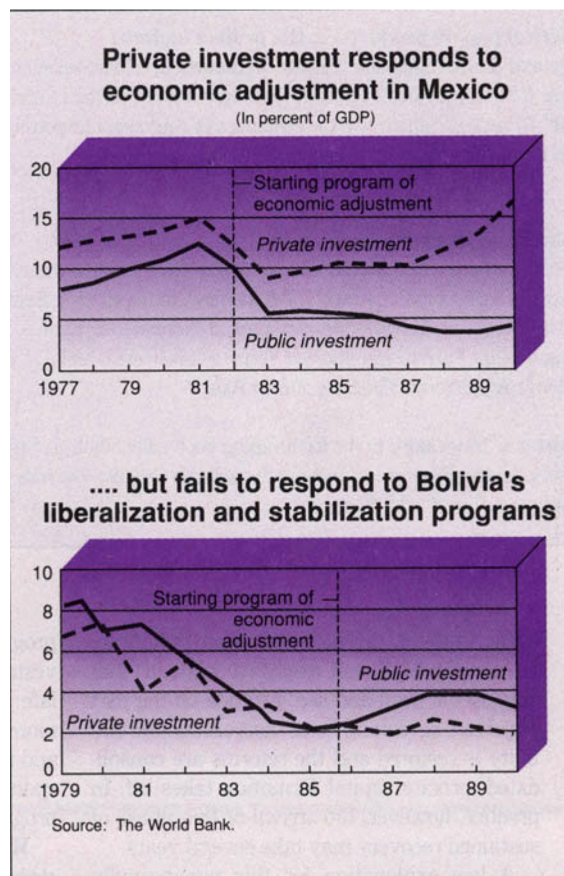
Economic Adjustment and Private Investment

How has private investment fared in the last decade? Findings from recent research

Luis Serven and Andrés Solimano
Economists, Country Economics Department, The World Bank

A decade ago, the debt crisis and the global shocks affecting developing countries set off a protracted period of macroeconomic instability and a drop in external financing that precipitated a drastic decline in investment. This decline, which was especially sharp in the highly indebted countries, has been accompanied by slowed growth in developing countries. If this trend continues, it will endanger the sustainability of adjustment efforts in the developing world.

The resumption of growth will require a robust response of investment to macroeconomic adjustment and reform—particularly by the private sector, which is expected to play a key role in market-oriented reforms. But since the outbreak of the debt crisis in 1982, both public and private investment in developing countries have slowed sharply, remaining depressed throughout the decade. Although private investment did show signs of recovery beginning in 1987, public investment rates have continued to decline. Indeed, in 1989, the average ratio of public investment to GDP was almost three points below its level of the 1970s.



Even in countries that made substantial progress in correcting macroeconomic imbalances and restoring profitability (e.g., Bolivia, Ghana, and Mexico in the mid 1980s), the recovery of private investment has been slow and weak, often lagging adjustment measures by more than five years. In turn, the continuing decline of public investment has led to a contraction in public infrastructure expenditures, which has had adverse implications for both medium-term growth and private capital accumulation, given the complementary relationship between private and public infrastructure investment.

This disappointing trend in private investment has become a major source of concern, prompting academics and policymakers to examine the reasons for it and to suggest policies to stimulate investment. Adjustment policies typically involve fiscal and monetary restraint and real currency depreciation, as well as foreign trade and financial market liberalization and the removal of microeconomic distortions. Until recently, however, the magnitude and speed of the private investment response to the new economic incentives brought about by these reforms have received relatively little attention in the analysis of adjustment programs.

With this in mind, a World Bank research project during 1990–91 focused on the relationship between private investment and macroeconomic adjustment (see box). This project aimed to: (1) understand the determination of private investment, (2) highlight the channels through which adjustment policies affect private capital formation, and (3) analyze the impact of adjustment policies on capital formation in developing countries in the last decade.

©International Monetary Fund. Not for Redistribution

Key questions and answers

Based on the recent adjustment experience of developing countries, the analytical and empirical papers produced in the project set out to answer five key questions regarding the effects of standard macroeconomic adjustment measures on investment, as follows.

What is the impact of a depreciation of the real exchange rate on private investment?

A crucial component of most adjustment programs is a real devaluation of the exchange rate, oriented to restore external balance and make room for a resumption of growth. The effect of real exchange rate changes on the level of aggregate private investment is complex. Time series studies for individual countries tend to indicate that the volume of private investment may initially drop, and then recover, following a currency depreciation. In fact, a real devaluation squeezes real balances, cuts real wages, and increases the real price of imported capital goods, leading to a contraction in domestic aggregate demand and capital formation in the short run. However, it stimulates export and import-competing industries, thereby encouraging investment in these and other related sectors.

Cross-country work for countries in Latin America, East Asia, and Africa suggests that the level of the exchange rate has an ambiguous impact on the level of private investment. But our study shows that the variability of the real exchange rate (as a measure of macroeconomic uncertainty) has a much stronger and adverse effect on capital formation than does its level. Hence, a stable and predictable exchange rate policy is crucial to promote investment.

What has been the impact of cuts in public investment on private investment?

During the 1980s, fiscal adjustment in many developing countries led to an excessive compression of public infrastructure investment. This may have later jeopardized the recovery of private investment and growth. Hence, the relationship between public and private investment depends crucially on the composition of the former. Infrastructure investment (and also public expenditures on infrastructure maintenance and on human capital formation) is likely to stimulate private investment; non-infrastructure public investment may have the opposite effect, bidding resources away from the private sector.

Empirical studies for Latin America and Asia strongly suggest that public and private investment go hand in hand. These studies also indicate that public sector deficits "crowd out" private investment by pushing up interest rates and reducing the availability of credit to the private sector. Thus, an appropriate composition of public expenditures, protecting sound public capital formation during adjustment complemented by overall fiscal balance, is required to promote private capital formation.

Why is the response of private investment in the aftermath of adjustment so weak and delayed?

During the course of an adjustment program, private investment goes through a cycle. Initially, private (and often public) investment falls; then it reaches a "plateau" that suggests a "wait-and-see" attitude on the part of private investors. Once macroeconomic stability is restored and the reforms are consolidated, private capital formation takes off. In practice, however, the arrival of this phase of sustained recovery may take several years.

A key explanation for this unexpectedly slow and weak response lies in the high "value of waiting" that arises in the context of fragile adjustment and unconsolidated reform. Investment, once installed, is irreversible—that is, it cannot be put to use in a different sector, at least not without substantial costs. Hence, investors may opt to wait for new information before undertaking a risky investment project. As a result, the response of investment to a new set of economic incentives brought about by an adjustment program is bound to be weak if the macroeconomic environment is unstable and the new policy regime is perceived as fragile.

Unless investors view an adjustment program as internally consistent and are convinced that the government will carry it out despite the implied social costs, the possibility of reversal will become a crucial determinant of the investment response. Governments can reverse adjustment policies, but investors cannot undo decisions about fixed capital. Thus, the stability and predictability of the incentive structure is likely to be at least as important as the level of incentives, in the form of wages, taxes, and interest rates. Attractive market incentives for capital formation are a necessary, but not sufficient, condition for the resumption of private investment and growth.

A study analyzing the effect of irreversibility on investment using data for selected developing countries, found that fixed investment becomes very sluggish in conditions of high uncertainty. Investment incentives would therefore have to be very large to promote a significant recovery of capital accumulation. Clearly, a stable macroeconomic framework, policy predictability, and clear rules of the game are key ingredients for private investment to thrive. Hence, differences in the degree of macroeconomic stability during adjustment explain considerable cross-country diversity found in the response of private investment to liberalization programs. In Chile, for example, private investment reacted quite forcefully during the late 1970s and late 1980s. The response was more moderate in Mexico in the late 1980s, and in Bolivia, private investment failed to respond to the stabilization and liberalization programs of the mid-1980s.

What is the effect of the external debt burden and external financing constraints on investment?

The external debt burden hampers investment through at least three channels: first, debt service requires an external transfer that in conditions of restricted external financing and reduced consumption leads to reduced levels of investable resources; second, the an-

The analytical papers produced in the project include:
Luis Serven and Andrés Solimano "Private Investment and Macroeconomic Adjustment: A Survey"; Robert Pindyck "Irreversibility, Uncertainty and Investment"; Ricardo Caballero "On the Dynamics of Aggregate Investment"; and Martin Rama "Empirical Investment Equations in Developing Countries."

The empirical papers include:
Luis Serven and Andrés Solimano "Economic Adjustment and Investment Performance in Developing Countries: The Experience of the 1980s"; Eliana Cardoso "Macroeconomic Environment and Capital Formation in Latin America"; and Felipe Larrain and Rodrigo Vergara "Investment and Macroeconomic Adjustment: The Case of East Asia."

These papers will be included in the forthcoming book edited by Luis Serven and Andrés Solimano, *From Adjustment to Sustainable Growth: The Role of Capital Formation,* The World Bank.

©International Monetary Fund. Not for Redistribution

ticipated "tax" associated with future debt service (the debt overhang) reduces the anticipated return on investment; third, uncertainty about the policies needed in the future to meet an equally uncertain debt service also tends to depress investment (see "Will Debt Reduction Increase Investment?" by Eduardo Borensztein, *Finance & Development*, March 1991). The adverse impact of the debt burden on investment is confirmed empirically in all the studies in the project.

What policy implications can be derived from the analysis to revive private investment?

The analysis shows that macroeconomic restraint, especially when sharp and protracted, has an overly adverse impact on capital formation in the short term. In contrast, the effects of liberalization policies on the composition and productivity of investment tend to develop more slowly. This asymmetry should be taken into consideration in the design of adjustment programs and, especially, in the assessment of their likely short-term costs.

Public policies can promote investment in two main areas. Sound public investment in physical infrastructure and human capital must be protected during the course of adjustment; this is needed both from the viewpoint of boosting complementary private investment and also because of its own contribution to long-term growth. In addition, priority must be given to the consolidation of macroeconomic stabilization during the design of adjustment programs. Sustainable policies are often better at promoting private investment than are premature attempts at liberalization, which can be reversed because of a lack of solid macroeconomic foundations and weak political support. Adequate action in these two areas is a key ingredient in the design of growth-enhancing adjustment programs. ■

Luis Serven
from Spain, is an Economist in the World Bank's Macroeconomic Adjustment and Growth Division. He has a PhD from MIT.

Andrés Solimano
a national of Chile, is an Economist in the World Bank's Macroeconomic Adjustment and Growth Division. He holds a PhD from MIT.

International Monetary Fund ***Reserve your copy now!***

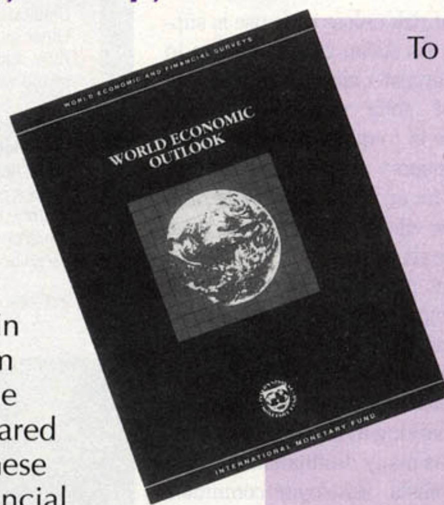
World Economic Outlook

October 1992

What are the prospects for economic recovery in the industrial world, for sustainable growth in the developing world, and for economic reform in the former centrally planned economies? The October 1992 World Economic Outlook, prepared by the IMF's Research Department, explores these and other issues in its latest economic and financial analyses and forecasts for both industrial and developing countries. It assesses key economic variables-- global output and trade, inflation, and financial flows-- and gives short-term prospects for both country groups, and medium-term prospects under alternative policy scenarios.

Available in English, French, Spanish, and Arabic.
(paper) 1992.

US$30.00. (Please state your language preference.)



To order, please write or call:

International Monetary Fund

Publication Services
Box FD-203
700 19th Street, N.W.
Washington, D.C. 20431 U.S.A.

Telephone (202) 623-7430
Telefax: (202) 623-7201
Cable Address: INTERFUND

American Express, MasterCard and VISA credit cards accepted.

©International Monetary Fund. Not for Redistribution