ABSTRACTS

Policy Research Working Paper Series

Numbers 3399–3468

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The World Bank
Research Support Team
Development Economics
October–December 2004

Social Development

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3399. Analyzing Urban Poverty: A Summary of Methods and Approaches

Judy Baker and Nina Schuler
(September 2004)

In recent years an extensive body of literature has emerged on the definition, measurement, and analysis of poverty. Much of this literature focuses on analyzing poverty at the national level, or spatial disaggregation by general categories of urban or rural areas, with adjustments made for regional price differentials. Yet for an individual city attempting to tackle the problems of urban poverty, this level of aggregation is not sufficient for answering specific questions such as where the poor are located in the city, whether there are differences between poor areas, if access to services varies by subgroup, whether specific programs are reaching the poorest, and how to design effective poverty reduction programs and policies. Answering these questions is critical, particularly for large, sprawling cities with highly diverse populations and growing problems of urban poverty.

Understanding urban poverty presents a set of issues distinct from general poverty analysis and thus may require additional tools and techniques. Baker and Schuler summarize the main issues in conducting urban poverty analysis, with a focus on presenting a sample of case studies from urban areas that were implemented by a number of different agencies using a range of analytical approaches for studying urban poverty. Specific conclusions regarding design and analysis, data, timing, cost, and implementation issues are discussed.

This paper—a product of the Urban Unit, Transport and Urban Development Department—is part of a larger effort in the department to promote strategies for reducing urban poverty. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Laura de Brular, room H3-222, telephone 202-473-0539, fax 202-522-3232, email address ldebrular@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at jbaker2@worldbank.org or nschuler@worldbank.org. (65 pages)

3400. The Effects of Infrastructure Development on Growth and Income Distribution

César Calderón and Luis Servén
(September 2004)

Calderón and Servén provide an empirical evaluation of the impact of infrastructure development on economic growth and income distribution using a large panel data set encompassing over 100 countries and spanning the years 1960–2000. The empirical strategy involves the estimation of simple equations for GDP growth and conventional inequality measures, augmented to include, among the regressors, infrastructure quantity and quality indicators, in addition to standard controls. To account for the potential endogeneity of infrastructure (as well as that of other regressors), the authors use a variety of generalized-method-of-moments (GMM) estimators based on both internal and external instruments and report results using both disaggregated and synthetic measures of infrastructure quantity and quality. The two robust results are: (1) growth is positively affected by the stock of infrastructure assets, and (2) income inequality declines with higher infrastructure quantity and quality. A variety of specification tests suggests that these results do capture the causal impact of the exogenous component of infrastructure quantity and quality on growth and inequality. These two results combined suggest that infrastructure development can be highly effective to combat poverty. Furthermore, illustrative simulations for Latin American countries suggest that these impacts are economically quite significant and highlight the growth acceleration and inequality reduction that would result from increased availability and quality of infrastructure.

This paper—a joint product of the Finance, Private Sector, and Infrastructure Department and the Office of the Chief Economist, Latin America and the Caribbean Region—is part of a larger effort in the region to assess the effects of infrastructure development. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Soto, room I8-018, telephone 202-473-7892, fax 202-522-7528, email address psoto@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. Luis Servén may be contacted at lserven@worldbank.org. (43 pages)

3401. Trends in Infrastructure in Latin America, 1980–2001

César Calderón and Luis Servén
(September 2004)

There is widespread concern across Latin America that the provision of infrastructure services has suffered as a consequence of the retrenchment of the public sector and the insufficient response of the private sector to the opening up of infrastructure industries to private participation in most countries. Calderón and Servén document the recent trends in infrastructure stocks and infrastructure investment in major Latin American economies. Using an updated dataset constructed for this task, the authors describe the evolution of the quantity and quality of infrastructure assets—power, transport, and telecommunications—as well as the investment expenditures of the public and private sectors. They find that Latin America lags behind the international norm in terms of infrastructure quantity and quality, and there is little evidence that the gap may be closing—except in the telecommunications sector. Furthermore, overall infrastructure investment has fallen, as a combined result of the retrenchment of public investment and the limited response of the private sector, which has been mostly confined to the telecommunications industry. However, there is considerable disparity across countries. On the whole the data show that the countries most successful in attracting large volumes of private investment (Bolivia, Chile, and Colombia) are precisely those where public investment has remained high.

This paper—a joint product of the Finance, Private Sector, and Infrastructure Department, and the Office of the Chief Economist, Latin America and the Caribbean Region—is part of a larger effort in the region to assess the effects of infrastructure development. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Soto, room I8-018, telephone 202-473-7892, fax 202-522-7528, email address psoto@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. Luis Servén may be contacted at lserven@worldbank.org. (51 pages)

3402. Phasing out Polluting Motorcycles in Bangkok: Policy Design by Using Contingent Valuation Surveys

Jian Xie, Jitendra J. Shah , Elisabetta Capannelli, and Hua Wang
(September 2004)

Xie, Shah, Capannelli and Wang use a contingent valuation method to study the design of economic incentives to phase out polluting motorcycles in Bangkok. Like in many other cities, the government of Bangkok has been considering a series of control measures to discourage and eventually eliminate the use of heavily polluting motorcycles. Two of the possible policy instruments under consideration are charges on those polluting vehicles which are operating in the streets and compensation to those polluting vehicles which would stay off the roads. The policy research questions then include (1) what are the charges implied or compensation provided, given a policy target, and (2) what are the reactions of motorcycle owners to those charges or compensation. To answer those policy questions, the authors conducted a stochastic contingent valuation survey in Bangkok to question motorcycle owners on the likelihood they would keep or give up riding their motorcycles in the streets given certain charges or compensations. Results show that among others, about 80 percent of those motorcycles which did not pass the emission tests would be off the streets if a charge of 1,000 baht a year was levied, while under a one-time compensation of 10,000 baht, the number would be about 50 percent. The authors also estimate the average values of maximum willingness to pay (WTP) for staying on the road and minimum willingness to accept (WTA) compensation for staying off the street, and analyze the determinants of WTP and WTA. Their econometric analysis shows that, among other factors, household income, fuel costs, use of motorcycles, and/or public transit affect the value of WTP and WTA.

This paper—a product of Infrastructure and Environment, Development Research Group—is part of a larger effort in the group to study environmental policy issues in developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Hua Wang, room MC2-525, telephone 202-473-3255, fax 202-522-3230, email address hwang1@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. Jian Xie may be contacted at jxie@worldbank.org. (19 pages)

3403. What Happens When a Country Does Not Adjust to Terms of Trade Shocks? The Case of Oil-Rich Gabon

Ali Zafar
(September 2004)

Gabon is currently one of the richest countries in Sub-Saharan Africa, having a GDP per capita of close to $4,000, and is characterized by a stable political climate and rich forestry and mineral resources, as well as a small population. Oil is the key economic sector, accounting for half of GDP and more than two-thirds of revenue. Discovered in the 1970s, oil windfalls have delivered spectacular wealth and financed public expenditure over two decades. However, the oil boom has led to the Dutch disease and the shrinkage of the industrial and agricultural sectors of the economy due to the appreciation of the exchange rate and the movement of capital to the oil sector. But with output projections suggesting that oil will be depleted within the next 10 to 15 years, there are growing pressures on the policymakers to take actions to diversify production. While Gabon's membership in the Central African economic and monetary union means that it benefits from the macroeconomic stability from a common external trade and fixed exchange rate regime pegged to the euro, it relinquishes independence in the policy response to shocks.

An analysis using a quantitative methodology to decompose responses to shocks shows that Gabon's adjustment to adverse movements in the terms and trade from 1980 to 2000 was considerably weak in terms of three performance indicators—import intensity, economic compression, and nonoil export promotion. While the economy's growth rate was respectable, Gabonese policymakers postponed adjustment by resorting to considerable borrowing during this period. While there was some decrease in import intensity from 1987 to 1990 and 1996 to 2000, as well as slight nonoil export diversification from 1996 to 2000, the government borrowed from commercial banks and donors, causing its external debt/GDP ratio to increase from 30 percent of GDP in 1970–76 to 80 percent in 1999. To pay the debt service, it currently has to maintain large primary surpluses. Only since 1996 has there been significant fiscal retrenchment and a freezing of government wages.

This paper—a product of Poverty Reduction and Economic Management 3, Africa Technical Families—is part of a larger effort in the Bank to study the macroeconomic management of volatility. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Josiane Luchmun, room J7-276, telephone 202-473-7530, fax 202-473-8466, email address jluchmun@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The author may be contacted at azafar@worldbank.org. (28 pages)

3404. The Corporate Governance of Banks: A Concise Discussion of Concepts and Evidence

Ross Levine
(September 2004)

Levine examines the corporate governance of banks. When banks efficiently mobilize and allocate funds, this lowers the cost of capital to firms, boosts capital formation, and stimulates productivity growth. So, weak governance of banks reverberates throughout the economy with negative ramifications for economic development. After reviewing the major governance concepts for corporations in general, the author discusses two special attributes of banks that make them special in practice: greater opaqueness than other industries and greater government regulation. These attributes weaken many traditional governance mechanisms. Next, he reviews emerging evidence on which government policies enhance the governance of banks and draws tentative policy lessons. In sum, existing work suggests that it is important to strengthen the ability and incentives of private investors to exert governance over banks rather than to rely excessively on government regulators. These conclusions, however, are particularly tentative because more research is needed on how legal, regulatory, and supervisory policies influence the governance of banks.

This paper—a product of the Global Corporate Governance Forum, Corporate Governance Department—is part of a larger effort in the department to improve the understanding of corporate governance reform in developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Ghita Alderman, room F4K-179, telephone 202-458-2905, fax 202-522-7588, email address galderman@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The author may be contacted at rlevine@csom.umn.edu. (19 pages)

3405. A Survey of Securities Laws and Enforcement

Florencio Lopez-de-Silanes
(September 2004)

Lopez-de-Silanes examines the theoretical and empirical literature pertaining to securities laws and their enforcement by regulators and courts to establish what is known and what is yet unclear. Recent empirical research in the field has established that law matters. Mandatory disclosure requirements, insider trading laws, safeguards against self-dealing transactions, adequate regulatory powers, and simple laws that are easily enforced aid in the development of capital markets. The debate is now focused on identifying which components of securities laws matter most and on what the optimal regulatory framework for each country should be. Although public enforcement of securities laws is important, the author finds that the largest impact comes from aspects of the law that facilitate private enforcement. This means that the development of capital markets depends crucially on creating laws that facilitate enforcement and improving court procedures that allow for a more efficient dispute resolution.

This paper—a product of the Global Corporate Governance Forum, Corporate Governance Department—is part of a larger effort in the department to improve the understanding of corporate governance reform in developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Ghita Alderman, room F4K-179, telephone 202-458-2905, fax 202-522-7588, email address galderman@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The author may be contacted at florencio.lopez@yale.edu. (46 pages)

3406. Special Issues Relating to Corporate Governance and Family Control

Randall Morck and Bernard Yeung
(September 2004)

Control of corporate assets by wealthy families in economies lacking institutional integrity is common. It has negative implications on corporate governance and adverse macroeconomic effects when it extends across a sufficiently large part of the country's corporate sector. Morck and Yeung consider the reasons why family control and control pyramids predominate in emerging market economies and in some industrial economies. They also discuss the reasons why widely held freestanding firms predominate in the United States. The authors discuss policies that countries might adopt to discourage family control pyramids, but caution that control pyramids are but one feature of an institutionally deficient economy. A concerted effort to improve a country's institutions is needed before diffuse ownership is desirable.

This paper—a product of the Global Corporate Governance Forum, Corporate Governance Department—is part of a larger effort in the department to improve the understanding of corporate governance reform in developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Ghita Alderman, room F4K-179, telephone 202-458-2905, fax 202-522-7588, email address galderman@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at randall.morck@ualberta.ca or byeung@stern.nyu.edu. (25 pages)

3407. State Ownership: A Residual Role?

Enrico Perotti
(September 2004)

Perotti reviews the state of thinking on the governance role of state ownership. He argues that a gradual transfer of operational control and financial claims over state assets remains the most desirable goal, but it needs to be paced to avoid regulatory capture, and the capture of the privatization process itself. In addition, the speed of transfer should be timed on the progress in developing a strong regulatory governance system, to which certain residual rights of intervention must be vested. In many countries institutional weakness limits regulatory capacity and reliability, yet the author's conclusion is that in such environments, maintaining state control undermines the very emergence of institutional capacity, and so the balance should tip toward progressively less direct state control.

After all, what are "institutions" if not governance mechanisms with some degree of autonomy from both political and private interests? The gradual creation of institutions partially autonomous from political power must become central to the development of an optimal mode of regulatory governance.

The author offers some suggestions about creating maximum accountability in regulatory governance, in particular creating an internal control system based on a rotating board representative of users, producers, and civic organizations, to be elected by a process involving frequent reporting and disclosure.

This paper—a product of the Global Corporate Governance Forum, Investment Climate Unit—is part of a larger effort in the department to improve the understanding of corporate governance reform in developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Ghita Alderman, room F4K-179, telephone 202-458-2905, fax 202-522-7588, email address galderman@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The author may be contacted at e.c.perotti@fee.uva.nl. (24 pages)

3408. China's (Uneven) Progress Against Poverty

Martin Ravallion and Shaohua Chen
(September 2004)

While the incidence of extreme poverty in China fell dramatically over 1980–2001, progress was uneven over time and across provinces. Rural areas accounted for the bulk of the gains to the poor, though migration to urban areas helped. The pattern of growth mattered. Rural economic growth was far more important to national poverty reduction than urban economic growth. Agriculture played a far more important role than the secondary or tertiary sources of GDP. Rising inequality within the rural sector greatly slowed poverty reduction. Provinces starting with relatively high inequality saw slower progress against poverty, due both to lower growth and a lower growth elasticity of poverty reduction. Taxation of farmers and inflation hurt the poor. External trade had little short-term impact.

This paper—a product of the Poverty Team, Development Research Group—is part of a larger effort in the group to understand the causes of country success in poverty reduction. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Sader, room MC3-556, telephone 202-473-3902, fax 202-522-1151, email address psader@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at mravallion@worldbank.org or schen@worldbank.org. (57 pages)

3409. Enforcement and Corporate Governance

Erik Berglof and Stijn Claessens
(September 2004)

Enforcement more than regulations, laws-on-the-books, or voluntary codes is key to effective corporate governance, at least in transition and developing countries. Corporate governance and enforcement mechanisms are intimately linked as they affect firms' ability to commit to their stakeholders, in particular to external investors. Berglof and Claessens provide a framework for understanding these links and how they are shaped by countries' institutional contexts. When the general enforcement environment is weak and specific enforcement mechanisms function poorly, as in many developing and transition countries, few of the traditional corporate governance mechanisms are effective. The principal consequence in these countries is a large blockholder, but there are important potential costs to this mechanism. A range of private and public enforcement "tools" can help reduce these costs and reinforce other supplementary corporate governance mechanisms. The limited empirical evidence suggests that private tools are more effective than public forms of enforcement in the typical environment of most developing and transition countries. However, public enforcement is necessary regardless, and private enforcement mechanisms often require public laws to function. Furthermore, in some countries at least, bottom-up, private-led tools preceded and even shaped public laws. Political economy constraints resulting from the intermingling of business and politics, however, often prevent improvements in the general enforcement environment, and adoption and implementation of public laws in these countries.

This paper—a product of the Global Corporate Governance Forum, Corporate Governance Department—is part of a larger effort in the department to help improve the understanding of corporate governance reform in developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Ghita Alderman, room F4K-179, telephone 202-458-2905, fax 202-522-7588, email address galderman@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at erik.berglof@hhs.se or sclaessens@worldbank.org. (49 pages)

3410. Pension Funds and National Saving

Pablo Lopez Murphy and Alberto R. Musalem
(September 2004)

Murphy and Musalem conduct an empirical study of the effect of the accumulation of pension fund financial assets on national saving using a panel of 43 industrial and developing countries. The authors find evidence suggesting that the accumulation of pension fund financial assets might increase national saving when these funds are the result of a mandatory pension program. By contrast, national saving might be unaffected when pension funds are the result of a public program implemented to foster voluntary pension saving.

This paper is a product of the Human Development Group, Middle East and North Africa Region. The study was funded by the Bank's Research Support Budget under the research project "Contractual Savings Institutions and National Saving." Copies of this paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Rougiata Bah-Sanches, room H8-104, telephone 202-473-5620, fax 202-477-0036, email address rbahsanches@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at pablolopezmurphy@yahoo.com or amusalem@worldbank.org. (46 pages)

3411. Implications of Genetically Modified Food Technology Policies for Sub-Saharan Africa

Kym Anderson and Lee Ann Jackson
(September 2004)

The first generation of genetically modified (GM) crop varieties sought to increase farmer profitability through cost reductions or higher yields. The next generation of GM food research is focusing also on breeding for attributes of interest to consumers, beginning with "golden rice," which has been genetically engineered to contain a higher level of vitamin A and thereby boost the health of unskilled laborers in developing countries. Anderson and Jackson analyze empirically the potential economic effects of adopting both types of innovation in Sub-Saharan Africa (SSA). They do so using the global economywide computable general equilibrium model known as GTAP. The results suggest that the welfare gains are potentially very large, especially from nutritionally enhanced GM wheat and rice, and that—contrary to the claims of numerous interests—those estimated benefits are diminished only slightly by the presence of the European Union's current barriers to imports of GM foods. In particular, if SSA countries impose bans on GM crop imports in an attempt to maintain access to EU markets for non-GM products, the loss to domestic consumers due to that protectionism boost to SSA farmers is far more than the small economic gain for these farmers from greater market access to the EU.

This paper—a product of the Trade Team, Development Research Group—is part of a larger effort in the group to better understand the contributions of both new technologies and discriminatory trade policies to economic welfare of different groups in developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Paulina Flewitt, room MC3-333, telephone 202-473-2724, fax 202-522-1159, email address pflewitt@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. Kym Anderson may be contacted at kanderson@worldbank.org. (34 pages)

3412. Export Variety and Country Productivity

Robert Feenstra and Hiau Looi Kee
(September 2004)

Feenstra and Kee study the link between export product variety and country productivity based on data from 34 industrial and developing countries, from 1982 to 1997. They measure export product variety by the share of U.S. imports on the set of goods exported by each sampled country relative to the world. It is a theoretically sound index which is consistent with within-country GDP maximization, as well as cross-country comparison. The authors construct country productivity based on relative endowments and product variety. Increases in output product variety improve country productivity as the new mix of output may better use resources of the economy and improve allocative efficiency. Such effects depend on the elasticity of substitution in production between the different varieties. The more different the varieties are in terms of production, the more efficient it is to use the endowments of the economy when a new variety is available, which leads to productivity gains. In addition, as suggested in the literature, export product variety depends on trade costs, such as tariffs, distance, and transport costs. Such trade cost variables are used as instruments to help the authors identify the effects of export variety on country productivity. Empirical evidence supports their hypothesis. Overall, while export variety accounts for only 2 percent of cross-country productivity differences, it explains 13 percent of within-country productivity growth. A 10 percent increase in the export variety of all industries leads to a 1.3 percent increase in country productivity, while a 10 percentage point increase in tariffs facing an exporting country leads to a 2 percent fall in country productivity.

This paper—a product of the Trade Team, Development Research Group—is part of a larger effort in the group to study the link between trade and productivity. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Michelle Chester, room MC3-322, telephone 202-458-2010, fax 202-522-1159, email address mchester@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. Hiau Looi Kee may be contacted at hlkee@worldbank.org. (44 pages)

3413. Stamp Duties In Indian States: A Case for Reform

James Alm, Patricia Annez, and Arbind Modi
(September 2004)

Alm, Annez, and Modi review the options for reform of stamp duties on immovable property transfers collected by Indian state governments. After briefly reviewing some of the many administrative difficulties experienced with the tax, they turn to an examination of its economic impacts. A review of stamp duties internationally indicates that Indian rates are exceptionally high, at rates often above 10 percent. Most countries' rates are less than 5 percent, including a number of low and middle-income developing countries. With these high rates, the authors find that while the tax has become the third largest revenue source for many Indian states, it imposes high compliance costs on taxpayers, has been subject to a good deal of evasion and fraud, and the distortionary impacts appear to be large, reducing the responsiveness of real estate markets in Indian cities by discouraging transactions essential to the efficient growth of cities. The authors then study the revenue implications of lowering stamp duty rates, which need to be understood if reform is to be viable. Evidence indicates that the current high duty rates, coupled with weak tax administration, lead to widespread evasion of the tax through underdeclaration. This underdeclaration of property values directly affects collection of other taxes, among them, property taxes and capital gains tax. Moreover, it indirectly affects the collection of all taxes through the impact of underdeclaration on the circulation of black money. Simulations indicate that revenues lost due to a lowering of stamp duty rates closer to international levels are quite likely to be recovered in higher collections of other taxes. However, these taxes would at least in part be collected by other levels of government. So reform could be made a more viable option through appropriately designed intergovernmental transfers.

This paper—a joint product of the Energy and Infrastructure Sector Unit, South Asia Region, and the Urban Unit, Transport and Urban Development Department—is part of a larger effort in the Bank to to assess the impacts of alternative tax systems in urban finance. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Laura De Brular, room H3-222, telephone 202-473-0539, fax 202-522-3232, email address ldebrular@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. Patricia Annez may be contacted at pannez@worldbank.org. (80 pages)

3414. Greco-Roman Lessons for Public Debt Management and Debt Market Development

Alessandra Campanaro and Dimitri Vittas
(September 2004)

Greece and Italy initiated efforts to improve public debt management and develop their domestic debt markets respectively in the late 1970s and mid-1980s. At that time, both countries suffered from large and rapidly growing public debt, excessive reliance on short-term bills held by commercial banks, a strong preference of households to save in bank deposits, and a weak presence of institutional investors (pension funds, insurance companies, and mutual funds). Continuing large fiscal deficits, high levels of interest rates and inflation, and serious policy credibility problems impeded the use of long-term instruments.

Campanaro and Vittas provide a detailed analysis of the characteristics of the instruments that were used in these two countries, their pace of issuance, and their impact on the composition of public debt. The authors note that the main Greco-Roman lesson for developing and transition countries concerns the transition from an excessive reliance on short-term Treasury bills, held by captive banks, to a liquid market with long-term instruments held, and actively traded, by long-term institutional investors. The transition required moving gradually to medium-term instruments, experimenting with innovation, and targeting households and foreign investors, while taking steps to establish policy credibility by lowering fiscal deficits and inflation.

When reliance on captive sources of finance was substantially reduced and policy credibility was established, both countries focused on developing active money markets and liquid secondary markets with benchmark issues of fixed-rate long-term securities. They ultimately succeeded in developing active professional markets, using modern practices, targeting well-established European institutional investors, and integrating into the highly sophisticated euro markets. However, integration into the euro markets was the culmination of a prolonged effort of modernization and adaptation and was greatly facilitated by their strong political commitment to achieve economic convergence and join the euro zone.

This paper—a product of the Financial Sector Operations and Policy Department—is part of a larger effort in the department to study public debt management and debt market development. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Priscilla Infante, room MC9-702, telephone 202-473-7642, fax 202-522-7105, email address pinfante@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. Dimitri Vittas may be contacted at dvittas@worldbank.org. (45 pages)

3415. The Challenge of Reducing Subsidies and Trade Barriers

Kym Anderson
(September 2004)

This is one of 10 studies for the Copenhagen Consensus Project that sought to evaluate the most feasible opportunities to improve welfare globally and alleviate poverty in developing countries. Anderson argues that phasing out distortionary government subsidies and barriers to international trade will yield an extraordinarily high benefit-cost ratio. A survey is provided of recent estimates using global economywide simulation models of the benefits of doing that by way of the current Doha round of multilateral trade negotiations. Even if adjustment costs are several times as large as suggested by available estimates, the benefit-cost ratio from seizing this opportunity exceeds 20. That is much higher than the rewards from regional or bilateral trade agreements or from providing preferential access for least-developed countries' exports to high-income countries. Such reform would simultaneously contribute to alleviating several of the other key challenges reflected in the United Nation's Millennium Development Goals.

This paper—a product of the Trade Team, Development Research Group—is part of a larger effort in the group to better understand the likely consequences of further trade liberalization for global economic welfare and its distributional effects, particularly for the poor in developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Paulina Flewitt, room MC3-333, telephone 202-473-2724, fax 202-522-1159, email address pflewitt@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The author may be contacted at kanderson@worldbank.org. (52 pages)

3416. Foreign Bank Entry, Performance of Domestic Banks, and Sequence of Financial Liberalization

Nihal Bayraktar and Yan Wang
(September 2004)

The openness or internationalization of financial services is a complex issue because it is closely related to structural reforms in the domestic financial sector with some perceived implications for macroeconomic stability. Bayraktar and Wang investigate the impact of foreign bank entry on the performance of domestic banks and how this relationship is affected by the sequence of financial liberalization. Their data set is constructed from the BANKSCOPE database, including 30 industrial and developing countries, and covering the period from 1995 to 2002. The authors apply panel data regressions by pooling all countries together, and by grouping countries according to the sequence of their financial liberalization. One observation based on descriptive analysis is that the degree of openness to foreign bank entry varies a great deal, which is not correlated with average income levels or with GDP growth. Second, the sequence of financial liberalization matters for the performance of the domestic banking sector: After controlling for macroeconomic variables and grouping countries by their sequence of liberalization, foreign bank entry has significantly improved domestic bank competitiveness in countries that liberalized their stock market first. In these countries, both profit and cost indicators are negatively related to the share of foreign banks. Countries that liberalized their capital account first seem to have benefited less from foreign bank entry compared with the other two sets of countries.

This paper—a product of the Poverty Reduction and Economic Management Division, World Bank Institute—is part of a larger effort in the institute to develop materials for capacity building on trade in financial services. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Carole Evangelista, room J4-261, telephone 202-473-7179, fax 202-676-9810, email address cevangelista@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. Yan Wang may be contacted at ywang2@worldbank.org. (42 pages)

3417. Is Environmentally-Friendly Agriculture Less Profitable for Farmers? Evidence on Integrated Pest Management in Bangladesh

Susmita Dasgupta, Craig Meisner, and David Wheeler
(September 2004)

Concerns about the sustainability of conventional agriculture have prompted widespread introduction of integrated pest management (IPM), an ecologically-based approach to control of harmful insects and weeds. IPM is intended to reduce ecological and health damage from chemical pesticides by using natural parasites and predators to control pest populations. Since chemical pesticides are expensive for poor farmers, IPM offers the prospect of lower production costs and higher profitability. However, adoption of IPM may reduce profitability if it also lowers overall productivity, or induces more intensive use of other production factors. On the other hand, IPM may actually promote more productive farming by encouraging more skillful use of available resources. Data scarcity has hindered a full accounting of IPM's impact on profitability, health, and local ecosystems.

Using new survey data, Dasgupta, Meisner and Wheeler attempt such an accounting for rice farmers in Bangladesh. They compare outcomes for farming with IPM and conventional techniques, using input-use accounting, conventional production functions, and frontier production estimation. All of their results suggest that the productivity of IPM rice farming is not significantly different from the productivity of conventional farming. Since IPM reduces pesticide costs with no countervailing loss in production, it appears to be more profitable than conventional rice farming. The interview results also suggest substantial health and ecological benefits. However, externality problems make it difficult for farmers to adopt IPM individually. Without collective adoption, neighbors' continued reliance on chemicals to kill pests will also kill helpful parasites and predators, as well as exposing IPM farmers and local ecosystems to chemical spillovers from adjoining fields. Successful IPM adoption may therefore depend on institutional support for collective action.

This paper—a product of the Infrastructure and Environment Team, Development Research Group—is part of a larger effort in the group to understand the economics of pesticide contamination in developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Yasmin D'Souza, room MC2-622, telephone 202-473-1449, fax 202-522-3230, email address ydsouza@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at sdasgupta@worldbank.org, cmeisner@worldbank.org, or dwheeler1@worldbank.org. (26 pages)

3418. Remittances and Poverty in Guatemala

Richard H. Adams, Jr.
(September 2004)

Adams uses a large, nationally representative household survey to analyze the impact of internal remittances (from Guatemala) and international remittances (from the United States) on poverty in Guatemala. With only one exception, he finds that both internal and international remittances reduce the level, depth, and severity of poverty in Guatemala. However, he finds that remittances have a greater impact on reducing the severity as opposed to the level of poverty in Guatemala. For example, the squared poverty gap—which measures the severity of poverty—falls by 21.1 percent when internal remittances are included in household income, and by 19.8 percent when international remittances are included in such income. This is true because households in the lowest decile group receive a very large share of their total household income (expenditure) from remittances. Households in the bottom decile group receive between 50 and 60 percent of their total income (expenditure) from remittances. When these "poorest of the poor" households receive remittances, their income status changes dramatically and this in turn has a large effect on any poverty measure—like the squared poverty gap—that considers the number, distance, and distribution of poor households beneath the poverty line.

This paper—a product of the Trade Team, Development Research Group—is part of a larger effort in the group to understand the impact of international migration and remittances on poverty and development. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Maria Kasilag, room MC3-321, telephone 202-473-9081, fax 202-522-1159, email address mkasilag@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The author may be contacted at radams@worldbank.org. (36 pages)

3419. Poverty Alleviation through Geographic Targeting: How Much Does Disaggregation Help?

Chris Elbers, Tomoki Fujii, Peter Lanjouw, Berk Özler, and Wesley Yin
(October 2004)

Using recently completed "poverty maps" for Cambodia, Ecuador, and Madagascar, the authors simulate the impact on poverty of transferring an exogenously given budget to geographically defined subgroups of the population according to their relative poverty status. They find large gains from targeting smaller administrative units, such as districts or villages. But these gains are still far from the poverty reduction that would be possible had the planners had access to information on household level income or consumption. The results suggest that a useful way forward might be to combine fine geographic targeting using a poverty map with within-community targeting mechanisms.

This paper—a product of the Poverty Team, Development Research Group—is part of a larger effort in the group to develop tools for the analysis of poverty and income distribution. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Sader, room MC3-556, telephone 202-473-3902, fax 202-522-1151, email address psader@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. Berk Özler may be contacted at bozler@worldbank.org. (41 pages)

3420. Have Consumers Benefited from the Reforms in the Electricity Distribution Sector in Latin America?

Antonio Estache and Martin Rossi
(October 2004)

Estache and Rossi bring new empirical evidence on the impact of the choice of ownership and regulatory regime on firms' productivity and prices paid by consumers. They collect the evidence from a sample of electricity distribution companies in Latin America. The authors rely on estimations of labor and operation and maintenance (O&M) input requirement functions using alternative econometric approaches. Their main conclusions are:

- Private firms perform better (approximately 30 percent) than public firms.
- The regulatory regimes matter, so that *price-cap* regulated firms do better than *rate-of-return* regulated firms, and firms regulated under hybrid regimes have intermediate performance.
- Private firms operating under rate of return are at most as efficient as public firms.
- There is no clear pattern of differences in electricity prices according to the regulatory regime.
- Final prices fell in general but the drop did not match the productivity gains, implying that the operators and the state share some of the gains in the form of rents and higher tax revenue, respectively.

This paper—a product of the Office of the Vice President, Infrastructure Network—is part of a larger effort in the network to promote analytical work on emerging policy issues in infrastructure service delivery. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Antonio Estache, room H3-145, telephone 202-458-1442, fax 202-522-2961, email address aestache@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. (33 pages)

3421. Universal Service Obligations in Developing Countries

Antonio Estache, Jean-Jacques Laffont,
and Xinzhu Zhang
(October 2004)

Estache, Laffont, and Zhang develop a model to analyze the effects of asymmetric information on optimal universal service policy in the public utilities of developing countries. Optimal universal service policy is implemented using two regulatory instruments—pricing and network investment. Under discriminatory pricing, asymmetric information leads to a higher price and smaller network in the rural area than under full information. Under uniform pricing, the price is lower but the network is even smaller. In addition, under both pricing regimes, not only the firm but also taxpayers have incentives to collude with the regulator.

This paper—a product of the Office of the Vice President, Infrastructure Network—is part of a larger effort in the network to promote analytical work on emerging policy issues in infrastructure service delivery. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Antonio Estache, room H3-145, telephone 202-458-1442, fax 202-522-2961, email address aestache@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. (31 pages)

3422. Toward a Social Policy for Argentina's Infrastructure Sectors: Evaluating the Past and Exploring the Future

Vivien Foster
(October 2004)

Argentina was a pioneer of infrastructure reform in the early 1990s. The social dimension of infrastructure services was typically overlooked in the reform process. However, social sensitivities often resurfaced in the years that followed, leading to a series of ad hoc social policy measures that cumulatively amount to US$200 million a year. Foster quantifies and prioritizes the social challenges faced by the Argentine infrastructure sectors, evaluates how well existing social policies are functioning, and provides illustrative simulations of how certain changes in the design of social policy could improve the performance of current social policies.

The author's findings are that current social policies do not prove to be very effective in targeting resources to the poor. They have no real impact on the distribution of income across customers. An important reason for this targeting failure is the tendency to allocate resources to all households resident in a particular geographical area, irrespective of socioeconomic status.

A series of simulations that limit subsidies to households reaching a minimum score on a multidimensional poverty index show that individual targeting of this kind potentially leads to a more progressive distribution of subsidies. However, the greatest improvements in targeting performance would be achieved if efforts switched from subsidizing the use of infrastructure services to subsidizing connections to those services.

This paper—a product of the Finance, Private Sector, and Infrastructure Unit, Latin America and the Caribbean Region—is part of a larger effort in the region to understand and mitigate the social impacts of infrastructure reform. The author wrote the paper in collaboration with Centro de Estudios Económicos de la Regulación, Universidad Argentina de la Empresa. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Vivien Foster, room I5-005, telephone 202-458-9574, fax 202-522-3552, email address vfoster@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. (56 pages)

3423. Designing Performance: The Semi-Autonomous Revenue Authority Model in Africa and Latin America

Robert Taliercio, Jr.
(October 2004)

During the past decade, diverse developing countries have introduced radical reforms in their collection of taxes. In more than 15 countries, traditional tax departments have been granted the status of semiautonomous revenue authorities (ARAs), which are designed with a number of autonomy-enhancing features, including self-financing mechanisms, boards of directors with high-ranking public and private sector representatives, and *sui generis* personnel systems. Taliercio addresses gaps in the public management and tax administration literatures by closely examining ARA reforms in Kenya, Mexico, Peru, South Africa, Uganda, and Venezuela from their inception to the early 2000s. Using the comparative case study method, he tackles three questions. First, what has motivated the wave of ARA reforms over the past decade? The author argues that from a public management perspective, reformers intended to use autonomy to enhance bureaucratic performance in low-capacity public sectors. Second, is there a connection between autonomy and performance? Focusing on revenue collection, compliance management, taxpayer services, human resource management, and administrative costs, the author suggests that autonomy is associated with higher levels of performance. He also makes the case that higher levels of autonomy are associated with higher levels of performance. Third, if there is a connection between autonomy and performance, which specific design features matter most and why? In spite of the popularity of the ARA reform, there is no consensus on best practice in organizational design. The author offers hypotheses based on the cases about why certain designs work better than others, and makes specific recommendations for the next generation of ARA reforms.

This paper—a product of the Poverty Reduction and Economic Management Sector Department, East Asia and Pacific Region—is part of a larger effort in the Bank to understand under what conditions public sector performance improves. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Gloria Elmore, room MC8-162, telephone 202-473-6701, email address gelmore@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The author may be contacted at rtaliercio@worldbank.org. (83 pages)

3424. The Transactions Costs of Primary Market Issuance: The Case of Brazil, Chile, and Mexico

Sara Zervos
(October 2004)

Zervos documents the precise costs of debt and equity issuance, both domestically and internationally, for firms in Brazil, Chile, and Mexico. Costs include investment banking and legal fees, regulatory and exchange listing costs, rating agency fees, and expenditures for marketing and publishing. Her findings suggest that Brazilian firms face similar costs in issuing debt locally or abroad, whereas domestic equity issuance is nearly twice as expensive as debt. While the Chilean domestic corporate debt market is well developed by emerging market standards (size of the market and maturity of issues), Chilean firms can issue debt more cheaply internationally than at home. In addition, while equity financing is cheaper in Chile from a transaction cost perspective, over the past decade most firms have used bonds rather than shares to raise capital. This financing trend is true in all three countries. Finally, Mexican firms can issue debt at the lowest costs of the three, but face the highest equity issuing costs. In addition to documenting these features, the author sheds light on how the investor base in these countries plays a strong role in influencing the ability of firms to access domestic capital markets.

This paper—a product of the Financial Sector Operations and Policy Department—is part of a larger effort in the department to understand and promote private sector financing in emerging markets. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Priscilla Infante, room MC9-702, telephone 202-473-7642, fax 202-522-7105, email address pinfante@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The author may be contacted at sara.zervos@otaam.com. (19 pages)

3425. Can Student Loans Improve Accessibility to Higher Education and Student Performance? An Impact Study of the Case of SOFES, Mexico

Erik Canton and Andreas Blom
(October 2004)

Financial aid to students in tertiary education can contribute to human capital accumulation through two channels—increased enrollment and improved student performance. Canton and Blom analyze the quantitative importance of both channels in the context of a student loan program (SOFES) implemented at private universities in Mexico. With regard to the first channel, enrollment, results from the Mexican household survey indicate that financial support has a strong positive effect on university enrollment. Given completion of upper secondary education, the probability of entering higher education rises 24 percent. The authors use two data sources to investigate the second channel, student performance. They analyze administrative data provided by SOFES using a regression-discontinuity design, and survey data enable them to perform a similar analysis using a different control group. Empirical results suggest that SOFES recipients show better academic performance than students without a credit from SOFES. However, the results cannot be interpreted as a purely causal impact of the student loan program, since the impacts also could reflect (self-) selection of students.

This paper—a product of the Human Development Sector Unit, Latin America and the Caribbean Region—is part of a larger effort in the region to measure and evaluate the impact of the unit's programs. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Samia Benbouzid, room I7-046, telephone 202-458-8469, fax 202-522-1201, email address sbenbouzid@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at e.j.f.canton@cpb.nl or ablom@worldbank.org. (45 pages)

3426. International Economic Activities and the Demand for Skilled Labor: Evidence from Brazil and China

Pablo Fajnzylber and Ana M. Fernandes
(October 2004)

Increases in international economic integration can lead to greater specialization according to comparative advantage, but also to the diffusion of skill-biased technologies. In developing countries characterized by relative abundance of unskilled labor, these factors can have opposite effects on the relative demand for skilled labor. Fajnzylber and Fernandes investigate the impact of the use of imported inputs, exports, and foreign direct investment on the demand for skilled workers by Brazilian and Chinese manufacturing plants. They find that while in Brazil increased levels of international integration are associated with an increased demand for skilled labor, the opposite is true in China.

This paper—a product of the Growth and Investment Team, Development Research Group—is part of a larger effort in the group to study the links between globalization and labor markets. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Paulina Sintim-Aboagye, room MC3-422, telephone 202-473-7644, fax 202-522-1155, email address psintimaboagye@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at pfajnzylber@worldbank.org or afernandes@worldbank.org. (42 pages)

3427. Shelter Strategies for the Urban Poor: Idiosyncratic and Successful, but Hardly Mysterious

Robert M. Buckley and Jerry Kalarickal
(October 2004)

In 1986 the World Bank prepared a strategy for low-income housing in developing countries. This work grew out of the Bank's efforts to support the urban poor through an extensive housing assistance program that was launched by Bank President McNamara's speech on urban poverty. By that time, the Bank had provided more than $4 billion of such assistance, and had undertaken an extensive research effort to design support for that lending. Much has changed since that time, not only in the way the Bank provides shelter assistance, more than doubling its support since that review, but also in the changing consensus as to what shelter strategy should be. Buckley and Kalarickal review the emerging consensus. They examine three new research areas: the empirical analysis of the effects policy has on housing supply; the richer understanding of the effects that land market regulations have on specific projects and on the functioning of urban areas; and the alleged mysterious effects that de Soto, for example, claims that effective property rights have not only for shelter policy but for development more generally. The authors also examine the emergence of both a new financial innovation, micro-enterprise finance, and the increased emphasis given to project design based on community participation, showing how these approaches more fully reconcile the incentives faced by beneficiaries and donors. In sum, the authors argue that the evolving consensus on shelter strategy is not nearly as mysterious as some would claim. Housing markets in most developing countries remain highly idiosyncratic and constrained. Nevertheless, the evolving consensus on shelter strategy appears to recognize these idiosyncrasies and policy constraints as evidenced by the strong and improving performance of the Bank's shelter lending.

This paper—a product of the Urban Unit, Transport and Urban Development Department—is part of a larger effort in the department to evaluate the lessons from 30 years of urban shelter loans. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Oumi Himid, room H3-333, telephone 202-458-0225, fax 202-522-3232, email address uhimid@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at rbuckley@worldbank.org or jkalarickal@worldbank.org. (35 pages)

3428. Who Suffers from Indoor Air Pollution? Evidence from Bangladesh

Susmita Dasgupta, Mainul Huq,
M. Khaliquzzaman, Kiran Pandey,
and David Wheeler
(October 2004)

In this paper the authors investigate individuals' exposure to indoor air pollution. Using new survey data from Bangladesh, they analyze exposure at two levels—differences within households attributable to family roles, and differences across households attributable to income and education. Within households, they relate individuals' exposure to pollution in different locations during their daily round of activity. The authors find high levels of exposure for children and adolescents of both sexes, with particularly serious exposure for children under 5. Among prime-age adults, they find that men have half the exposure of women (whose exposure is similar to that of children and adolescents). They also find that elderly men have significantly lower exposure than elderly women. Across households, they draw on results from their previous paper (Dasgupta and others, 2004), which relate pollution variation across households to choices of cooking fuel, cooking locations, construction materials, and ventilation practices. They find that these choices are significantly affected by family income and adult education levels (particularly for women). Overall, the authors find that the poorest, least-educated households have twice the pollution levels of relatively high-income households with highly-educated adults.

For children in a typical household, pollution exposure can be halved by adopting two simple measures—increasing their outdoor time from 3 to 5 or 6 hours a day, and concentrating outdoor time during peak cooking periods. The authors recognize that weather and other factors may intervene occasionally, and that child supervision outdoors may be difficult for some households. However, the potential benefits are so great that neighbors might well agree to pool outdoor supervision once they became aware of the implications for their children's health.

This paper—a product of the Infrastructure and Environment Team, Development Research Group—is part of a larger effort in the group to study environmental health issues in developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Yasmin D'Souza, room MC2-622, telephone 202-473-1449, fax 202-522-3230, email address ydsouza@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. Susmita Dasgupta may be contacted at sdasgupta@worldbank.org. (23 pages)

3429. Creating Markets for Habitat Conservation when Habitats are Heterogeneous

Kenneth M. Chomitz, Timothy S. Thomas,
and Antônio Salazar Brandão
(October 2004)

A tradable development rights (TDR) program focusing on biodiversity conservation faces a crucial problem defining which areas of habitat should be considered equivalent. Restricting the trading do-main to a narrow area could boost the range of biodiversity conserved but could increase the opportunity cost of conservation. The issue is relevant to Brazil, where TDR-like programs are emerging. Current regulations require each rural property to maintain a forest reserve of at least 20 percent, but nascent policies allow some tradability of this obligation. Chomitz, Thomas, and Brandão use a simple, spatially explicit model to simulate a hypothetical state-level program. They find that wider trading domains drastically reduce landholder costs of complying with this regulation and result in environmentally preferable landscapes.

This paper—a product of the Infrastructure and Environment Team, Development Research Group—is part of a larger effort in the group to understand the economics of conservation. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Viktor Soukhanov, room MC2-523, telephone 202-473-5721, fax 202-522-3230, email address vsoukhanov@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. Kenneth Chomitz may be contacted at kchomitz@worldbank.org. (29 pages)

3430. The Forest-Hydrology-Poverty Nexus in Central America: An Heuristic Analysis

Andrew Nelson and Kenneth M. Chomitz
(October 2004)

A "forest-hydrology-poverty nexus" hypothesis asserts that deforestation in poor upland areas simultaneously threatens biodiversity and increases the incidence of flooding, sedimentation, and other damaging hydrological processes. Nelson and Chomitz use rough heuristics to assess the applicability of this hypothesis to Central America. They do so by using a simple rule of thumb to identify watersheds at greater risk of hydrologically significant land use change: these are watersheds where there is a relatively large interface between agriculture and forest, and where this interface is on a steep slope. The authors compare the location of these watersheds with spatial maps of poverty and forests (for Guatemala and Honduras) and with maps of population and forests (for Central America at large). The analysis is performed for watersheds defined at different scales. The authors find plausible evidence for a forest-biodiversity-poverty connection in Guatemala, and to a lesser extent in Honduras. In the rest of Central America, there are relatively few areas where forest meets agriculture on steep slopes—either the forest or the slopes are lacking. And the ratio of these forest/agriculture/hillside interfaces to watershed area declines markedly as larger-scale watersheds are considered. This directs attention to relatively small watersheds for further investigation of the "nexus."

This paper—a product of the Infrastructure and Environment Team, Development Research Group—is part of a larger effort in the group to understand the economics of conservation. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Viktor Soukhanov, room MC2-523, telephone 202-473-5721, fax 202-522-3230, email address vsoukhanov@worldbank.org. Maps in this paper are best viewed in color. A color PDF file of this paper may be downloaded at http://econ.worldbank.org. Kenneth Chomitz may be contacted at kchomitz@worldbank.org. (39 pages)

3431. Financial Development, Financial Fragility, and Growth

Norman Loayza and Romain Rancière
(October 2004)

Loayza and Rancière study the apparent contradiction between two strands of the literature on the effects of financial intermediation on economic activity. On the one hand, the empirical growth literature finds a positive effect of financial depth as measured by, for instance, private domestic credit and liquid liabilities (for example, Levine, Loayza, and Beck 2000). On the other hand, the banking and currency crisis literature finds that monetary aggregates, such as domestic credit, are among the best predictors of crises and their related economic downturns (for example, Kaminski and Reinhart 1999). The authors account for these contrasting effects based on the distinction between the short- and long-run impacts of financial intermediation. Working with a panel of cross-country and time-series observations, they estimate an encompassing model of short- and long-run effects using the Pooled Mean Group estimator developed by Pesaran, Shin, and Smith (1999). Their conclusion from this analysis is that a positive long-run relationship between financial intermediation and output growth coexists with a mostly negative short-run relationship. The authors further develop an explanation for these contrasting effects by relating them to recent theoretical models, by linking the estimated short-run effects to measures of financial fragility (namely, banking crises and financial volatility), and by jointly analyzing the effects of financial depth and fragility in classic panel growth regressions.

This paper—a product of the Growth and Investment Team, Development Research Group—is part of a larger effort in the group to understand the sources of growth and volatility. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Tourya Tourougui, room MC3-361, telephone 202-458-7431, fax 202-522-3518, email address ttourougui@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. Norman Loayza may be contacted at nloayza@worldbank.org. (35 pages)

3432. Growth, Inequality, and Simulated Poverty Paths for Tanzania, 1992–2002

Gabriel Demombynes and Johannes G. Hoogeveen
(October 2004)

Although Tanzania experienced relatively rapid growth in per capita GDP in the 1995–2001 period, household budget survey (HBS) data show only a modest and statistically insignificant decline in poverty between 1992 and 2001. To assess the likely trajectory of poverty rates over the course of the period, changes in poverty are simulated using unit-record HBS data and national accounts growth rates under varying assumptions for growth rates and inequality changes. To this end the projection approach of Datt and Walker (2002) is used along with an extension that is better suited to taking into account distributional changes observed between the two household surveys. The simulations suggest that following increases in poverty during the economic slowdown of the early 1990s, recent growth in Tanzania has brought a decline in poverty, particularly in urban areas. Unless recent growth is sustained, the country will not meet its 2015 Millennium Development Goal (MDG). Poverty reduction is on track in urban areas, but reaching the MDG target for bringing down poverty in rural areas, where most Tanzanians live, requires sustaining high growth in rural output per capita.

This paper—a product of the Poverty Reduction and Economic Management 2 Team, Africa Technical Families—is part of a larger effort in the Tanzania country team to investigate the relation between economic growth and poverty reduction. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Tanisha McGill, room J10-138, telephone 202-473-7605, fax 202-614-0759, email address tmcgill@worldbank.org, or in Tanzania, Mary-Anne Mwakangale, telephone 022-211-4575-77, fax 022-211-3039, email address mmwakangale@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at gabriel@demog.berkeley.edu or jhoogeveen@worldbank.org. (36 pages)

3433. Measuring the Risk on Housing Investment in the Informal Sector: Theory and Evidence from Pune, India

Mudit Kapoor and David le Blanc
(October 2004)

Kapoor and le Blanc provide an economic framework to analyze investment in informal housing in developing countries. They consider a simple model of investment in the housing market where investors can choose between two sectors—the formal sector, where physical investment faces no risk of destruction, and the informal sector, where investment in each period is subjected to an exogenous risk of destruction. Construction costs differ between the two sectors. All households are renters. Renters shop for dwelling attributes and do not care about the sector (formal or informal) itself. The model implies that returns on investment, measured by the rent-to-value ration, will be higher in the informal sector. The authors use a survey conducted by the World Bank in Pune, India in 2002. The sample comprises 2,850 households. This survey had the peculiarity of asking the households, regardless of tenure status, questions about the market rent and value of their dwelling. Thus they can calculate individual rates of return for each unit without facing the typical selection bias problems. Comparing the distributions of returns in the informal and formal sectors, the authors obtain the following results:

- Rates of return are significantly higher in the informal sector, as predicted by the model.
- These figures imply a perceived risk on housing investment in the informal sector equivalent to an annual destruction rate ranging between 1 and 2 percent.
- The two distributions of rates of return present highly idiosyncratic components and are not well explained by variables proxying either the strength of informal property rights or lower perceived risks of eviction.

This paper—a joint product of the Infrastructure and Environment Team, Development Research Group, and the Urban Unit, Transport and Urban Development Department—is part of a larger effort in the Bank to better understand the dynamics of informal housing around the world. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact David le Blanc, room H9-231, telephone 202-458-0990, fax 202-477-1993, email address dleblanc@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. Mudit Kapoor may be contacted at mkapoor@worldbank.org. (47 pages)

3434. North-South Technology Diffusion, Regional Integration, and the Dynamics of the "Natural Trading Partners" Hypothesis

Maurice Schiff and Yanling Wang
(October 2004)

Based on static analysis, a number of studies argue that forming a regional trade agreement is more likely to raise welfare if member countries are "natural trading partners," while other studies claim that the opposite is true. Schiff and Wang look at the argument from a dynamic viewpoint by examining the impact of North-South trade on technology diffusion and total factor productivity (TFP) in the South. Specifically, it examines the impact on TFP in the Republic of Korea, Mexico, and Poland of trade with Japan, Canada plus the United States (North America) and the European Union. Using industry-level data, they find that (1) technology diffusion and productivity gains tend to be regional: Korea benefits mainly from trade with Japan, Mexico with the United States, and Poland with the European Union; and (2) though these results suggest that the dynamic version of the "natural trading partners" hypothesis holds for all three countries, careful analysis shows that it holds for Korea and Mexico but not necessarily for Poland.

This paper—a product of the Trade Team, Development Research Group—is part of a larger effort in the group to examine the dynamic effects of North-South regional trade blocs. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Paulina Flewitt, room MC3-333, telephone 202-473-2724, fax 202-522-1159, email address pflewitt@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. Maurice Schiff may be contacted at mschiff@worldbank.org. (20 pages)

3435. Population Age Structure and the Budget Deficit

Derek H. C. Chen
(October 2004)

Chen focuses on the effects of age structure changes on the size of budget deficits of national governments. More specifically, he determines whether differences in age structure can account for the observed differences in budget deficits across countries as well as across time. By way of an extension of the untested theory of negative bequest motives advocated by Cukierman and Meltzer (1989), the author argues that the commonly accepted notion that population aging tends to increase the budget deficits of economies is theoretically consistent. However, preliminary results from country and time fixed-effects panel regressions, estimated from 1975 to 1992 over 55 industrial and developing countries, indicate statistical evidence for this postulation is present only in the developing countries but not in the industrial countries.

This paper—a product of the Knowledge for Development Program, World Bank Institute—is part of a larger effort in the institute to study the economic and social effects of population aging. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Faythe Calandra, room J2-267, telephone 202-473-6440, fax 202-522-1492, email address fcalandra@ worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The author may be contacted at dchen2@worldbank. org. (39 pages)

3436. Approaches to Results-Based Funding in Tertiary Education: Identifying Finance Reform Options for Chile

Kristian Thorn, Lauritz Holm-Nielsen, and Jette Samuel Jeppesen
(October 2004)

Unrealized potential exists for increasing accountability and transparency in Chilean tertiary education by allocating resources based on achieved results rather than historical precedence and political negotiation. Against this background, Thorn, Holm-Nielsen, and Jeppesen profile approaches to results-based funding of tertiary education to identify efficacious finance reform options for Chile. International experience shows that financing by results is not a ready-made concept, but a broad label that offers a menu of design options. To decipher results-based funding, the authors cover all phases in designing and implementing a results-based funding system and highlight strengths and weaknesses of concepts, such as taximeter funding, performance contracts, and formula-based allocations.

This paper—a product of the Human Development Department, Latin America and the Caribbean Region—is part of a larger effort in the region to increase accountability for results. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Tania Gomez-Carcago, room I7-144, telephone 202-473-2127, fax 202-614-1538, email address tgomez@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at kthorn@ worldbank.org or lholmnielsen@ worldbank.org. (24 pages)

3437. Bank Capital and Loan Loss Reserves under Basel II: Implications for Emerging Countries

Giovanni Majnoni, Margaret Miller, and Andrew Powell
(October 2004)

Majnoni, Miller, and Powell propose an integrated approach to minimum bank capital and loan loss reserves regulation. They break new ground in two main areas. First, the authors provide an explicit measurement of the credit loss distribution for a sample of emerging countries providing a benchmark for discussing the appropriate calibration of new regulatory capital and loan loss provision requirements for non-G10 countries. Second, on normative grounds, they propose a simplified version of the "internal rating based" (IRB) approach as a transition tool that, while retaining a risk-based definition of solvency ratios, implies reduced supervisory monitoring costs and could therefore be of interest to emerging countries where supervisory resources are particularly scarce.

This paper—a product of the Finance Cluster Sector Unit, Latin America and the Caribbean Region—is part of a larger effort in the region to analyze the effects of bank capital regulation. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Helena Issa, room I5-112, telephone 202-473-0154, fax 202-522-2106, email address hissa@ worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at gmajnoni@ worldbank.org, mmiller5@worldbank.org or apowell@utdt.edu. (30 pages)

3438. Addressing Gender-Based Violence in the Latin American and Caribbean Region: A Critical Review of Interventions

Andrew Morrison, Mary Ellsberg, and Sarah Bott
(October 2004)

Morrison, Ellsberg, and Bott present an overview of gender-based violence (GBV) in Latin America, with special emphasis on good practice interventions to prevent GBV or offer services to its survivors or perpetrators. Intimate partner violence and sexual coercion are the most common forms of GBV, and these are the types of GBV that they analyze.

GBV has serious consequences for women's health and well-being, ranging from fatal outcomes, such as homicide, suicide, and AIDS-related deaths, to non-fatal outcomes, such as physical injuries, chronic pain syndrome, gastrointestinal disorders, complications during pregnancy, miscarriage, and low birth-weight of children. GBV also poses significant costs for the economies of developing countries, including lower worker productivity and incomes, and lower rates of accumulation of human and social capital.

The authors examine good practice approaches in justice, health, education, and multisectoral approaches. In each sector, they identify good practices for: (1) law and policies; (2) institutional reforms; (3) community-level interventions; and (4) individual behavior change strategies.

The authors offer conclusions and recommendations for future work on gender-based violence:

- It is essential to focus on the prevention of GBV, not just on services for its survivors.
- Prevention is best achieved by empowering women and reducing gender disparities, and by changing norms and attitudes which foster violence.
- Interventions should employ a multisectoral approach and work at different levels—individual, community, institutional, and laws and policies.

GBV may be common in the Latin America and the Caribbean region, but there are promising approaches available to begin working toward its elimination.

This paper—a product of the Poverty Sector Unit, Latin America and the Caribbean Region—is part of a larger effort in the region to address issues of violence and its impact on development. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Lucy Bravo, room I8-104, telephone 202-458-2361, fax 202-522-3134, email address lbravo1@ worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at amorrison@ worldbank.org or mellsberg@path-dc.org. (70 pages)

3439. Elections, Special Interests, and the Fiscal Costs of Financial Crisis

Philip Keefer
(October 2004)

Keefer proposes a new approach to explain why the costs of crisis are greater in some countries than in others. He begins with the premise that many crises result from the willingness of politicians to cater to special interests at the expense of broad social interests. A parsimonious model predicts that the less costly it is for average citizens to expel politicians, the more veto players there are; the less important are exogenous shocks, and the more difficult it is for politicians and special interests to forge credible agreements, the lower the costs of crisis are. Though these predictions differ from those in the literature, empirical evidence presented shows that they explain the fiscal costs of financial crisis, even after controlling for the financial sector policies believed to contribute most to the efficient prevention and resolution of financial crisis.

This paper—a product of the Growth and Investment Team, Development Research Group—is part of a larger effort in the group to understand the political economy of good policy. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Paulina Sintim-Aboagye, room MC3-422, telephone 202-473-8526, fax 202-522-1155, email address psintimaboagye@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The author may be contacted at pkeefer@worldbank.org. (48 pages)

3440. Market Discipline under Systemic Risk: Evidence from Bank Runs in Emerging Economies

Eduardo Levy-Yeyati, Maria Soledad Martinez Peria, and Sergio L. Schmukler
(November 2004)

Levy-Yeyati, Martinez Peria, and Schmukler show that systemic risk exerts a significant impact on the behavior of depositors, sometimes overshadowing their responses to standard bank fundamentals. Systemic risk can affect market discipline both regardless of and through bank fundamentals. First, worsening systemic conditions can directly threaten the value of deposits by way of dual agency problems. Second, to the extent that banks are exposed to systemic risk, systemic shocks lead to a future deterioration of fundamentals not captured by their current values. Using data from the recent banking crises in Argentina and Uruguay, the authors show that market discipline is indeed quite robust once systemic risk is factored in. As systemic risk increases, the informational content of past fundamentals declines. These episodes also show how few systemic shocks can trigger a run irrespective of ex-ante fundamentals. Overall, the evidence suggests that in emerging economies, the notion of market discipline needs to account for systemic risk.

This paper—a product of the Finance Team, Development Research Group—is part of a larger effort in the group to study market discipline. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Agnes Yaptenco, room MC3-439, telephone 202-473-1823, fax 202-522-1155, email address ayaptenco@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at ely@utdt.edu, mmartinezperia@worldbank.org, or sschmukler@worldbank.org. (48 pages)

3441. Policies Facilitating Firm Adjustment to Globalization

Bernard Hoekman and Beata Smarzynska Javorcik
(November 2004)

Hoekman and Javorcik focus on policies facilitating firm adjustment to globalization. They briefly review the effects of trade and investment liberalization on firms, focusing on within-industry effects. They postulate that governments' role in supporting the process is to (1) ensure that firms face "right" incentives to adjust, and (2) intervene in areas where market failures are present. Their main message is that while many policies could be adopted to address market failures, they need to be carefully designed and implemented in a stable macroeconomic environment. An institutional infrastructure that supports the functioning of modern markets is most important. Proactive support policies of whatever stripe should be subject to cost-benefit analysis, based on the existence of an identified market failure, and monitored for performance and cost effectiveness. Transparency and accountability are critical in ensuring that interventions accomplish their intended objectives rather than being vehicles for rent seeking.

This paper—a product of the Trade Team, Development Research Group—is part of a larger effort in the group to examine the effects of globalization on developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Paulina Flewitt, room MC3-333, telephone 202-473-2724, fax 202-522-1159, email address pflewitt@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at bhoekman@worldbank.org or bjavorcik@worldbank.org. (27 pages)

3442. Emerging Infrastructure Policy Issues in Developing Countries: A Survey of the Recent Economic Literature

Antonio Estache
(November 2004)

Estache reviews the recent economic research on emerging issues for infrastructure policies affecting poor people in developing countries. His main purpose is to identify some of the challenges the international community, and donors in particular, are likely to have to address over the next few years. He addresses six main issues: (1) the necessity of infrastructure in achieving the Millennium Development Goals; (2) the various dimensions of financing challenges for infrastructure; (3) the debate on the relative importance of urban and rural infrastructure needs; (4) the debate on the effectiveness of infrastructure decentralization; (5) what works and what does not when trying to target the needs of the poor, with an emphasis on affordability and regulation challenges; and (6) the importance of governance and corruption in the sector. The author concludes by showing how the challenges identified define a relatively well integrated agenda for both researchers and the international infrastructure community.

This paper—a product of the Office of the Vice President, Infrastructure Network—is part of a larger effort in the network to stimulate more analytical assessments of emerging issues in the sector. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Marie Leon, room H3-145, telephone 202-473-6151, fax 202-522-2461, email address mleon@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The author may be contacted at aestache@worldbank.org. (42 pages)

3443. Improving Credit Information, Bank Regulation, and Supervision: On the Role and Design of Public Credit Registries

Andrew Powell, Nataliya Mylenko, Margaret Miller, and Giovanni Majnoni
(November 2004)

Powell, Mylenko, Miller, and Majnoni analyze how data in public credit registries can be used both to strengthen bank supervision and to improve the quality of credit analysis by financial institutions. Empirical tests using public credit registry (PCR) data were performed in collaboration with the central banks in Argentina, Brazil, and Mexico. The results of the empirical tests confirm the value of the data for credit risk evaluation and provide insights regarding its use in supervision, including in calculations of credit risk for capital and provisioning requirements, or as a check on a bank's internal ratings for the Basel II's internal rating-based approach. The authors also define a set of critical design parameters and use the results to comment on appropriate public registry design. Finally, they discuss the relationship between the different objectives of a PCR and how they influence the registry's design.

This paper—a product of the Finance Cluster, Latin America and the Caribbean Region—is part of a larger effort in the region to analyze the effects of bank capital regulation. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Helena Issa, room I5-112, telephone 202-473-0154, fax 202-522-2106, email address hissa@worldbank.org. Policy Research Working Papers are also posted on the Web at http:/econ.worldbank.org. The authors may be contacted at gmajnoni@worldbank.org, mmiller5@worldbank.org, nmylenko@worldbank.org, or apowell@utdt.edu. (37 pages)

3444. Predicting the Poverty Impacts of Trade Reform

Thomas W. Hertel and Jeffrey J. Reimer
(November 2004)

An important area of research in recent years involves assessing the microeconomic implications of macro-level policies—particularly those related to international trade. While a wide range of research methodologies are available for assessing the microeconomic incidence of micro-policies, as well as for assessing the effect of macro-level policies on markets and broad groups of households, there is a gap when it comes to eliciting the disaggregated household and firm level effects of trade policies. Recent research addresses this knowledge gap and the present survey offers an overview of this literature.

The preponderance of the evidence from the studies encompassed by this survey points to the dominance of earnings-side effects over consumption-side effects of trade reform. This is problematic, since household surveys are notable for their underreporting of income. From the perspective of the poor, it is the market for unskilled labor that is most important. The poverty effects of trade policy often hinge crucially on how well the increased demand for labor in one part of the economy is transmitted to the rest of the economy by way of increased wages, increased employment, or both. Further econometric research aimed at discriminating between competing factor mobility hypotheses is urgently needed.

This paper—a product of the Trade Team, Development Research Group—is part of a larger effort in the group to assess the poverty impacts of trade policies. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Paulina Flewitt, room MC3-333, telephone 202-473-2724, fax 202-522-1159, email address pflewitt@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at hertel@purdue.edu or reimer@aae.wisc.edu. (40 pages)

3445. Has Private Participation in Water and Sewerage Improved Coverage? Empirical Evidence from Latin America

George R. G. Clarke, Katrina Kosec, and Scott Wallsten
(November 2004)

Introducing private sector participation (PSP) into the water and sewerage sectors in developing countries is difficult and controversial. Empirical studies on its effects are scant and generally inconclusive. Case studies tend to find improvements in the sector following privatization, but they suffer from selection bias and it is difficult to generalize their results. To explore empirically the effects of PSP on coverage, Clarke, Kosec, and Wallsten assemble a new dataset of connections to water and sewerage services at the city and province level based on household surveys in Argentina, Bolivia, and Brazil. The household surveys, conducted over a number of years, allow them to compile data before and after the introduction of PSP, as well as from similar (control) regions that never privatized at all. Their analysis reveals that, in general, connection rates to piped water and sewerage improved following the introduction of PSP, consistent with the case study literature. The authors also find, however, that connection rates similarly improved in the control regions, suggesting that PSP may not have been responsible for those improvements. On the other hand, connection rates for the poorest households also tended to increase in the regions with PSP and in the control regions, suggesting that—in terms of connections at least—PSP did not harm the poor.

This paper—a product of the Growth and Investment Team, Development Research Group—is part of a larger effort in the group to study the impact of infrastructure reform on poor households. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Paulina Sintim-Aboagye, room MC3-427, telephone 202-473-7644, fax 202-522-1155, email address psintimaboagye@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at gclarke@worldbank.org, kkosec@worldbank.org, or swallsten@aei.org. (63 pages)

3446. The Long-Term Legacy of the Khmer Rouge Period in Cambodia

Damien de Walque
(November 2004)

De Walque studies the long-term impact of genocide during the period of the Khmer Rouge (1975–79) in Cambodia and contributes to the literature on the economic analysis of conflict. Using mortality data for siblings from the Cambodia Demographic and Health Survey in 2000, he shows that excess mortality was extremely high and heavily concentrated during 1974–80. Adult males had been the most likely to die, indicating that violent death played a major role. Individuals with an urban or educated background were more likely to die. Infant mortality was also at very high levels during the period, and disability rates from landmines or other weapons were high for males who, given their birth cohort, were exposed to this risk.

The very high and selective mortality had a major impact on the population structure of Cambodia. Fertility and marriage rates were very low under the Khmer Rouge but rebounded immediately after the regime's collapse. Because of the shortage of eligible males, the age and education differences between partners tended to decline. The period had a lasting impact on the educational attainment of the population. The education system collapsed during the period, so individuals—especially males—who were of schooling age during this interval had a lower educational attainment than the preceding and subsequent birth cohorts.

This paper—a product of the Public Services Team, Development Research Group—is part of a larger effort in the group to understand the consequences of conflict. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Hedy Sladovich, room MC3-607, telephone 202-473-7698, fax 202-522-1154, email address hsladovich@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The author may be contacted at ddewalque@worldbank.org. (43 pages)

3447. India's Public Health System: How Well Does It Function at the National Level?

Monica Das Gupta *and* Manju Rani
(November 2004)

India has relatively poor health outcomes, despite having a well-developed administrative system, good technical skills in many fields, and an extensive network of public health institutions for research, training, and diagnostics. This suggests that the health system may be misdirecting its efforts, or may be poorly designed. To explore this, Das Gupta and Rani use instruments developed to assess the performance of public health systems in the United States and Latin America based on the framework of the Essential Public Health Functions, identified as the basic functions that an effective public health system must fulfill. The authors focus on the federal level in India, using data obtained from senior health officials in the central government.

The data indicate that the reported strengths of the system lie in having the capacity to carry out most of the public health functions. Its reported weaknesses lie in three broad areas. First, it has overlooked some fundamental public health functions such as public health regulations and their enforcement. Second, deep management flaws hinder effective use of resources—including inadequate focus on evaluation, on assessing quality of services, on dissemination and use of information, and on openness to learning and innovation. Resources could also be much better used with small changes, such as the use of incentives and challenge funds, and greater flexibility to reassign resources as priorities and needs change. Third, the central government functions too much in isolation and needs to work more closely with other key actors, especially with subnational governments, as well as with the private sector and with communities. The authors conclude that with some reassessment of priorities and better management practices, health outcomes could be substantially improved.

This paper—a product of the Public Services Team, Development Research Group—is part of a larger effort in the group to understand how to improve public service delivery. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Hedy Sladovich, room MC3-607, telephone 202-473-7698, fax 202-522-1154, email address hsladovich@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at mdasgupta@worldbank.org or mrani@worldbank.org. (24 pages)

3448. What Are the Right Institutions in a Globalizing World? And ... Can We Keep Them if We've Found Them?

Roumeen Islam
(November 2004)

Greater trade integration has often been viewed as requiring greater standardization in institutions, without which the benefits of trade do not materialize. There are many current debates concerning the degree and area of standardization needed and these debates are likely to continue for the foreseeable future. This paper, drawing on both the fiscal federalism and the trade literature, argues that increasing trade integration is consistent with a wide array of institutional choices. The final outcome, in terms of which institutions have prevailed, has depended substantially on political pressures for standardization and not necessarily on a clear assessment of economic gains.

This paper—a product of the Poverty Reduction and Economic Management Division, World Bank Institute—is part of a larger effort in the institute to understand the concept of "good" governance and to disseminate its work in this area. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Roumeen Islam, room J4-151, telephone 202-473-2628, fax 202-676-9810, email address rislam@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. (40 pages)

3449. Does It Matter Where You Come From? Vertical Spillovers from Foreign Direct Investment and the Nationality of Investors

Beata S. Javorcik, Kamal Saggi, and Mariana Spatareanu
(November 2004)

Javorcik, Saggi, and Spatareanu use a firm-level panel data set from Romania to examine whether the nationality of foreign investors affects the degree of vertical spillovers from foreign direct investment. Investors' country of origin may matter for spillovers to domestic producers in upstream sectors (supplying intermediate inputs) in two ways. First, the share of intermediate inputs sourced by multinationals from a host country is likely to increase with the distance between the host and the source economy. Second, the sourcing pattern is likely to be affected by preferential trade agreements that cover some but not other source economies. In this case, the Association Agreement signed between Romania and the European Union (EU) implies that inputs sourced from the EU are subject to a lower tariff than inputs sourced from America or Asia. Moreover, while for European investors intermediate inputs sourced from home country suppliers comply with the rules of origin and thus can be exported to the EU on preferential terms, this would not be the case for home country suppliers of American or Asian multinationals. Therefore, one would expect that American and Asian investors source more from Romania than EU investors and thus present greater potential for vertical spillovers. The empirical analysis produces evidence in support of the authors' hypothesis. They find a positive association between the presence of American and Asian companies in downstream sectors and the productivity of Romanian firms in the supplying industries. Further, the productivity of Romanian firms in the supplying sectors is negatively correlated with operations of European investors in downstream sectors. The differences between the effects associated with investors of different origin are statistically significant.

This paper—a product of the Trade Team, Development Research Group—is part of a larger effort in the group to study the effects of foreign direct investment on developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Paulina Flewitt, room MC3-333, telephone 202-473-2724, fax 202-522-1159, email address pflewitt@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at bjavorcik@worldbank.org, ksaggi@smu.edu, or mspatareanu@worldbank.org. (22 pages)

3450. Discovery and Development: An Empirical Exploration of "New" Products

Bailey Klinger and Daniel Lederman
(November 2004)

Klinger and Lederman use disaggregated export data to explore the relationship between economic discovery and economic development. They find that discoveries, or episodes, when countries begin exporting a new product are not limited to so-called "dynamic" industries. Rather, they also occur in traditional sectors such as agriculture. In addition, the data suggest discovery is a component of the stages of productive diversification that occur with development, following a consistent pattern—discovery activity peaks at the lower-middle income level and then declines. Based on this pattern, the authors show that discovery in the 1990s occurred with a higher than expected frequency in Eastern Europe and Central Asia, and lower than expected frequency in Sub-Saharan Africa. Discovery is not found to be a product of structural transformation based on changing factor endowments across income levels. Beyond export growth, population, and development, there are no significant and positive relationships between the expected drivers of entrepreneurship and the frequency of discovery. Combined with the finding that higher absorptive capacity and lower barriers to entry are associated with a reduction in discovery, this suggests that market failures arising from imitation and free-riding may be inhibiting the emergence of new export products in developing countries.

This paper—a product of the Office of the Chief Economist, Latin America and the Caribbean Region—is part of a larger effort in the region to understand the role of innovation in development. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Soto, room I8-018, telephone 202-473-7892, fax 202-522-7528, email address psoto@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at bailey_klinger@ksg05.harvard.edu or dlederman@worldbank.org. (48 pages)

3451. Romania's Integration into European Markets: Implications for Sustainability of the Current Export Boom

Bartlomiej Kaminski and Francis Ng
(November 2004)

In defiance of its unimpressive track in structural reforms and relatively low foreign direct investment (FDI) inflows, Romanian exports have experienced surprisingly strong performance in both EU and non-EU markets since 2000 after a four-year period of flat growth. While the first phase of growth in 1992–95 can be easily explained by redirection of trade toward the EU once the state monopoly over foreign trade was abolished and other policy areas liberalized, the current second phase of export expansion raises questions concerning its drivers and sustainability.

Having examined overall foreign trade performance, evolving patterns of specialization, Romania's competitiveness in EU sunrise markets, changes in factor intensities of trade with the EU, and "intra-product" trade, Kaminski and Ng conclude that Romania's export offer has become diversified, reflecting an impressive progress in industrial restructuring. Restructuring has been facilitated by FDI inflows, even though they appear to have been too small to generate such a big effect. Romanian firms have become increasingly part of international production networks and traditional global value chains. Sustainability of this performance depends on maintaining macroeconomic stability and keeping wage increases in line with productivity growth, as well as increasing Romania's ability to attract larger FDI inflows through improvements in business climate and trade facilitation.

This paper—a product of the Trade Team, Development Research Group—is part of a larger effort in the group to analyze regional integration and trade policy. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Michelle Chester, room MC3-303, telephone 202-458-2010, fax 202-522-1159, email address mchester@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at bkaminski@gvpt.umd.edu or fng@worldbank.org. (39 pages)

3452. Import Demand Elasticities and Trade Distortions

Hiau Looi Kee, Alessandro Nicita, and Marcelo Olarreaga
(November 2004)

To study the effects of tariffs on gross domestic product (GDP), one needs import demand elasticities at the tariff line level that are consistent with GDP maximization. These do not exist. Kee, Nicita, and Olarreaga modify Kohli's (1991) GDP function approach to estimate demand elasticities for 4,625 imported goods in 117 countries. Following Anderson and Neary (1992, 1994) and Feenstra (1995), they use these estimates to construct theoretically sound trade restrictiveness indices and GDP losses associated with existing tariff structures. Countries are revealed to be 30 percent more restrictive than their simple or import-weighted average tariffs would suggest. Thus, distortion is nontrivial. GDP losses are largest in China, Germany, India, Mexico, and the United States.

This paper—a product of the Trade Team, Development Research Group—is part of a larger effort in the group to measure trade restrictiveness. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Michelle Chester, room MC3-322, telephone 202-458-2010, fax 202-522-1159, email address mchester@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at hlkee@worldbank.org, anicita@worldbank.org, or molarreaga@worldbank.org. (36 pages)

3453. Education Decentralization and Accountability Relationships in Latin America

Emanuela di Gropello
(November 2004)

Di Gropello analyzes decentralization reforms in the education sector in Latin America (their status, impact, and ongoing challenges) by making use of the accountability framework developed by the *World Development Report 2004: Making Services Work for Poor People*. She starts by identifying three main groups of models according to the subnational actors involved, the pattern adopted in the distribution of functions across subnational actors, and the accountability system central to the model. She then reviews the impact of these models according to the available empirical evidence, and explores determinants of this impact, extracting lessons useful to the design of future reforms. The author concludes that the single most important factor in ensuring the success or failure of a reform is the way the accountability relationships are set to work within each of the models and provides some lessons on how to get these relationships to work effectively. She also provides three main general lessons for selecting "successful" models: (1) avoid complicated models; (2) increase school autonomy and the scope for "client power," maintaining a clear role for the other accountability relationships; and (3) place more emphasis on the "management" accountability relationship and the sustainability of the models.

This paper—a product of the Human Development Sector Unit, Latin America and the Caribbean Region—is part of a larger effort in the region to assess the effectiveness of service delivery. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Nelly Vergara, room I7-004, telephone 202-473-0432, fax 202-522-1202, email address nvergara@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The author may be contacted at edigropello@worldbank.org. (34 pages)

3454. Will the Kyoto Protocol Affect Growth in Russia?

Franck Lecocq and Zmarak Shalizi
(November 2004)

In light of the recent argument that rapid economic growth in Russia over the next decade might result in emissions higher than the Kyoto target, thereby putting much-needed growth at risk, Lecocq and Shalizi revisit the discussion on the costs and benefits of ratification of the Kyoto Protocol by Russia. They conclude that even under a very high economic growth assumption, and even under very conservative assumptions about the decoupling between carbon dioxide emissions and economic growth, Russia still benefits from a net surplus of emissions allowances, and thus will not see its growth adversely affected by the Kyoto target. In addition, a review of the possible costs and benefits of the Kyoto Protocol suggests that the potential sale of excess allowances far outweighs the other costs.

This paper—a product of the Infrastructure and Environment Team, Development Research Group—is part of a larger effort in the group to analyze climate change mitigation and adaptation options. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Yvonne Edwards, room MC2-533, telephone 202-473-6308, fax 202-522-3230, email address yedwards@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at flecocq@worldbank.org or zshalizi@worldbank.org. (25 pages)

3455. Labor Market Distortions, Rural-Urban Inequality, and the Opening of China's Economy

Thomas Hertel and Fan Zhai
(November 2004)

Hertel and Zhai evaluate the impact of two key factor market distortions in China on rural-urban inequality and income distribution. They find that creation of a fully functioning land market has a significant impact on rural-urban inequality. This reform permits agricultural households to focus solely on the differential between farm and nonfarm returns to labor in determining whether to work on or off-farm. This gives rise to an additional 10 million people moving out of agriculture by 2007 and lends a significant boost to the incomes of those remaining in agriculture. This off-farm migration also contributes to a significant rise in rural-urban migration, thereby lowering urban wages, particularly for unskilled workers. As a consequence, rural-urban inequality declines significantly.

The authors find that reform of the *Hukou* system has the most significant impact on aggregate economic activity, as well as income distribution. Whereas the land market reform primarily benefits the agricultural households, this reform's primary beneficiaries are the rural households currently sending temporary migrants to the city. By reducing the implicit tax on temporary migrants, *Hukou* reform boosts their welfare and contributes to increased rural-urban migration. The combined effect of both factor market reforms is to reduce the urban-rural income ratio dramatically, from 2.59 in 2007 under the authors' baseline scenario to 2.27.

When viewed as a combined policy package, along with WTO accession, rather than increasing inequality in China, the combined impact of product and factor market reforms significantly reduces rural-urban income inequality. This is an important outcome in an economy currently experiencing historic levels of rural-urban inequality.

This paper—a product of the Trade Team, Development Research Group—is part of a larger effort in the group to evaluate the poverty impacts of trade policy reforms. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Paulina Flewitt, room MC3-333, telephone 202-473-2724, fax 202-522-1159, email address pflewitt@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at hertel@purdue.edu or fzhai@adb.org. (39 pages)

3456. Macroeconomic Stability in Developing Countries: How Much Is Enough?

Peter Montiel and Luis Servén
(November 2004)

In the 1990s macroeconomic policies improved in a majority of developing countries, but the growth dividend from such improvement fell short of expectations, and a policy agenda focused on stability turned out to be associated with a multiplicity of financial crises. Montiel and Servén take a retrospective look at the content and implementation of the macroeconomic reform agenda of the 1990s. They review the progress achieved with fiscal, monetary, and exchange rate policies across the developing world, and the effectiveness of the changing policy framework in promoting stability and growth. The main lesson is that slow growth and frequent crises resulted, more often than not, from shortcomings in the reform agenda of the 1990s. These shortcomings essentially concern the depth and breadth of the macroeconomic reform agenda, its attention to macroeconomic vulnerabilities, and the complementary reforms outside the macroeconomic sphere.

This paper—a joint product of the Office of the Chief Economist, Latin America and the Caribbean Region, and the Poverty Reduction and Economic Management Network—is part of a larger effort in the Bank to draw policy lessons from the development experience of the 1990s. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Soto, room I8-018, telephone 202-473-7892, fax 202-522-7528, email address psoto@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at peter.j.montiel@williams.edu or lserven@worldbank.org. (49 pages)

3457. Creating a 21st Century National Innovation System for a 21st Century Latvian Economy

Alfred Watkins and Natalia Agapitova
(November 2004)

The Latvian economy made great strides in recovering from the economic shock of the early transition and the adverse aftereffects of the 1998 Russian financial crisis. Nevertheless, Latvia faces serious challenges to its future growth and prosperity despite these impressive achievements and the outward appearance of macroeconomic stability and economic progress.

A wide variety of recent studies suggest that the Latvian economy is not particularly competitive and, even more worrisome, they indicate that Latvia is not well positioned to gain ground in the race for global competitiveness, prosperity, and rising standards of living. Most of Latvia's growth to date has come from one-off gains generated by structural reforms, privatization, and reallocating resources, not inexhaustible reservoirs of growth. Latvian enterprises will be able to sustain economic growth and create high wage jobs only by becoming internationally competitive, innovating, accumulating new knowledge and technology, and finding a high value added niche in the European and global division of labor.

This paper is designed to help Latvian leaders develop a clear diagnosis of the innovation and competitiveness challenges facing Latvia as it prepares to enter the EU and, more important, design and implement policies and programs to ensure that Latvia reaps the maximum possible benefits from EU structural funds. Section II analyzes the current structure of Latvia's production, imports, and exports. Section III uses data from a number of competitiveness reports to benchmark Latvia's current progress against a number of comparator countries and to pinpoint Latvia's strengths and weaknesses as an innovative economy. Section IV offers a detailed list of potential policies and programs that could improve the competitiveness of Latvian enterprises and the efficiency of the Latvian National Innovation System. The recommendations include specific policies and programs to improve (1) the production of knowledge in Latvia, (2) the commercialization of technology produced by Latvian scientists, small companies, and research institutes, and (3) local firms' capacity to absorb, adapt, and adopt existing knowledge produced outside Latvia for use inside Latvia.

This paper—a product of the Private and Financial Sectors Development Unit, Europe and Central Asia Region—is part of a larger effort in the region to promote the knowledge economy. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Rosamund Garner, room H12-115, telephone 202-473-7670, fax 202-522-3687, email address lgarner@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at awatkins@worldbank.org or nagapitova@worldbank.org. (95 pages)

3458. Regionalism in Standards: Good or Bad for Trade?

Maggie Xiaoyang Chen and Aaditya Mattoo
(November 2004)

Regional agreements on standards have been largely ignored by economists and unconditionally blessed by multilateral trade rules. Chen and Mattoo find, theoretically and empirically, that such agreements increase trade between participating countries but not necessarily with the rest of the world. Adopting a common standard in a region—that is, harmonization—boosts exports of excluded industrial countries to the region. But it reduces exports of excluded developing countries, possibly because developing country firms are hurt more by an increase in the stringency of standards and benefit less from economies of scale in integrated markets. Mutual recognition agreements are more uniformly trade promoting unless they contain restrictive rules of origin, in which case intra-regional trade increases at the expense of trade with other, especially developing, countries. The authors propose a modification of international trade rules to strike a better balance between the interests of integrating and excluded countries.

This paper—a product of the Trade Team, Development Research Group—is part of a larger effort in the group to understand the implications for trade of agreements on standards. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Michelle Chester, room MC3-322, telephone 202-458-2010, fax 202-522-1159, email address mchester@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at xiaoyang.chen@colorado.edu or amattoo@worldbank.org. (37 pages)

3459. Economic Volatility and Returns to Education in Venezuela: 1992–2002

Harry Anthony Patrinos
and Chris Sakellariou
(November 2004)

Preliminary evidence suggests that the rates of return to education in Venezuela have been declining since the 1970s. Patrinos and Sakellariou rigorously estimate the returns to education in Venezuela for the period 1992–2002 and link them to earlier available estimates from the 1980s. They use consistent cross-sections from the *Encuesta de Hogares por Muestro* to document falling returns to schooling and educational levels until the mid-1990s, followed by increasing returns thereafter. The authors use quantile regression analysis to provide further insight into the within skill group changes in returns over time.

This paper—a product of the Education Sector Unit, Latin America and the Caribbean Region—is part of a larger effort in the region to estimate the labor market outcomes of education. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Maria Colchao, room I7-162, telephone 202-473-8048, fax 202-522-3135, email address mcolchao@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at hpatrinos@worldbank.org or acsake@ntu.edu.sg. (34 pages)

3460. Schooling and Labor Market Impacts of a Natural Policy Experiment

Harry Anthony Patrinos
and Chris Sakellariou
(November 2004)

Patrinos and Sakellariou use a nationally representative household survey to estimate returns to schooling in Venezuela from instrumental variables based on a supply-side intervention in the education market. These estimates apply to a subgroup of liquidity-constrained individuals, in the spirit of the Local Average Treatment Effect (LATE) literature. Returns to schooling estimates which apply to a subgroup of individuals affected by the policy intervention may be more interesting from a policy perspective than the return to the "average" individual. The authors use an instrument based on the 1980 education reform (the Organic Law of Education) which provided for nine years of compulsory basic education. They also obtain alternative estimates using father's education as an instrument, in an attempt to derive high and low estimates of returns to schooling in Venezuela. The estimates are consistent with recent findings suggesting that the effect of education, at least for certain subgroups affected by a policy intervention, is as large or larger than what is suggested by OLS estimates.

This paper—a product of the Education Sector Unit, Latin America and the Caribbean Region—is part of a larger effort in the region to estimate the labor market outcomes of education. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Maria Colchao, room I7-162, telephone 202-473-8048, fax 202-522-3135, email address mcolchao@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at hpatrinos@worldbank.org or acsake@ntu.edu.sg. (23 pages)

3461. Looking beyond Averages in the Trade and Poverty Debate

Martin Ravallion
(November 2004)

There has been much debate about how much poor people in developing countries gain from trade openness, as one aspect of "globalization." Ravallion views the issue through both "macro" and "micro" empirical lenses. The macro lens uses cross-country comparisons and aggregate time series data. The micro lens uses household-level data combined with structural modeling of the impacts of specific trade reforms. The author presents case studies for China and Morocco. Both the macro and micro approaches cast doubt on some wide generalizations from both sides of the globalization debate. Additionally the micro lens indicates considerable heterogeneity in the welfare impacts of trade openness, with both gainers and losers among the poor. The author identifies a number of covariates of the individual gains. The results point to the importance of combining trade reforms with well-designed social protection policies.

This paper—a product of the Poverty Team, Development Research Group—is part of a larger effort in the group to assess the distributional impacts of economywide policies. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Sader, room MC3-556, telephone 202-473-3902, fax 202-522-1151, email address psader@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The author may be contacted at mravallion@worldbank.org. (39 pages)

3462. The Returns to Participation in the Nonfarm Sector in Rural Rwanda

Andrew Dabalen, Stefano Paternostro, and Gaëlle Pierre
(December 2004)

Dabalen, Paternostro, and Pierre investigate the differences in outcomes (earnings and consumption) between individuals (households) who participate in the nonfarm sector and those who do not. They use propensity score matching methods where they create appropriate comparison groups of individuals and households. First the authors find that nonfarm self-employed individuals in rural Rwanda have significantly higher earnings than farm workers and nonfarm formal employees. Second, they show that the benefits to nonfarm self-employment are much higher among the nonpoor than among the poor. Third, the authors show that diversified households—those with a farm and a nonfarm enterprise—are less likely to be poor. Finally, farm households who do not participate in the market have significantly lower consumption levels than households that do. However, the benefits to market participation appear to matter less for the poor than for the nonpoor. The authors find little difference in expenditures between market participants and nonmarket participants for comparable households in the bottom 40 percent of the expenditure distribution.

This paper—a product of the Poverty Reduction Group, Poverty Reduction and Economic Management Network—is part of a larger effort in the network to understand rural nonfarm employment determinants. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Cecile Wodon, room MC4-552, telephone 202-473-2542, fax 202-522-3283, email address cwodon@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at adabalen@worldbank.org, spaternostro@worldbank.org, or gpierre@worldbank.org. December 2004. (33 pages)

3463. Employment Regulations through the Eyes of Employers: Do they Matter and How Do Firms Respond to Them?

Gaëlle Pierre and Stefano Scarpetta
(December 2004)

Pierre and Scarpetta present evidence on how employers perceive labor regulations and react when these are perceived to constrain the operation of their firm. They draw from harmonized surveys of (up to) 17,000 firms around the world and compare employers' responses with actual labor legislation. The authors find that employers' concerns about labor regulations are closely matched by the relative stringency of de jure labor laws. Countries that have, from an international perspective, tight labor regulations tend to have higher proportions of employers reporting these regulations as severe constraints. But not all firms are affected in the same way by onerous labor regulations. Medium sized firms are those whose business and prospects for growth are most negatively affected. Similarly, innovating firms are disproportionally affected by tight labor regulations. There is also clear evidence in the data that firms facing tight regulations invest more in training and make greater use of temporary employment. Small firms mainly rely on temporary employment, while medium and large firms, as well as innovating firms, tend to rely more on on-the-job training if labor regulations make hiring and firing very costly.

This paper—a product of the Division, Human Development Network—is part of a larger effort in the network to understand the effect of employment regulations on firm's performance. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Social Protection Advisory Service, room G7-130, telephone 202-548-5267, fax 202-614-0471, email address socialprotection@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at gpierre@worldbank.org or sscarpetta@worldbank.org. (41 pages)

3464. Microeconomic Evidence of Creative Destruction in Industrial and Developing Countries

Eric Bartelsman, John Haltiwanger, and Stefano Scarpetta
(December 2004)

Bartelsman, Haltiwanger, and Scarpetta provide an analysis of the process of creative destruction across 24 countries and 2-digit industries over the past decade. They rely on a newly assembled dataset that draws from different micro data sources (business registers, census, or representative enterprise surveys). The novelty of their approach is in the harmonization of firm-level data across countries, which enables international comparisons and the identification of country-specific factors as opposed to sector and time effects. All countries display a massive reallocation of resources, with the entry and exit of many firms in all markets, the failure of many newcomers, and the expansion of successful ones. This process of creative destruction affects productivity directly by reallocating resources toward more productive uses, but also indirectly through the effects of increased market contestability. There are also large differences across groups of countries. While entry and exit rates are fairly similar across industrial countries, post-entry performance differs markedly between Europe and the United States, a potential indication of the importance of barriers to firm growth as opposed to barriers to entry. Transition economies show an even more impressive process of creative destruction and those that have progressed the most toward a market economy show better outcomes from this process. Finally, Mexico shows large firm dynamics with many new firms entering the battle but also many failing rapidly, while Argentina resembles Continental Europe with smaller flows and less impressive post-entry growth of successful firms.

This paper—a product of the Division, Human Development Network—is part of a larger effort in the network to understand the process of creative destruction. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Social Protection Advisory Service, room G7-130, telephone 202-458-5267, fax 202-614-0471, email address socialprotection@worldbank.org. Policy Research Working Papers are also posted on the Web at

http://econ.worldbank.org. The author may be contacted at ebartelsman@ econ.vu.nl, haltiwan@econ.umd.edu, or sscarpetta@worldbank.org. (49 pages)

3465. Economic Geography: Real or Hype?

Jun Koo and Somik V. Lall
(December 2004)

Economic geography has become a mantra for many economists, geographers, and regional scientists. Previous studies have tested the importance of economic geography for production activities and found a significant association between them. Most of these studies, however, have not taken into account that economic geography influences location decisions at the firm level. Koo and Lall show a potential bias that can arise when firm location choices are not considered in estimating the contribution of economic geography to industry performance. Their analysis using microdata of Indian manufacturing firms shows there is an upward bias in the contribution of economic geography to productivity when firm location choices are not considered in the analysis.

This paper—a product of the Infrastructure and Environment Team, Development Research Group—is part of a larger effort in the group to examine industry location decisions. The study was partly funded by the Bank's Research Support Budget under the research project "Urbanization and the Quality of Life." Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Viktor Soukhanov, room MC2-532, telephone 202-473-5721, fax 202-522-3230, email address vsoukhanov@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ. worldbank.org. The authors may be contacted at jkoo@urban.csuohio.edu or slall1@worldbank.org. (23 pages)

3466. Building a Clean Machine: Anti-Corruption Coalitions and Sustainable Reform

Michael Johnston and Sahr J. Kpundeh
(December 2004)

Many societies have limited corruption through the broad-based mobilization of a diverse range of interests willing and able to defend themselves by making meaningful demands for accountability of, and limits on, official power, and for an end to illicit advantages enjoyed by others. Historically such a process has taken place gradually, as political development has proceeded and the base of participation broadens. But today's high-corruption societies cannot wait for several generations to see such developments take place. Johnston and Kpundeh argue that *social action coalitions*, linking public and private actors, are a way to mobilize these sorts of participation and advocacy. Such coalitions are neither a new idea nor a guarantee of successful reforms. In many instances they win out by default as an anti-corruption strategy. But they contend that if sustained by careful planning and a diverse set of incentives, they can reinforce political will and enhance the strength of civil society. Coalition-building efforts are underway in many societies. But too often they have focused only on anti-corruption tactics and pursuing their own growth, rather than looking at the coalition-building process in more general terms. In Part I, the authors employ Wilson's (1973) analysis of the incentives that motivate and reward participation in organizations. This approach helps them identify ways in which the anti-corruption goals can be augmented by other kinds of appeals, even when material incentives are scarce. The authors also identify four stages of the coalition-building process—formation, credibility, expansion, and transformation—in which differing combinations of incentives will be necessary to address the group's most important problems and opportunities. In Part II the authors examine two important coalition-building efforts in light of the discussions thus far—Ghana's Anti-Corruption Coalition, and the Bangalore Agenda Task Force in Bangalore, Karnataka State, India. In Part III the authors link those cases to a broader analysis, suggesting that while purposive incentives are common in the early phases of all coalitions, other varieties must be added to the mix. Wilson's scheme points to ways in which the imaginative use of incentives can aid the transition from one phase of coalition development to the next. The authors conclude with general strategic issues, suggesting ways in which their analysis can be applied to those questions given the important variations to be found among cases.

This paper—a product of the Governance, Finance, and Regulation Division, World Bank Institute—is part of a larger effort in the institute to address governance and anti-corruption issues in developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Sahr Kpundeh, room J4-109, telephone 202-473-6783, fax 202-676-9810, email address skpundeh1@ worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. Michael Johnston may be contacted at mjohnston@ mail.colgate.edu. (34 pages)

3467. Economic Growth, Income Distribution, and Poverty in Poland during Transition

Pierella Paci, Marcin J. Sasin, and Jos Verbeek
(December 2004)

Paci, Sasin, and Verbeek attempt to analyze the linkages between macroeconomic policies and economic growth variables, their movement over time, and their impact on poverty in the case of Poland. Poland, a middle-income country, is of particular interest because its data sources allow for a relatively detailed analysis of such developments, and the macroeconomic environment and the economic growth variables show a relatively sizable degree of variance. In addition, Poland has struggled in the past few years to reduce poverty while still experiencing positive economic growth. The authors show that in Poland, poverty-reducing growth depends heavily on the ability of the economy to generate jobs. During the early years of transition, net job growth was positive, while after the Russian crisis of 1998, productivity gains were accomplished mostly through labor shedding, henceforth, increasing poverty in Poland. In addition, the authors identify how fiscal and social protection policies affect income distribution and poverty in Poland.

This paper—a product of the Poverty Reduction and Economic Management Sector Unit, Europe and Central Asia Region—is part of a larger effort in the region to analyze the links between post-transition economic growth and poverty reduction. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Helena Makarenko, room

H4-170, telephone 202-458-7832, fax 202-614-1501, email address hmakarenko@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at ppaci@worldbank.org, msasin@worldbank.org, and jverbeek@worldbank.org. (18 pages)

3468. Infrastructure Services in Developing Countries: Access, Quality, Costs, and Policy Reform

Cecilia Briceño-Garmendia,
Antonio Estache , and Nemat Shafik
(December 2004)

Briceño, Estache, and Shafik review the evidence on the state of infrastructure in the developing world, emphasizing the investment needs and the emerging policy issues. While their assessment is seriously constrained by data gaps, they provide useful insights on the main challenges ahead, emphasizing that, in addition to the widely discussed access problems, the poorest also face major affordability and service quality issues which were not well addressed by the reforms of the 1990s. The authors make a case for a stronger commitment of the international community to generate the information needed to assess and monitor infrastructure needs and policies.

This paper—a product of the Office of the Vice President, Infrastructure Network—is part of a larger effort in the network to upgrade economic and policy work in infrastructure. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Marie Leon, room H3-162, telephone 202-473-6151, fax 202-522-2961, email address mleon@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at cbricenogarmendi@worldbank.org, aestache@worldbank.org, or nshafik@worldbank.org. (33 pages)