectly affected (e.g., orphans whose parents have died of AIDS).

Three main criteria can be used by resource-constrained developing countries to prioritize HIV/AIDS interventions: current HIV prevalence, risk of future spread based on the prevalence of STDs, and existing AIDS burden. According to these criteria, four distinct situations emerge.

• Areas at low current risk, with little spread of HIV and few STDs (e.g., rural China and North Africa), should emphasize comprehensive reproductive health education for youth and some AIDS prevention among high-risk groups and should establish sensitive HIV and STD surveillance to provide early warning of impending spread.

• Areas at high risk of an epidemic from early spread of HIV or little HIV but a high prevalence of STDs (e.g., Yunnan Province in China and Surabaja, Indonesia) should undertake massive, targeted preventive activities for high-risk groups, including prostitutes, supplemented by general education and testing of the blood supply.

• Areas with a current epidemic, but as yet little incidence of disease (e.g., urban areas of India), need to develop AIDS prevention programs for the entire population while continuing to target high-risk groups. Voluntary HIV testing and counseling and preparation for the care of AIDS patients should also begin.

• Areas with a major epidemic and a high disease burden (e.g., Uganda and Zambia) have to combine a broadly based preventive strategy with attention to care for AIDS patients.

Preventive efforts must be targeted at populations with diverse needs. For the high-risk groups (e.g., mobile population groups such as long-distance truck drivers, migrant workers, young urban adults, prostitutes and their clients, and injecting drug users), key interventions include providing education on safer sex, promoting condom use, and treating STDs. For young people—half of all HIV infection has occurred in people under age 25—there is an urgent need for comprehensive education on reproductive health issues, both in and out of school. In addition, preventive efforts should be truly sensitive to the needs of women and young girls, helping them to protect themselves. Women are biologically more susceptible to acquiring infection through heterosexual intercourse than men, and they are also epidemiologically more vulnerable as they tend to marry or have sex with older men, who are more likely to be infected. Social factors such as double standards for virginity and for fidelity after marriage, along with the sexual subordination of women, represent additional risks. In Uganda, more than 60 percent of HIV-infected persons are women, many of whom are faithful to one partner.

NGOs—many of which have initiated rapid and innovative responses to the epidemic—can play a vital role in prevention, care, and community support, using their credibility and access to reach those at highest risk. Governments should maximize this advantage by providing a supportive environment for NGO activities.

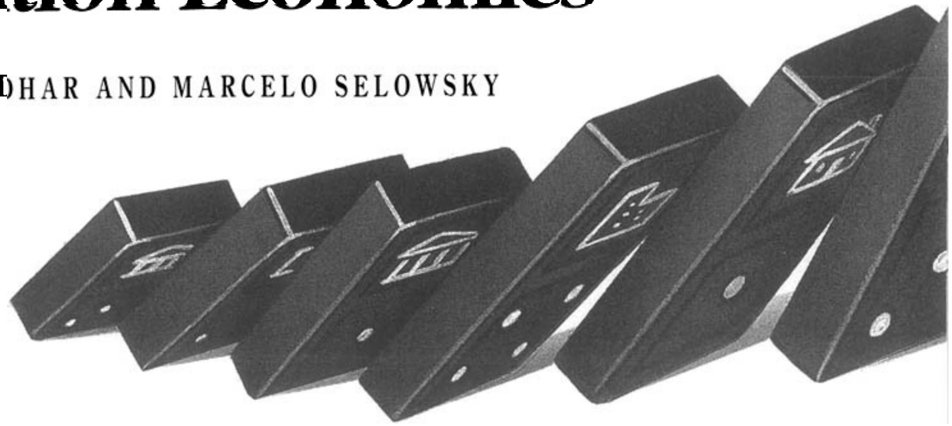
Although effective interventions now exist, research is urgently needed to further develop new prevention technologies such as female-controlled barrier methods (e.g., vaginal microbicides) and vaccines that are appropriate and affordable for developing countries. Although current antivirals are only partially effective and too expensive for most persons in developing countries, new agents are being developed. It will be critical to formulate strategies that make these affordable for those living in developing countries.

In addition, many critical questions remain unanswered. Why is the efficiency of heterosexual transmission higher in some settings (e.g., Africa versus the United States)? What percentage of transmission is caused by breast-feeding, male noncircumcision, and various STDs? What factors enhance infection from mother to child, and can the mechanism be blocked? And are there really those who are "resistant" to, or have developed immunity to, infection?

The danger right now is that although most of the world's population—excepting parts of Africa and Southeast Asia—still live in communities that have low levels of HIV, these areas are nonetheless at great risk. If these communities wait until they recognize significant illness from HIV before acting, the epidemic will most likely have penetrated deeply into the population, at which point HIV will be much more costly and difficult for the world community to halt. Without a major increase in resources, as well as political will and leadership, the HIV epidemic is likely to become a development disaster of unprecedented proportions. ■

Dealing with the Bad Debt Problem in Transition Economies

SANJAY DHAR AND MARCELO SELOWSKY



AS EASTERN EUROPE and the states of the former USSR confront the bad debt problem, they face difficult policy choices. These include when to commit fiscal resources to recapitalize banks, how to change behavior given the incentive system inherited from the past, and under what conditions to pursue bank and enterprise restructuring as an integrated package.

Throughout Eastern Europe, the initial phase of transition has produced a legacy of nonperforming loans in the portfolios of commercial banks. The bad debt problem stems from the deterioration in the financial condition of most state-owned enterprises, reflecting major shifts in relative prices, particularly higher energy prices; substantial declines in domestic demand for capital and military goods; a breakdown of trading arrangements under the CMEA (the former socialist country trading bloc); and a tightening of fiscal subsidies to these enterprises as tax bases shrank. The continuing flow of credit to overindebted enterprises has exacerbated the problem.

Estimates of the volume of nonperforming loans in Eastern Europe (defined here to exclude the states of the former USSR) range between 10 percent and 40 percent of total bank credit, although variation in loan classification criteria make cross-country comparisons difficult. The figures for individual banks can range much higher, and many banks are clearly insolvent under Western loan classification criteria. The stock of bad loans as a share of GDP also varies widely, ranging from 4 percent to over 20 percent.

By contrast, in most states of the former USSR, including Russia, the bad loan problem remains largely hidden because bank lending is conducted at highly negative real interest rates and repayments tend to be rolled over routinely. But as economic stabilization takes hold, the problem could become even more severe than in Eastern Europe, given the larger economic distortions prevailing during the Soviet era and the deeper economic dislocations that have occurred since then. Indeed, the fear that tighter credit and higher real interest rates might constitute an unmanageable burden on enterprises and the banking sector already inhibits governments from embarking on major stabilization.

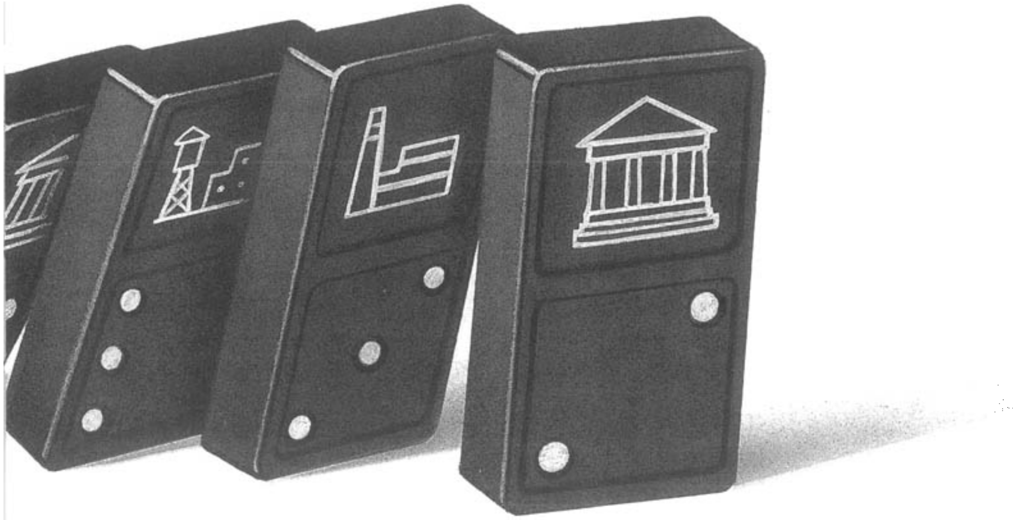
The growth of nonperforming loans is worrisome as it undermines efforts to restructure existing enterprises and to provide adequate credit to emerging ones. There is still no consensus on how to deal with this problem. Theoretical solutions are largely untested, and difficulties exist even at the conceptual level, reflecting the daunting range of economic and institutional problems facing the economies of the region. Critical questions include whether transition economies should undertake bank and enterprise restructuring as an integral package, and what degree of centralization or decentralization is feasible within that context.

Options for reform

Experience from market economies suggests the problem should be dealt with swiftly; inaction and delay raise the eventual costs as the share of distressed borrowing tends to rise. This situation is particularly harmful for transition economies because the flow of credit to emerging private firms—the main source of output and employment growth in the short term—is reduced.

Admittedly, if strong economic recovery in Eastern Europe could be sustained, for example through the growth of profitable exports to the West, the share of bad loans could decline without government intervention. Preliminary evidence from Poland indicates that the share of bad debt has declined somewhat following positive economic growth in 1992–93. But this is not an argument for inaction. The size of the bad debt problem is in most cases too large to start with, and the likelihood of rapid economic recovery too uncertain. There are, therefore, significant risks associated with inaction.

The bad loan portfolio is not only a result of adverse external shocks; it also reflects the incentive system inherited from the past. Banks had little reason to allocate credit on a commercial basis, and penalties for nonpayment by enterprises were few. Banks had



close links with the enterprise sector—often they were merely enterprises' "treasury" branches. Politicization of credit, poor governance in the enterprise sector due to unclear ownership rights, and lack of prudential regulation and bankruptcy legislation all contributed to a lack of financial discipline.

Dealing with the stock of bad debt in isolation—through recapitalization of banks, for example—without addressing the underlying incentive framework could therefore waste scarce fiscal resources because the problems are likely to recur. Indeed, if no accompanying measures are taken, recapitalization could be viewed as merely rewarding inappropriate lending behavior and exacerbating moral hazard problems.

This has led to the view that an integrated approach to bank and enterprise restructuring is needed because neither can succeed in isolation. But any comprehensive scheme will take time to establish. In some countries, an integrated approach may not be feasible in the foreseeable future, and attempts to construct one could delay any action. In that case, it would be preferable to proceed separately with banking and enterprise reform.

Whichever course is chosen, governments must quickly decide whether and when insolvent banks should be recapitalized or liquidated. Key criteria to guide these decisions should include a realistic assessment of the fiscal costs of adequate recapitalization versus liquidation (for which the major cost is likely to be a partial or full payoff of depositors); and the extent to which recapitalization favorably affects the bank's lending behavior. This in turn will depend on the credibility of government efforts to establish an environment of greater financial discipline and the capacity of the banks to respond to the new environment.

Centralized versus decentralized

Within the parameters of an integrated approach, solutions range from centralized—in which the government is assigned the key role in dealing with the problem—to decentralized, in which this role is transferred primarily to the creditor banks.

In the simplest form of centralized approach, the government takes over all nonperforming loans and replaces them with treasury bonds, guarantees, or cash. The enterprise debt taken over by the government is then sold off, as are the physical assets of the enterprises. The government might also form a liquidation/restructuring agency whose role can vary from the mere auctioning off of the debts and assets of the troubled enterprises to a semipermanent agency entrusted with the restructuring of enterprises that cannot be liquidated rapidly.

A key issue is how to keep the problem from recurring. One option would be to rapidly develop a private banking system, either by privatizing a critical number of banks at the time of transfer of their troubled assets, or by allowing the old state-owned banks to shrink when their claims are taken over and then using any recapitalization resources to jump-start the existing private banks.

The distinguishing feature of a centralized approach is that the government is effectively in charge of dealing with the bad loan problem. But even if politics can be kept out of the process, several problems arise:

- Trying to sell off debt into thin or nonexistent capital markets may result in a heavy bias toward liquidation.
- The new government agency might then be forced to hold on to the majority of claims, resulting in an ongoing demand for government subsidies.
- The incentives for those entrusted with running the new agency would also work against a rapid sell-off of the enterprises under their control.

In practice, the lack of administrative and financial resources to manage such a system has precluded the wholesale adoption of this policy. Proposals to rapidly privatize the banking system have also stalled because the coexistence of a largely private banking system with a largely public enterprise sector still burdened by an untenable debt level would not necessarily be an improvement over the status quo.

Modified centralization. A number of countries, such as Albania, Kazakhstan, the Kyrgyz Republic, and Romania, are in various stages of considering more manageable versions of the above approach. One option being considered is for the government to form a liquidation or restructuring agency to which the management of a preselected, limited number of the most distressed enterprises, along with their debts, is transferred. These enterprises would be effectively isolated from the banking system. The government would finance downsizing and liquidation, as well as working capital, temporary operating losses, and limited physical restructuring.

The more limited focus of the government agency in this case would allow the agency to be more effective than if burdened by the entire bad debt portfolio of the banking system. Isolating some of the most distressed enterprises would help raise the credibility of government efforts to harden budget constraints through tighter fiscal and credit policies. But because of the limited role of the new agency, the banking system would still be burdened by a significant number of nonperforming loans. Moreover, selecting candidates for the liquidation agency might be a tricky process given the difficulty of assessing the firms' prospects under unstable macroeconomic conditions.

So far, Romania has proceeded furthest along this path. In July 1993, 30 enterprises in critical financial condition were isolated from the banking system and placed under the surveillance of a restructuring committee. In December 1993, the government endorsed the proposals of this committee to liquidate six of the enterprises and downsize or privatize the rest. It is anticipated that this process will be repeated on a larger scale.

The decentralized approach. An alternative, decentralized approach would minimize the government's role and instead assign it to the creditor banks in cooperation with the overindebted enterprises. This would require designing a suitable incentive framework for the creditor banks to take the lead in restructuring troubled enterprises. Poland is experimenting in this direction, but it is too early to assess results.

A key objective of the decentralized option is to nudge debt restructuring toward debt-to-equity conversions to facilitate privatization and counter the bias toward liquidation inherent in the thin capital markets characterizing transition economies. In addition, formal bankruptcy procedures are minimized, as the capacity of the courts to handle the large number of cases is limited. Creditor banks are recapitalized at the beginning of the process. The cost of recapitalization is based on prior audit assessments and not on the losses incurred during the transition period. This gives banks an incentive to maximize collection of bad loans. Recapitalization should be announced as a once-and-for-all operation, after which the banks would be accountable for their losses. Finally, the recapitalization should be large enough to ensure the banks' credibility and accountability.

A functioning regulatory framework with credible enforcement capacity is essential for the success of this option. Strong supervisory boards would be needed to allow monitoring of bank management. Giving managers a stake in the eventual privatization of the banks by linking their compensation to the bank's value is also essential.

The Polish experience. In Poland, the objective is to restructure and privatize about 2,000 financially troubled companies, which accounted for about 40 percent of the aggregate loan portfolio of nine state-owned banks in 1992. Each bank is expected to take the lead in dealing with 200 to 300 of these enterprises. Through the so-called conciliation process, the banks are given a limited time to deal with troubled customers. They solicit reorganization proposals from other creditors, from outside investors, or from incumbent management. If the debtor is considered nonviable or is unwilling to restructure, the banks are obliged to force the debtor to file for bankruptcy or sell its troubled asset.

For enterprises that fail to reach agreements with their creditors but are too large or politically sensitive to be closed rapidly, a special support mechanism administered by the government—the so-called intervention fund—has been established. The key difference here is that candidates for government intervention are determined after negotiations between creditor and debtor have failed rather than being preselected. Moreover, negative incentives (such as loss of senior creditor status) are built in to discourage banks from excessive recourse to the fund.

"... an integrated approach to bank and enterprise restructuring is needed because neither can succeed in isolation."

The decentralized option has been criticized for encouraging collusion between distressed enterprises and distressed banks, increasing the risk exposure of banks, and thus possibly bolstering the status quo. Clearly, the success of this approach depends on designing the right incentives for banks, ensuring close monitoring and supervision by the government, and improving banking skills and auditing techniques.

Even if enterprise restructuring proceeds as anticipated, the possibility that the banks may *de facto* become the major shareholders in most of the distressed enterprises is cause for concern: if banks have to focus on managing troubled enterprises over an extended period, the need to build banking skills may be neglected. The results of Poland's experience with bank and enterprise restructuring are likely to influence the efforts of other countries in the region. It is difficult to visualize, however, how any solely bank-led scheme could function in the states of the former USSR, where the banks' major customers are also their main shareholders and the level of commercial banking expertise is low, even in comparison with Eastern Europe.

What role for bankruptcy?

A properly functioning bankruptcy code is the ultimate form of decentralized scheme, involving minimal government intervention. But except in Hungary, bankruptcy laws remain weak or largely unenforced and have had little impact in imposing financial discipline. This reflects, on the one hand, inadequate legal frameworks and shortages of skilled personnel and, on the other, concern that the unrestrained use of bankruptcy could result in an unmanageable number of firms facing liquidation. Moreover, limiting liquidations through the constraints imposed by personnel and legal deficiencies does not appear efficient.

Hungary's bankruptcy law. Notwithstanding these constraints, Hungary has initiated the use of bankruptcy as the central mechanism of conflict resolution between banks and enterprises. A strict bankruptcy law was adopted in January 1992 that required enterprises to file for bankruptcy or liquidation if they were more than 90 days in arrears on any of their debt. This law has played a key role in tightening financial discipline. As of September 1993, more than 5,000 bankruptcy and 16,000 liquidation proceedings had been submitted to the courts. While only a fraction of these were completed, the stock of interenterprise arrears and the number of involuntary creditor enterprises have dropped sharply since the adoption of the law.

In the presence of weak or insolvent banks that have substantial exposure to overindebted firms, however, the Hungarian law by itself need not end distress borrowing; banks may prefer to continue rolling over debt rather than force the enterprise to declare bankruptcy. Hence, strengthening the banks through recapitalization, coupled with enforceable ceilings on single-borrower loan concentration, can enhance the efficacy of bankruptcy legislation. The Hungarian authorities are also promoting out-of-court settlements, a trend that will economize on the use of scarce legal resources and hence conserve them for the most serious cases.

Priorities in the former USSR

In the states of the former USSR, where inflation is very high, real interest rates substantially negative, and rollover of principal pervasive, it is hard to get a clear picture of the bad loan problem. However, the situation

may sharply deteriorate. Once financial discipline is imposed and inflation is reduced, an explosion of bad loans is likely to appear on the banks' balance sheets. The issue today is more one of containing the damage from the growth of bad loans that will follow as stabilization progresses than of dealing immediately with the existing problem.

In addition to confronting severe macroeconomic instability, most of these countries face a situation in which the number of banks has proliferated, with enterprises being the main shareholders, leading to extensive insider lending. At the same time, commercial banks hold practically no household deposits—they raise funds primarily from the enterprise sector and the central bank, which is not in a position to supervise all banks effectively.

Under these conditions, it is premature to allocate fiscal resources to pursue a comprehensive exercise to clean up loans and recapitalize banks because most banks do not even report a problem, and most household deposits are not at risk from the performance of the commercial bank loan portfolio. The emphasis in the states of the former USSR in the short term thus has to be on strengthening bank supervision, enforcing regulatory restrictions, particularly on capital requirements and connected lending, and enhancing commercial banking skills.

A recent World Bank report on Russia proposes providing incentives for banks to improve their standards and submit to stricter supervision and thus create a separate tier of banks that will be more capitalized, adhere to better banking practices, and be more closely supervised. An important element of this strategy is to impose penalties on banks that do not adhere to the mandated practices and to revoke the licenses of and to liquidate the most problematic banks. The objective is to improve the overall soundness of the banking system gradually through a continuous increase in the number and market share of the better banks. This approach cannot prevent a banking crisis from emerging following stabilization but would lower the costs and facilitate dealing with such a crisis should it occur.

Because other countries in the region share with Russia many of the institutional characteristics of its banking system and face a similar macroeconomic environment, elements of the above approach to banking reform may be relevant to them. Recapitalization of banks that have no potential for developing into modern commercial institutions is not advisable, and bank-led conciliation schemes will not be viable.

Strengthening existing private banks and encouraging the involvement of foreign banks through a direct presence and by twinning arrangements (in which foreign bankers transfer skills to local bankers) may improve credit allocation. Centrally managed restructuring agencies may need to expand and lengthen their scope of operations beyond what would ideally be advisable. And there may be little alternative to relying more heavily on appropriately designed bankruptcy legislation to complement privatization and impose financial discipline after privatization takes place. While each of these options would be difficult to implement, they may all be needed to develop a market-based system of credit allocation after macroeconomic stabilization has occurred.

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Mixing and matching

It is important to emphasize that the health of any banking system is largely a reflection of the strength of the economy, which in the case of most transition economies, is still dominated by troubled state enterprises. To the extent that integrated schemes of bank and enterprise reform can speed privatization and restructuring, they should clearly be encouraged. However, if the institutional obstacles to implementing such schemes are too great, it would be preferable to proceed separately with banking and enterprise reform while devising incentives to make the processes mutually reinforcing. Irrespective of the method chosen, reducing the share of nonperforming loans to an acceptable level will be a process, rather than an event, given the difficulty of corporate restructuring, the costs of recapitalization, and the dependence on sustained economic recovery.

For countries attempting the integrated approach, some combination of centralized and decentralized schemes is likely to be required. The weight given to each scheme can be expected to vary with the degree of development of the banking system: the more developed the banking system, the greater the scope for decentralization.

For countries with relatively developed financial systems that have not yet adopted a Polish-style conciliation scheme, pursuing such an option versus strengthening the applicability of bankruptcy legislation is an unresolved issue. Monitoring the experience of Hungary and Poland will provide useful insights for other countries in the region. But ultimately institutional characteristics such as the managerial capacity and independence of the banking system must be weighed against the ability of the courts to cope with the heavier load of bankruptcy cases. Moreover, the two approaches should not be regarded as mutually exclusive. For example, even in Poland, where the conciliation process is being implemented most comprehensively, judicial bankruptcy will continue to be needed, not only for the emerging private sector but also to provide the "stick" for all parties to actually agree on a path of restructuring and debt reduction.

During a transitional period, designing bankruptcy legislation separately for state-owned enterprises and the private sector could be considered (if it does not become a disincentive to privatize), because the legislation that is appropriate to instill the requisite market discipline for the private sector may overburden the judicial system and cause an intolerable level of liquidations when applied to state-owned enterprises. The softer legislation targeted at these enterprises could then be merged with legislation applicable to the private sector over a limited time.

If a centralized approach is undertaken, the number and market share of enterprises selected to undergo restructuring through an official agency should be large enough to improve the quality of the banks' loan portfolio significantly, but small enough so that takeover by the new government agency leads to perceptibly improved management. Depending on the mix of enterprises selected—those that can be privatized or liquidated rapidly versus those that may require fiscal subsidies for an extended period—creating separate agencies to address each objective may enhance the credibility of each function. ■

The New Global Environment Facility

MOHAMED EL-ASHRY
Chairman of the GEF and Director, Environment Department, The World Bank

REPRESENTATIVES from more than 80 developed and developing countries meeting in Geneva on March 14–16 agreed to transform the Global Environment Facility (GEF) from an experimental program into a permanent financial mechanism that will provide grants and concessional funds to developing countries for programs aimed at protecting the global environment.

The agreement, which came three years after the GEF was launched as a pilot program, builds on the achievements of the Rio Earth Summit of 1992. In Rio, more than 150 nations signed landmark conventions on climate change and biodiversity, designating the GEF as the funding mechanism to cover the "incremental" costs of activities with global benefits—that is, the extra cost, net of any additional domestic benefits. *Agenda 21*, the action plan for the 21st century, also singled out the GEF—which is run jointly by the United Nations Development Programme, the United Nations Environment Programme, and the World Bank—for this purpose.

However, in response to developing country and nongovernmental organization (NGO) concerns that the GEF was too restrictive during the pilot phase, the Rio summit specified that the GEF could be used as the funding entity of the new conventions only if it were restructured and replenished in a way that encouraged universal participation and greater transparency and democracy in governance.

The GEF's new shape

The GEF restructuring began in earnest in December 1992 at the first of seven negotiating rounds that embraced a growing membership (from 28 in 1991 to more than 80 by March 1994). The lengthy negotiations reflected the determination of governments to avoid the creation of a new bureaucracy.

Coverage. The GEF will continue to deal with four global environmental problems: climate change, the destruction of biodiversity, the pollution of international waters, and ozone depletion. Furthermore, land degradation—primarily desertification and deforestation—will also be eligible insofar as it relates to one or more of the four main focal areas.

Decision making. Decisions will normally be reached on the basis of consensus, but when this is not possible, a vote may be taken. Differences between developing and developed countries over whether to use the UN system, which is based on one country one vote, or the Bretton Woods approach, where voting rights reflect economic strength, were eventually resolved with the introduction of a "double majority" system. This requires a 60 percent majority of all member countries as well as approval by donors representing at least 60 percent of contributions—in effect, giving both developed and developing countries veto power.

Governance. The new arrangements represent a unique blend of UN and Bretton Woods practices. They include:

- A universal assembly that will meet every three years to review the GEF's policies.
- A council, constituting the main governing body, that will meet at least twice a year. The 32 members will embrace 16 developing countries, 14 developed countries, and 2 economies in transition. Responsibility for conducting the council's business will be shared between an elected chairperson (the UN model) and the GEF's Chief Executive Officer (the Bretton Woods model), who will also be the chairman of the GEF.
- A functionally independent secretariat that will be administratively supported by the World Bank but will report directly to the GEF's council. This follows up on one of the main recommendations of a recent independent evaluation of the pilot phase.

Who will pay

A parallel negotiating process began in mid-1993 to replenish the GEF, which by spring 1994 had committed around $750 million to over 100 projects throughout the world. Donors finally agreed to provide more than $2 billion to the GEF's core fund for commitment over three years. This sum, which is about two and a half times larger than the core fund during the pilot phase, is contributed over and above resources channeled to regular official development assistance.

As for burden sharing, it was agreed that contributions would be based on the formula used for the Tenth Replenishment of the International Development Agency (the soft loan facility of the World Bank, aimed at poverty alleviation in the poorest countries) but with the understanding that the entire issue would be reconsidered in the next replenishment exercise three years hence.

Several countries have already pledged voluntary contributions in addition to their burden shares. The United States will be the largest donor (SDR 307 million, or about $430 million), followed by Japan (some SDR 296 million), Germany (SDR 171 million), France (SDR 102 million), and the United Kingdom (SDR 96 million).

What is ahead

The Geneva agreement opens the way for the GEF to become a principal funding mechanism for the climate change and biodiversity conventions. The agreement also tries to facilitate access to other funding sources (e.g., leveraging additional resources from the private sector) and broaden the range of partners with access to GEF funds (e.g., the regional development banks, the UN agencies, and bilateral development agencies).

But the permanent GEF is intended to be more than a channel for project financing. It will also help support global environmental security by integrating the global environment into national development, encouraging the transfer of environmentally sound technology and knowledge, and, crucially, strengthening the capacity of developing countries to play their full part in protecting the global environment. Making the GEF permanent sends a modest but important signal about the international community's determination to follow a path to a more secure and sustainable way of life on earth. ■

Bruce Rich

Mortgaging the Earth

Beacon Press, Boston, MA, USA, 1994, ix + 376 pp., $29.

Mortgaging the Earth is a provocative critique of development practice in general, and of the World Bank's role in particular. The book's themes are vital: the need for more participatory forms of development and greater sensitivity to social concerns, the imperative of incorporating environmental concerns into development policymaking, the importance of openness in decision making in multilateral institutions, the imperative of avoiding past mistakes, and the need for further debt relief (especially in Africa). These deserve urgent and continued attention, and Mr. Rich's book is a welcome contribution to the debate.

The book's value, however, is seriously undermined by its one-sidedness. Its approach is to pick the worst examples of country experiences and of World Bank performance and to generalize. This "analysis by vignette" is effective in raising emotions but does injustice to the important and complex issues involved. Chapter 1, for example, devoted to the Thai experience, portrays development in that country as one of a total failure to meet the needs of the poor. The huge gains in the poor's access to education, basic health care, nutrition, and sanitation in Thailand are ignored.

The book portrays the development record as one of near universal failure— and its recommendations are predicated on this assumption. Unfortunately, by ignoring the dramatic achievements of the past quarter century—including a doubling of food production, a halving of infant mortality, a doubling of secondary school enrollment rates, a doubling of real incomes, and a sharp move toward democracy in developing countries— the book throws the baby out with the bathwater.

The book also suffers from the common methodological flaw of failing to take account of the counterfactual—that is, what would have happened had development programs not been followed. One example (of many) is in its treatment of structural adjustment programs, which, the book concludes, have led to slower growth, cutbacks in health spending, and no growth in exports. In fact, there is ample evidence that countries that failed to adjust to the shocks of the 1970s and early 1980s fared far worse on all those indicators than those that did adjust. To be honest to the issue, it is necessary to remember that only countries in acute difficulties seek support from the World Bank for adjustment programs. Thus, drawing conclusions from simple correlations between countries in crisis and World Bank involvement is analogous to observing the high correlation between sick people and hospitals and concluding that hospitals are bad for your health!

Rich's portrayal of developing countries as beholden to the dictates of donors is inappropriate. Developing countries rightly take pride in their accomplishments and so too take responsibility for their failures. Countries such as India and Thailand (both highlighted in the book) receive less than 1 percent of their GDP in official development assistance. To assign to this the impact that Rich does is illogical. Of course, the World Bank plays a significant role in assisting its member governments (its owners), but a sense of perspective is warranted. For example, the Bank finances about 3 percent of dams in developing countries and about 2 percent of total investment.

The book also exhibits a rich-country perspective when dealing with issues such as energy. Rich writes from a country where per capita electricity consumption is more than 30 times that of India. Yet he seems to oppose additional power generation, arguing instead that developing countries should make their existing supplies go further. The World Bank needs to do more to help promote energy efficiency but should make no apology for investing in economically efficient and environmentally sound supply.

The book's prescriptions for developing countries—essentially to slow down their modernization—are in sharp contrast to the expressed desires of the citizens of those countries. The 2 billion who currently have to use sticks and dung for their energy want access to electricity. So, too, the 1 billion without clean water and the 1.7 billion without sanitation want access to these services. And all aspire to higher living standards and better job opportunities. This helps explain why the majority of developing country NGOs continually support funding for IDA, while Rich does not.

The book is removed from current thinking on sustainable development. Mr. Rich regards the Brundtland Commission Report as "endorsement of business as usual" and the Rio Earth Summit (where 178 nations agreed to a program of action) as irrelevant or worse. The book thus misses out on important new insights on the links between development and the environment. Most serious environmental thinkers would now recognize that development is essential if the environment is to be protected. They recognize that, without development (including income and employment growth), there is no chance of protecting natural habitats in developing countries, and without education and higher income levels, Africa's population will rise sevenfold and its forests won't have a chance. This kind of thinking is now mainstream and embodied in the phrase "sustainable development." The book rejects it, remaining fundamentally "antigrowth" and referring to sustainable development as an "oxymoron." Rather, it falls back on a pre-Brundtland "development versus the environment" paradigm.

These criticisms apart, the book is an interesting read. By carefully documenting (albeit in exaggerated manner) the development mistakes of the 1970s and 1980s, it not only stirs the blood but also rightly points to the urgent need to guard against repeating the same mistakes. The preface claims that the book is "one person's attempt to understand our world." It should be read as such.

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Anne O. Krueger

Political Economy of Policy Reform in Developing Countries

MIT Press, Cambridge, MA, USA, 1993, ix + 171 pp., $22.50.

This highly readable and informative book is based on the author's 1990 Bertil Ohlin lectures. In writing about the interactions between politics and economics in developing countries, Professor Krueger calls upon a formidable background: professorships at leading universities (currently, Stanford) and five years as the Chief Economist of the World Bank (1982–86). She has written extensively on these issues, and in this book, she attempts to develop a synthesis from which one can reach a broad understanding of why economic policies so often go wrong and of what it will take to generate sustainable growth.

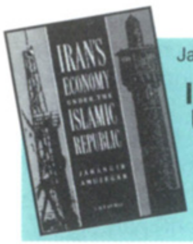
Krueger starts from the premise that bad policy, not bad luck, is to blame for the fundamental problems faced by developing countries. Excessively ambitious and underfinanced spending programs, unrealistic domestic pricing, rigid controls over a wide range of economic activities, unsustainable exchange rates, support for uneconomic industry through long-term protection against import competition . . . the list is sadly familiar and unassailable. In contrast, the "high flyers" of East Asia and elsewhere have pursued more economically liberal policies aimed at generating wealth through exports, reducing price distortions, and allowing agents wide latitude in choosing what to produce and what to buy.

In asking why everyone does not adopt the open-economy paradigm, Krueger carefully avoids the easy answers. After all, it is as common for countries to embark on a diet of discipline and liberalism, only to fall prey to the temptations of open or disguised inflation, as it is for us mortals to give up on our New Year's resolutions by Valentine's Day. The problem, she argues, is not that the leaders of developing countries are typically weak-willed or misguided but that "there are systematic political-economic interactions at work" (p. 92).

Political support for economic openness has been slow to materialize in developing countries, for which Krueger cites three main causes: anticolonial nationalism, distrust of reliance on primary commodity markets in the wake of the depression of the 1930s (to which one could easily add the commodity depression of the 1980s and 1990s), and (until recently) a desire to emulate the apparent success of the Soviet Union in achieving rapid growth through mandated industrialization. The rise of democracy thus does not lead to economic reform; indeed, Krueger argues that success is as likely to come from an authoritarian but benevolent "social guardian," such as President Chung Hee Park of Korea or President Suharto of Indonesia (p. 61). But she puts a positive spin on this Myrdalian nexus by arguing that economic success in turn breeds democratization and may create the political support for further reforms. Chile under Pinochet and Aylwin is a textbook example, but Krueger recognizes that in most countries, the links between political and economic reforms are harder to discern.

In spite of her care to tell a balanced story, Krueger occasionally oversimplifies. In emphasizing the dangers of introverted policies, she downplays the role played by adverse external shocks in bringing on the debt crises of the 1980s. In stressing the enervating consequences of trying to rapidly industrialize agricultural economies, she neglects the costs of relying on primary commodity exports for which the world market is highly uncertain. And in acknowledging the necessity of government authority for achieving economic reforms, she may be giving more credit to the beneficial role of government than most analysts would feel comfortable with. Such lapses are not surprising, given the constraints imposed by the lecture-series format, and they should not distract from the central message that Krueger skillfully conveys: economists and politicians ignore each other's world at their peril, and only when we finally understand the relationship between the two will we understand why sustained development is so hard to achieve.

James Boughton



Jahangir Amuzegar

Iran's Economy Under the Islamic Republic

I.B. Tauris, London, England and New York, NY, USA, 1993, xi + 398 pp., $59.50.

In contrast to other major revolutions that, among other goals, sought to check the influence of religion, the Iranian Revolution was inspired by the fundamental objective of replacing a secular society by one that, in all its dimensions, would be governed by the precepts of Islam. Enunciated in the rhetoric of revolution and enshrined in legal documents, the regime's economic design was to reverse the perceived deficiencies and outrages of the system inherited from the Shah, most prominently to reduce dependence on the West (imports, oil export earnings, and a consumerist ethos) and to bring about a just and equitable society, incorporating "rights" to employment, housing, food, and certain basic needs (such as free water and transport).

In this assiduously researched work, Amuzegar traces the course of the Iranian economy in the context of the proclaimed goals of the Islamic Republic. He has produced a valuable and highly informative volume, all the more impressive for the severe data constraints he had to surmount. Economic and social developments are described and examined at the macroeconomic and sectoral levels, often in minute detail; indeed, in some passages the deluge of statistics all but overwhelms the text, blurring the focus on underlying trends. Even if certain segments lack narrative lucidity, the overall analysis emerges clearly, occasionally spiced with droll epithets (Amuzegar characterizes the regime's ambitious social agenda as a "constitutionally mandated welfare nirvana").

Amuzegar concludes that the overall performance of the economy during the postrevolutionary period has been "distinctly disappointing." To cite one stark but key indicator, real GDP in 1990/91 was 6.3 percent below its level on the eve of the revolution; during the same period, per capita GDP fell by 38 percent. In surveying the complex of factors responsible for this performance (including the adoption of a "Soviet-inspired Indian model" of economic development—just as it was being discarded by those countries!), Amuzegar presses home the point that the economy has failed on economic effi-

ciency as well as on equity criteria; the poor are not palpably better off. The author, who was a senior official under the Shah's regime, buttresses his negative evaluation with references to analogous assessments by current Iranian leaders.

The basic methodological approach of the book—a comparison between promise and performance—is a legitimate one although subject to certain qualifications. It may be objected that the economic goals of the revolution should be viewed as basic ideals to be achieved sine die; after all, even the objectives of the American and the French Revolutions have not been fully realized, much less those of assorted socialist experiments. Others may point to acute exculpatory circumstances, in particular to the lengthy and devastating conflict with Iraq—the "costliest calamity of the century" for Iran. Still others may contend that economic aims were secondary to the principal goal of spiritual transformation—a claim that falls outside the compass of the work under review. Yet, for all these and other qualifications, the somber fact remains that, after more than a decade, the economy is apparently making little headway toward the regime's declared objectives.

An essential lesson of Amuzegar's analysis is that economic realities cannot be ignored or subjugated—especially in an increasingly global economy—and that the achievement of social, political, and many other objectives is, to a large extent, contingent upon the promotion of a healthy and expanding economy. It is seemingly a lesson that entrepreneurs of revolutions learn anew each time.

Bahram Nowzad

Jeffrey Sachs

Poland's Jump to the Market Economy

MIT Press, Cambridge, MA, USA, 1993, ix + 126 pp., $19.95.

Poland's stabilization and reform program (the Balcerowicz plan), launched on January 1, 1990, has been among the most courageous and successful of all post-Communist reform efforts. This experience is of vital importance for countries elsewhere in the region, and so it is important that it be well understood. In this slim and clearly written volume, a slightly updated version of the 1991 Lionel Robbins lectures, Jeffrey Sachs makes a most helpful contribution.

Starting with a description of the Communist legacy, Sachs details the main pillars of the Balcerowicz plan: stabilization, liberalization, privatization, the creation of a social safety net, and Western assistance. He stresses the political considerations underlying the program. Gradualism in subjecting the economy to the forces of the market was not a realistic option, since Solidarity feared that in such an approach it would be outmaneuvered by the old bureaucracy and entrenched enterprise managers. Sachs conveys some of the excitement and satisfaction involved in seeing each day on the streets of Poland's cities fresh, positive effects of the program.

The favorable results of the program have been many: Poland has experienced the smallest production fall in the region and is the only European country to show steady and substantial growth since the end of 1991, its cities have been transformed, and more than half its economy has been placed in private hands. But has the cost not been excessive? Sachs firmly refutes this. He shows that, while there was some decline in measured real wages from the spike of 1989, consumption of foods showed no measurable dip in 1990 and 1991, while ownership of a wide range of consumer durables rose spectacularly. Even open unemployment, a new phenomenon in Poland, has only reached average West European levels, contrasting with the fears of those who expected massive labor shedding and who did not foresee the absorption of labor by a rapidly growing service and small-scale sector.

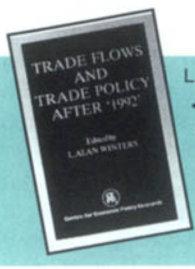
What are the lessons that can be drawn from this book? One is the crucial importance of sustained policy implementation with a clear eye on the goal of transformation. As Sachs puts it, "the great political task is to follow the path of reform in the face of inevitable anxieties, vested interests fighting for the status quo, and demagogues ready to seek political power by playing on the public's fears" (page 3). Another is the need for Western help to bolster the reformers. While the US$1 billion fund to stabilize the zloty played a role in Poland, over the longer run, open West European markets and a willingness to accept Poland as a member of the European Union will be of immeasurably greater importance.

Mark Allen

Ludger Schuknecht

Trade Protection in the European Community

Harwood Academic Publishers, Philadelphia, PA, USA, 1993, vii + 227 pp., $44.



L. Alan Winters (editor)

Trade Flows and Trade Policy After '1992'

Cambridge University Press, New York, NY, USA, 1992, ix + 294 pp., $59.95.

These two books represent first-rate examples of economic analysis in two traditions, neoclassical (Winters) and public choice (Schuknecht). Contributors to Winters' volume are interested principally in measuring the trade effects of '1992.' Schuknecht explores the causal relationship between the institutional structure in the European Community (EC) (now European Union) and its trade policy practices, both external and internal.

Schuknecht sets out to explain why the EC has adopted an array of protectionist policies toward the rest of the world while liberalizing trade internally. He argues persuasively that protectionist measures taken in the EC, including voluntary export restraint agreements, national measures under Article 115 of the Treaty of Rome, antidumping actions, and price undertakings, are all highly politicized. At the root

of this politicization is the current structure of EC institutions, which includes an excess of bureaucratic discretion combined with an unbalanced role for affected domestic interest groups, exacerbated by a lack of transparency and biased rules.

The value of Schuknecht's work lies in both the course and the lesson. The course takes us through the institutional twists and turns on the route to trade policy formation in the EC. The lesson is an old one; namely, "the devil is in the detail." Schuknecht meticulously dissects the legal and institutional structure of the EC to explain why this structure has simultaneously nourished external protectionism while tolerating, perhaps facilitating, progress toward the single market.

Contributors to Winters' volume evaluate the quantitative effects of '1992.' The volume includes computable general equilibrium (CGE) studies with imperfect competition, designed to evaluate sector-specific production, factor-market adjustment, welfare, and trade effects inside and outside the EC. Two theoretical chapters, one by Jan Haaland and Ian Wootan, the other by Gernot Klepper, suggest that the conventional wisdom regarding the pro-consumer, pro-competitive effects of '1992' may be mistaken. Klepper's examination of the pharmaceuticals industry, with careful reference to the relevant policy directives, argues that only "slight moves" toward a unified European market will occur. Winters' chapter on trade policy in the European footwear industry is an excellent case study with some broadly applicable lessons. The Community-wide effects of integration of financial services is examined by Cillian Ryan, and the potential gains are found to be significantly larger than previously suggested. Policymakers and others interested in attempting to anticipate some of the economic consequences of '1992' will find carefully reasoned and prudently qualified answers throughout the Winters volume.

Schuknecht and Winters are distinguished principally by the questions they ask. There is, however, a sense in which these questions should not be separated as a matter of practice. Because of the distributive effects of '1992,' and because of the change in orientation away from national toward Community-wide rule-making, interest group behavior and the progression of trade-policy measures can also be expected to change. This, in turn, can be expected to affect the longer-term economic consequences of '1992.' Many of the models in the Winters volume offer substantial detail on the possible distributional consequences of '1992.' These models thus contain a large measure of the raw material essential for evaluating, in the manner of Schuknecht, the likely endogenous response of interest groups after '1992.'

Whether these volumes are taken together or separately, anyone with an appetite for international commercial policy analysis will savor a thoroughly nourishing meal.

Michael Leidy

Derek Crabtree and A.P. Thirlwall (editors)

Keynes and the Role of the State

St. Martin's Press, New York, NY, USA, 1993, ix + 277 pp., $69.95.

Keynes continues to tower above all other 20th-century economists. So we should expect *Keynes and the Role of the State* to be a gripping read, especially as the subject should involve social, philosophical, and political ideas as well as economic theory. In his opening remarks for this University of Kent at Canterbury seminar, Alan Peacock points out that Keynes' "liberal" position on the role of the state ought to be sought in his ideals at least as much as in his experience of the world. Peacock also mentions that some of Keynes' most pervasive practical influence has occurred indirectly; for instance, it was Keynes' emphasis on macroeconomic variables that stimulated the taxonomy of national income and the quantification of variables, which today we take for granted and which, for good or ill, has enabled discussions about state interventionism to be informed and pervasive.

Regrettably, not all contributors try to combine scholarly reference to Keynes' thought with their own contributions. Mica Panic, who writes on "The Future of the State in Eastern Europe," manages to ignore Keynes (except for an allusion to the general theory). Richard Sakwa, again ignoring Keynes, argues for Western help for post-Communist societies, not through any general type of Marshall Plan, but by offering the opportunity of long-term economic and political integration into the world economy and society through trade, credit, training, joint ventures, and debt rescheduling. Although the papers are perfectly readable and interesting, the editors might have done a more conscientious job of obliging contributors to match their offerings to the actual title of this book. Two major chapters (out of seven) that do not refer to Keynesian thought is not good enough. And surely if Keynes were alive today, he would have plenty to say about the role of the state in economies in transition. For instance, a contribution that does explicitly consider Keynes in the context of Russia and development is that of John Toye, who discussed Keynes' visits to Russia in 1925, 1928, and 1936 as a sample of analyses that anticipated much current thinking on structural adjustment in developing countries. Keynes' prescriptions for structural adjustment included "reformed public finances, extra investment in agriculture for export proceeds, and the removal of wage and price distortions." Similarly, Anand Chandavarkar uses detailed references to Keynes' work (principally on India) to illustrate Keynes' prescriptions for developing countries.

The more general macroeconomic papers by John Cornwall, Andrew Henley, and Euclid Tsakalotos suggest that to make Keynesian economics work, new institutions are needed to accommodate distributional conflict and hence a "permanent incomes policy." We can be fairly sure Keynes would have been horrified by such a solution and would have sought some less interventionist role for the state. Indeed, Keynes might question whether we had exhausted his own prescriptions for our ills. For instance, the current wisdom about European unemployment is that labor immobility is encouraged by generous transfer payments and high costs of both recruiting and firing employees—implying that Keynesian demand management plays little role. Yet we could argue that in the late 1980s, European unemployment fell because aggregate demand increased faster and certainly not

because the barriers to labor mobility changed. Similarly, there is little doubt now that Keynesian fiscal stimulus could reduce European unemployment (and is needed because of the limits on using monetary policy). But the Maastricht criteria will continue to deter such fiscal stimulus. We might imagine what Keynes would have made of the Maastricht target for national debt reduction given his evidence to the Colwyn Committee, which was debating ways to reduce the size of the national debt (an issue not mentioned in this book). "I think it is a matter almost of indifference...it looks nice to have a clean balance sheet, and I think it is partly false analogy from private account-keeping; an individual likes to be out of debt. But for a nation as a whole it is merely a bookkeeping transaction." (The Committee on the National Debt and Taxation, *Minutes of Evidence*, Vol. II, paras 7589/90.) It is not the stock of debt that matters but the direction and rate of change in its size and composition.

One of the useful functions of such a book is to prompt the reader to look again at what Keynes himself actually said. For instance, Keynes' attitude toward the role of the state was also reflected in an exchange in that same Colwyn Committee, when Keynes was asked whether he thought the view of those who thought they were overtaxed to pay the interest on the national debt should be disregarded: "I think there is no end to it if you set out in your legislative program not to produce the best results but to get rid of unfounded misapprehensions in the mind of the ignorant." The Chairman: "But Parliament has to take account of public opinion?" Keynes: "It takes account of nothing else." (*Ibid*, paras 7594/98.)

This book is worth reading, but Keynes is better.

Alan A. Tait

Dominique Foray and Christopher Freeman (editors)

Technology and the Wealth of Nations

The Dynamics of Constructed Advantage

Pinter Publishers, New York, NY, USA, 1993, vii + 406 pp., $75.

This book, a collection of selected papers presented at an OECD conference, will appeal primarily to scholars of technological change and innovation. Nevertheless, the general reader wishing for an introduction to the field can sample what some of its leading practitioners have to offer. The chapters are grouped into four sections, each with its own introduction.The theme of the book, as set out in the general introduction by Dominique Foray, is the tension between two tendencies: the imperative of modern technology for standardization and coordination and the diversity of conditions and objectives of economic agents. The relationship between technology and the wealth of nations is seen as resting on the "entering into coherence of the two mechanisms of technical progress (interdependence... and incentives...)" (p.16). In other words, the editors believe that the wealth of a nation would depend on how national systems provide incentives for innovation and diffusion of technologies.

Given its importance to the main theme, the section on "Institutional and Technical Change: The Importance of Diversity" is disappointing. The best is Susumu Watanabe's piece on Quality Circles in Japanese firms, which punctures a few myths about the importance of the Confucian culture in explaining the loyalty and devotion of the industrious Japanese worker. Watanabe shows that in over two thirds of the cases, the Quality Circles met during regular working hours and that over 85 percent of the time, the firm paid for such work. Throw in lifetime employment and the egalitarian pay schemes, and one has a mixture of short-term and long-term incentives that would explain a great deal of the loyalty of the Japanese worker. Among other contributors to this section, David Marsden provides a useful discussion of the labor training institutions in France, Germany, and Britain, while Ben Ake Lundval explores the implications of "bounded" rationality for the evolution of cooperative behavior, overseas investment, and even "national systems of innovation."

The section on "Networks and Convergence" is closest to the main theme of the book. Paul David, who, along with Brian Arthur, has made seminal contributions in this area, makes yet another in a chapter that discusses Markov Random Fields, which is spiced with interesting anecdotes and witty prose. David discusses how externalities and coordination problems, characteristic of a number of social processes, including technology diffusion, imply local increasing returns and lead societies to "lock in" to inefficient outcomes.

Modeling technical change and growth is dealt with in "The Models Revolution," which has something to suit all tastes—neoclassical (Philippe Aghion and Peter Howitt), *evolutionary* (Francesca Chiaramonte and Giovanni Dosi), disequilibrium (Jean Luc Gaffard), and post-Keynesian (Bruno Amable). The first section on "Sources of Localized Learning and the Science-Technology Interface" covers a lot of ground. There are chapters dealing with the interface between science and technology, as well as with the diffusion of numerically controlled machine tools. Keith Pavitt's chapter on the benefits (to private firms) of basic research is both interesting and brief.

While the book has a great deal to say about technology, there is much less on the wealth of nations. Despite the valiant efforts of the editors and those writing the introductions to the individual sections, the link between technology and the wealth of nations remains obscure. Consequently, Christopher Freeman and Luc Soete have to work hard in the concluding chapter to draw implications for public policy. But this is not meant to be an indictment of a book that deals with a very important, and even more complex topic.

Ashish Arora
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BOOKS *in brief*

Mitchell A. Seligson and John T. Passé-Smith (editors)

Development and Underdevelopment

Lynne Rienner Publishers, Boulder, CO, USA, 1993, xv + 456 pp., $22.

Two vast and growing gaps in wealth—international and domestic—separate the world's rich and poor populations. The first is between industrial and developing countries; the second is between tiny minorities of the affluent and vast majorities of the poor in the developing countries themselves.

Starting from Simon Kuznets's seminal essay, this comprehensive anthology of classic and contemporary papers traces the thinking that has evolved on the subject of these international and domestic gaps between the rich and the poor. The views represented range from the so-called classicists, who suggest that the gaps will narrow once the process of industrialization has matured or anti-industrial cultural values are replaced by the necessary "industrial" values, to proponents of the view that the international system itself perpetuates the gaps and that only a major restructuring of the system will narrow them. Other perspectives focus on the behavior, responsibility, and political orientation of the state. Have domestic policy actions, such as rent-seeking behavior and urban bias, perpetuated the gaps? Is there a connection between democracy, on the one hand, and growth and inequality on the other?

The editors concede that definitive answers remain elusive. Their hope is that continued airing of the debate and the development of more sophisticated and precise research tools will lead the way to productive answers and constructive policy advice.

LETTERS

Getting better measures of environmental degradation

There is much that is thoughtful in the article by Andrew Steer and Ernst Lutz on "Measuring Environmentally Sustainable Development" (*Finance & Development*, December 1993). However, I find the handling of national income adjustment rather disappointing. The article asserts that if the environmentally adjusted accounts should indicate reduced or negative investment, a "careless interpretation might conclude that . . . the productive capacity of the economy had actually declined." The authors appear to think that "human capital formation and technological progress" can automatically be offsetting to environmental disinvestment.

The two issues, I submit, are separate and should not be confused. Environmental capital deterioration is certain to undermine sustainability, and a greater investment effort will be needed to counteract its effect on future income. Human capital formation, by convention, is left out of the national accounts for various reasons, one of which is that, if it is truly productive, it will be reflected through enhanced productivity in a higher GDP. By contrast, the loss of environmental capital, if not recorded, may take some time before it will reflect itself in income and product measurements. Anyhow, should not a proper comparison be made of the effect of both on national income, before such a summary judgment is made?

Besides properly measuring investment, there are other policy implications of failure to reflect environmental deterioration (especially natural resource depletion) in the national accounts. Without the adjustment we would not be able to know, for example, if an economy that is dependent on such resources is genuinely growing or merely living unsustainably on asset sales beyond its true income; whether the balance of payments is in surplus or deficit on current account (if exports contain environmental capital elements); and whether the exchange rate needs to be changed. The authors, by effectively saying "not to worry," are in fact depreciating the utility of adjusting the accounts—contrary to what they are ostensibly advocating.

Salah El Serafy

Andrew Steer and Ernst Lutz respond:

We gratefully agree with Mr. El Serafy's first sentence but have to disagree thereafter. He claims we think that human capital can automatically substitute for resource depletion. We do not, as our article makes clear. There are many situations where neither human nor fabricated capital can substitute for a loss of natural capital and, as we argue in the article, it is essential to analyze what is happening to each type of capital separately. Nonetheless, it is quite wrong to assert that depleting natural capital will always reduce the productive capacity of the nation. If Indonesia uses its oil wealth to invest in its children's education (as it has wisely done), with the result that fertility rates fall and productive practices become more efficient, few rational people would believe that the country is either poorer or less sustainable. The point we make is that if calculations on trends in a nation's aggregate capital stock are to be useful for policymakers, they must include human as well as natural and fabricated capital. The Environmentally Sustainable Development Vice Presidency of the World Bank is currently involved in an effort to make both sets of adjustments.

Mr. El Serafy's argument is that human capital formation can be ignored because, if productive, its presence will be reflected in future income. Of course! So, too, will changes in natural and fabricated capital. The belief that changes in human capital have a "quicker" impact on income than changes in natural capital is not necessarily true; nor is it relevant. What is relevant is that some human capital formation gets recorded in the current account of the national accounts, and some (knowledge breakthroughs) gets omitted altogether. When we assess trends in a nation's productive capacity, we need a complete picture.

None of this detracts from the vital importance of getting better measures of the high costs of environmental degradation, which was the main theme of our article and where we and Mr. El Serafy are in full agreement.

Culture and development

William Easterly's review of my book, *Who Prospers? How Cultural Values Shape Economic and Political Success* (*Finance & Development,* March 1994) demonstrates how shackled one can become to a conventional wisdom, even when compelling evidence exists that the conventional wisdom is untenable. He concludes his review with, ". . . there is a lot to be said for the old-fashioned view that people are the same everywhere and will respond to the right economic opportunities and incentives." How then would he explain the extraordinary performance of some ethnic groups in multiethnic societies, where everyone operates with the same signals: for example, the Chinese in Thailand, Malaysia, Indonesia, the Philippines, and the United States; the Japanese in Brazil, Peru, and the United States; the Koreans in the United States; the Basques in Spain and Latin America; the Germans in Latin America; and the Jewish people wherever they have migrated?

It is Mr. Easterly's embrace of economic dogma that leads him to caricature *Who Prospers?* I explain East Asia's phenomenal success as an important reflection of the progress-prone values in Confucianism/Taoism: future orientation, work, education, frugality, merit, and community. Mr. Easterly asserts that "such a theory is of little use for predicting who is going to succeed." On the contrary, it would have predicted, without exception, the performance of Japan, Korea, Taiwan Province of China, Singapore, Hong Kong, post-Mao China, and the overseas Chinese.

Mr. Easterly remarks that "when East Asian nations do well, it is the latent positive forces in their own culture; when Spain does well, it is the influx of foreign culture." But there are differences, and there are costs to the Spanish model: the Spanish economy has grown about half as fast as those of the East Asian countries; Spain saves substantially less and has depended heavily on foreign investment; about one half of GDP is produced by state-owned firms; and Spain has been plagued by very high unemployment, currently above 20 percent, reflecting in part an indisposition toward entrepreneurship. Spain's per capita GNP is about one half the Western European average and trails Hong Kong and Singapore.

Cause and effect clearly run in both directions in the relationship between culture and development. Indeed, open economic policies have contributed to progressive cultural change, as well as to economic success in some cases. But, as Mr. Easterly suggests, "the old-fashioned view that people are the same everywhere and will respond to the right economic opportunities and incentives" has been with us throughout the past four decades of disappointing performance in most of the Third World. While the Third World should certainly be pursuing the open policies that have proven successful in a few countries, it should also be pondering the values common to successful societies around the globe.

Lawrence E. Harrison

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Claire Liuksila, Editor

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