Inflation’s addiction

Inflation is growth’s enemy. So is reducing it, at least in the short run. Why, then, do countries get themselves into inflationary habits by abandoning the salutary effects of stable prices? Why do they remain addicted? And what does it take to break the habit? Orthodox medicine — or heterodox? (Orthodox measures concentrate on the budget and either money or the exchange rate. Heterodox measures add to the orthodox an incomes policy and a fixed exchange rate.)

We look here at the answers offered by a diverse body of recent Bank research (see a partial list on page 4). The studies examined episodes of moderate (low double-digit), high (high double-digit), and extreme (triple- and quadruple-digit) inflation.

What the record shows

Dornbusch (1992), summarizing his analysis of 23 countries, writes that in early 1991 Argentina, Brazil, Peru, Poland, and Yugoslavia were in the midst of extreme instability or at best in the early stages of stabilization. Another group of countries — including the Soviet Union, Romania, and Bulgaria — was on the verge of slipping into high or even extreme inflation. A third group had already run the course and stabilized, as Bolivia and Israel did, or had avoided the extreme experience and opted for stabilization early and decidedly, as Mexico did. Dornbusch draws four main lessons from these experiences.

Inflation is similar everywhere. It is a mistake to believe that the problems of a particular country are unique. But it is common for policymakers — in Brazil, Peru, and the former Soviet Union — to believe that the experience of their country is unique in the essential facts of inflation. Yet their situation is not substantially different from that of 20 other countries where policymakers also thought that their unique situation set ordinary economics aside.

Complacency is dangerous. Extreme inflation is not around the corner whenever there is a budget deficit. But inflation can easily become a habit — and from there an unstable process. Complacency has a disastrous price: society falls apart as the middle class disappears, and society is divided into those who know how to get ahead with inflation and those who fall behind.

Democracy makes hard moves harder. Political change toward a more participatory democracy has not favored price stability. Political change may carry with it the expectation of an improvement in opportunities and living standards — as with the growth of Solidarity in Poland.

Because democratic institutions do not make hard choices easy, democratic countries have almost invariably implemented special procedures to adopt and implement the hard measures needed for stabilization. The abhorrence of inflation’s destructiveness may nevertheless allow stern measures that had been considered politically impossible but that are needed to rebuild confidence and stability.

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inflation all contain the basic orthodox measure: fiscal restraint. But the desire to stabilize prices and bring budgets closer to balance does not imply that zero inflation must be achieved at any cost. Some countries use policies that accept a moderate rate of inflation because there is a steeply rising cost of disinflation. Inflation control thus has limits, discussed in the next section.

**Why start inflation?**

Dornbusch and Fischer (1991), summarizing their analysis of eight bouts of inflation, write that there are basically two answers. One is that inflation is integral to a country's public finance. The other is that inflation is allowed to persist because it is too hard or too costly to stop.

*Too easy to print.* At least since the 1920s it has been understood that printing money is one way, albeit not the preferred one, of financing budget deficits.

Thought to be relevant only to extreme inflation economies, inflationary money printing accounts for a significant portion of government revenue even in economies with moderate rates of inflation. So it is plausible to consider inflation as a conscious instrument of public finance.

Dornbusch and Fischer accept that inflation rates will be higher in countries where alternative sources of revenue are costly. But the costs of inflation, and the gradual shift away from money holding that is common under moderate and high inflation, make them skeptical of the public finance argument for moderate inflation.

*Too costly to stop.* A different motive for inflation comes from the observation, or at least the belief, that inflation is costly to stop.

Because lagged inflation appears mechanically as a determinant of current wage and price inflation, disinflation is costly because inflation can be lowered only through protracted unemployment.

In economies where inflation is substantial — say 20 percent a year — some implicit or explicit form of indexing wages to inflation is unavoidable. In many countries wage increases follow a regular pattern of once or twice a year adjustments, often mechanically based on past inflation. And the higher past price inflation is, the more work that unemployment has to do in bringing down wage inflation.

**How to stop it**

Dornbusch and Fischer write that for inflation to fall, there has to be a major break in the process whereby each sector, including the monetary authorities, accommodates the inflation rate of every other sector. One possibility is a change in the structure of indexation among wages, prices, and the exchange rate. Another is a new set of rules for setting the exchange rate and public sector prices.

Using the exchange rate to initiate a disinflation is very common, but a risk is overvaluation, which greatly complicates the unwinding of inflationary forces. Alternatively, a change in the wage rules might move from compensating for past...
erosion of the purchasing power of wages to setting wages forward on the basis of expected inflation. But if all else fails, high unemployment will have to be used to slow inflation by reducing wage and demand pressures.

Most of the countries Dornbusch and Fischer studied reached moderate or high inflation as a result of external, and particularly commodity price, shocks. Countries that remained in the moderate inflation range after arriving there — Chile and Colombia, and for a shorter time Mexico — did so only by taking decisive action to prevent inflation from rising at certain specific points. Brazil, which was not willing to slow its growth to stay in the moderate inflation range, found itself with high and sometimes extreme inflation.

Three of the countries that successfully disinflated to low inflation — Ireland, Korea, and Spain — did so at a significant output cost. Each used nonmarket (heterodox) measures, the equivalent of an incomes policy, to assist the disinflation. In Korea, wage growth was restrained through restraint over public sector wages and moral suasion of the private sector.

Each of these disinflations was accompanied by a very strong orthodox fiscal contraction. Chile and Mexico also undertook fiscal contractions to reduce high inflation to the moderate range, and Colombia to keep inflation moderate.

Indexation and disindexation appear to have been important in the Latin American inflations and disinflations. But whether disinflation is easier in the absence of indexation, or whether the absence of indexation indicates a government’s commitment not to live with inflation, is difficult to say, write Dornbusch and Fischer.

Revenues from the inflation tax (seigniorage) accounted for a significant share of government revenues in most of the moderate inflation countries. These revenues, especially high at the start of most of the inflationary episodes, slowed the fiscal effort that had to be made to reduce inflation. But there is little evidence in the literature that revenue considerations were important in the inflationary thinking of any government. This may reflect a general lack of understanding of the inflationary process, or it may mean that seigniorage is rarely an explicit reason for a government to pursue inflationary policies. Dornbusch and Fischer believe the second interpretation.

Kiguel and Liviatan (1988 and 1992) sum it up thus: Countries typically find themselves in moderate or high inflations as a result of external shocks. When the next inflationary shocks hit, it takes explicit counterinflationary policies to prevent inflation from rising. Moderate inflation is not a state that economies stay in without a government commitment to prevent further increases in inflation.

Governments have successfully reduced moderate inflations to low through a combination of tight fiscal policy, incomes policy, and generally some exchange rate commitment. But there is little support for the view that an exchange rate commitment, or an incomes policy, alone allows a country to move at low cost from moderate to low inflation.

What, then, of the choice between orthodox and heterodox measures? Orthodox stabilization policies are very successful in stopping extreme inflation. The success is usually much more limited, especially in the short run, in countries suffering chronic high inflation, where inflation is downwardly rigid and persistent. In these countries the heterodox approach is more effective in bringing down inflation initially, although the costs of disinflation are not avoided altogether. These costs typically arise at a later stage, when the government tries to sustain the initial success as controls are phased out.

While incomes policies can do much in the high-inflation countries in fiscal adjustment programs, the heterodox approach is not recommended for stopping inflation in countries that traditionally have experienced low inflation. These countries should rely as much as possible on orthodox measures.

In short: For moderate or extreme inflation, use orthodox measures. For high inflation, use heterodox measures.
This suggestion raises questions about the economic impact of military spending, the likely effect of reductions, and what the Bank can or should do on this issue. This study will review findings in the literature and develop an analytical framework that will specify key economic variables affected by military spending (principally, economic growth, investment, external accounts, and public spending on economic and social sectors). To estimate the framework, the study will use cross-sectional, time-series data or, for particular parameters, findings in the literature. It will examine the likely effect of reductions in military spending. Finally, the project will assess the feasibility and desirability of countries’ reducing military spending to 2 percent of their GNP, as envisaged by the McNamara proposal. This part of the research will involve looking at the trends in the levels of national military spending, discussing the feasibility of applying a uniform norm for defense spending across countries with different security needs, and using the framework developed in the project to assess the economic implications of reducing military spending to 2 percent of GNP.

Concern has been growing about developing countries’ military spending, and how it may affect their growth, external accounts, and spending levels on social and economic programs. Many in the donor community wonder whether development assistance is directly or indirectly financing military spending. Another concern in the aftermath of the Gulf War is arms proliferation. Some have suggested that development assistance should be made conditional on reductions in military spending. Robert McNamara, former president of the World Bank, endorsed a proposal by the Independent Group on Financial Flows to Developing Countries that decisions on aid allocation should give “special consideration...to countries spending less than 2 percent of their GNP in the security sector.”

Basic education plays a fundamental role in promoting social and economic development and in improving individual welfare, largely because of the cognitive skills that it imparts — literacy, numeracy, and problem-solving skills. Knowing what constitutes the most cost-effective approach in basic education is therefore vital for developing countries making decisions about how to allocate resources for education.

That schools vary in their effectiveness in producing learning is well known; little is known about what differences in schools’ input mixes and management practices account for this, however. This study, in close collaboration with officials of Jamaica’s Ministry of Education and local academics, seeks to identify the characteristics of schools and households that are most efficient in raising cognitive skills. It is intended to make a concrete contribution to education policymaking in Jamaica, and to demonstrate how to carry out education research that produces immediate and specific policy recommendations in other developing countries. The research will address the following questions:

- What is the most cost-effective combination of material inputs, and the most cost-effective set of school management practices, for increasing student achievement?
- How does grade repetition affect achievement?
- What are the most effective ways of reducing repetition? Would investing in these measures reduce repetition enough to reduce the cost of educating a child to a given grade?
- How do the responses to material inputs and school management practices differ by students’ family background and gender?

The research will estimate the relative effects that different factors have on students’ attainment of reading and mathematics skills in Jamaica, focusing on family background (parents’ education, occupation, and income), the students’
participation in school (weekly attendance, years of school, grade attained), material and nonmaterial school inputs typically provided by Bank-supported education projects (textbooks, teacher training and supervision), and other characteristics of schools (principals' instructional leadership, teachers' professionalism). The estimates of the determinants of cognitive outcomes will then be combined with estimates of the costs of providing school inputs to calculate the relative cost-effectiveness of alternative school inputs and mixes of those inputs. This work will make use of data collected in the Jamaica Survey of Living Conditions.

RSB support: $147,500
Staff weeks: 42

The emphasis on poverty alleviation and on the social impact of structural adjustment programs has renewed interest in the quantity and quality of social sector investments. And budget constraints have created pressure on governments to accomplish more with the same or fewer resources. These conditions have given rise to a need for a method to evaluate how social investments affect welfare. Although there have been isolated efforts to evaluate the social impact of investments, they have not produced a process in which policy design is informed by hard data.

This project will address three principal research objectives in the context of several Bank-supported social sector projects. First, it will determine how much the projects have increased the welfare of the beneficiaries relative to their position had the project not existed. Second, it will evaluate the adequacy and cost-effectiveness of the instruments used in targeting the projects. And third, the project will provide methodological guidance for choosing among competing social sector investments.

The project will generate information on outcomes and the costs of obtaining those outcomes for Bank-supported social sector programs of three different types: the Social Investment Fund Projects in Bolivia and Honduras, the Youth Training and Employment Partnership Program in Trinidad and Tobago, and the Venezuelan Social Development Project, a targeted health and nutrition intervention. By focusing on specific projects and addressing the issues within an operational context, the project is expected to make it easier to translate the lessons it yields into guidance for the design of projects.

RSB support: $175,000
Staff weeks: 105

Sub-Saharan Africa has the highest population growth rate and the highest fertility rate among the developing regions. And while countries in every other developing region have begun to experience declines in fertility, this trend has only recently shown up in Sub-Saharan Africa, and in only three countries, Botswana, Kenya, and Zimbabwe. Results from the Demographic and Health Surveys indicate an increase in these countries in the use of modern contraceptives and a possible decline in fertility. But what accounts for these trends and how sustained they will prove to be remain uncertain. Further, fertility rates in these countries are still relatively high.

In considering a strategy for reducing fertility and population growth rates in Sub-Saharan Africa, knowing why fertility remains high and contraceptive use is low is important. Surveys of women of childbearing age in Sub-Saharan Africa over the past two decades have shown that there is a growing unmet need for contraceptives among certain groups of women who want to space and limit births but that, despite this trend, most couples still want very large families.

Among the factors thought to be most important in accounting for the desire for large families are high child mortality rates and women's low levels of education. That would suggest that a two-pronged approach for reducing fertility is needed: first, multisectoral policies that will lower the demand for children (by reducing child mortality, raising the level of education for females, and increasing the attractiveness to parents of investing in children), and second, improvements in the performance of family planning programs in attracting and retaining clients. The purpose of this research is to provide the necessary empirical foundation for effective multisectoral population policies.

The project will address two questions: First, what is the effect of economic and social policies on fertility and contraceptive use in Sub-Saharan Africa? And second, how can African family planning programs be made more effective in attracting and retaining clients?

Evaluation of Social Sector Investments
John Newman
Population and Human Resources Department, Welfare and Human Resources Division
Ref. no. 676-90

Economic and Policy Determinants of Fertility in Sub-Saharan Africa
Martha Ainsworth
Technical Department, Africa Regional Office, Population, Health, and Nutrition Division
Ref. no. 676-91
Toward answering these questions, the project will conduct comparative microeconomic analyses of the economic and policy determinants of fertility and contraceptive use in 13 African countries, using recently collected household data. The research will focus on four issues: the effect of women’s education on fertility and contraceptive use; the relation between child investments and the number of children; the determinants of child mortality and the effect of child mortality on fertility; and the effect of the availability, price, and quality of family planning and other social services on fertility and contraceptive use.

RSB support: $150,000
Staff weeks: 46

Pesticide Immunity in India
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Country Economics Department, Trade Policy Division, Environmental Policy and Research Division
Ref. no. 676-92

Regulations, Institutions, and Economic Efficiency
Mary Shirley and Brian Levy
Country Economics Department, Public Sector Management and Private Sector Development Division
Ref. no. 676-94

The use of fertilizers and pesticides in agriculture initially seemed to hold great promise for increasing yields, and for feeding the world’s hungry. But over the last 30 years, the use of these chemicals has produced disturbing results: pesticides leaching through soil have contaminated groundwater, excessive application of chemicals has rendered soils unusable, and exposure to the chemicals has caused health problems. And in a perverse development, the use of pesticides has led to the development of pesticide-resistant strains of pests that have devastated crops in several parts of the world.

This research — a small pilot project — seeks to develop an appropriate methodology for making preliminary measurements of the economic costs of pesticide immunity in the cotton-growing areas of the Guntur district of Andhra Pradesh in India. The effects on other crops in contiguous and more distant areas will be included. The research will focus on externalities that arise in the use of pesticides against the cotton bollworm (Heliothis armigera).

Because the bollworm is migratory, a farmer who controls the pest on his own fields creates a positive externality for other farmers. But because pesticide use leads to the development of pesticide-resistant strains, he also creates a negative externality. These external effects impinge on a wide range of food crops (notably, pulses, spices, vegetables, and coarse grains) as well as on cotton.

The research will develop a theoretical model that examines the necessary conditions for economically optimal use of pesticides, as well as of other agricultural inputs. It will attempt to estimate empirically farmers’ profits under Integrated Pest Management (IPM) techniques as a “best strategy,” as indicated by the theoretical analysis. The research is intended to contribute to the design of an incentive system for implementing IPM techniques and thus for optimizing the quantity and types of pesticides used in cultivating cotton. Finally, the research will look at the effect of pesticide-generated externalities on the economic costs of cultivating cotton and on the economic efficiency of cotton as an import substitute and as an export crop.

RSB support: $12,000
Staff weeks: 20

Regulatory reforms to promote efficient private sector participation have been introduced in many developed and developing countries, but there is still only limited empirical knowledge about what determines whether such reforms succeed. This research, which will build on the new “institutional economics,” will investigate how regulatory reforms may promote efficient private sector participation in developing countries and what is necessary to ensure that the reforms are successful.

The research will compare the regulatory experiences of five countries in the telecommunications sector, a sector whose mix of monopolistic and competitive activities and pace of technological change present diverse and complex regulatory issues. The five countries — including Chile, Jamaica, the Philippines, and the United Kingdom — have a wide variety of regulatory experiences and institutional capabilities.

The country case studies will look in detail at the institutional arrangements for regulation (for example, the mechanisms for conflict resolution, and the relationships between policymakers, regulatory authorities, and firms) and at the content of regulatory rules — the areas commonly addressed in standard, operationally oriented approaches. This research will go beyond the standard approach, however, by examining institutional arrangements and regulatory rules in a richer, more complex set of interre-
lations. First, it will highlight the relation between the sustainability of the regulatory regime and sector performance, and explore the ways in which institutional arrangements and regulatory rules can influence sustainability. And second, unlike the standard approach, which typically treats institutional arrangements and regulatory rules as exogenous variables that policymakers can shape with relatively few constraints, this research will treat sustainability, institutional arrangements, and regulatory rules as endogenous variables, whose characteristics are influenced by a country’s institutional endowment.

To produce lessons with practical application for countries planning regulatory reform, the research will test a number of hypotheses as to the relations among institutional arrangements, regulatory rules, and the sustainability of reform. It will examine the question of whether — and if so, how — institutional arrangements, regulatory rules, and the sequencing of privatization and regulatory reforms should differ for countries with different institutional endowments. And it will examine how technological change and regulation affect each other, and how technological change affects the sustainability of reform.

RSB support: $200,000
Staff weeks: 45

The Marginal Productivity of Infrastructure Investment in Developing Countries
Arturo Israel
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Ref. no. 676-95

World Bank analyses in the late 1980s of the condition and adequacy of “hard” infrastructure — transport, power generation and distribution, water supply and irrigation — yielded varied conclusions, but the overall impression was that the infrastructure of many countries was failing, or was inadequate for supporting structural change and a resumption of growth. But have investments in infrastructure indeed been inadequate? And how can their adequacy be judged? What is the appropriate level and distribution of infrastructure investment, and what is the cost of cutting back? Answering these questions for a particular project or country is made difficult by the lack of a practical method for bringing macroeconomic and microeconomic data to bear on the subject, and the lack of a body of analyzed experience that can be applied to different countries.

This research, formulated as a pilot study, is intended to help fill this gap. Its investigation of the effect of infrastructure investment on marginal productivity and economic growth should produce evidence, and methods for interpreting such evidence, helpful in making decisions on the allocation of investable resources, between public and private uses, and among alternative public uses. To ensure that the results have practical application, the study will follow a two-pronged approach, incorporating analyses of both macroeconomic and microeconomic data.

In the study’s macroeconomic analysis, the growth effects of infrastructure investment will be estimated for about 40 countries, for a 25-year period. The countries will be characterized by indicators of the structure of production, political stability, and the orientation of economic policies (distortion versus open economy), and periods will be characterized by indicators of international demand conditions. This analysis should thus produce estimates of the marginal productivity of infrastructure, relative to other capital, that permit predictions relevant to individual countries or groups of countries.

The microeconomic analysis will assess the Bank’s reestimated economic rates of return (RROR) as evidence for the marginal productivity of infrastructure investment, or of changes in the marginal productivity, and develop procedures for using the RROR for this purpose. This component will also produce hypotheses to be investigated in a country case study. The case study will estimate the effects of different levels and changes in infrastructure provision on the growth of industry in several economically distinct regions of a country. These estimates will then be compared, first, with reestimated economic rates of return on Bank-supported projects and projects supported by other agencies, and, second, with the results of macroeconomic estimates at the national level. The research will produce an account of ways for extracting evidence on the marginal productivity of infrastructure investment from microeconomic data. It will examine apparent externalities of infrastructure in terms of location and size. And it will yield preliminary results on the mechanism through which infrastructure investment affects economic growth.

RSB support: $75,000
Staff weeks: 69

Modeling Future Health Trends and Costs
Patricio Marquez
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Ref. no. 676-96

Chile is undergoing a major demographic and epidemiological transition — the incidence of
infectious and parasitic diseases has declined sharply and, as the population has aged, the relative importance of noncommunicable chronic conditions has increased. To meet Chile’s emerging and future health needs and priorities, and to improve the equity, efficiency, and effectiveness of its health system, improved data on the country’s future health trends and costs are needed. Also needed are evaluations of how alternative health sector interventions would affect the mortality, disability, and morbidity associated with chronic degenerative diseases and injuries.

This project will develop a model to predict Chile’s future health care experience and needs. The model will be designed to produce three main results: an “order of magnitude” forecast of causes of death for the next 40 to 50 years; the ability to generate alternative scenarios of health sector or behavioral interventions and a measure of how these interventions could be expected to affect Chile’s future health experience; and predictions of health care costs over time using mortality experience as an index of morbidity expense.

Unlike the earlier, more narrowly focused studies of health conditions in Chile, this model will incorporate national data and allow comparisons between socioeconomic groups and between urban and rural areas. The data base it will create should help in identifying cost-effective policies and programs for reducing the incidence of chronic diseases and injuries in Chile. It should be useful to policymakers at all levels of government in Chile, as well as to policymakers and researchers of other countries, particularly those countries undergoing similar demographic and epidemiological transitions.

Phase I of this research project tested the hypothesis that the property rights systems typical of many parts of Western Africa — common property rights — lead to an externality that causes overexploitation of the natural biomass stock and an excessive rate of land clearing. It investigated the extent to which the observed decline in agricultural productivity during the last decade is related to the degradation of the natural vegetation stock, treated as a common property resource.

The study, which looked at seven villages in western Côte d’Ivoire, has found that the stock of natural biomass is an important factor of production in agriculture and that its degradation goes a long way toward explaining the fall in agricultural productivity in western Côte d’Ivoire. It also found that communities are able to exert some control over farmers’ use of the biomass resources held in common, thus slowing the degradation of the biomass, but that these controls are insufficient. Farmers internalize less than 30 percent of the true social cost of using the resource, suggesting that too much land is cultivated to maximize the villages’ social income. As a result, it was found, the insufficient community control over the use of the biomass leads to a significant loss in village income. The results thus suggest that community income could in the long run be increased by reducing the area under cultivation.

The findings of this first phase suggest that increasing the aggregate prices of agricultural commodities without adequate complementary policies would have adverse implications for agricultural productivity in environmentally fragile areas because of the degradation of the biomass stock that would result. This poses a policy challenge: how to minimize the expansion of the area cultivated in environmentally fragile areas as the agricultural terms of trade are improved by more liberal policies. One solution could be to tax land-intensive commodities that are more environmentally demanding and subsidize labor-intensive commodities that are environmentally benign. Another is to strengthen community organizations to promote greater social control over the use of biomass.

Phase II of this project will expand the research to all of Côte d’Ivoire and Ghana, which have recently implemented significantly different policies affecting agriculture, to determine whether the findings of phase I hold for a larger sample of villages. The expanded scope will allow a disaggregation of agricultural commodities, which will make it possible, in turn, to test alternative policies more thoroughly.

RSB support: $184,000
Staff weeks: 15.5

Primary Teacher Training in Nepal: Improving Equity for Women

This research aims to produce information to help planners and policymakers in developing strategies to recruit more female primary school teachers and to enroll and retain more women in in-service teacher training programs. The
study, which will focus on Nepal, draws its impetus from two bodies of evidence on education in that country. First, the quality of its schools is low. Second, the enrollment and retention rates for females in Nepal are among the lowest in the world, and Nepalese parents prefer sending girls to schools with female teachers. But in 1988 only 10.5 percent of Nepal’s teachers were women; of those, 75 percent were untrained (compared with 65 percent of teachers as a whole).

One of the most effective ways to improve the quality of education has been found to be training teachers. The evidence suggests, then, that to improve education in Nepal, teacher training is needed, and to increase girls’ enrollment, more female teachers need to be recruited.

The research will address these questions: What factors influence a woman’s decision to become a teacher, and a female primary teacher’s attendance at and completion of teacher in-service training programs? (Two in-service training programs are included in the study: the cluster-based system, which provides face-to-face training for satellite schools within walking distance, and the Radio Education Teacher Training Program, which provides radio correspondence and some face-to-face training.) How are the factors identified for each program related to each other, which are related to program policy, and what would it take to affect women’s participation? What are the most appropriate target populations for each program? And what policy changes are needed to increase women’s recruitment and retention?

Data will be gathered through interviews with about 64 women, comprising equal numbers of graduates of in-service teacher training programs, dropouts from such programs, untrained primary teachers, and women who are not teachers. Male heads of households will also be interviewed. A principal hypothesis to be tested is that the man in the household, whether husband or father of the woman teacher, is the household’s “gatekeeper” and has the most control over who in the family becomes educated, and where and how. Understanding what influences gatekeepers’ decisions is important in planning policy for recruiting and training female teachers.

RSB support: $20,000
Staff weeks: 25

Research Proposals under Preparation

“Industrial Restructuring and Reform in Three Chinese Cities” and “Center-Local Fiscal and Financial Relations in China”
Shehid Javed Burki
Country Department III, Asia Regional Office
Ref. no. 676-86
RSB support: $10,000

Food Security, Consumption Smoothing via Storage, and Seasonal Price Instability in Africa
Gershon Feder
Agriculture and Rural Development Department, Agricultural Policies Division
Ref. no. 676-88
RSB support: $10,000

Forestry Sector Analysis
Patrice Harou
Western Africa Department, Africa Regional Office, Agriculture Operations Division
Ref. no. 676-89
RSB support: $18,300

Strengthening Accountability in Public Services
Mary Shirley
Country Economics Department, Public Sector Management and Private Sector Development Division
Ref. no. 676-93
RSB support: $10,000
involvement in adjustment lending and tax reform. It describes the evolution of the Bank's role, general patterns of Bank tax advice, and the provision of technical advice in adjustment loans. Finally, it recommends directions for future Bank involvement in tax reform in its country economic and sectoral work, lending operations, and research.

**Commodity Risk Management and Finance**
Theopilos Priovolos and Ronald C. Duncan, editors
Published for the World Bank by the Oxford University Press
186 pages/Order Stock #60867/$24.95

Commodity-linked financing is an innovation now commonly used in the financial markets of industrial countries. Such financing offers considerable potential for managing risk in developing countries, but has not yet been used.

This volume examines the uses of commodity-linked financing in industrial countries and analyzes the merits of using it in developing countries. It shows that commodity price-related financing can help manage the instability in export earnings and shift the risks from the developing countries to investors better able to bear them. As a result, revenue and expenditure streams can be made more stable, debt servicing can be more reliable, creditworthiness can be improved, and macroeconomic management can be made less onerous.

Part I of the volume discusses commodity-linked securities. Chapters explain commodity-linked issues, the demand for commodity bonds, methods for pricing commodity-linked securities, and commodity bonds using binomial option pricing.

Part II deals with commodity contingency — the payment of debts linked to assets — in the internal lending of developing countries. Chapters review optimal external debt management with commodity-linked bonds; integrating commodity and exchange rate risk management; hedging with commodity-linked bonds under price risk and capital constraints; and ways to reduce commodity fluctuations, stabilize incomes, and securitize development finance.

**Disease and Mortality in Sub-Saharan Africa**
Richard G. Feachem and Dean T. Jamison, editors
Published for the World Bank by the Oxford University Press
376 pages/Order Stock #60826/$49.95

In 1980 African delegates joined representatives of other nations in endorsing the Alma Ata declaration, which committed all governments throughout the world to the common goal of achieving “Health for All” by the year 2000. The goal, ambitious even for well-established industrial countries, is difficult for developing countries to achieve, particularly those in Sub-Saharan Africa. Nevertheless, many African governments have boldly confronted the challenge of improving the health of their populations.

This book documents the significant changes in the health situation in Sub-Saharan Africa during the past 20 years. The editors present useful insights regarding the patterns of health and disease, including such frightening challenges as AIDS. Trends in the health of populations — including important differences that require further research and analysis — are described and evaluated. The editors also present innovative approaches to community diagnosis and health care delivery. The book provides an important work agenda for African health officials for the next decade.

**Journals**
The articles summarized in this Journals section appear in the January 1992 issue of the World Bank Economic Review. Subscription to the Review is available without charge to readers with mailing addresses in countries that are not members of the OECD but are members of the World Bank. Other subscription requests should be directed to the World Bank Publications Sales Unit, Department PR, 1818 H Street, NW, Washington, DC 20433.

**World Bank Economic Review**

Does Undernutrition Respond to Incomes and Prices? Dominance Tests for Indonesia
Martin Ravallion
Recent evidence suggests that food energy intakes of the poor respond less to income than was once thought. However, it is not intake alone that is of concern, but undernutrition. Two facts confound assessments of how undernutrition responds to incomes and prices: individual nutrient requirements vary in a generally unobserved way, and intakes are observed with error. By modeling observed intake distributions econometrically, straightforward stochastic dominance tests can permit robust qualitative inferences about such responses. An application to Indonesia in the mid-1980s indicates that regional distributions of food energy intake are influenced by average income levels, intraregional inequalities, and local prices of staple food grains — all of which have unambiguous effects on undernutrition. The results suggest that any adverse effects on inequality of a growth process would need to be large to outweigh the desirable effect on undernutrition. In
addition, higher food staple prices still have adverse effects on undernutrition after allowing for their likely positive effects on rural incomes.

The Menu Approach to Debt Reduction in Less Developed Countries
Ishac Diwan and Ken Kletzer
This article examines the mechanics and attributes of concerted debt reduction agreements that offer creditors a choice between exit and relending options. The menu approach sets prices for divergent options that implement a decentralized equilibrium. When banks can commit to choosing from the menu options and are not allowed to free ride, a menu can be designed that assures that the price paid for debt repurchased is equal to the marginal value of the debt claims. This can be achieved by taxing the gains that accrue to non-exiters with a new money call. The article shows that the equilibrium amount of debt reduction rises when the new money call is increased. It discusses the importance of banks' heterogeneity for menus to dominate simple concerted buybacks. The article also discusses the case in which debt reduction is financed by loans from international financial institutions.

Alleviating Transitory Food Crises in Sub-Saharan Africa: International Altruism and Trade
Victor Lavy
The donor community has responded to unexpected or transitory drops in domestic food production in many countries in Sub-Saharan Africa. An empirical framework estimates and analyzes the correlation between this food aid and domestic production. Both emergency food aid and commercial imports are used to offset the effects of negative output shocks in Sub-Saharan African countries — the major recipients of global emergency food aid. On average every one-ton drop in cereal production is offset by the delivery of 0.8 tons of cereal and dairy products from abroad (over four years). Most food aid arrives within a year of a shock, and correlation of shocks over time along with the differences between crop years and calendar years may explain the link between aid and production. The economic and political considerations also determine the global response to the emergency food needs of countries in Africa. The international response is not contingent on the form of government or the level of political and human rights violations. Poorer countries and those with well-established nonemergency food aid programs receive larger amounts of emergency aid when needed.

The Working Behavior of Young People in Rural Côte d'Ivoire
Rob Alessie, Paul Baker, Richard Blundell, Christopher Heady, and Costas Meghir
One of the major features of structural adjustment is an attempt to reallocate labor — and hence output — through changes in relative prices. This article assesses how price changes affect the working patterns of young people in rural Côte d'Ivoire. The analysis is based on a model of the labor supply of rural households and on the construction of composite price indexes. The data come from the Côte d'Ivoire Living Standards Survey for 1985 and 1986. The panel aspect of the data allows the work choice made in one year to depend on the individual's choice in the previous year. Results indicate that the price of agricultural output generally is a positive incentive in the decision to participate in the labor force. This result depends heavily on the employment and education of the individual in the previous period, however. Those not already working are less likely to respond to favorable movements in the prices of cash crops by entering the work force.

Social Security and Private Transfers in Developing Countries: The Case of Peru
Donald Cox and Emmanuel Jimenez
Do social security systems "crowd out" private transfers from younger to older generations? This question has generated much theoretical discussion, but little empirical work exists to confirm or refute this crowding-out hypothesis. This article investigates the connection between social security and private transfers in Peru, using the Peruvian Living Standards Survey. It was found that private transfers from young to old would have been nearly 20 percent higher without social security benefits. This indicates that the Peruvian social security system is less effective at delivering benefits to the elderly than a simple assignment of government expenditures would suggest. Social security's displacement of private transfers, while significant, is less than that predicted by models with widespread altruistic transfers.

The Willingness to Pay for Education for Daughters in Contrast to Sons: Evidence from Rural Peru
Paul Gertler and Paul Glewwe
In most of the developing world the education of women lags behind that of men. This could come about from a lack of parental desire for educated daughters or from a perception by the parents that there is a lower net return to education for girls. The relation between gender and education in rural Peru is explored using data from the 1985–86 Peru Living Standards Survey. A model of educational choice is developed. The estimated demand functions are used to assess the impact of user fees on demand and revenues. The empiri-
Evidence indicates that parents are more willing to pay for reduced travel time to secondary schools for boys than for girls. However, parents are willing to pay increased fees for girls' schooling sufficient to generate teachers' salaries.

**A Symposium on Inflation in Socialist Economies in Transition**

**Inflation and the Transition to a Market Economy: An Overview**

*Simon Commander*

European socialist economies were commonly characterized by low or negligible open inflation, full employment, and stable relative prices and real incomes. Associated features were significant repressed or hidden inflation and disequilibria in goods markets. More recently, as economic and political reform has advanced, attention has shifted to translating repressed into open inflation. Where such reforms have proceeded against a background of a monetary overhang, the implications of that overhang for demand-side policies have figured prominently. In all instances, however, the key underlying issue has been the transmission mechanism for inflation once the initial impulse associated with price liberalization has been imparted.

**Lessons from Experiences with High Inflation**

*Rudiger Dornbusch*

In economies where price control has been the rule, the most serious concern may be recognition of the inflation problem. Beyond the initial correction of subsidies there is the broader issue of the risk of a serious inflation. This article looks at the problem of high inflation in developing countries in Europe and Latin America and draws lessons from historical experience. It analyzes the dynamics of the interaction among deficit finance, institutional innovation in financial markets, dollarization, and the shortening of wage contracts in high-inflation situations. When stabilization is undertaken, there is neither immediate, spontaneous resumption of longer adjustment periods for wages and prices nor instant increase of real money demand to noninflationary levels. Incomes policy—freezing exchange rates, wages, and prices—is advocated as an effective supplement to the inevitable budget cut to make up for institutional inertia and facilitate the start of the stabilization process.

**Price-Wage Dynamics and Inflation in Socialist Economies: Empirical Models for Hungary and Poland**

*Simon Commander and Fabrizio Coricelli*

This article analyzes the determinants of open inflation in transitional socialist economies, with reference to recent experience in Hungary and Poland. A simple inflation model is centered on the transmission process and on the short-run dynamics of inflation. Further incorporating a number of features specific to socialist economies and working with quarterly data, dynamic price and wage equations are estimated. The estimated equations allow satisfactory exploration of the role and weight of foreign prices and domestic factors in propagating inflation. Foreign prices matter, but developments on the cost side are critical in relating exogenous, policy-driven adjustments to the price level to increases in the rate of inflation. The absence of conventional market-based, equilibrating mechanisms requires that nominal anchors, particularly wage restraints, feature prominently in any stabilization program adopted by reforming socialist economies.

**Are High Interest Rates Effective for Stopping High Inflation? Some Skeptical Notes**

*Guillermo A. Calvo*

High interest rates are considered an effective tool for stopping high inflation. The case for a policy of high interest rates is developed in terms of a conventional IS-LM model. However, among other things, the model ignores some central aspects of modern credit markets. In particular high interest rates may give rise to nonperforming bank loans, thus seriously jeopardizing the effectiveness of the policy. Examples are developed in which it would be optimal to aim for equilibriums of low, rather than high, interest rates. One of these examples hinges on the existence of nonindexed domestic debt.

**Stagflationary Effects of Stabilization Programs in Reforming Socialist Countries: Enterprise-Side and Household-Side Factors**

*Guillermo Calvo and Fabrizio Coricelli*

Dismantling subsidies could give rise to serious macroeconomic difficulties in the short run. This article explores a view based on the enterprise sector as a central source and main channel of the stagflation phenomenon, using as an example the stagflation that followed the 1990 stabilization program in Poland. The stagflation phenomenon is linked to features of the financial market that are somewhat peculiar to reforming socialist economies: the weak credit links between households and enterprises, and the existence of large interenterprise debt. The policy implications of the enterprise-side view include more explicit consideration of initial conditions in the credit market, implementation of privatization schemes, and the development of a domestic banking system.
Discussion, Technical, and Related Papers

Finance at the Frontier: Debt Capacity and the Role of Credit in the Private Economy
J. D. Von Pischke
EDI Development Study
448 pages/Order Stock #11818/$22.95
Developing country governments and development assistance agencies commit millions of dollars each year to credit programs designed to help small farmers and businesses. Their records indicate, however, that most of these programs serve small farmers and small businesses poorly, and that loans are often not paid. But the use of credit remains a key strategy in economic development for people in these sectors.

This study addresses the relation between finance and development for farmers and small businesses, and the use of credit by individuals in low-income countries. It reviews why credit projects fail. And it recommends ways to make financial systems more responsive to those who attempt to use credit for development. The report considers financial markets and their special characteristics and problems with conventional efforts to improve financial markets in developing countries.

The New Fiscal Federalism in Brazil
Anwar Shah
World Bank Discussion Paper 124
138 pages/Order Stock #11820/$9.95
Brazil's states and municipalities gained broad taxing and spending powers with the country's new constitution of 1988. Revenue-sharing arrangements were also redefined. The new provisions have important implications for the success of macroeconomic policies in Brazil.

This paper reviews the state of fiscal federalism in Brazil, then develops and applies a framework for fiscal federalism to evaluate the constitutional division of powers. It reviews tax and expenditure assignments, analyzes federal transfers to states and municipalities, and examines state transfers to municipalities. Finally, it summarizes its analyses and recommendations on directions for reform.

Environment and Development in Africa: Selected Case Studies
Jonathan M. Blackwell, Roger N. Goodwillie, and Richard Webb
EDI Development Policy Case Series, Analytical Case Study 6
144 pages/Order Stock #11608/$6.95
This study examines the impact of bilateral, multilateral, and government-initiated development projects on the environment of areas in Gezira Province of Sudan, Dodoma District of Tanzania, and Kasama District of Zambia. It looks at why some projects are environmental “successes” and others “failures,” and identifies three factors crucial to success: appropriate technology, community involvement, and adequate monitoring.

The study includes a checklist of environmental issues that policymakers and planners should consider in preparing projects. The checklist is divided into three sections: environmental orientation, monitoring and evaluation, and environmental impact.

Managing Inflation in Socialist Economies in Transition
Simon Commander, editor
EDI Seminar Series
280 pages/Order Stock #11778/$15.95
Inflation has become an early manifestation of the economic reforms in such countries as Poland and Yugoslavia and poses a very real threat in other Eastern European countries. To study the effects of these reforms, a senior policy seminar on Managing Inflation in Socialist Economies was held in Laxenburg, Austria, in March 1990. Government officials from Bulgaria, Czechoslovakia, Hungary, Poland, the Soviet Union, Yugoslavia, and the former German Democratic Republic joined with representatives from nonsocialist countries.

This volume brings together the papers prepared for the seminar and later revised to address the significant changes of the past year. The report first summarizes seminar discussions of inflation, under the categories of causation, dynamics, and control. Second, it discusses the reform process in general. Finally, it addresses economic stabilization, approaches to the stabilization of free markets — including privatization — and issues involved in the privatization of enterprises.
Policy Research Working Papers

Working Papers disseminate the findings of work in progress and encourage the exchange of ideas among Bank staff and all others interested in development issues.

Private Investment Under Macroeconomic Adjustment in Morocco
Klaas Schmidt-Hebel and Tobias Muller
WPS787 • Contact Susheela Jonnakuty, room N11-039, tel. 202-473-9074.

How Expectations Affect Reform Dynamics in Developing Countries
Francesco Daveri
WPS788 • Contact Susheela Jonnakuty, room N11-039, tel. 202-473-9074.

Intrahousehold Inequality and the Theory of Targeting
Lawrence Haddad and Ravi Kanbur
WPS789 • Contact Jane Sweeney, room S3-026, tel. 202-473-1021.

Reforming and Privatizing Hungary’s Road Haulage
Esra Bennathan, Jeffrey Gutman, and Louis Thompson
WPS790 • Contact Barbara Gregory, room S10-049, tel. 202-473-3744.

Measuring Real Exchange Rate Instability in Developing Countries: Empirical Evidence and Implications
Lant Pritchett
WPS791 • Contact Karla Cabana, room N10-037, tel. 202-473-7947.

Reducing Labor Redundancy in State-Owned Enterprises
Jan Svejnar and Katherine Terrell
WPS792 • Contact Barbara Gregory, room S10-053, tel. 202-473-3744.

Decollectivization and the Agricultural Transition in Eastern and Central Europe
Karen M. Brooks
WPS793 • Contact Cicely Spooner, room N8-037, tel. 202-473-0464.

How Do National Policies Affect Long-Run Growth? A Research Agenda
William Easterly, Robert King, Ross Levine, and Sergio Rebelo
WPS794 • Contact Rebecca Martin, room N11-053, tel. 202-473-9065.

Economic Stagnation, Fixed Factors, and Policy Thresholds
William Easterly
WPS795 • Contact Rebecca Martin, room N11-053, tel. 202-473-9065.

Excess Liquidity and Monetary Overhangs
Gerard Caprio, Jr., and Patrick Honohan
WPS796 • Contact Wilai Pitayatonakarn, room N9-003, tel. 202-473-7666.

Using Field Visits to Improve the Quality of Family Planning, Health, and Nutrition Programs: A Supervisor’s Manual
Richard Hoover
WPS797 • Contact Otilia Nadora, room S6-065, tel. 202-473-1091.

Agriculture’s Decline in Indonesia: Supply or Demand Determined?
Will Martin and Peter G. Warr
WPS798 • Contact Maria Sanchez, room S7-075, tel. 202-473-3731.

Working Papers are not available through the Publications Department. Please address requests for papers to the contact person indicated at the Bank’s main address.

Growth in Open Economies
Sergio Rebelo
WPS799 • Contact Rebecca Martin, room N11-043, tel. 202-473-9065.

The Legal Framework for Private Sector Development in a Transitional Economy: The Case of Poland
Cheryl W. Gray, Rebecca J. Hanson, Michael A. Heller, Peter Ivanov, and Yoessuf Dzhang
WPS800 • Contact CECSE, room N6-037, tel. 202-473-7188.

Unraveling the Mysteries of China’s Foreign Trade Regime: A View from Jiangsu Province
Arvind Paragarrya
WPS801 • Contact Dawn Ballantyne, room N10-025, tel. 202-473-7947.

Strengthening the Bank’s Population Work in the Nineties
Steven W. Sinding
WPS802 • Contact Otilia Nadora, room S6-065, tel. 202-473-1091.

Financial Regulation: Changing the Rules of the Game
Millard Long and Dimitri Vittas
WPS803 • Contact Wilai Pitayatonakarn, room N9-003, tel. 202-473-7666.

Global Trends in Raw Materials Consumption
Baum-jong Kee
WPS804 • Contact Sarah Lipscomb, room S7-062, tel. 202-473-3718.

Privatization in the Soviet Union: The Beginnings of a Transition
Sergei Shatalov
WPS805 • Contact CECSE, room N6-037, tel. 202-473-7188.

Measuring Commercial Bank Efficiency: Use and Misuse of Bank Operating Ratios
Dimitri Vittas
WPS806 • Contact Wilai Pitayatonakarn, room N9-003, tel. 202-473-7666.

Moderate Inflation
Rudiger Dornbusch and Stanley Fischer
WPS807 • Contact Sabah Moussa, room S9-029, tel. 202-473-3490.

Ann Harrison
WPS808 • Contact Dawn Ballantyne, room N10-025, tel. 202-473-7947.

Openness and Growth: A Time Series, Cross-Country Analysis for Developing Countries
Ann Harrison
WPS809 • Contact the WDR office, room P4-001, tel. 202-473-1393.

Poverty and Income Distribution during Adjustment: Issues and Evidence from the OECD Project
Eugleanor Bourguignon, Jaime de Melo, and Christian Morisson
WPS810 • Contact Dawn Ballantyne, room N10-025, tel. 202-473-7947.

Comparative Resource Allocations to Human Resource Development
Peter T. Knight and Sukainan S. Wasty
WPS811 • Contact Dulce Afzal, room M7-035, tel. 202-473-6335.

Alternative Forms of External Finance
Stijn Claessens
WPS812 • Contact Sheila King-Watson, room S8-040, tel. 202-473-1047.
January

24-25 — Conference on Impediments to Transition: East European Countries and the Policies of the EC, Florence, Italy [Contact: European University Institute, European Policy Unit, tel. 39-55-309-2235, fax 39-55-309-2298]

February

16-27 — Seminar on Environmental Policy, Natural Resource Management, and Development in the Arab States, Aleppo, Syria [Contact: Peter Sun, Economic Development Institute, World Bank, 1818 H Street, NW, room M5-047, Washington, DC 20433, tel. 202-473-6407]

17-21 — Workshop on Energy Investments and the Environment, Quito, Ecuador [Contact: Cora Siddayao, Economic Development Institute, World Bank, 1818 H Street, NW, room M5-015, Washington, DC 20433, tel. 202-473-6373]

March

2-5 — Seminar on Poverty and Adjustment in Sub-Saharan Africa, Côte d'Ivoire — on the relation between public policy and economic growth, the alleviation of poverty, and changes in income inequality [Contact: Irfan Ul Haque, Economic Development Institute, World Bank, 1818 H Street, NW, room M7-051, Washington, DC 20433, tel. 202-473-6340]

April

2-3 — Conference on Regional Integration, Washington, DC [Contact: Karla Cabana, World Bank, 1818 H Street, NW, room N10-037, Washington, DC 20433, tel. 202-473-7946]


6-10 — Seminar on the Politics and Economics of Public Spending, Brazil — a comparative examination of the framework for public expenditure policymaking in Latin America [Contact: Max Iacono, Economic Development Institute, World Bank, 1818 H Street, NW, room M8-049, Washington, DC 20433, tel. 202-473-1175]


20-24 — Seminar on Teachers’ Cost and Effectiveness in the Middle East and North Africa, Morocco [Contact: Abdelwahed Zhiri, Economic Development Institute, World Bank, 1818 H Street, NW, room M4-053, Washington, DC 20433, tel. 202-473-6451]

21-24 — Second European Conference on Food and Nutrition Policy, The Hague, The Netherlands [Contact: Flora de Vrijer, c/o TNO Nutrition and Food Research, P.O. Box 360, 3700 AJ Zeist, The Netherlands, tel. 31-3404-44218; fax 31-3404-57224]