

BULLETIN

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Building economic research capacity around the world

The World Bank has been helping to create and support regional economic research centers in the developing world for more than a decade. This involvement has leveraged increasing support from governments and private foundations that is enabling further expansion of these regional activities. Now the Bank has initiated a program to link these networks internationally—the new Global Development Network.

The need for local research capacity

The problems facing developing and transition economies are far greater than those facing industrial countries—yet the financial, institutional, and human resources to solve them are far more limited. Determining how best to use limited resources to address daunting problems requires extensive experience, expert analytic skills, and comprehensive knowledge of local circumstances, systems, and resources. Training local researchers and creating an institutional environment that supports independent policy research can help developing countries formulate solutions to local problems that are informed by experience elsewhere, tested analytically and empirically, and tailored to their needs.

Creating regional networks

The World Bank has long supported efforts to increase the capacity of economists in the developing world to perform research, analyze policy, and provide advice on

development issues. To take advantage of synergies and make the best use of limited capacity-building resources, the Bank has helped link developing countries through regional research networks. These networks allow policy researchers in one country to benefit from lessons learned in others. They create a community of researchers who critique and encourage one another's work, help train one another's students, and share data and new methods.

The creation of regional networks emerged from the notion that countries within a region often share some problems and that these can be addressed most cost-effectively on a regional rather than a national level. These problems differ from region to region:

- In the Middle East and North Africa governments finance policy research, but research findings often reflect the policy stance of the regime in power. The Economic Research Forum was created to support institutions and incentives for independent policy research (box 1).
- Latin America and South Asia have long had large numbers of skilled researchers and have produced many internationally renowned economists. But research infrastructure within the regions has been weak, and it has been difficult for many researchers to attend international conferences or work with researchers from other countries. The Bank has financed participation by policy researchers in regional conferences (box 2).

- In the transition economies the study of economics was long dominated by central planning of production and distribution. To prepare students to analyze market economies, the Bank has supported research and graduate education programs in Eastern Europe and the former Soviet Union (box 3).

- As China began the shift toward a market economy, many of the best-trained Chinese scholars lived abroad. The China Center for Economic Research has boosted China's research capacity in part by helping to repatriate Chinese scholars (box 4).

- In Sub-Saharan Africa the gaps in research capacity are multiple and massive. The African Economic Research Consortium supports a range of activities to improve the quality of economic research in the region (box 5).

While specific capacity-building needs differ markedly across regions, all capacity-building programs face many of the same challenges. They need to make research relevant to policy, to balance their activities between improving the quality of research and training new researchers, and to allocate research funds transparently. They need effective, independent governing bodies, rigorous peer review processes, mem-

BOX 1

Creating incentives for independent research in the Arab countries, Iran, and Turkey

Although economic research institutions exist in the Middle East and North Africa, policy research has too often reflected government preferences. Incentives encourage research findings that are acceptable to national governments rather than being intellectually rigorous. Contact and interaction among regional scholars is limited, and peer review inadequate.

To address these problems, in 1992 the Bank's Middle East and North Africa Regional Office helped to establish the Economic Research Forum (ERF). Headquartered in Cairo, the ERF supports a variety of activities—research, training, publications, an annual conference, a regional data bank. Its annual conferences have brought together hundreds of researchers from throughout the region. All these efforts are aimed at creating a community of economists in which incentives for excellence counter official pressures in determining the standards in economic research. The ERF has been financed by several donors, including the Arab Fund for Economic and Social Development, European Union, Ford Foundation, International Development Research Centre, and World Bank.

bers who participate in the network and in running it, and researchers integrated into the international community of policy research. And they need to ensure that research findings are disseminated broadly and have an effect on policy.

The need for a Global Development Network

For more than a decade the Bank's Research Committee has provided grants to help establish and strengthen regional networks of research organizations in Bank member countries. Over time the value of developing a worldwide network of development researchers became increasingly apparent. In June 1998 representatives of 22 think tanks in the developing world attended a meeting on "Capacity Building for Knowledge Institutions" to discuss how best to accomplish this. Following that meeting, the Bank held a series of seminars on capacity building for think tanks, and a research support program began awarding research grants through competitions organized by regional networks. The following spring the International Economic Association, six regional networks, and the World Bank agreed to start the Global Development Network.

Aiding the global exchange of knowledge

The Global Development Network aims to strengthen the capacity of developing country research institutions to perform policy-relevant research, to help them to establish themselves as effective spokespersons on behalf of civil society, and to support their efforts to introduce the results of research into the policy debate.

BOX 2

Facilitating international contacts in Latin America

Unlike other developing regions, Latin America has a large pool of expert economic researchers. But lack of funds has limited contacts and opportunities for collaboration and discussion between researchers from different countries in the region. To aid the international exchange of ideas, the Bank has provided support to the Latin American Econometric Society for more than a decade. And since 1997 it has supported participation by young economists in the Latin American and Caribbean Economic Association (LACEA). The Annual Congress of the LACEA is held in a different Latin American or Caribbean country each year. All costs for the congress are borne by the host country, including its universities and private sector.

BOX 3

Training economists for the new market economies in Eastern Europe and the former Soviet Union

As the economies of Eastern Europe and the former Soviet Union moved from state planning to markets, there were few economists with training in the fundamental concepts of market dynamics who could advise on this massive transformation. In response, the Bank in 1996 helped to establish the Economics Education and Research Consortium (EERC), to create independent institutions for economic research and graduate education in Russia and Ukraine, both managed by the Eurasia Foundation.

In Russia the EERC focuses on economic research. The program has supported more than 100 Russian researchers in 60 research projects, financed research and methodological workshops attended by more than 200 young economists, launched professional publications, and extended research capacity beyond Moscow and St. Petersburg.

In Ukraine the EERC established the first master's degree program that meets international standards in curriculum and teaching quality. The two-year program at the National University Kiev–Mohyla Academy is taught by visiting Western faculty, who also provide professional development opportunities for Ukrainian faculty through collaboration in research. The program has placed graduates in strong Ph.D. programs abroad and in internships in agencies at home.

A key to the EERC's success has been the expanding coalition of donors that support and direct its activities. Donors have included the Carnegie Corporation of New York, Eurasia

Foundation, Ford Foundation, Norwegian Royal Foreign Ministry, Open Society Institute (Soros), Starr Foundation, and Swedish Foreign Ministry. Also, the Citicorp Foundation, Digital Equipment Corporation, the government of Finland, the International Monetary Fund, and the Pew Charitable Trusts have provided direct or in-kind support. Bank funding has served as a catalyst for other donors, with the Bank contributing only about 12 percent of total funds raised.

The Bank has supported other institutions in Russia and Eastern Europe: the New Economic School in Moscow and the Center for Economic Research and Graduate Education at Charles University in Prague. The Bank has also collaborated with the Open Society Institute, which established a third center, the Economics Department at the Central European University in Budapest.

A recent report on a needs assessment in 20 transition economies proposes three programs of graduate economics in Central Asia, the Caucasus, and Southeastern Europe, and a fourth for countries in the region not already involved in an international economic research program. A meeting with European foundations and other donors will be held in Berlin on November 6 to discuss the report and expansion of the program. (For a copy of the report, "Proposed Strategy to Address Critical Economics Education and Research Needs in Transition Economies," contact Boris Pleskovic at bpleskovic@worldbank.org.)

BOX 4

Repatriating Chinese researchers to increase capacity in China

China's pool of skilled economists is large, but many of its top researchers live abroad. The China Center for Economic Research (CCER) at Beijing University was established in 1994 to create the core of an economic research community in China. The CCER has been supported by the Asia Foundation, Ford Foundation, Friedrich-Naumann Foundation, Hong Kong Chinese University, International Food Policy Research Institute, Rockefeller Foundation, and World Bank, among others. The program includes a graduate economics program, fellowships for visiting scholars, computer laboratories, paper and Internet report series, and national conferences on economic research.

The task of repatriating Chinese researchers is a difficult one given the huge pay differences between Chinese and OECD economists and the absence of a strong research community in China. But many Chinese are willing to help their country's transition, and have permanently returned to China after having participated in the CCER's visiting scholar program. The visitor program has also brought domestic visitors from government agencies and other universities both within and outside Beijing to the CCER. By mixing researchers with different backgrounds and perspectives, the program has created invaluable opportunities for the exchange of information and ideas—exchanges that will improve the policy relevance of economic research both inside and outside government.

Improving the quality of research and creating an esprit de corps in Sub-Saharan Africa

The plethora of problems facing Sub-Saharan Africa has made the challenges for policy researchers there acute, particularly given the region's limited resources. And yet the program to strengthen local capacity for policy-related economic research in Sub-Saharan Africa has been extraordinarily successful. According to an independent review of the program, the consortium "combines within one institution and under one roof some of the best characteristics of such eminent U.S. economic research agencies as the Economic Research Division of the National Science Foundation and the National Bureau of Economic Research."

The African Economic Research Consortium (AERC) was established in 1988 following a pioneering initiative by the International Development Research Centre. It is supported by the African Capacity Building Foundation, Canadian International Development Agency, European Union, Ford Foundation, government of Norway, MacArthur Foundation, Ministry of Foreign Affairs of Denmark, Ministry of Foreign Affairs of the Netherlands, Rockefeller Foundation, Swedish International Development Authority, Swiss Agency for Development Cooperation, U.K. Department for International Development, U.S. Agency for International Development, and World Bank. The program seeks to achieve a balance between activities that establish rigorous professional standards and those that build indigenous capacity for economic research.

The consortium fosters economic research in four basic ways. First, the research program has established a network of researchers in the region, which supports their research on themes identified by the AERC's advisory committee as most pertinent to policy needs. Second, the AERC provides small grants to groups made up of researchers from both academia and policy institutions. Including both types of researchers helps ensure that the research both benefits from the frontier knowledge in the discipline and is sensitive to policy concerns. Third, the AERC's Secretariat builds the skills of local researchers by providing technical advice and up-to-date literature. It also conducts methodological workshops. Fourth, the AERC holds thematic research workshops—a key tool for monitoring the implementation and quality of research, creating effective peer pressure, fostering international participation in the network, and enforcing scheduled delivery of reports.

Besides improving the quality of research in Sub-Saharan Africa, the AERC has played a critical role in bringing together African economists and creating an esprit de corps in a region in which professional isolation has long retarded professional growth and engagement. The AERC has also enabled African economists to stay close to the professional frontier by supporting contacts with the rest of the world.

A key aspect of the Global Development Network is the sharing of knowledge—about development, about research methods and techniques, and about the implications of research for policy. Communication is thus critical. Much of this communication will take place electronically, through electronic mail and the World Wide Web. Other mechanisms—creating incentives for cooperation, developing interlocking research themes, establishing mentoring programs—can also help networks in different parts of the world share what they know.

In regions where networks do not exist, the Global Development Network is working with local organizations to create them. In regions where networks are already in place, the Global Development Network is working with regional organizations to extend their reach. Eight regional institutions or networks are now participating in the Global Development Network (box 6).

The Bank is providing financial, administrative, and intellectual support to the Global Development Network.

To ensure that research funds are allocated objectively, proposals for funding are reviewed by professionals from both inside and outside a region. In the past some governments and private foundations were reluctant to finance research because of doubts about the quality and value of the work being done. By putting in place a rigorous and competitive grant allocation process, the Global Development Network hopes to assure donors that their grants will be well spent. Bank support of the network will thus be catalytic, helping to attract other sources of funding that eventually will support the Global Development Network. While the Bank has played an important role in initiating the network, management and governance of the network will be handled by the regional networks and other international organizations, such as the International Economic Association.

Launching the Global Development Network

The Global Development Network will be officially launched December 6–8, 1999, in Bonn. About 400 people

Participants in the Global Development Network

- African Economic Research Consortium (P.O. Box 62882, 8th Floor, International House, Nairobi, Kenya; GDN contact: Delphin Rwegasira, aerced@form-net.com)
- East Asian Development Network (coordinating institute: Institute of Southeast Asian Studies, Heng Mui Keng Terrace, Pasir Panjang, Singapore 119 596; GDN contact: Chia Siow Yue, chia@merlion.iseas.edu.sg)
- Eastern European Network (coordinating institute: Center for Economic Research and Graduate Education–Economic Institute Foundation, P.O. Box 882, Politických Veznu 7, 111 21 Prague 1, Czech Republic; GDN contact: Randall Filer, randall.filer@cerge.cuni.cz)
- Economics Education and Research Consortium (18 Malaya Pirogovskaya, Suite 101, Moscow 119435, Russia; GDN contact: Eric Livny, elivny@eerc.ru)
- Economic Research Forum (7 Boulos Hanna Street, Dokki, Cairo, Egypt; GDN contact: Heba Handoussa, erf@idsc.gov.eg)
- Latin American and Caribbean Economic Association (GDN contact: Almudena Ocejo, Inter-American Development Bank, 1300 New York Avenue, NW, Washington, DC 20057, almudena@iadb.org)
- New Economic School in Moscow (Nakhimovsky Prosp. 47, Moscow 117418, Russia; GDN contact: Valery Makarov, nes@nes.cemi.rssi.ru)
- South Asian Network of Economic Institutes (coordinating institute: Indian Council for Research on International Economic Relations, Habitat Centre, Core 6A, 4th Floor, Lodi Road, New Delhi, 10003, India; GDN contact: Isher Ahluwalia, director@icrier.res.in)

are expected to attend the launch meeting—about half of them from developing countries. The meeting will establish the network's governance structure and secure funding commitments from donors. It will also showcase the work of think tanks and research institutions in developing countries, share experiences and best practices for managing research institutions, and provide a forum for developing countries to participate in debates on global issues. Perhaps most important, the conference will allow face-to-face networking, helping to build a global community of development research institutions.

Choosing network services

To determine what activities and services the Global Development Network should support, the Bank will survey more than a thousand research institutions throughout the developing world to find out which services they consider most valuable. Services being considered include:

- An annual conference on research and policy.
- Staff exchanges.
- An on-line or paper journal.
- A searchable on-line archive of abstracts.
- A directory of development researchers and policy analysts.
- A directory of think tanks.
- Guidelines on collecting and preparing data.
- An on-line directory of research data.
- Information on funding opportunities.

- Information on policy-oriented training opportunities.
- Electronic bulletin boards.
- Moderated on-line discussion tools.

Results of the survey will be presented and discussed at the launch meeting in Bonn.

Joining the Global Development Network

Information about the Global Development Network initially will be available from: The Global Development Network, World Bank, 1818 H Street, NW, Washington, DC 20433. It will also be available on the Web at *www.gdnet.org*. In addition, researchers may subscribe without charge to the Global Development Network newsletter at the above address, or to the email version by completing the subscription form on the network's Website or sending an email to *info@gdnet.org*. Whether subscribing to the paper or email version, please include your full name, position or title, the name and address of your organization, and your country of residence.

All funding of research through the Global Development Network is now being handled by the regional networks. Researchers interested in receiving funding should thus contact their regional network directly. Opportunities to apply for funding through the regional networks will be announced through the Global Development Network. Information about funding through other sources, including the World Bank and bilateral donors, will also be provided.

New Research

The research projects described here are directed by World Bank staff and funded by the Bank's central Research Support Budget (RSB). Research proposals being prepared with RSB funding are listed on page 8. For information about the research projects described here, contact the researchers at the Bank's main address (see back page).

The Impact of Deworming Treatment on Primary School Performance: Busia, Kenya

Paul Glewwe

Development Research Group

Ref. no. 683-55

School-based, mass treatment of intestinal helminth (parasitic worm) infections and schistosomiasis is considered more cost-effective than individual screening and treatment in developing countries. But widespread adoption of school-based programs may require evidence on their effect on education outcomes.

This study will examine the effects on education, health, and nutrition outcomes of programs providing both anthelmintics and health education in 75 primary schools in Busia District, a rural district in Kenya. Education outcomes will include cognitive skills as well as attendance, repetition, and dropout rates. The two-year study will also assess the potential for school-based programs to become sustainable through cost sharing with parents. The order in which schools will receive treatment will be random, allowing unbiased estimation of the effect of deworming treatment.

RSB support: \$449,168

Staff weeks: 116

Sending Farmers Back to School: An Econometric Evaluation of the Farmer Field School Extension Approach

Gershon Feder

Development Research Group

Ref. no. 683-56

In recent years the World Bank and other development agencies have promoted farmer field schools (FFS) as an efficient and cost-effective way of disseminating science-based knowledge and practice to farmers. The approach relies on participatory training methods to convey knowledge to field school participants in order to turn them into pest experts and effective trainers of other farmers.

This study will try to determine whether FFS are a cost-effective public investment and whether the approach is a viable model for a national agricultural extension service. It will examine the net economic benefits, at the household and national levels, of the FFS approach in Indonesia and the Philippines, where it has long been used, and in Peru, where the effort is just beginning.

RSB support: \$254,000

Staff weeks: 75

Land Rental Markets and Agricultural Efficiency in Ethiopia

Gershon Feder

Development Research Group

Ref. no. 683-59

All rural land in Ethiopia belongs to the state, but village authorities periodically reallocate use rights among farmers. Policymakers are weighing the merits of moving to a system in which the government would grant

long-term land leases. Such leases would provide more ownership security and thus improve incentives to invest in land conservation, but they would also freeze the current distribution of land.

Using plot-level data from Ethiopia, this study will investigate the extent to which land rental markets support allocative efficiency and provide adequate incentives for good farm management and investment in land improvements. It will also examine whether different types of land rental contracts—sharecropping, fixed rent contracts, and temporary transfers of land use rights—have different effects on work incentives and input use.

RSB support: \$34,479

Staff weeks: 14

Land Market Liberalization and the Welfare of the Rural Poor: Lessons from Recent Reforms in Central America

Klaus Deininger

Development Research Group and

Latin America and the Caribbean

Region, Poverty Reduction

and Economic Management

Sector Unit

Ref. no. 683-64

Increasing social efficiency and improving access to land by the rural poor are key objectives of land reform. Does eliminating land use laws and allowing the market to allocate land help achieve these goals?

This study will investigate how recent reforms in agrarian property rights and land markets in Honduras, Mexico, and Nicaragua have affected agricultural productivity and the well-being of the rural poor. It will create and analyze household-level panel data sets to try to determine whether the

reforms have increased income, access to land, and the potential for wealth accumulation for the poor. It will also look at the effect of agrarian reforms on the bargaining power and economic position of women within poor households. The results will directly inform the design of postreform policies intended to make markets work better for the rural poor.

RSB support: \$140,200

Staff weeks: 69

Gender, Old Age, and Social Security: Evidence from Chile and Argentina

*Estelle James and Maria Correia
Development Research Group and
Latin America and the Caribbean
Region, Poverty Reduction
and Economic Management
Sector Unit*

Ref. no. 683-65

Women are less likely than men to be covered by social security or other pension programs, and those who are covered receive less in benefits than men do. Little empirical work has been done to quantify these gender differences, however, or to understand their causes.

Using Chile and Argentina as case studies, this study will use data from household surveys and other sources to investigate how and why the financial positions of older men and women differ. It will also examine the effects of different features of social security programs on men and women and recommend ways of creating social security policies that are not gender biased.

RSB support: \$40,000

Staff weeks: 6

Cost Analysis of Educational Technology in Developing Countries

*Michael Potashnik
Human Development Network,
Education Team*

Ref. no. 683-66

Education indicators in developing countries lag far behind those in industrial countries. Can technology be used to prevent developing countries from falling further and further behind?

This study will conduct five case studies of exemplary uses of technology to try to determine how and when technology can be effectively deployed to provide quality education in developing countries. It will model and analyze the cost structures of various deployment options and examine cost-saving strategies available to governments and institutions. Through a comprehensive literature review, interviews, and site visits, the study will gather and synthesize much-needed data about the costs of alternative models for the production of education services.

RSB support: \$40,000

Public Sector Downsizing II

*Martín Rama
Development Research Group*

Ref. no. 638-67

The first phase of this research showed that downsizing often entails adverse selection that significantly reduces the efficiency gains from voluntary layoffs. It also demonstrated that severance packages generally do a poor job of offsetting losses from displacement and that vast resources are wasted in redeployment programs that are not valued by displaced workers.

This study will investigate a host of issues left unresolved by the first phase

of the research program. In particular, it will try to determine whether self-selection mechanisms can be implemented that circumvent the adverse selection problem, whether compensation packages can be appropriately tailored so that workers are neither overcompensated nor undercompensated for severance, and whether state-owned enterprises should be downsized before they are privatized. The study will also try to determine the cost of early retirement programs and establish when downsizing is necessary.

RSB support: \$199,500

Staff weeks: 52

The Derivation of World Income Distribution in 1988–93 Based on Household Survey Data

*Branko Milanovic
Development Research Group*

Ref. no. 683-68

Interest in income inequality has been growing for the past decade. Until recently, however, it was not possible to derive a world income distribution because detailed household income or expenditure data were not available for much of the world's population. This has changed during the past decade as data on transition economies have become more readily available and household surveys have been developed in many African countries.

This study will use recently collected national survey data on 90 percent of the world's population to generate a world income distribution. The results will reveal the level of inequality in the world and the changes in inequality that took place between 1988 and 1993, the two years examined. The choice of years is determined by the availability of purchas-

ing power parity data from the two most recent rounds of the International Comparison Programme. The study will allow the decomposition of world inequality into intracountry and intercountry differences in mean income, and simulation of changes in world inequality under different income and population growth scenarios.
RSB support: \$35,000
Staff weeks: 8

Corporate Governance, Corporate Finance, and Economic Performance in Developing Countries

Jack Glen
International Finance Corporation,
Corporate Portfolio Management Group
Ref. no. 683-70

Issues relating to corporate governance in developing countries have assumed special significance since the East Asian financial and economic crisis. Little has been written about corporate governance in the developing world, however.

This study will analyze corporate governance, corporate finance, and economic performance in India, Malaysia, the Republic of Korea, and Thailand. It will compare intertemporal and intercountry debt-equity ratios in developing and industrial countries and use multivariate analysis to investigate the determinants of debt-equity ratios in the four Asian markets studied. The research will be based on two databases, the corporate database of the International Finance Corporation and a more comprehensive set of corporate data that incorporates a broader and more detailed set of financial state-

ments for the four countries in the study.
RSB support: \$38,000
Staff weeks: 6

Impact of Early Childhood Nutrition on School Attainment and Child Labor in Cebu, Philippines

Paul Glewwe and Elizabeth King
Development Research Group
Ref. no. 683-71

The Cebu Longitudinal Health and Nutrition Survey, conducted by the Office of Population Studies at the University of San Carlos, in Cebu, Philippines, is probably the richest source of data in the world on the link between early childhood nutrition and subsequent school performance and employment outcomes. The data set includes 15 years of data on a random sample of about 3,000 children born in the metropolitan Cebu area in 1983 and 1984.

This study will extend the data set by interviewing the boys included in the study who are now 15 and 16 years old. The survey results will provide valuable data that can be used to analyze the impact of early childhood nutrition on school attainment and child labor.
RSB support: \$40,000
Staff weeks: 5

The Impact of Colombia's Voucher Program on Grade Repetition and Academic Achievement

Elizabeth King
Development Research Group
Ref. no. 683-72

Since 1991 Colombia has awarded vouchers to 100,000 poor students, mostly by lottery, to attend private secondary school. Students who win vouchers may renew them each year as

long as they are promoted to the next grade.

An earlier study found that students who won vouchers in the lottery repeated grades less often—and thus completed more years of schooling—than students who did not. There are several possible explanations: Voucher winners may have greater incentive to advance in school. They may choose better schools. And schools may promote voucher winners more readily to ensure that voucher funds continue to come.

This project will test these explanations through surveys of teachers, principals, and students at schools with voucher applicants, and through achievement tests of voucher applicants, including some no longer in school.
RSB support: \$40,000
Staff weeks: 6

RESEARCH PROPOSAL UNDER PREPARATION

Trade Liberalization, Industrial Performance, and Export Growth in India

James Hanson and Sanjay Kathuria
South Asia Region, Poverty Reduction
and Economic Management Sector Unit
Ref. no. 683-63
RSB support: \$10,000

Information on many more research projects under way or recently completed at the World Bank can be found in *World Bank Research Program 1999: Abstracts of Current Studies* (see page 16 for ordering information). Searchable abstracts of research projects are on the Web at www.worldbank.org/research.

Publications and Data

For information on how to order the World Bank publications reviewed in this issue, see page 16.

BOOKS

Exchange Rate Misalignment: Concepts and Measurement for Developing Countries

Lawrence E. Hinkle and Peter J. Montiel, editors

Published by Oxford University Press

This book provides a comprehensive treatment of the conceptual and empirical issues relating to measuring exchange rate misalignment in developing countries. The aim is to provide policymakers and their advisers with a compendium of practical techniques for estimating equilibrium real exchange rates in settings where data, time, and professional capacity are limited.

The book assesses alternative empirical measures of the internal and external real exchange rates. It surveys the literature on estimating equilibrium exchange rates in both industrial and developing countries. It presents the currently available methodologies for empirically estimating the equilibrium exchange rate in developing countries, analyzing four of them in detail.

Social Capital: A Multifaceted Perspective

Partha Dasgupta and Ismail Serageldin, editors

The views on "social capital" are many and varied, and the concept remains

too loosely defined to be usable in quantitative research into the character of societies. To explore the issues surrounding the idea of social capital, the World Bank convened a multidisciplinary workshop in April 1997. Many of the papers that resulted from that workshop are included in this volume, which is intended to provide a reasoned account of the current understanding of the concept. The volume covers both theoretical and empirical studies.

Development Issues in the 21st Century

Gudrun Kochendörfer-Lucius and Boris Pleskovic, editors

Published by the German Foundation for International Development

This volume contains articles presented at the 1998 Villa Borsig Winter Workshop, the first in a series intended to provide a forum for European researchers to contribute to early discussions in preparation for the World Bank's annual *World Development Report*. The workshops are sponsored by the Development Policy Forum of the German Foundation for International Development and the World Bank.

The workshop identified six trends that will define the institutional and policy matrix of sustainable development in the 21st century: a tendency toward globalization, continuing environmental change, demographic transition in developing countries, greater political participation and community involvement, increasing decentralization and the emergence of smaller economic clusters within (but also autonomous from) the nation state, and sweeping urbanization in the developing world.

For information on obtaining copies of this book, contact the German Foundation for International Development, Development Policy Forum, Villa Borsig, Reiherwerder, D-13505 Berlin, Germany. Quantities limited.

JOURNAL

The articles summarized below appear in the May issue of the World Bank Economic Review, vol. 13, no. 2.

Household Income and Child Schooling in Vietnam

Jere R. Behrman and James C. Knowles

The stronger are the associations between household income and child schooling, the lower is intergenerational social mobility and the less equal is opportunity. This article estimates the associations between household income and child schooling in Vietnam and finds that they are considerable. It also investigates some ways in which school fee policies relate to household income.

Benefit Incidence, Public Spending Reforms, and the Timing of Program Capture

Peter Lanjouw and Martin Ravallion

This article uses the geographic variation in 1993–94 household survey data for rural India to estimate the marginal odds of participating in schooling and antipoverty programs. The results suggest early capture of these programs by the nonpoor. The article shows that conventional methods for assessing benefit incidence underestimate both the gains to the poor from higher public outlays and the losses from cuts.

Does Informality Imply Segmentation in Urban Labor Markets? Evidence from Sectoral Transitions in Mexico

William F. Maloney

Using detailed panel data from Mexico to look at worker transitions between sectors, this article finds little evidence in favor of the traditional dualistic view of the relationship between formal and informal labor markets. The patterns of worker mobility do not suggest a rigid labor market or one segmented along the formal-informal division.

Tax Incidence in Madagascar: An Analysis Using Household Data

Stephen D. Younger, David E. Sahn, Steven Haggblade, and Paul A. Dorosh

This article asks who pays the taxes in Madagascar. Its main concern is to identify the progressivity of different taxes, based on the consumption and income patterns in a 1994 nationally representative survey. It finds that most taxes are progressive, meaning that wealthy households pay proportionately more relative to their expenditures than do poor households.

Genuine Savings Rates in Developing Countries

Kirk Hamilton and Michael Clemens

After developing the theory of genuine savings—traditional net savings less the value of resource depletion and environmental degradation plus the value of investment in human capital—this article presents empirical estimates for developing countries for 1970–93. It shows that genuine savings are negative in a wide range of countries, particularly in Sub-Saharan Africa.

Winners and Losers from the Privatization and Regulation of Utilities: Lessons from a General Equilibrium Model of Argentina

Omar Chisari, Antonio Estache, and Carlos Romero

Using a computable general equilibrium model, this article estimates the macroeconomic and distributional effects of the privatization and regulation of utilities in Argentina, begun in 1989. It finds that both privatization and effective regulation yield significant macroeconomic benefits. Gains from privatization accrue mainly to high-income classes, and those from effective regulation to low-income classes.

Determinants of Commercial Bank Interest Margins and Profitability: Some International Evidence

Aslı Demirgüç-Kunt and Harry Huizinga

Using bank-level data for 80 countries in 1988–95, this article shows that differences in interest margins and bank profitability reflect a variety of determinants: bank characteristics, macroeconomic conditions, explicit and implicit bank taxation, deposit insurance regulation, overall financial structure, and underlying legal and institutional indicators.

DISCUSSION,
TECHNICAL, AND
RELATED PAPERS

Court Performance around the World: A Comparative Perspective

Maria Dakolias
Technical Paper 430

This paper describes and explains the performance of court systems in a sample of developing and industrial coun-

tries in order to provide data to those designing or evaluating reforms. It also shows areas in which international comparison of judicial performance can be fruitful and suggests indicators that can be used in such comparisons.

Health Expenditures, Services, and Outcomes in Africa: Basic Data and Cross-National Comparisons, 1990–1996

David H. Peters, Kami Kandola, A. Edward Elmendorf, and Gnanaraj Chellaraj

Despite remarkable improvements in the past 30 years, African countries still suffer from some of the worst health conditions in the world. To aid health planning and policy development in Africa, this paper presents national-level information on health expenditures, health service outputs, and health outcomes. By exploring gaps in the information available and potential uses of health information, the paper is also aimed at stimulating discussion on how better to monitor progress and use information for improved health outcomes in Africa.

Trade, Global Policy, and the Environment

Per G. Fredriksson, editor
Discussion Paper 402

This volume attempts to further the understanding of the empirical links between trade and the environment. Its 13 chapters, presented as papers at a World Bank conference in April 1998, focus on three main themes: the effects of trade liberalization and growth on the environment, the “pollution haven” hypothesis, and economic instruments for resolving global environmental problems.

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Adjustments after Speculative Attacks in Latin America and Asia: A Tale of Two Regions?

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A growing body of evidence suggests that world inequality is increasing, but the source of that increase has been unclear. Two World Bank initiatives have begun to shed light on this issue: recent research based on household survey data for more than 100 countries, and a new technique to graph and analyze income distribution.

World income distribution

Most estimates of the global distribution of income treat individuals as having the average income of their country. Such aggregations implicitly rank a poor American household above a richer Chinese household. To derive a “true” income distribution among individuals would require knowing their actual income (adjusted for price differences between countries). The lack of such data for most countries and the sheer size of the exercise compelled analysts to settle for approximations.

But household income data are now available for more than 90 percent of the world’s population. The number of household surveys has increased, particularly in Africa, and political changes in China and the former Soviet Union have allowed compilation and release of survey data. A recent Bank study has taken advantage of the expanded pool of survey data, deriving and comparing world income distribution in 1988 and 1993.

The 1988 survey data cover 101 countries representing about 4.6 billion people, or almost 87 percent of the world’s population. The 1993 surveys cover 119 countries—more than 90 percent of the population and

about 95 percent of world GDP. As these shares suggest, the 61 countries not in the study are very small.

The increased coverage in Africa accounts for most of the difference in the number of countries between 1988 and 1993. In 1988 comparable household data were available for only 14 African countries. By 1993 a survey program launched by the World Bank in cooperation with African governments had raised the number of countries to 29—representing nearly three-quarters of Africa’s population and almost 90 percent of regional GDP.

Most of the data used in the study come from four sources:

- The Household Expenditure and Income Data (HEIDE) database for countries in Eastern Europe and the former Soviet Union (www.worldbank.org/research/transition/index.html; also see this column in the October–December 1997 issue).
- The Living Standards Measurement Study (LSMS) surveys (www.worldbank.org/html/prdph/lsm/lsmshome.html; also see this column in the April–June 1996 issue).
- The Luxembourg Income study, for most OECD countries (dpls.dacc.wisc.edu/apdu/lis_intro.html).

- World Bank–financed surveys in Africa, managed by the Bank’s African Poverty Reduction and Social Development Unit. Most African governments have not granted public access to the data, but more are expected to do so in time.

The study’s findings show that world inequality is very high. In 1993 the richest 1 percent of the world’s people received as much income as the poorest 59 percent. What explains this inequality? By far the biggest factor is

a person’s country: about 75–80 percent of world inequality is due to the differences in average income between countries. Only 20–25 percent is due to class—that is, income inequality within countries.

Even more disturbing is the finding that inequality is increasing. Between 1988 and 1993 the real income of the richest 5 percent of the world’s people increased by 12 percent, while that of the poorest 5 percent fell by almost 25 percent. So the world is becoming increasingly segregated between rich and poor nations. Economic growth in poor and populous countries is crucial not only to alleviate poverty but also to reduce world inequality.

Two cautions about the results here: First, because countries often collect either income or expenditure data, the calculations are based on a mix of the two. Since poor countries tend to collect expenditure data, and since expenditure measures tend to be higher than income measures, the results here probably understate world inequality. Second, the results refer to income or expenditure flows and do not account for stocks of assets. Ignoring wealth also would be expected to underestimate inequality.

For more information about the research and the data sources used, contact Branko Milanovic at the World Bank’s main address or at bmilanovic@worldbank.org. The findings of the research are reported in a paper by Milanovic, “True World Income Distribution, 1988 and 1993” (Policy Research Working Paper 2244). For copies, contact Patricia Sader at the Bank’s main address or at psader@worldbank.org.

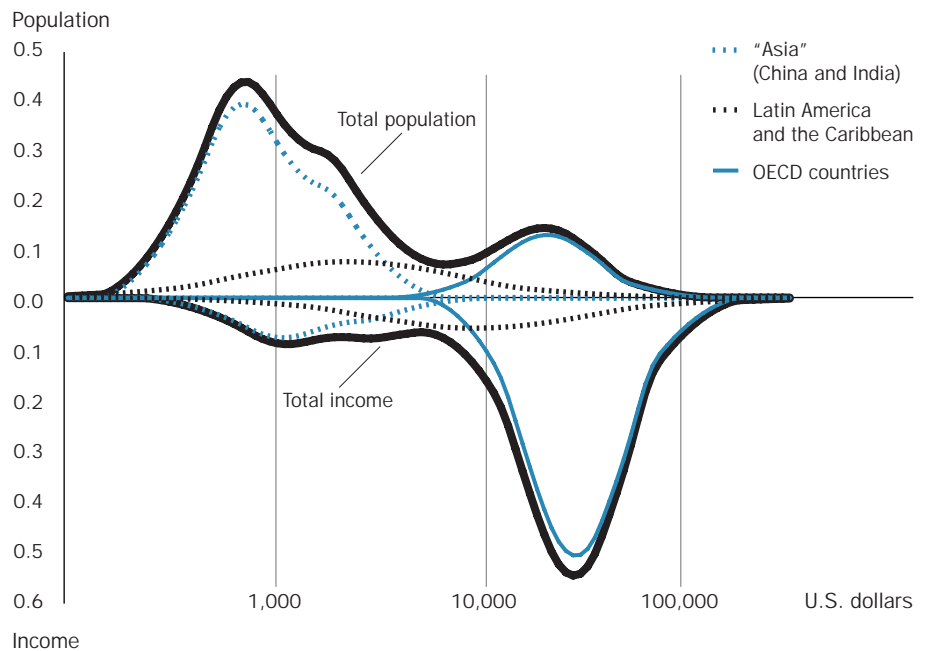
International income distribution

A new graphical and analytical technique has been developed to allow comparison of income distribution across countries or income groups and over time. This technique also allows comparison of income distributions for the same country in different years, and simulation of the effects of changes in policies or conditions. The main advantage of the technique is that it does not require large bodies of data and is relatively easy to use.

The results of one application of this technique, which is called quasi-exact polynomial interpolation, are illustrated in figure 1. The curves above the horizontal axis show the distribution of population by income level, while the curves below the axis show their income. The area between the horizontal axis and each outer curve equals one, distributed so that the areas within the curves correspond to shares in total population or income. The thicker lines show the overall distribution of population and income, and the lighter lines the distribution in three sets of countries: Latin America, the OECD countries, and China plus India ("Asia").

Nearly all "Asians" earn less than \$6,000, while nearly all OECD citizens earn more than that. Latin America has the greatest inequality of the three, with some of its people receiving the lowest income and others the highest. The lower half of figure 1

FIGURE 1
International income distribution, 1993



shows that most of the income in the world goes to people earning more than \$10,000, almost all of whom are in OECD countries.

Another use of the technique is to simulate the effects of changes in policies or conditions. Income distribution could be decomposed graphically and analytically by such factors as salary, transfers, and capital income to show the effects of changes in tax and poverty alleviation policies, for example.

Because each curve in figure 1 is based on aggregate data—for 10 decile groups—the curves might be expected to be relatively discontinu-

ous, reflecting the "bar chart" type of initial distributions from which they were derived. The new technique, however, smooths curves from these discontinuous data through precise interpolation; it also allows restoration of exact values at the interval boundaries and minimizes deviation in between (hence the "quasi-exact"). The program is implemented in GINI ToolPak, which runs in Microsoft Excel.

For more information on the technique or for copies of the GINI ToolPak software, contact Yuri Dikhanov at the Bank's main address or at ydikhanov@worldbank.org.

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